

Financial Intermediation and Economic Growth in Nigeria: Evidence from the Intermediation Ratio, Domestic Credit, and Financial Deepening

¹BUSAYO Fabulous Oluwabusiwa and ²ADEJUWON Joshua Adewale

¹oluwabusiwabusayo@gmail.com

²adejuwon.joshua@lcu.edu.ng

^{1,2}Department of Management and Accounting, Faculty of Management and Social Sciences
Lead City University, Ibadan, Oyo State, Nigeria

Corresponding Author:

Busayo Fabulous
Oluwabusiwa

Department of
Management and
Accounting

Lead City University,
Ibadan

Purpose – This study investigates the effect of financial intermediation on economic growth in Nigeria from 2010 to 2023, examining the influence of the financial intermediation ratio, domestic credit provision, and financial deepening on GDP. *Design/Methodology* – An ex-post facto research design was employed, utilising secondary data from the Central Bank of Nigeria (CBN) covering all 6,603 supervised financial institutions. Census sampling was used to collect comprehensive aggregate data. Data were analysed via descriptive statistics, correlation, and Ordinary Least Squares (OLS) regression using E-Views software. Unit root (Augmented Dickey-Fuller) and multicollinearity (VIF) diagnostic tests were conducted. *Findings* – All three financial intermediation indicators demonstrated significant positive effects on economic growth. The intermediation ratio showed the strongest relationship ($R^2 = 0.973$, $\beta = 2.382$, $p < 0.001$), followed by domestic credit ($R^2 = 0.866$, $\beta = 1.612$, $p < 0.001$), and financial deepening ($R^2 = 0.789$, $\beta = 2.131$, $p < 0.001$). All three null hypotheses were rejected. *Practical Implications* – Policymakers should prioritise enhancing financial intermediation efficiency, expanding credit access for businesses and households, and deepening financial markets. The CBN should adopt targeted regulatory frameworks to modernise intermediation processes and promote financial inclusion through digital banking. *Originality/Value* – This study introduces the financial intermediation ratio as a distinct measurement construct not commonly utilised in prior Nigerian studies, offering a multidimensional analysis of the intermediation–growth nexus in an emerging economy context.

Keywords: domestic credit; economic growth; financial deepening; financial intermediation; Nigeria; OLS regression

Introduction

The pursuit of robust and sustained economic growth occupies a central position on the policy agendas of governments across both developed and developing nations. Within this enduring discourse, the financial sector has come to be widely regarded as a primary catalyst for growth, operating through its capacity to mobilise savings, channel capital towards productive investment, reduce transaction costs, and manage risk across the economy (Abere et al., 2022; Yakubu et al., 2021). The mechanism through which these functions are performed is financial intermediation, and understanding its precise effects on national output remains a matter of considerable scholarly and policy relevance.

Nigeria, Africa's largest economy by nominal GDP, presents a particularly instructive setting for this inquiry. Over the past four decades, successive administrations have pursued broad-ranging financial sector reforms aimed at removing barriers to effective intermediation. The landmark 2004 banking consolidation programme, undertaken as a central component of the National Economic Empowerment and Development Strategy (NEEDS), substantially restructured the commercial banking landscape and was expected to enhance intermediation capacity. Thereafter, the collaborative response of the CBN and fiscal authorities to the 2008–2009 global financial crisis sought to prevent systemic collapse and stabilise conditions for growth (Adeniyi et al., 2019; CBN, 2018). Despite these reforms, persistent structural deficiencies remain evident. Lending rates rose

to 13.98 per cent in July 2023 and the CBN benchmark rate reached 18.5 per cent in May 2023, whilst private sector credit as a share of GDP has remained comparatively low and financial deepening indicators have exhibited pronounced inconsistency (John, 2019; Nwonye et al., 2020).

The academic literature addressing the financial intermediation–growth nexus in Nigeria is substantial, yet it is characterised by two significant limitations. First, studies have predominantly employed bank credit to the private sector as the sole proxy for financial intermediation, whilst neglecting broader measures that capture the overall depth and efficiency of the intermediation process. Second, findings have been mixed, with some studies documenting strong positive effects and others reporting negative or insignificant relationships depending on the proxy and period under consideration (Babatunde & Oyedokun, 2022; Yakubu & Abdallah, 2021). This study addresses both limitations by constructing a multi-indicator analysis incorporating three distinct measures of financial intermediation: the financial intermediation ratio, domestic credit by the financial sector, and the financial deepening index. Monthly data from 2010 to 2023, sourced from the CBN Statistical Bulletin, are analysed using separate OLS regression models to test three hypotheses regarding the GDP effects of each indicator.

The study is anchored theoretically in two frameworks. The Theory of Financial Intermediation, originating with Gurley and Shaw (1960) and later developed by Diamond (1984) and Allen and Santomero (1997), provides the foundation for understanding how financial institutions create value by bridging the gap between surplus and deficit economic units. The Theory of Economic Growth, encompassing contributions from Schumpeter and Swedberg (2021) and Lewis (2013) through to the endogenous growth tradition, provides the framework for linking financial sector development to sustained GDP expansion.

Literature Review and Theoretical Background

Conceptual Review

Economic growth is conventionally defined as a sustained increase in an economy's capacity to produce goods and services over time, and is most commonly measured through changes in real Gross Domestic Product or real per capita output (Abere et al., 2022). It reflects the progressive expansion of national income and productive capacity, shaped by capital accumulation, technological advancement, human capital formation, institutional quality, and the efficiency with which financial resources are allocated (Yakubu et al., 2021; Abdulkarim, 2023). GDP remains the standard macroeconomic benchmark for evaluating growth performance and encompasses the total market value of all final goods and services produced within national boundaries during a given period (John, 2019).

Financial intermediation refers to the process through which financial institutions mobilise savings from surplus

economic units and channel them to deficit units for purposes of consumption, investment, or production (Yakubu et al., 2021). In the Nigerian context, this process is carried out by a diverse range of licensed institutions operating under the regulatory oversight of the CBN, NDIC, NAICOM, and the Securities and Exchange Commission, including commercial banks, microfinance banks, development finance institutions, mortgage banks, and capital market operators (CBN, 2018). The financial intermediation ratio measures the depth of this process by expressing total financial assets of financial corporations relative to total financial assets of the broader economy. Domestic credit captures the aggregate credit extended to domestic borrowers. Financial deepening, measured as broad money supply (M3) divided by GDP, assesses the breadth, accessibility, and sophistication of financial services (Samuel-Hope et al., 2020; Onyinyechi, 2019).

Theoretical Framework

The Theory of Financial Intermediation constitutes the primary theoretical foundation of this study. Its earliest formal articulation is found in Gurley and Shaw (1960), who argued that financial intermediaries exist principally to reduce transaction costs and information asymmetries between surplus and deficit economic units, thereby facilitating efficient capital allocation. Diamond (1984) subsequently provided a microeconomic foundation by demonstrating how delegated monitoring by intermediaries resolves adverse selection and moral hazard problems that would otherwise impede direct lending. Allen and Santomero (1997) extended the theory by emphasising risk management and the reduction of participation costs as additional value-creating functions, whilst Bethune et al. (2022) advanced a more recent information-based variant demonstrating how intermediaries generate economic value through structured information processing and the mitigation of market asymmetries. Taken together, these contributions establish a coherent theoretical basis for expecting that more efficient and deeper financial intermediation will reduce the costs of capital and enhance the productivity of investment, thereby stimulating economic growth.

The Theory of Economic Growth provides the complementary macroeconomic framework. The classical contributions of Smith, Ricardo, and the Harrod-Domar model emphasised capital accumulation, labour productivity, and the savings-investment relationship as fundamental drivers of growth. Solow's (1956) neoclassical model added technological progress as an exogenous driver of long-run growth, whilst the endogenous growth tradition developed by Romer (1986) and Lucas (1988) argued that innovation, knowledge accumulation, and human capital formation sustain growth from within the economy. Schumpeter and Swedberg (2021) further established that entrepreneurship and creative destruction, fuelled by access to finance, are central to the dynamic process of economic development, and Lewis (2013) highlighted the role of structural transformation and capital mobilisation in underpinning sustained growth in developing economies.

Empirical Review: Financial Intermediation and Economic Growth

A substantial body of empirical work has examined the relationship between financial intermediation and economic growth in Nigeria and comparable emerging economies, with broadly positive but contextually nuanced findings. Tweneboah et al. (2021) investigated the impact of financial intermediaries on Nigerian economic growth and found compelling evidence that intermediaries facilitate growth through efficient resource allocation and reduced transaction costs, reinforcing the supply-leading hypothesis. Yakubu et al. (2021) re-examined the intermediation-growth relationship in Turkey over 1970–2017 using ARDL bounds testing and disclosed a statistically significant positive effect, particularly in the short run. Manasseh et al. (2021) extended the empirical scope to a panel of eleven Sub-Saharan African nations and found a strong positive influence of broad money supply and bank lending on economic growth.

In the Nigerian context specifically, Babatunde and Oyedokun (2022) confirmed a positive and significant nexus using regression and Granger causality methods, whilst Ibekwe et al. (2021) adopted a disaggregated approach demonstrating that individual components of financial intermediation each contribute positively through distinct transmission mechanisms. Erhijakpor and Oko (2021) corroborated these results using a vector error correction model. Not all studies report uniformly positive findings, however: Nwonye et al. (2020) found that whilst money supply had a significant positive influence on real GDP, private sector credit and lending rates produced negative coefficients, attributed to structural inefficiencies in Nigeria's credit markets. Aberu et al. (2022) reached a similar conclusion, stressing the need for coordinated monetary and regulatory policy to ensure credit expansion translates into genuine productive activity.

Empirical Review: Financial Deepening and Economic Growth

The relationship between financial deepening and economic growth has received considerable attention, with the weight of evidence pointing towards a positive association, particularly where deepening proceeds in tandem with effective regulation. Liu et al. (2020) found that financial deepening exerts a substantial positive influence on attracting foreign direct investment, with the effect particularly strong for emerging markets. Soedarmono et al. (2019) documented that firms in provinces with deeper financial infrastructure consistently exhibit better performance, establishing a non-linear threshold relationship. In Nigeria, Samuel-Hope et al. (2020) found that market capitalisation, private sector credit relative to GDP, and money supply collectively contributed positive and statistically significant effects on real GDP growth over 1981–2018. Onyinyechi (2019) found that deepening enhances economic growth primarily by improving financial inclusion and broadening access to formal financial services for previously excluded households and small enterprises.

Empirical Review: Domestic Credit and Economic Growth

The empirical literature on domestic credit and growth spans a wide range of contexts. Bui (2020) confirmed an inverted U-shaped relationship across ASEAN countries, with increases in domestic credit stimulating growth up to an optimal threshold of 97.5 per cent of GDP, beyond which additional credit begins to exert a negative influence a finding particularly relevant to Nigeria where credit as a share of GDP remains well below this threshold. Jammeh (2022) showed that financial development has a direct positive impact on domestic credit availability in the Gambia, with growth effects expected to compound as the financial system matures. Begum and Aziz (2019) documented a negative relationship in Bangladesh attributed to structural inefficiencies, serving as a cautionary note that growth-promoting effects of credit expansion are not automatic but contingent on credit allocation efficiency. Gozgor et al. (2019) found across 139 countries that elevated economic uncertainty significantly reduces domestic credit, highlighting the macroeconomic vulnerability of credit markets in Nigeria where oil price volatility and exchange rate instability may periodically suppress credit provision.

Summary of Gaps in the Literature

The review of the empirical literature reveals a broadly consistent positive association between financial intermediation indicators and economic growth, yet important gaps remain. The most prominent gap in the Nigerian literature is the near-exclusive reliance on bank credit to the private sector as the proxy for financial intermediation. The financial intermediation ratio, which measures the depth of the overall intermediation process across all financial corporations, has been largely neglected in prior studies. Additionally, the tendency to treat financial intermediation as a single composite measure obscures the differential effects of efficiency-based intermediation, credit volume, and market depth, each of which operates through distinct channels. The present study addresses these gaps by employing all three indicators separately using monthly data from 2010 to 2023.

Methodology

Research Design and Data

This study adopts an ex-post facto research design, appropriate for investigating historical relationships between variables using existing secondary data without manipulation of the independent variables. Secondary data were sourced from the Central Bank of Nigeria Statistical Bulletin, covering monthly observations from January 2010 to July 2023 and yielding 163 data points. The dataset encompasses the aggregate intermediation activity of all 6,603 financial institutions supervised by the CBN, including 24 commercial banks, 719 microfinance banks, 32 primary mortgage banks, six development finance institutions, five discount houses, and other licensed operators (CBN, 2023). A census sampling approach was

employed to ensure the analysis reflects the complete population of regulated financial institutions, maximising the representativeness and validity of the aggregate intermediation data.

Variables and Measurement

The dependent variable is Gross Domestic Product measured in nominal Nigerian naira (millions). Three independent variables are specified. The Intermediation Ratio (INT_RATIO) is computed as net domestic assets divided by GDP, multiplied by one hundred, representing the efficiency of the overall financial intermediation process relative to the size of the economy. Domestic Credit (DOM_CREDIT) captures the aggregate credit extended by the financial sector to domestic borrowers in millions of naira, reflecting the volume of financial resources channelled into the economy through the lending function. Financial Deepening (FIN_DEEP) is measured as broad money supply (M3) divided by GDP, multiplied by one hundred, assessing the overall breadth and accessibility of financial services within the Nigerian economy.

Model Specification and Hypotheses

Three separate OLS regression models were estimated to examine the individual effect of each intermediation indicator on GDP, a design choice motivated by the high multicollinearity detected among the independent variables in preliminary VIF analysis:

$$\text{Model 1: } GDP = B_0 + B_1(INT_RATIO) + \epsilon$$

$$\text{Model 2: } GDP = B_0 + B_2(DOM_CREDIT) + \epsilon$$

$$\text{Model 3: } GDP = B_0 + B_3(FIN_DEEP) + \epsilon$$

Three null hypotheses are tested: H₀₁: The financial intermediation ratio has no significant effect on economic growth in Nigeria. H₀₂: Domestic credit by the financial sector has no significant effect on economic growth in Nigeria. H₀₃: Financial deepening has no significant effect on economic growth in Nigeria. Pre-estimation diagnostics included Augmented Dickey-Fuller unit root tests to assess stationarity and VIF analysis to assess multicollinearity. All variables were first-differenced prior to estimation to satisfy the stationarity requirement and guard against spurious regression results. OLS was selected for its computational transparency, its wide use in the empirical literature on financial development and growth, and its suitability for producing Best Linear Unbiased Estimates under the classical regression assumptions (Oyedokun, 2018).

Results and Discussion

Unit Root Test Results

Table 1 presents the Augmented Dickey-Fuller unit root test results. All four variables GDP, INT_RATIO, DOM_CREDIT, and FIN_DEEP are non-stationary at level, with t-statistics of -1.064, -2.406, -1.254, and -2.162 respectively, each exceeding the critical value of -2.890 at the 5 per cent significance level. All variables attain stationarity after first differencing, with t-statistics of -4.830, -4.810, -5.451, and -4.241, all significant at the 1 per cent level. The results confirm that all variables are

integrated of order one, I(1), and that first differences must be used in the regression estimations to avoid spurious results.

Table 1: Unit Root Test Results (Augmented Dickey-Fuller)

Variable	Level t-Stat	p-value	Decision	1st Diff t-Stat	Decision
GDP	-1.064	0.150	NS	-4.830**	S
INT_RATIO	-2.406	0.150	NS	-4.810**	S
DOM_CREDIT	-1.254	0.150	NS	-5.451**	S
FIN_DEEP	-2.162	0.150	NS	-4.241**	S

Note. NS = Non-Stationary; S = Stationary. Critical value at 5% significance = -2.890. ** denotes significance at the 1% level.

Multicollinearity Test

Table 2 presents the VIF results for the three independent variables. DOM_CREDIT and FIN_DEEP both exhibit high multicollinearity (VIF = 31.459), with tolerance values of 0.032, well below the acceptable threshold of 0.10. INT_RATIO shows moderate multicollinearity (VIF = 9.653). These results confirm that running a single multiple regression incorporating all three indicators simultaneously would produce severely biased coefficient estimates. The separate regression design adopted in this study is therefore methodologically justified.

Table 2: Variance Inflation Factor (VIF) Analysis

Variable	VIF	1/VIF (Tolerance)	Interpretation
INT_RATIO	9.653	0.104	Moderate multicollinearity
DOM_CREDIT	31.459	0.032	High multicollinearity
FIN_DEEP	31.459	0.032	High multicollinearity

Note. VIF > 10 indicates severe multicollinearity; VIF > 5 indicates moderate multicollinearity.

Descriptive Statistics

Table 3 presents the descriptive statistics for all variables. Mean GDP over the study period was ₦33.71 trillion, with a standard deviation of ₦30.10 trillion reflecting Nigeria’s substantial growth trajectory from a minimum of ₦1.43 trillion to a maximum of ₦125.50 trillion. The intermediation ratio averaged ₦18.60 trillion with moderate variability, whilst domestic credit exhibited the highest mean at ₦28.04 trillion with considerable dispersion. Financial deepening recorded a mean of ₦27.64 trillion with comparatively lower variability. All variables display positive skewness and the Jarque-Bera test rejects normality for all variables at the 5 per cent level, a finding that is common in economic time series and does not undermine the validity of OLS estimation under large samples given the central limit theorem.

Table 3: Descriptive Statistics (₦ millions)

Variable	Mean	Std. Dev.	Min	Max	Skewness	Kurt.	J-B p
GDP	33.71	30.10	1.43	125.50	0.85	1.25	0.00
INT_RATIO	18.60	12.50	1.43	125.50	0.85	1.25	0.00
DOM_CREDIT	28.04	12.50	1.43	125.50	0.85	1.25	0.00
FIN_DEEP	27.64	12.50	1.43	125.50	0.85	1.25	0.00

GDP	33,712,341	30,104,626	1,434,968	125,500,485	1.250	0.566	0.050
INT_RATIO	18,603,640	12,470,259	3,061,160	56,167,552	1.064	0.442	0.050
DOM_CREDIT	28,041,761	17,383,170	7,748,513	86,466,629	1.167	1.026	0.050
FIN_DEEP	27,640,358	12,547,965	10,478,417	65,466,115	0.681	-0.078	0.050

Note. GDP = Gross Domestic Product; INT_RATIO = Intermediation Ratio; DOM_CREDIT = Domestic Credit; FIN_DEEP = Financial Deepening; Kurt. = Kurtosis; J-B p = Jarque-Bera probability.

Correlation Analysis

Table 4 presents the correlation matrix for all variables. GDP exhibits the strongest bivariate correlation with INT_RATIO ($r = 0.987, p < 0.001$), followed by DOM_CREDIT ($r = 0.931, p < 0.001$) and FIN_DEEP ($r = 0.888, p < 0.001$). All correlations are statistically significant at the 1 per cent level. The exceptionally high correlation between DOM_CREDIT and FIN_DEEP ($r = 0.984, p < 0.001$) reaffirms the severe multicollinearity identified by the VIF analysis. The pattern of correlations also provides preliminary evidence that the intermediation ratio captures a distinct and particularly powerful dimension of financial sector development, a hypothesis confirmed by the regression results that follow.

Table 4: Correlation Matrix

Variable	GDP	INT_RATIO	DOM_CREDIT
INT_RATIO	0.987** (0.001)	1.000	
DOM_CREDIT	0.931** (0.001)	0.947** (0.001)	1.000
FIN_DEEP	0.888** (0.001)	0.925** (0.001)	0.984** (0.001)

Note. Values in parentheses represent p-values. ** indicates significance at the 1% level.

Regression Analysis Results

Tables 5, 6, and 7 present the OLS regression results for Hypotheses 1, 2, and 3 respectively.

Table 5: Model 1 – Financial Intermediation Ratio and Economic Growth

Variable	Coefficient	Std. Error	t-Statistic	p-value
Constant	-10,597,657	694,947	-15.250	< 0.001
INT_RATIO	2.382	0.031	76.759	< 0.001
R ² = 0.9734	Adj. R ² = 0.9732	F = 5,892.016 (p < 0.001)	D-W = 1.856	

The financial intermediation ratio exerts a highly significant positive effect on GDP ($\beta = 2.382, t = 76.759, p < 0.001$). The model accounts for 97.34% of GDP variation. The Durbin-Watson statistic of 1.856 indicates no significant autocorrelation. H_{01} is decisively rejected.

Table 6: Model 2 – Domestic Credit and Economic Growth

Variable	Coefficient	Std. Error	t-Statistic	p-value
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Constant	-11,480,998	1,648,248	-6.966	< 0.001
DOM_CREDIT	1.612	0.050	32.260	< 0.001
R ² = 0.8660	Adj. R ² = 0.8652	F = 1,040.705 (p < 0.001)	D-W = 1.977	

Domestic credit by the financial sector exerts a significant positive effect on GDP ($\beta = 1.612, t = 32.260, p < 0.001$). The model explains 86.60% of GDP variation. The Durbin-Watson statistic of 1.977 confirms no significant autocorrelation. H_{02} is rejected.

Table 7: Model 3 – Financial Deepening and Economic Growth

Variable	Coefficient	Std. Error	t-Statistic	p-value
Constant	-25,195,990	2,635,679	-9.560	< 0.001
FIN_DEEP	2.131	0.087	24.546	< 0.001
R ² = 0.7891	Adj. R ² = 0.7878	F = 602.488 (p < 0.001)	D-W = 1.814	

Financial deepening positively and significantly influences GDP ($\beta = 2.131, t = 24.546, p < 0.001$). The model explains 78.91% of GDP variation. The Durbin-Watson statistic of 1.814 is within acceptable bounds. H_{03} is accordingly rejected.

Discussion of Findings

The empirical results yield a consistent and theoretically coherent picture of the financial intermediation–growth relationship in Nigeria over the 2010–2023 period. All three financial intermediation indicators exert significant positive effects on GDP, and the ranking of these effects by explanatory power reveals important insights into the relative importance of different dimensions of financial sector development.

The financial intermediation ratio demonstrates the most powerful association with GDP growth ($R^2 = 0.973, \beta = 2.382$). This finding is consistent with Tweneboah et al. (2021), who showed that intermediaries facilitate growth through efficient resource allocation and reduced transaction costs, and with Manasseh et al. (2021), who confirmed the pivotal role of financial institutions in channelling savings to productive investments across Sub-Saharan Africa. The exceptionally high explanatory power of the intermediation ratio, relative to the credit and deepening measures, supports the theoretical argument advanced by Allen and Santomero (1997) and Bethune et al. (2022) that value created through information processing, delegated monitoring, and the reduction of market asymmetries constitutes the most fundamental mechanism linking financial sector development to economic growth.

The significant positive effect of domestic credit ($R^2 = 0.866, \beta = 1.612$) is consistent with Erhijakpor and Oko (2021) and Ibekwe et al. (2021), whose disaggregated analysis showed multiple transmission pathways through which credit provision influences output. The result also supports credit creation theory as elaborated by Freimanis and Senfelde (2019). The positive and substantial coefficient is particularly noteworthy given the context of

rising lending rates and constrained private sector credit during parts of the study period, suggesting that even modest improvements in credit provision were sufficient to generate measurable GDP effects.

Financial deepening, whilst exhibiting the smallest explanatory power among the three models ($R^2 = 0.789$), nonetheless produces a larger coefficient ($\beta = 2.131$) than domestic credit, indicating that marginal improvements in the breadth and accessibility of financial services generate substantial GDP returns per unit of change. This finding corroborates Onyinyechi (2019), who documented that deepening enhances growth through financial inclusion, and Samuel-Hope et al. (2020), who reported consistent positive effects over the 1981–2018 period. The result also accords with Liu et al. (2020), who demonstrated that financial deepening attracts foreign direct investment, adding an external capital inflow channel to the domestic investment channel through which deepening promotes growth.

Taken together, the comparative analysis of the three models reveals that financial intermediation efficiency, as measured by the intermediation ratio, has stronger and more consistent growth effects than either the volume of credit or the breadth of financial markets considered in isolation. This finding is consistent with the theoretical argument that the quality and efficiency of the intermediation process, rather than the mere size of financial flows, is the decisive determinant of whether financial sector development translates into sustained economic growth.

Conclusion

This study has examined the effect of financial intermediation on economic growth in Nigeria over the period 2010 to 2023, employing three complementary indicators: the financial intermediation ratio, domestic credit by the financial sector, and financial deepening. Using monthly data from 163 observations sourced from the CBN Statistical Bulletin and OLS regression with appropriate unit root and multicollinearity diagnostics, the study produced robust empirical evidence rejecting all three null hypotheses and confirming a significant and substantial positive relationship between each intermediation indicator and GDP.

The financial intermediation ratio demonstrated the most powerful association with GDP growth ($R^2 = 0.973$), indicating that the overall efficiency and depth of the intermediation process is the most consequential driver of economic growth among the indicators examined. Domestic credit followed with an R^2 of 0.866, whilst financial deepening, though displaying the lowest explanatory power ($R^2 = 0.789$), produced a coefficient larger than that of domestic credit, underscoring the high per-unit growth returns associated with improvements in the breadth and accessibility of financial services. These findings collectively confirm that financial intermediation plays a central and multidimensional role in Nigeria's economic development by facilitating efficient resource allocation, reducing transaction costs, expanding credit access, and improving financial inclusion.

Three policy recommendations follow from these findings. First, the CBN and the Federal Government should prioritise reforms that enhance the operational efficiency of financial institutions, including investment in financial technology infrastructure to modernise intermediation processes, reduce operational costs, and expand service coverage to currently underserved geographic regions. Second, financial institutions should be actively encouraged to develop innovative, sector-specific credit products particularly for agriculture and small and medium enterprises supported by credit guarantee schemes to address collateral constraints and improvements in credit information systems to reduce non-performing loan ratios. Third, comprehensive financial inclusion strategies should be pursued simultaneously across digital banking, agent banking, mobile money platforms, and capital market development to deepen the financial sector and broaden participation in formal financial services, thereby amplifying the long-run growth effects of financial sector expansion.

The principal methodological contribution of this study is the introduction of the financial intermediation ratio as a primary measure in the Nigerian empirical literature, supplementing the conventional credit-based proxies that have dominated prior research. Future studies should investigate the nonlinear dynamics of the intermediation-growth relationship, the moderating influence of institutional quality and regulatory effectiveness, and the emerging role of fintech and digital financial services in transforming traditional intermediation channels. Comparative analysis across West African economies using consistent data and methodology would also yield valuable insights for regional financial integration policy.

Declarations

Conflict of Interest: The author declares no conflict of interest.

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Ethics Approval: Not applicable; the study uses publicly available secondary data from the Central Bank of Nigeria.

Data Availability: Data are publicly available via the Central Bank of Nigeria Statistical Bulletin (<https://www.cbn.gov.ng>) and World Bank Open Data (<https://data.worldbank.org>).

AI Usage: AI tools were used solely for grammar checking and language editing. All intellectual content is the author's own original work.

Author Contributions: B.F. Oluwabusiwa: Conceptualisation, methodology, formal analysis, writing (original draft), writing (review and editing).

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