


EFFECT OF FINANCIAL INCLUSION ON ECONOMIC DEVELOPMENT IN NIGERIA

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ARTICLE INFO	<u>ABSTRACT</u>
<p>Article history: Received: January, 22nd 2024 Accepted: March, 22nd 2024</p>	<p>Objective: The objective of this study is to investigate the effect of financial inclusion on economic development in Nigeria, with the aim of analysing the interplay between the two variables through a review of relevant literature and empirical evidence.</p>
<p>Keywords: Financial Inclusion; Economic Growth; Sustainable Development; ARDL.</p>	<p>Theoretical Framework: The finance-growth theory posits that development of financial systems cultivates an environment conducive to growth, operating through demand-following mechanism. This theory provides a solid basis for understanding the context of the investigation.</p>
	<p>Method: Financial inclusion was proxied through money supply, which represents the size of the banking sector, while credit to the private sector measures the size and financial depth of the banking sector. Data were sourced from the Central Bank of Nigeria Statistical Bulletins and the World Development Indicators.</p>
	<p>Results and Discussion: The findings indicate both short-term and long-term relationships between financial inclusion and economic growth, aligning with the theoretical framework. The implications and relationships identified are discussed within this context, including potential discrepancies and study limitations.</p>
	<p>Research Implications: The practical and theoretical implications of this research are discussed, providing how the results can be applied or influence practices in the field of financial management. These implications could encompass inclusive economic growth and sustainable development.</p>
	<p>Originality/Value: This study contributes to the literature by highlighting the need to design and implement interventions that promote financial inclusion while addressing the specific needs of diverse demographics. The relevance and value of this research are evidenced by its emphasis on advancing financial inclusion as a catalyst for driving economic development in Nigeria.</p>
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EFEITO DA INCLUSÃO FINANCEIRA NO DESENVOLVIMENTO ECONÔMICO DA NIGÉRIA

RESUMO

Objetivo: O objetivo deste estudo é investigar o efeito da inclusão financeira sobre o desenvolvimento econômico na Nigéria, com o intuito de analisar a interação entre as duas variáveis por meio de uma revisão da literatura relevante e de evidências empíricas.

Estrutura teórica: A teoria finanças-crescimento postula que o desenvolvimento de sistemas financeiros cultiva um ambiente propício ao crescimento, operando por meio do mecanismo de acompanhamento da demanda. Essa teoria fornece uma base sólida para entender o contexto da investigação.

Método: A inclusão financeira foi representada pela oferta de moeda, que representa o tamanho do setor bancário, enquanto o crédito ao setor privado mede o tamanho e a profundidade financeira do setor bancário. Os dados foram obtidos dos Boletins Estatísticos do Banco Central da Nigéria e dos Indicadores de Desenvolvimento Mundial.

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Resultados e discussão: Os resultados indicam relações de curto e longo prazo entre a inclusão financeira e o crescimento econômico, alinhando-se com a estrutura teórica. As implicações e relações identificadas são discutidas dentro desse contexto, incluindo possíveis discrepâncias e limitações do estudo.

Implicações da pesquisa: As implicações práticas e teóricas desta pesquisa são discutidas, fornecendo como os resultados podem ser aplicados ou influenciar as práticas no campo da gestão financeira. Essas implicações podem abranger o crescimento econômico inclusivo e o desenvolvimento sustentável.

Originalidade/valor: Este estudo contribui para a literatura ao destacar a necessidade de projetar e implementar intervenções que promovam a inclusão financeira e, ao mesmo tempo, atendam às necessidades específicas de diversos grupos demográficos. A relevância e o valor desta pesquisa são evidenciados por sua ênfase no avanço da inclusão financeira como um catalisador para impulsionar o desenvolvimento econômico na Nigéria.

Palavras-chave: Inclusão Financeira, Crescimento Econômico, Desenvolvimento Sustentável, ARDL.

EFFECTO DE LA INCLUSIÓN FINANCIERA EN EL DESARROLLO ECONÓMICO DE NIGERIA

RESUMEN

Objetivo: El objetivo de este estudio es investigar el efecto de la inclusión financiera en el desarrollo económico de Nigeria, con el fin de analizar la interacción entre ambas variables a través de una revisión de la literatura relevante y de la evidencia empírica.

Marco teórico: La teoría de las finanzas y el crecimiento postula que el desarrollo de los sistemas financieros cultiva un entorno propicio para el crecimiento, que opera a través del mecanismo de seguimiento de la demanda. Esta teoría proporciona una base sólida para comprender el contexto de la investigación.

Método: La inclusión financiera se aproximó a través de la oferta monetaria, que representa el tamaño del sector bancario, mientras que el crédito al sector privado mide el tamaño y la profundidad financiera del sector bancario. Los datos proceden de los Boletines Estadísticos del Banco Central de Nigeria y de los Indicadores del Desarrollo Mundial.

Resultados y discusión: Los resultados indican relaciones a corto y largo plazo entre la inclusión financiera y el crecimiento económico, en consonancia con el marco teórico. Las implicaciones y relaciones identificadas se discuten en este contexto, incluidas las posibles discrepancias y las limitaciones del estudio.

Implicaciones de la investigación: Se discuten las implicaciones prácticas y teóricas de esta investigación, proporcionando cómo los resultados pueden aplicarse o influir en las prácticas en el campo de la gestión financiera. Estas implicaciones podrían abarcar el crecimiento económico inclusivo y el desarrollo sostenible.

Originalidad/Valor: Este estudio contribuye a la literatura destacando la necesidad de diseñar e implementar intervenciones que promuevan la inclusión financiera al tiempo que abordan las necesidades específicas de diversos grupos demográficos. La pertinencia y el valor de esta investigación se ponen de manifiesto por su énfasis en el avance de la inclusión financiera como catalizador para impulsar el desarrollo económico en Nigeria.

Palabras clave: Inclusión Financiera, Crecimiento Económico, Desarrollo Sostenible, ARDL.

1 INTRODUCTION

Economic growth fosters development through financial inclusion; on the other hand, financial inclusion enhances wealth creation and, consequently, economic growth. Studies (Rajan & Zingales, 2003; Levine & Zervos, 1998) have shown that access to financial services enhances economic growth, tackles poverty, improves welfare and the general standard of living, and promotes economic development.

In developing nations, there has been a notable shift towards prioritizing sustainable development and long-term economic growth. The integration of all sectors of the economy, with particular emphasis on the financial sector, is recognized as instrumental in fostering

growth and mitigating disparities within these countries. Consequently, Financial Inclusion has emerged as a crucial global concern essential for fostering inclusive economic growth and sustainable development, as noted by Sadakkadulla (2007) and Subbarao (2010).

Financial Inclusion has become a focal point of development policies worldwide, particularly in emerging economies, such as Nigeria. Financial Inclusion is defined as the provision of financial services at affordable rates to disadvantaged and low-income segments of the population, in contrast to financial exclusion, in which such services are inaccessible or unaffordable (Nwanne, 2015). Onaolapo (2015) describes financial inclusion as a process aimed at ensuring easy access to, and utilization of, formal financial services by all members of the economy. This involves facilitating the opening of bank accounts, enabling access to credit, and ensuring seamless usage of financial products and services. Stephen et al. (2009), cited in the Central Bank of Nigeria (CBN) (2013), defined financial inclusion as a state in which all individuals have access to banking and insurance services coupled with financial literacy and capabilities.

Sanusi (2011) highlights the pivotal role of the financial system in driving economic development by facilitating savings mobilization, efficient monetary administration, and liquidity management. A robust financial system anchored by banks fosters linkages across various sectors, promotes specialization, and provides a conducive environment for implementing government policies aimed at achieving non-inflationary growth, exchange rate stability, balance of payments equilibrium, and full employment.

The concept of financial inclusion originated in the early 2000s in response to research findings that highlight the adverse effects of financial exclusion on poverty and economic growth. The overarching aim of financial inclusion is to ensure that all adult members of society have easy access to a comprehensive range of financial products tailored to their needs and offered at reasonable costs encompassing payments, savings, credit, insurance, and pensions (Onaolapo, 2015).

The primary aim of this study is to examine the influence of financial inclusion on economic development in Nigeria. Research on financial development and its implications for economic growth and development holds significant value for scholars, researchers, policymakers, and investors. From an academic standpoint, it is notable that previous studies in this field have predominantly focused on evaluating the relationship between investment and economic growth as well as exploring the impact of financial liberalization on economic

growth. This study seeks to forecast the principal effects of financial inclusion on the economy. It is essential to investigate this aspect as a distinct subject matter from previous studies.

1.1 THE CONCEPT OF FINANCIAL INCLUSION

Financial inclusion has been interpreted differently by analysts, stakeholders, researchers, and scholars, leading to a lack of uniformity in standard comparisons. It is defined as a process that ensures universal access, availability, and utilization of the formal financial system by all members of an economy. According to Martinez (2011), financial access serves as a vital policy tool utilized by governments and non-governmental organizations to foster aggressive and stimulating economic growth, enabling the efficient allocation of productive resources and reducing capital costs. This inclusive financing system significantly enhances day-to-day financial management and curbs the proliferation of unfair informal credit sources such as money lenders (Martinez, 2011).

Consequently, an inclusive financial system is recognized as a crucial policy initiative in many countries, with contributions from financial regulators, government bodies, and the banking industry. Legislative efforts have been undertaken in certain countries to establish monitoring frameworks, exemplified by initiatives in the United States, France, the United Kingdom, and South Africa. Many of these regulatory frameworks aim to enhance the economic welfare of marginalized groups, enabling rural women to purchase sewing machines and start small businesses, granting artisans access to a broader range of financial services to augment income and enhance resilience to economic shocks. A well-functioning financial system drives economic growth through sustainable development and facilitates financial intermediation by offering savings, credit, payment, and risk-management products tailored to the diverse needs of individuals. Financially inclusive systems ensure broad-based access to financial services by providing customized products at affordable rates without stringent documentation requirements, particularly benefiting the poor and other vulnerable groups within the economy. Onaolapo (2015) contends that without financially inclusive systems, the poor would rely solely on limited savings for future investments, while micro and small businesses would struggle to pursue growth opportunities, perpetuate income disparities, and hinder economic growth in many developing countries.

In essence, striving for financial inclusion via inclusive financial systems not only stimulates economic growth but also empowers marginalized communities, diminishes income inequalities, and bolsters resilience to economic shocks within developing nations.

1.2 THE CONCEPT OF ECONOMIC GROWTH

Economic growth is commonly defined as the enhancement of national productivity within a nation (Eton et al., 2019). In developing countries such as Nigeria, where agriculture constitutes a significant productive sector, predominantly situated in rural areas, enhancing productivity in these regions necessitates financial inclusion. The inadequacy of credit facilities has been identified as a primary impediment to rural productivity, largely because of the exclusion of these areas from the financial system.

However, facilitating broad access to financial services, free from price or non-price barriers, can empower rural and impoverished populations to alleviate poverty, enhance productivity, and drive economic growth (Eton, 2019). Therefore, unless the financial system extends its reach to financially excluded rural communities, where a substantial portion of resources and contributions lies outside the financial system, the rate of productivity and economic growth may remain sluggish (Ele & Ogbonna 2023). These rural populations serve as the cornerstone of the agricultural sector, which is a vital pillar supporting the nation's economy.

Economic growth denotes the augmentation of a country's potential Gross Domestic Product (GDP). GDP is a monetary measure that reflects the market value of all final goods and services produced within a specified period, typically annually or quarterly (although this may vary depending on the method of national product measurement). Continuous economic growth is essential for a developing economy to break free from poverty and attain sustainable development (Ele & Ogbonna, 2023).

2 THEORETICAL FRAMEWORK

The theoretical foundation underpinning this study is rooted in the finance-growth theory, which asserts that the development of financial systems cultivates an environment conducive to growth, operating through either a supply leading or 'demand-following' mechanism. This perspective underscores the critical importance of addressing financial exclusion that is often linked to persistent income disparities and sluggish economic growth. In

this context, ensuring access to secure, convenient, and affordable financial services becomes imperative for catalyzing growth, ameliorating income inequality, alleviating poverty, promoting inclusive opportunities, integrating marginalized segments into the economy, and fortifying resilience against economic shocks (Serrao et al., 2012).

A notable proponent of this theory is Walter Bagehot, whose seminal work in the 1870s elucidated the interconnectedness between financial systems and real economic activities. Bagehot's theory elucidated how financial market dynamics in Britain influenced the allocation of capital, foreseeing that capital would flow to areas offering the highest returns, akin to water seeking its level (Bagehot, 1873). Despite criticism and evolving economic paradigms, Bagehot's emphasis on the role of financial systems in resource pooling and allocation remains relevant today. The theory posits that successful enterprises supported by efficient financial systems stimulate economic growth through positive spillover effects.

Moreover, the finance-growth theory has been enriched and expanded upon by subsequent scholars, including Karl Marx, whose insights into the role of financial capital in economic growth are documented in the work of Hilferding (1981). Additionally, the first and latter half of the 20th century saw the dominance of theoretical frameworks proposed by scholars such as Joseph Schumpeter and John Maynard Keynes. Schumpeter's theory of economic development accentuated the pivotal role of innovation as a driver of growth, emphasizing the importance of new combinations of production methods, market development, and sectoral transformations, facilitated either through administrative mechanisms or banking channels in open economies (Stolbov, 2012).

Despite theoretical advancements, challenges persist, particularly in regions such as Nigeria, where financial inclusion is impeded by low levels of financial literacy, especially among rural populations. Limited access to information and telecommunications infrastructure exacerbates these challenges, hindering the effective utilization of financial services. Addressing these obstacles requires tailored awareness campaigns, linguistic considerations, and educational initiatives to empower individuals to effectively engage with financial services effectively (Migap et al., 2015).

2.1 EMPIRICAL REVIEW

According to Nzotta and Okereke (2009), financial deepening did not contribute to Nigeria's economic expansion from 1986 to 2007. Maduka and Onwuka (2012) looked at the

short- and long-term connections between Nigeria's financial system and economic expansion. The findings suggest that Nigeria's economic growth is adversely affected by the structure of the financial industry. Oriavwote and Eshenake (2012) looked at how financial development affected Nigeria's economic growth and discovered that the country's economic growth was much enhanced by the rise of the financial sector. Economic growth and financial intermediation have a long-run equilibrium connection, as confirmed by Ogiriki and Andabai (2014). Shittu (2012) and Azege (2004) concur that financial deepening is the primary driver of economic growth.

According to Khan (2011), rural families would benefit from more economic activity and job prospects because of having access to basic banking services. As more people engage in the economy, rural households' disposable income will increase, resulting in more savings and a stronger base of deposits for the bank. This will drive economic growth, which inevitably leads to inclusive growth. According to Hariharan and Marktanner (2012), Financial Inclusion can support economic development and growth. They discover a significant positive association between a nation's total factor productivity (TFP) and its Financial Inclusion, suggesting that it has the capacity to generate capital. The research findings indicate that financial inclusion has the capacity to augment the savings portfolio of the financial sector, improve the effectiveness of intermediation, and stimulate entrepreneurial endeavours.

Using the index of financial inclusion (IFI) technique, which he developed in accordance with UNDD within the 94 nations of study, Sarma (2012) assessed the degree of financial inclusion for 94 countries globally between 2004 and 2010. Even Nigeria and Ghana were absent from the list of very few African nations, and his selection of them was predicated on the data that was available in the IMF's financial access survey (FAS) database. According to the results, among the 91 nations that were ultimately tested in 2009, Cyprus had the highest ranking as the most financially inclusive nation, with an IFI value of 0.996, while Chad had the lowest, with an IFI value as low as 0.016. Afghanistan came in worst in 2010 with an IFI rating of 0.052, while Luxembourg came in first place with a value of 0.996. The study's conclusion is based on the discovery that financial inclusion and exclusion vary widely among nations. Because it is a reliable predictor of economic progress, he advises using a multidimensional method consistently to track the degree of financial inclusion and exclusion in different nations.

Aina and Oluyombo (2014) look at Nigeria's financial inclusion economy. According to the report, most respondents had savings accounts even though there is a high level of access to bank accounts. Even with dormant accounts, adults have an extremely low bank account

ownership penetration percentage of 1.4. Africans place a great value on family relationships, and using bank accounts to receive and transfer money to distant family members contributes to the upkeep of strong family ties. Most persons use their accounts one to five times a month on average; nevertheless, 24.01% of the accounts are not being used for deposits, and 6.91% are not being used for withdrawals. The most widely used non-cash payment options include wire transfers, internet payments, and ATM/debit card transactions. Of those who made use of savings, 59.58% did so through bank accounts, 32.5 percent through cooperative societies, and 26.2 percent through daily contributions and rotating savings plans.

Thomas et al. (2017) examined the connection between financial accessibility and economic development in eight South Asian nations between 2007 and 2015 using GMM estimators. According to the study, income increased in direct proportion to financial accessibility, however economic development in low-income nations was more affected by increases in financial access indices than in middle-income ones.

Kim et al. (2017) similarly examined the connection between financial inclusion and economic growth in 55 countries that are members of the Organization of Islamic Cooperation (OIC) by utilizing panel Granger causality tests, impulse-response functions (IRFs), dynamic panel estimation, and panel vector autoregressive (VAR) methodology. The findings demonstrate that financial inclusion boosts economic expansion. Malinda and Maya (2018) used a vector error correction model, Granger causality tests, and a pooled regression model to examine the link between financial inclusion and economic development in 11 countries between 2007 and 2016. The results show a long-term connection between economic expansion and financial inclusion.

Additionally, from 2004 to 2010, Sethi and Acharya (2018) examined how financial inclusion affected the economic development of 31 developed and developing nations. The panel study's findings demonstrated a bidirectional causal association between financial inclusion and economic growth as well as a favourable, long-term relationship between the two across the chosen nations. Arestis et al. (2018) contended that panel studies often overstate the correlation between financial depth and growth, citing a time series spanning five industrialized nations.

Nwafor and Yomi (2018) investigate the connection between Nigeria's economic expansion and financial inclusion. Two hypotheses were developed, and the two-stage Least Squares Regression Method was used to acquire and assess the appropriate data (which covered the years 2001 to 2016). The results showed that financial industry intermediation had no effect

on financial inclusion over the reviewed period, and that financial inclusion had a major impact on economic growth in Nigeria.

Using a differenced GMM, Inoue and Hamori (2019) investigated the impact of financial inclusion on the economic development of developing nations on a panel of 168 nations between 2004 and 2014. The number of commercial bank branches and real per capita GDP were shown to be positively correlated by the study, whereas financial deepening significantly and favorably impacted economic growth in the chosen nations.

Makina and Walle (2019) used the system GMM dynamic panel data estimator to assess the impact of financial inclusion on economic development in 42 African nations between 2004 and 2014. According to the findings, financial inclusion significantly and favorably influences economic growth in Africa. Van and Linh (2019) looked at the effect of financial inclusion on economic development in contrast to a research that looked at 23 Asian nations between 2010 and 2015. The findings point to a connection between a rise in economic development and the quantity of bank branches, ATMs, and domestic lending in the private sector.

Siddik et al. (2019) assessed how financial penetration affected economic development in 24 Asian nations between 2004 and 2016. The study indicated that there is a bidirectional causal relationship between financial permeation and economic growth and that financial permeation significantly boosts the economy of Asian nations. Chatterjee (2020) looked studied how ICT and financial inclusion contributed to 41 nations' economic development from 2004 and 2015. The findings imply that financial inclusion can enhance economic development per capita both on its own and when combined with mobile phones and the Internet. ICT metrics do not, however, significantly contribute to increased financial inclusion and economic growth in underdeveloped nations.

The impact of financial inclusivity on economic development in sixty-three developed and developing nations between 2014 and 2017 was examined by Nizam et al. (2020). This study found a positive, non-monotonic relationship between financial inclusiveness and economic growth, which is more pronounced at higher levels of the financial inclusion index. It did this by using a cross-sectional threshold regression technique and a new construction of the financial inclusion index. Similar to this, Huang et al. (2021) compared the old and new EU (27) nations between 1995 and 2015 in order to study the relationship between financial inclusion and economic progress. Using panel autoregressive distributed lag (ARDL) and FMOLS models, the study concluded that financial inclusion is critical to economic growth.

But compared to high-income and established EU nations, it is more substantial in low-income and recent member states.

Ifediora et al. (2022) used panel data from 22 sub-Saharan African (SSA) nations from 2012 to 2018 to study the effect of financial inclusion on economic development. Using a composite index of financial inclusion as well as individual financial inclusion indicators, the study used a Generalized Method of Moments (GMM) system. It found that while the usage dimension of financial inclusion slightly boosts economic growth, the availability, penetration, and composite dimensions of financial inclusion all significantly and positively impact economic growth. Furthermore, bank branches and ATMs have a major beneficial influence on economic growth; deposit accounts and outstanding loans have a little positive impact on growth, while outstanding deposits have a negative impact on growth.

3 METHODOLOGY

Following Onaolapo (2015) and Evans and Adeoye (2016), this study adapts the models established by Wadkok (2018), Emmanuel and M-Ember (2022), and Ukoh and Okeke (2023) to investigate the effect of financial inclusion on economic growth in Nigeria from 1981-2022. The measure of financial inclusion used in this study includes money supply, which represents the size of the banking sector, while credit to the private sector measures the size and financial depth of the banking sector. Others include the loan-to-deposit ratio, liquidity ratio, and total savings ratio, while economic growth is measured using gross domestic product per capita. Data sources encompassed a range of publications, including the Central Bank of Nigeria Statistical Bulletins (2023) and the World Development Indicators (2023). The adapted model that examines the influence of financial inclusion on economic growth in Nigeria is presented below.

$$LGDPPC_t = (\alpha_0 + \beta_1 CPS_t + \beta_2 BM_t + \beta_3 LDR_t + \beta_4 LQR_t + \beta_5 TSR_t + \dots \dots U_t) \quad (1)$$

Where:

LGDPPC_t: is the natural log of gross domestic product per capita at time *t*

BM_t: Ratio of road money to GDP (M2/GDP) at time *t*

CPS_t: Ratio of Credit to Private Sector by bank to GDP (CPS/GDP) at time *t*

LDR_t : Loan-to-deposit ratio of commercial banks at time t
 LQR_t : Liquidity ratio of commercial banks at time t
 TSR_t : Total Savings ratio of commercial banks at time t
 α_0 = Intercept
 $\beta_1 - \beta_5$ = Coefficient of the Independent Variables.
 U_t = Disturbance Term at time t

4 RESULTS

Table 1

Descriptive Statistics

	LNGDP	CPS	BM	LDR	LQR	TSR
Mean	7.148496	9.355944	16.80191	67.34447	49.20652	8.049396
Median	7.416375	8.194985	13.88719	66.90000	46.36736	6.645847
Maximum	8.071204	19.60353	27.37879	96.81702	104.2024	14.94330
Minimum	6.162171	4.948032	9.063329	37.55947	26.39276	3.291754
Std. Dev.	0.614723	3.505756	6.060746	13.37272	14.51636	3.464103
Skewness	-0.271039	1.026327	0.449879	-0.181231	1.446075	0.547543

Source: Authors Compilation (2024), based on data from WDI (2023)*

The descriptive statistics above depict the characteristics of the study variables and ascertain their suitability. The average value of all the variables is positive, with loan to deposit ratio (67.34%) having the highest mean value. This implies that Nigerian banks' financial intermediation function of funding the deficit sector with excess surplus sector is quite commendable. The banks liquidity ratio is also found to be about 49% which is above the 30% liquidity ratio recommended by the CBN 293th Monetary Policy Committee meeting (CBN, 2024). This suggests that Nigerian banks have an adequate ability to cover all immediate debt obligations.

Furthermore, the median of the variables suggests that all the variables are symmetrically distributed, given that their values are close to the mean value, while the maximum and minimum values ascertain that the values of the variables studied range from positive to positive in all cases, suggesting that there are fewer outliers in the dataset used for this study. The standard deviation values were also quite low compared with the mean values, suggesting that the data were dispersed. Similarly, some of the variables are negatively skewed (LNGDPPC and LDR), while LNGDPPC, BM, LDR, and TSR are platykurtic, implying that the variables produce fewer and less extreme outliers than those of the normal distribution, while others are greater than three, thus, leptokurtic. The unit-root test is described in the next section.

Table 2

Unit Root Test

	Level	1 st Difference	Decision
LNGDP	-1.4904 0.5284	-5.2315 0.0001*	I(1)
CPS	-2.2771 0.1840	-5.9441 0.0000*	I(1)
LDR	-4.8608 0.0003*		I(0)
BM	-0.8849 0.7830	-5.2266 0.0001*	I(1)
TSR	-0.2970 0.9166	-4.9630 0.0002*	I(1)

Source: Authors Compilation (2024)

The Augmented Dickey Fuller (ADF) test was used to ascertain the stationarity of the variables. The results in Table 2 confirm that LDR is stationary at the level, while LNGDPPC, CPS, BM, and TSR became stationary at the first difference. This confirms that the variable exhibited multilevel stationarity; hence, the study conducts the ARDL approach to cointegration to yield the short-run dynamic relationship, long-run relationship, and equilibrium parameter. Pesaran and Shin (1999) and Pesaran et al. (2001) confirm that the ARDL cointegration technique is used to determine the long-run relationship between series with different orders of integration. The bound test is as follows.

Table 3

ARDL Bound Test

ARDL Bounds Test		
Null Hypothesis: No long-run relationships exist		
Test Statistic	Value	K
F-statistic	4.4731	5
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.26	3.35
5%	2.62	3.79

Source: Authors Compilation (2024)

The bound cointegration test was performed for the linear specifications, and the results are listed in Table 3. The computed value of the F-statistic is 4.4731, which is higher than the upper bounds, implying that there exists a long-run linear association between financial inclusion and economic growth in Nigeria. This finding is similar to that of Sethi and Acharya (2018), who revealed that a long-run relationship exists between financial inclusion and

economic growth. In Nigeria, Ogiriki and Andabai (2014) confirmed a long-run equilibrium relationship between economic growth and financial intermediation.

Table 4

ARDL Cointegrating And Long Run Form

Dependent Variable: LNGDPPC				
Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNGDPPC(-1))	-0.0354	0.1942	-0.1822	0.8576
D(LNGDPPC(-2))	0.2724	0.1944	1.4014	0.1791
D(LNGDPPC(-3))	0.4124	0.1830	2.2538	0.0377*
D(BM)	0.0812	0.0456	1.7805	0.0929**
D(BM(-1))	-0.1166	0.0584	-1.9959	0.0622**
D(BM(-2))	-0.0662	0.0411	-1.6093	0.1260
D(CPS)	-0.1096	0.0796	-1.3765	0.1865
D(CPS(-1))	0.0194	0.0486	0.3999	0.6942
D(CPS(-2))	-0.1185	0.0441	-2.6904	0.0155*
D(LDR)	0.0234	0.0075	3.1310	0.0061*
D(LQR)	-0.0068	0.0046	-1.5007	0.1518
D(TSR)	0.0468	0.0784	0.5970	0.5584
D(TSR(-1))	0.1719	0.1112	1.5457	0.1406
D(TSR(-2))	0.2137	0.1058	2.0196	0.0595**
CointEq(-1)	-0.8747	0.1799	-4.8616	0.0001*
Cointeq = LNGDPPC - (0.4326*BM -0.1708*CPS + 0.0430*LDR -0.0201*LQR -0.4747*TSR + 3.3606)				
Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
BM	0.4326	0.1182	3.6614	0.0019*
CPS	-0.1708	0.0929	-1.8383	0.0836**
LDR	0.0430	0.0113	3.7991	0.0014*
LQR	-0.0201	0.0078	-2.5746	0.0197*
TSR	-0.4747	0.1418	-3.3477	0.0038*
C	3.3606	0.5933	5.6640	0.0000*

Source: Authors Compilation (2023)

NB: * 5% and ** 10% probability value respectively

Table 4 shows the short- and long-run effects of financial inclusion on economic growth. The results show that the error correction model (ECM) parameter represented by COINTEQ (-1) is significant at 5%, with a coefficient of -0.8747; hence, the adjusted parameter is significant and it has the correct theoretical sign. This implies that about 87% of any disequilibrium in the relationship between financial inclusion and economic growth, represented using gross domestic GDP per capita, can be restored within one year. This result is like that obtained by Wadkok (2018), who found that a short-run relationship exists between financial inclusion and economic growth.

In terms of the long-run effect of financial inclusion on economic growth, the findings revealed that broad money supply (BM) and loan-to-deposit ratio (LDR) have a significant positive effect on economic growth as a measure of financial inclusion. This implies that a 1%

increase in money supply by the federal government through the CBN to support the driver for financial inclusion will result in improvement in the lives of the citizens, as measured using gross domestic product per capita. Similarly, a 1% increase in LDR will result in 4.3% increase in economic growth. Barajas et al. (2016) and Nwafor and Yomi (2018) revealed that financial inclusion has a significant impact on economic growth. Makina and Walle (2019) also reveal that financial inclusion has a positive and statistically significant effect on economic growth in Africa. Shittu (2012) and Azege (2004) report that financial deepening drives economic growth. On the other hand, credit to the private sector (CPS), liquidity ratio (LQR), and Total Saving ratio (TSR) show significant negative coefficients, implying that these measures of financial inclusion do not propel economic growth in Nigeria. This means that an increase in credit to private sector, liquidity rate, and total savings rate will result in 17%, 2 %, and 47% decline in growth in the economy respectively. Between 1986 and 2007, Nzotta and Okereke (2009) opined that financial inclusion did not support economic growth in Nigeria. Furthermore. Bhattarai (2015) opined that overfinancing has reduced the level of growth in some developed countries with high financial development ratios, while a more prudent financial deepening method supports higher economic growth in emerging economies.

5 DISCUSSION

This study underscores the critical interplay between financial inclusion and economic development in Nigeria, supported by an extensive review of relevant literature and empirical evidence. The findings reveal a nuanced understanding of the multifaceted relationship between financial inclusion and economic growth, shedding light on both the positive and negative aspects. Using data from to 1981-2022 and employing the ARDL Bound Test, it was revealed that a short- and long-run relationship exists between financial inclusion and economic growth in Nigeria measured using gross domestic product per capita.

Specifically, in the long run, money supply and loan-to-deposit ratio as a measure of financial inclusion have a significant positive effect on economic growth, while credit to the private sector, liquidity ratio, and total saving ratio have significant negative coefficients, implying that these measures of financial inclusion do not propel economic growth in Nigeria. Thus, Financial inclusion has emerged as a fundamental driver of economic development with studies indicating its potential to enhance wealth creation, reduce poverty, and improve overall welfare and attain sustainable development. The integration of all sectors of the economy,

particularly the financial sector, is recognized as pivotal in fostering inclusive growth and mitigating disparities within Nigeria.

However, challenges, such as low levels of financial literacy, inadequate infrastructure, and regulatory constraints, hinder the full realization of the benefits of financial inclusion. Efforts to address these challenges must be prioritized to ensure that financial services reach all segments of the population, particularly marginalized and underserved. Policymakers, regulators, and financial institutions must collaborate to design and implement targeted interventions that promote financial inclusion while addressing the specific needs of diverse demographics. For instance, there is a need to increase the money supply, as this study shows that it has a significant positive effect on economic growth. Similarly, there is a need for more loans from banks in closing the wide gap between the total accumulated savings and the loans disbursed, especially to rural dwellers, business owners, and small and medium-sized enterprises who are in dire need of financial support, which will ultimately result in inclusiveness. Furthermore, the financial sector needs to embrace technological innovations and enhance financial literacy programs that can facilitate greater participation in the formal financial system, thereby fostering inclusive economic growth and sustainable development in Nigeria.

This study underscores the importance of advancing financial inclusion as a catalyst for driving economic development, empowering individuals, and building a more resilient and inclusive economy in Nigeria. By leveraging the insights gleaned from this research, stakeholders can chart a course toward a more prosperous and equitable future for all Nigerians.

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