DOES FINANCIAL INCLUSION LEAD TO POVERTY REDUCTION? A CASE STUDY IN NIGERIA

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ABSTRACT

This study examined if financial inclusion schemes have led to significant poverty reduction in Nigeria. Specifically, it examined how rural banks' credits (RBC), Rural Savings Mobilization (RSM), Number of Bank Branches (NBB) and Bank Lending Rate (BLR) have contributed to reducing poverty levels which was proxied by Household Consumption Expenditures (HCE). Annual Data were acquired from the CBN statistical bulletin from various years within the period 1985 -2023 and analyzed using OLS multiple regression after carrying out the Phillips-Perron Unit Root Test. The result revealed that RBC assert a positive insignificant impact on HCE with t-statistic and prob-value of (1.828139; 0.0763 > 0.05); RSM asserts a positive but significant impact on HCE with t-statistics and prob-value of (2.417841; 0.0211 < 0.05); NBB assert a significant positive impact on the HCE with a t-statistic and p-value of (9.722360; 0.0000 < 0.05); however, BLR has a negative and significant impact on HCE with a t-statistics and p-value of (-2.183577; 0.0360 < 0.05). The study recommended that the Central Bank of Nigeria needs to come up with effective MPR that can influence financial inclusion and alleviation of poverty. This will encourage accessibility to financial services at affordable cost for poverty reduction purposes.

Keywords: *Financial Inclusion, Poverty Reduction, Household Consumption Expenditure*

I. INTRODUCTION

Financial inclusion, as described by Ozili (2020), entails equitable access to financial services, providing individuals and businesses the opportunity to participate fully in economic activities. It serves as a vital mechanism for economic growth and poverty reduction, (Nnoje, Ozobialu & Nduokafor, 2024). Similarly, Olatunbosun (2023) identifies inclusive finance as the availability of diverse, high-quality financial products and services such as insurance, payments, savings, credit, and pensions, that are accessible, relevant, and affordable, particularly targeting low-income rural communities.

In many developing economies like Nigeria, financial inclusion has become a fundamental driver of economic development, especially where a large segment of the population lacks access to formal financial services, (Ukaoma & Inioluwa, 2024). On a global scale, financial inclusion has gained significance through initiatives like the World Bank's Global Findex Database, which tracks financial inclusion progress, and the United Nations' Sustainable Development Goals (SDGs), particularly Goal 8, which emphasizes sustainable and inclusive economic growth, (World Bank, 2018; United Nations, 2015). These initiatives highlight the role of financial inclusion in mitigating poverty and expanding economic opportunities, particularly in low-income regions, (Ukaoma & Inioluwa, 2024).

While Nigeria's financial system presents a dual structure, with a formal financial sector existing alongside a large informal economy. The informal sector - comprising unregistered businesses and self-employed individuals - contributes significantly to economic activities but remains excluded from formal financial services, (Ukaoma & Inioluwa, 2024). However, despite efforts from the Central Bank of Nigeria (CBN) and other stakeholders to enhance financial inclusion through the National Financial Inclusion Strategy (NFIS), progress has been uneven. While access to banking services has improved, substantial gaps persist, especially in rural regions where financial literacy is low and infrastructure is inadequate, (Central Bank of Nigeria, 2018).

As noted by Ibitoye, Ogundele, Monchin, Abraham, Ilugbusi, and Francis (2025), financial exclusion remains a critical factor driving poverty in Nigeria, limiting access to essential financial services that can economically empower individuals and communities. According to the World Bank, as of 2022, over 40% of Nigerians remained unbanked - a stark contrast to global averages. This disparity hampers poverty alleviation efforts, as limited access to credit, savings, and investment restricts both individuals and small enterprises. The 2021 Global Findex data highlights that financial exclusion is more prevalent in rural areas with minimal banking infrastructure, as well as among vulnerable groups such as women and young people, (World Bank, 2021).

The Nigerian government has implemented various initiatives, including the NFIS, to enhance financial inclusion, yet considerable challenges persist. Poverty remains a pervasive issue, with a substantial portion of the population living below the poverty line, (Agba, Agba, Ushie & Akwara, 2024). The nation's economy continues to grapple with high unemployment, low-income levels, and restricted access to financial services, exacerbating poverty, (Ezeudu & Tukur, 2024). Given these realities, this study seeks to examine the extent to which financial inclusion strategies have contributed to poverty reduction in Nigeria by investigating the impact of financial inclusion on poverty reduction in Nigeria from 1985 to 2023. The rest of this paper is structured into four sections. Section two concerns review of related literature, section three is the methodology section four is empirical analysis while section five is conclusion and recommendations.

This study holds substantial relevance for policymakers, financial institutions, development practitioners, and academic researchers seeking to understand and address poverty through financial inclusion in Nigeria. By investigating the relationship between financial inclusion strategies and poverty reduction, the study contributes fresh insights into how access to financial services can transform the economic well-being of the underserved populations-particularly rural dwellers, women, and youth.

Given the stark reality that over 40% of Nigerians remain unbanked despite national efforts like the National Financial Inclusion Strategy (NFIS), this study provides a timely evaluation of such initiatives, uncovering their efficacy, shortcomings, and potential for improvement. As financial exclusion continues to hinder economic empowerment and perpetuate poverty, the findings will help refine existing frameworks and guide future reforms tailored toward inclusive economic growth.

Furthermore, in a country grappling with unemployment, low incomes, and limited financial access, the study serves as a critical tool for enhancing sustainable poverty alleviation models. It advances academic discourse on inclusive finance while equipping decision-

makers with evidence-based recommendations to foster equitable development across all socio-economic segments.

II. LITERATURE REVIEW

This section provides a comprehensive examination of key concepts and empirical studies on financial inclusion and poverty reduction, enhancing the understanding of this research.

Financial Inclusion

Agbenyo, Jiang, and Antony (2019) emphasize that evaluating financial inclusion begins with identifying indicators that assess the accessibility, usage, and quality of financial services within a country. Additionally, promoting a sustainable, efficient, and accessible financial system in rural areas for economically marginalized populations can significantly boost productivity and contribute to poverty alleviation. In terms of lending, banks play a crucial role by holding equity and extending credit to finance various projects.

El-Said, Emara, and Pearlman (2020) define financial inclusion as individuals' ability to access and utilize financial products and services. Similarly, Oladimeji and Adegbite (2019) describe it as a process ensuring the ease of access, availability, and utilization of formal financial systems for all members of an economy through diverse financial service providers.

Beyond accessibility, financial inclusion also entails delivering financial services at affordable costs to low-income and disadvantaged segments of society, (Anthony-Orji, Orji, Ogbuabor & Nwosu, 2019). It encompasses formal financial services such as bank accounts, credit, savings, and other banking solutions, (Anthony-Orji, Ideba, Orji, Duru, Ifurueze, Nwaimo & Amako, 2023; Anthony-Orji, Orji, Jude & Ogbuabor, 2023).

Onyinye, Anthony-Orji, Igwe, Isaac, Jude, and Nwufo (2023) propose a three-dimensional assessment of financial inclusion: Access, Usage, and Quality. Access gauges individuals' and businesses' ability to obtain financial services, including savings, credit, insurance, and payment solutions. Usage evaluates the frequency and extent of service utilization, while Quality examines financial services in terms of cost, transparency, and reliability.

Measurements of Financial Inclusion

Mobilization of Credits and Savings in Rural Banks

The Rural Banking Scheme (RBS), introduced in 1977, aimed to instill banking practices among rural communities by encouraging savings, and improving access to credit for active rural dwellers, which would ultimately help to reduce the outflow of people and capital from rural to urban areas (Okafor, 2011).

The scheme initially centered on setting up commercial bank branches in rural locations, the initiative has since transformed into various models including People’s Banks, community banks, microfinance institutions, points-of-sale services, and agent banking platforms. In Nigeria, EFINA (2008) found that nearly fifty-three percent of adults lacked access to financial services, leading to a widespread financial exclusion in the country.

Rural Bank Credit Provision

Rural bank credit refers to the financial services offered by banking institutions based in rural communities, to small and medium-sized enterprises (SMEs), individuals, and agricultural ventures. These credit facilities play a key role in driving economic growth, boosting productivity, and alleviating poverty. Orji, Uwaeke, Ndukwe-Ani, Inya and Chima (2024) highlight that access to credit empowers low-income households and small businesses to invest in ventures that generate income.

Mobilization of Rural Savings

Rural savings mobilization encompasses demand, time deposits collected by deposit money banks (DMBs) operating in rural settings. These deposits typically come from low-wage earners, farmers, and owners of cottage and micro-enterprises. Jolaiya (2023) emphasis that mobilizing these savings significantly contributes to rural development by facilitating investments and enhancing income-generating activities.

Number of Bank Branches

The number of bank branches is commonly used as an indicator of financial accessibility. It reflects how physically reachable financial services are within a given location. Lawal, Abubakar, and Salau (2020) note that a greater number of branches improves convenience and closeness for rural residents facing geographical limitations. This view is supported by Ogbeide and Igbinigie (2019), who stress that expanding branch networks is vital for promoting inclusive finance and reducing rural poverty.

Lending Rates and Credit Accessibility

Bank lending rates represents the interest applied by financial institutions on loans, serving as a critical factor in determining access to credit. As noted by Otunaiya, Bamiro and Adeyemi (2020), higher interest rate tends to deter borrowing, particularly among economically disadvantaged rural populations. Consequently, elevated lending rates pose a significant obstacle to inclusive finance and limit credit access in rural Nigeria (Otunaiya, Bamiro & Adeyemi, 2020; Jolaiya, 2023).

Poverty Reduction and Rate in Nigeria

Poverty, a socio-economic issue characterized by scarce financial resources and low living standards, is particularly pronounced in Nigeria, (Umar, 2013). The devastating effects of poverty on individuals and communities remain alarming, (Ogbeide & Igbinigie, 2019).

Efforts to combat poverty require a blend of effective government interventions and collective societal actions. Variables influencing poverty alleviation are significant both conceptually and practically. Poverty reduction entails a broad range of economic and social measures aimed at permanently improving living standards for the impoverished, (Onaolapo, 2015).

Andrew, Ozobialu, and Nduokafor (2024), referencing Aliu (2023), highlight a surge in Nigeria's poverty rate, rising from 46.7% in 2010 to 69.0% in 2012. Economic instability,

inflation, and inadequate infrastructure disproportionately affected vulnerable groups, exacerbating the crisis. After peaking in 2012, the poverty rate fluctuated. A reduction to 33.1% in 2013 signaled early recovery efforts, but stagnation persisted through 2014 and 2015, indicating limited success in poverty alleviation. By 2016, the rate spiked to 62.6%, reflecting Nigeria's severe economic recession due to oil price declines and internal conflicts.

Between 2017 and 2019, poverty rates gradually declined, stabilizing at 40.1%, yet regional disparities remained stark, especially between northern and southern Nigeria. The COVID-19 pandemic in 2020 and 2021 led to economic disruptions, causing job losses and declining incomes, keeping poverty levels stagnant at 40.1%. In 2022, the rate slightly rose to 40.7%, with an estimated 88.4 million Nigerians living in extreme poverty, underscoring persistent challenges such as high inflation and the absence of robust social safety programs.

Theoretical Review

To explore the relationship between financial inclusion and poverty reduction, two key theories or hypotheses were utilized:

Financial Intermediation Theory

Developed by Schumpeter (1934) and further expanded by Goldsmith (1969) and Shaw (1973), the Financial Intermediation Theory highlights the essential role of financial institutions - such as money and capital markets - in economic growth. These intermediaries facilitate the transfer of funds from surplus units to deficit units, ensuring efficient capital allocation. Without financial intermediation, economic progress would be severely hindered.

McKinnon (1973) reinforced this theory by demonstrating a direct relationship between capital accumulation and the demand for money. That is, economic investment and growth depend on the availability of financial resources. Financial intermediaries mobilize savings, which can then be invested in wealth-generating opportunities, such as real estate acquisition and business development, fostering both rural and urban economic advancement.

Stage of Development Hypotheses

Building upon the Financial Intermediation Theory, Patrick (1996) introduced the Stage of Development Hypothesis, which comprises two interrelated perspectives: the supply-leading hypothesis and the demand-following hypothesis.

- In the early stages of development, the supply-leading hypothesis asserts that financial system growth stimulates economic progress.
- As the economy matures, the demand-following hypothesis suggests that financial development responds to economic expansion, with increased real sector growth driving demand for financial services.

While Patrick (1996) emphasizes both perspectives, some economists favor the demand-following hypothesis, including Robinson (1952) and Levine (1997), who argue that financial development follows enterprise growth within the broader economy.

A fundamental assumption underlying both theories is the central role of financial institutions in driving economic development through financial intermediation. By extending financial

services to underserved populations - particularly those in rural areas - these intermediaries contribute to sectoral growth and poverty reduction.

Empirical Review

The relationship between financial inclusion and poverty reduction has been extensively documented. Various studies underscore the role of financial inclusion in fostering economic growth and reducing inequality. The most recent one is Ibitoye, Ogundele, Monehin, Abraham, Ilugbusi, and Francis (2025) that examined the broader challenges of financial inclusion and poverty reduction in Nigeria from 2013 to 2023. Using World Bank global database indicators such as GDP, private sector credit, non-performing loans, and poverty headcount ratios, the study identified major obstacles, including limited credit access, low financial literacy, and disparities in banking infrastructure across urban and rural areas. Despite governmental initiatives, financial inclusion remains inadequate, prompting recommendations such as improving financial literacy programs, expanding fintech solutions, strengthening microfinance institutions, and fostering public-private collaborations.

Looking at impact on GDP, Ukaoma and Inioluwa (2024) explored how mobile money, banking services, and credit availability affect national economic performance. Their study employed multiple linear regression, Pearson correlation, and Granger causality tests, concluding that mobile money subscriptions had a marginally significant positive effect on GDP growth, whereas traditional banking services showed no significant correlation. These findings highlight mobile money as a key driver of financial inclusion, contrasting with the limited role of conventional banking institutions.

Further insights on financial inclusion through technological adoption on poverty alleviation in Nigeria by Nnoje, Ozobialu, and Nduokafor (2024) showed mixed results. The study investigated the impact of ATMs, POS systems, and mobile payments on poverty alleviation in Nigeria. Using trend analysis and error correction models, the study found that ATMs and mobile payments significantly reduce poverty by increasing access to financial services and enabling economic participation. However, POS systems exhibited limited impact, likely due to accessibility constraints in rural areas.

Olatunbosun (2023) investigated its impact on rural development in Nigeria, modeling GDP per capita as a function of financial inclusion variables such as rural savings mobilization, rural bank credits, and lending rates. Using time series data and an ex post facto research design, the study found a long-term relationship between financial inclusion and rural development, with the error correction model showing that 6.44% of short-term errors were corrected per period. The study concluded that rural savings mobilization and bank credit significantly contribute to rural development, while lending rates have a negative but insignificant effect.

Adegboyegun, Ademola, and Kazeem (2020) analyzed financial inclusion's effect on Nigeria's economic growth using Auto Regressive Distributed Lag models and causality techniques for the period 1986–2018. Their study examined key financial indicators such as GDP, rural loans, rural deposits, bank branches, and interest rates. Findings suggested that financial inclusion had a strong positive impact on economic growth, while interest rates exerted a significant negative influence. The causality test revealed a unidirectional

relationship between financial inclusion and economic growth, primarily driven by rural loans.

Research by Obayori and George-Anokwuru (2020) confirmed that access to and effective utilization of financial services contribute to economic growth, both in the short and long run. Their study, covering the years 1981–2018, used the ARDL model and analyzed annual data from the CBN Statistical Bulletin and World Bank reports. While per capita income showed a negative correlation with economic growth, the relationship remained statistically significant.

Similarly, Ogbeide and Igbinigie (2019) explored the impact of financial inclusion on poverty alleviation in Nigeria using data from 2002 to 2015, sourced from the World Bank indicators. The study employed ordinary least squares regression analysis and found that financial inclusion positively influences per capita income, lowers poverty levels, and improves living standards. Specifically, commercial bank branches per 100,000 adults were associated with higher per capita income and improved living conditions. However, depositors per 1,000 adults had a negative but statistically insignificant effect on poverty alleviation, while borrowers per 1,000 adults showed a positive relationship with per capita income but were also statistically insignificant. Additionally, the presence of automated teller machines enhanced financial inclusion and income generation, though the findings were not statistically significant.

III. METHODS

Research Design

This research employs secondary time series data sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin (2025), covering the period from 1985 to 2023. The study adopts an ex post facto research design, selected due to the nature of time series data. This approach integrates theoretical reasoning with empirical observation, providing a reliable framework for examining the relationships between financial inclusion and poverty reduction, as highlighted by Baghebo and Atima (2013).

Through this design, researchers can accurately observe the effects of the explanatory variables on the dependent variable. To ensure robustness in estimation, the study applies unit root tests, correlation matrix analysis, and least square econometric methods to determine the coefficient of parameter estimates.

Model Specification

The model specification builds upon frameworks developed by Iwedi, Wachuku, and Amadi (2024), as well as Onyejiaku, Ngong, Kum, and Nebasi (2024), who utilized final household consumption expenditure as a proxy for poverty alleviation, diverging from studies such as Ogbeide and Igbinigie (2019) and Olatunbosun (2023), which employed GDP per capita income as a reference measure.

Enhancing Olatunbosun's (2023) framework, which considers financial inclusion proxies such as rural savings, rural credits, and bank lending rates, this research incorporates the number of bank branches as an additional indicator of financial access, following the approach of Obayori and George-Anokwuru (2020). This refinement shifts the focus from

conventional financial inclusion proxies such as POS systems and ATMs, offering a more nuanced perspective on access to financial services within Nigeria.

The functional model for the study is given below:
HCE = f(RBC, RSM, NBB, BLR) ……(1)

Where:
HCE = Households Consumption Expenditure @ current price;
RBC = Rural Banks' Credits;
RSM = Rural Savings Mobilization (Deposits);
NBB = Number of Bank Branches;
BLR = Bank Lending Rate;
The relationship can be formulated into an econometric equation thus:
$HCE_t = \beta_0 + \beta_1(RBC)_t + \beta_2(RSM)_t + \beta_3(NBB)_t + \beta_4(BLR)_t + \mu_t$ ……. (2)
To eliminate disparity in the data, the model is converted to natural logarithm, thus, equ 2 becomes:
$LnHCE_t = \beta_0 + \beta_1(LnRBC)_t + \beta_2(LnRSM)_t + \beta_3(LnNBB)_t + \beta_4(LnBLR)_t + \mu_t$ …. (3)

Where:
β_0 is a constant or intercept, β_1, β_2, β_3 and β_4 are regression coefficients, μ is the stochastic error term.
Characteristics of each variable were ascertained with the use of descriptive statistics, correlation matrix and unit root test, Ln represent natural logarithm.
The a priori expectation of this model is that all the independent variables should have a positive relationship on the dependent variable (HCE). The A-priori signs of the explanatory variables are represented as; $\beta_0 > 0$; β_1, β_2, $\beta_3 > 0$; $\beta_4 < 0$ implying that a unit increase in the independent variables will lead to increase in HCE by the value of the coefficient of the respective independent variable except the β_4.

IV. DISCUSSION OF RESULTS

Table 4.1 Descriptive Statistics of Financial Inclusion and Poverty Reduction Proxies

	Households Consumption Expenditure ₦'Billion - HCE -	**Rural Banks' Credits ₦'Billion - RBC -**	**Rural Savings Mobilization (Deposits) ₦'Billion - RSM -**	**Number of Bank Branches - NBB -**	**Bank Lending Rate % - BLR -**
Mean	34124.10	104.3386	88.14878	3645.487	17.83278
Median	10716.10	15.59050	13.41181	3247.000	17.55502
Maximum	141696.8	988.5879	798.7996	5809.000	29.80000
Minimum	82.23772	0.114900	0.019723	1297.000	9.250000
Std. Dev.	42954.87	225.9801	177.1435	1616.618	4.193864
Skewness	1.080750	2.705307	2.460543	0.081471	0.566782
Kurtosis	2.811904	9.340856	8.695713	1.316954	3.988654
Jarque-Bera	7.649629	112.9069	92.06963	4.646193	3.676409
Probability	0.021822	0.000000	0.000000	0.097970	0.159103

Sum	1330840.	4069.203	3437.802	142174.0	695.4785
Sum Sq. Dev.	7.01E+10	1940545.	1192433.	99311230	668.3627
Observations	39	39	39	39	39

Source: *Author's Computation using E-Views, (2025).*

Table 4.1 contain the descriptive statistics of the variables based on observations collected over the period spanning from 1985 to 2023. As reported in the table, the mean of Households Consumption Expenditure (HCE), Rural Banks' Credits (RBC), Rural Savings Mobilization (RSM), Number of Bank Branches (NBB) and Bank Lending Rate (BLR) stood at ₦34,124.1 Billion, ₦104.34 Billion, ₦88.15 Billion, 3645.49, and 17.8% respectively.

Minimum and maximum value shows the lowest and highest figure reported for each of the variables. Specifically, the maximum and minimum values reported in the table above stood at ₦141,696.8 Billion and ₦82.24 Billion for HCE, ₦988.59 Billion and 0.115 Billion for RBC, ₦798.80 Billion and ₦0.0197 Billion for RSM, 5,809 and 1297 for NBB, 29.8% and 9.25% for BLR.

The skewness statistics also revealed that the variables HCE, RBC and RSM used in the study are positively skewed and is said to be long-right tailed (skewness greater 1) while NBB and BLR are skewed towards normality (value not greater 1).

Furthermore, kurtosis revealed that the variables HCE and NBB are mesokurtic (value < 3), while other variables; RBC, RSM and BLR are leptokurtic given a kurtosis value greater than 3. In specific terms, kurtosis statistics stood at 2.812, 9.341, 8.969, 1.317, and 3.989 for Households Consumption Expenditure (HCE), Rural Banks' Credits (RBC), Rural Savings Mobilization (RSM), Number of Bank Branches (NBB) and Bank Lending Rate (BLR) respectively under the period under consideration.

The standard deviation shows the deviation of the variables from the sample mean while the median shows the middle values of each of the mean values of the variables.

Table 4.2 Correlation Matrix of the Datasets

	LNHCE	**LNRBC**	**LNRSM**	**LNNBB**	**LNBLR**
LNHCE	1.000000	0.875533	0.269881	0.954698	-0.229233
LNRBC	0.875533	1.000000	0.325200	0.851785	-0.094124
LNRSM	0.269881	0.325200	1.000000	0.134796	-0.043369
LNNBB	0.954698	0.851785	0.134796	1.000000	-0.151085
LNBLR	-0.229233	-0.094124	-0.043369	-0.151085	1.000000

Source: *Author's Computation using E-Views, (2025).*

Table 4.2 above gives a preliminary idea of the relationship between Households Consumption Expenditures (HCE) and the independent variables that should be expected in the regression analysis. The table shows that Rural Banks' Credit (RBC) will have a strong positive relationship (0.876) on HCE with a value greater than 0.5 based on the rule of thumb; However, the result show that rural savings mobilizing has a weak positive (0.269)

link with HCE meaning it might play a role but not significant with a value less than 0.5 (average).

The result also shows that more number of bank branches, NBB (0.955) likely improve access, driving financial inclusion and thus, more household consumption with a strong positive on HCE; however, higher Bank Lending Rate (BLR) could discourage borrowing, which may reduce HCE with a weak negative value (-0.229) on HCE.

It can be observed that all other correlations with LNBLR are negative, suggesting higher interest rates don't support financial inclusion variables.

This snapshot suggests that increasing access to rural banking services, like more branches and better credit availability positively impacts household spending. On the flip side, high lending rates could stifle that benefit.

Table 4.3 Summary of Phillips-Perron Unit Root Test Statistic

Phillips-Perron Unit Root Test Statistic			
	Variables	**T-Statistic**	**Probability**
Level - Trend and Intercept	LnHCE	-0.386682	0.9846
	LnRBC	-10.05037	0.0000
	LnRSM	-1.878409	0.6460
	LnNBB	-1.499734	0.8122
	LnBLR	-4.805690	0.0022
First difference - Trend and Intercept	LnHCE	-6.013587	0.0001
	LnRBC	-14.46506	0.0000
	LnRSM	-4.646237	0.0034
	LnNBB	-5.198119	0.0008
	LnBLR	-8.420662	0.0000

Source: *Author's Computation using E-Views, (2025).*

According to the Phillips-Perron Test results, there is unit roots in the level form of three variables; therefore, the null hypotheses cannot be rejected at the levels of variables because the values are non-stationary.

On the other hand, when taking the first differences of all the variables, the null hypotheses are rejected at the 5% significance level which also has a t-statistics that is lesser than all critical values and a probability value below 0.05. This means that the series are stationary in their first difference or integrated of order one, I (1). Therefore, the relationship between variables can be analyzed using Least Square technique.

Table 4.4 Ordinary Least Square

Dependent Variable: LNHCE
Sample: 1985 – 2023
Included observations: 39

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	-21.63952	3.499576	-6.183469	0.0000
LNRBC	0.182907	0.100051	1.828139	0.0763

LNRSM	0.093730	0.038766	2.417841	0.0211
LNNBB	3.995968	0.411008	9.722360	0.0000
LNBLR	-0.920359	0.421492	-2.183577	0.0360

Adjusted R-squared	0.937503	S.D. dependent var	2.449227
S.E. of regression	0.612293	Akaike info criterion	1.975999
Sum squared resid	12.74671	Schwarz criterion	2.189276
Log likelihood	-33.53197	Hannan-Quinn criter.	2.052521
F-statistic	143.5067	Durbin-Watson stat	0.649825
Prob(F-statistic)	0.000000		

Source: *Author's Computation using E-Views, (2025).*

Sighting the E-views regression output in table 4.4, the Adjusted R-squared reported is pegged at 93.75%, positing a strong linear relationship between Households consumption expenditures (a proxy of poverty reduction) and the independent variables selected for finance inclusion.

The adjusted R-square indicates the fit of the model; that is, 93.75% of the variation in the dependent is being caused by all the independent variables which is statistically significant. This is further supported by the probability of the F-Statistics (0.0000 < 0.05).

Interpretation of Regression Coefficients

According to Regression Coefficients, the values of the model are given below as;

$LnHCE_t = \beta_0 + \beta_1(LnRBC)_t + \beta_2(LnRSM)_t + \beta_3(LnNBB)_t + \beta_4(LnBLR)_t + \mu_t$ …. (3)

Where:

HCE = Households Consumption Expenditure @ current price; **RBC** = Rural Banks' Credits; **RSM** = Rural Savings Mobilization (Deposits); **NBB** = Number of Bank Branches; **BLR** = Bank Lending Rate; $\boldsymbol{\beta_0}$ is an intercept, $\boldsymbol{\beta_1}$, $\boldsymbol{\beta_2}$, $\boldsymbol{\beta_3}$ and $\boldsymbol{\beta_4}$ are regression coefficients, **μ** is the stochastic error term.

A-priori signs of the explanatory variables are represented as; $\beta_0 > 0$; β_1, β_2, $\beta_3 > 0$; $\beta_4 < 0$ implying that a unit increase in the independent variables will lead to increase in HCE by the value of the coefficient of the respective independent variable except the β_4.

$LnHCE_t = -21.64 + 0.18(LnRBC)_t + 0.09(LnRSM)_t + 3.99(LnNBB)_t - 0.92(LnBLR)_t + 2.45(\mu)_t$

Constant ($\boldsymbol{\beta_0}$): The negative (-21.64) and significant sign (p-value = 0.000 < 0.05) suggests that when all independent variables are held at zero, poverty persist at a high baseline without financial inclusion proxies. This might also reflect other structural or socio-political barriers outside the scope of this study or financial inclusion in general. Based on the apriori expectation, a positive value is expected, but its negativity could imply latent constraints, such as financial aids, and other barriers.

(RBC) Rural Bank Credits ($\boldsymbol{\beta_1}$): Although the sigh is positive (0.18) as expected, it is insignificant with p-value (0.076 > 0.05). This suggests limited or inconsistent access to credit for the rural poor, perhaps due to certain challenges, thus, **$H_0$1:** is accepted.

(RSM) Rural Savings Mobilization (β_2): The significance (p-value = 0.0211 < 0.05) and positive coefficient (0.0937) reinforce that encouraging rural savings can play a meaningful and significant role in reducing poverty. This result reflects increasing financial literacy or trust in banking institutions, thus, **$H_0$2:** is rejected.

(NBB) Number of Bank Branches (β_3): The large positive (3.995) and significant impact (p-value = 0.000 < 0.05) of bank branches suggests that geographical access is a crucial enabler of financial inclusion. More branches mean more opportunities for people to engage in financial services, thus, **$H_0$3:** is rejected.

(BLR) Bank Lending Rate (β_4): As hypothesized, higher lending rates suppress financial access. The significant (p-value = 0.036 < 0.05) and negative (-0.92) impact underlines that cost of borrowing is a barrier of financial inclusion, sighting one of the factors that hinders RBC above, especially among rural and low-income populations.

Stochastic Error (μ): (2.449) Estimates the value of every other variables that influences poverty reduction but not consider in the study.

Policy Implications

The study conforms to stages of development hypotheses by Patrick (1996) which talks about the demand-following and financial development theory. A fundamental assumption underlying both theories according to Patrick (1996) is the central role of financial institutions in driving economic development through financial intermediation. By extending financial services to underserved populations - particularly those in rural areas - these intermediaries contribute to sectoral growth and poverty reduction.

While the results obtained in this study is similar to that of Olatunbosun (2023) and Adegboyegun, Ademola, and Kazeem (2020) that investigated financial inclusion's effect on poverty reduction. Their studies also find lending rates to be negatively impacting on financial inclusion schemes and poverty reduction, thus findings of the present paper highlight the necessity for targeted interventions to improve financial inclusion in Nigeria, especially among marginalized and rural populations. The key policy implication is the need to moderate bank lending rate. As noted in the study, bank lending rate remains a major barrier to accessing credits for economic activities, particularly in rural areas where banking infrastructure is weak.

V. SUMMARY, RECOMMENDATIONS AND CONCLUSION

In the heart of an emerging economy like Nigeria where poverty lingers like an unwelcomed shadow, questions have stirred how to measure progress against poverty. Many authors including Ogbeide and Igbinigie (2019) and Olatunbosun (2023) have looked at poverty reduction using income, others, to GDP, however, the present study proxied poverty reduction using household consumption expenditure based on the frameworks developed by Iwedi, Wachuku, and Amadi (2024), as well as Onyejiaku, Ngong, Kum, and Nebasi (2024). While findings of this study have shown the important role financial inclusion plays in poverty reduction, the results showed that rural savings mobilization and number of bank branches are significantly helping in reduction of poverty in Nigeria, although, sighting that rural banks' credits can go a long way in reducing poverty but this proxy is significantly

constrained by the bank lending rate underlining that cost of borrowing is a significant barrier of financial inclusion.

Based on the results obtained in this study, we conclude that financial inclusion schemes have significant potential of reducing poverty in Nigeria by bringing the unbanked population into the system if channeled with appropriate policies.

Recommendations

Based on the results obtained, the following suggestions are put forward:

Theoretically, financial institutions should increase credit to the poor, especially in rural areas at moderate cost, however, since this study finds bank lending rate unfavorable to the rural and low-income earners, the study suggest that the Central Bank of Nigeria needs to come up with effective monetary policy rate that can influence financial inclusion and alleviation of poverty. This will encourage accessibility to financial services at affordable cost for poverty reduction purposes.

In addition, strengthening financial literacy programs, promoting inclusive banking models, and fostering collaboration with fintech firms could significantly improve financial inclusion in Nigeria, ultimately contributing to sustained economic growth and enhanced welfare for the population.

Lastly, to maximize the poverty reducing potential of financial inclusion schemes, stakeholders, including policymakers, financial institutions, and technology providers must continue to invest in expanding access to financial services, particularly in underserved regions as the result of this study showed that number of bank branches is a major factor that drive accessibility in terms of financial inclusion.

Suggestion for Further Studies

Future studies could involve the application of other government, monetary and fiscal policies as explanatory variables to understand what affects finance inclusion schemes from achieving its purpose aside bank lending rates as identified as one of the barriers. In the same vein, future studies can also utilize credits targeted at specific real sectors that are capital deficient, to understand which sector to be prioritized and targeted with adequate credits in order to reduce poverty in the country.

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