Impact Assessment of Microfinance Banks on Poverty Alleviation in Nigeria

Marafa, Abbas Abdullahi Ph.D.
Department of Economics
Baze University, Abuja
abbas.marafa@bazeuniversity.edu.ng

Abstract: *Microfinance has remained one of the most widely used tools for reducing poverty rates worldwide. This study examined the impact of microfinance banks on poverty alleviation in Nigeria between 1992 and 2023 using the ARDL model approach. The study found that in the long run, the size of microfinance banks and the number of microfinance bank customers significantly reduce poverty, while microfinance bank loans and the number of microfinance banks showed positive but statistically insignificant effects in reducing poverty rate. On the other hand, the coefficient of the short-run dynamics indicated that the poverty rate continued to increase notwithstanding the size of several microfinance banks, while microfinance loans and the number of microfinance bank customer significantly reduce the poverty level within a short time period. The study recommends the repositioning of microfinance banks via recapitalization to enhance their liquidity, improve supervisory oversight to ensure delivery of their services to the targeted population, and improve infrastructure, specifically in rural areas, to widen their coverage.*

Keywords: Autoregressive Distributed Lag Model; Microfinance Banks; Nigeria; Poverty Alleviation
JEL Code: E6, G6

Introduction

The issue of poverty, which is associated with economic, social, and political deprivation, has been an increasing phenomenon and a global concern in the last three decades. The dimensions, measurements, implications, and way out of poverty have been a continuing subject of discussion by both academicians and policy analysts till date. Poverty, in both absolute and relative terms, is a state where an individual is unable to adequately cater for basic needs; meet social and economic obligations, and has limited access to fundamental social and economic infrastructures (Chepkwei, 2020; Obaigbo, 2022).

It was estimated by (World Bank [WB], 2024) that about 700 million people (8.5% of the global population) live in extreme poverty of less than $2.15 per day. Furthermore, around 3.5 billion (44% of the global population) remain poor by the standard relevant for upper middle-income countries of $6.85 per day. Still yet, Sub-Saharan Africa, which accounted for 16% of the world's population, has about 67% of the people living in extreme poverty. Same report revealed that in Nigeria, it was estimated that the poverty rate is around 46% in 2024, which is expected to be as high as 56% in 2025 due to the COVID-19 recession, insecurity, natural disaster, high inflation, and the removal of fuel and energy subsidies.

Experts have long acknowledged that the lack of access to financial services required for productive investment from the formal financial institutions is responsible for poverty

(Chepkwei, 2020; Stanley & Ezeanyeji, 2017). It was argued by (WB, 2022) that most residents in developing economies, including Nigeria, lack access to formal financial services and are impoverished as a result. Therefore, the availability of financial services inform of credit, particularly to the rural poor and low income earners, is thus considered a very essential means of alleviating poverty. The underlying idea is that increased access to financial resources relaxes the liquidity constraints and disadvantaged households face, enabling them to engage in economic activities that generate income and dynamic growth (Rulle et al., 2008). Consequently, countries across the world tend to fashion out means to alleviate poverty through the promotion of diverse financial policies targeted at poverty reduction (Thrikawala et al., 2013). Prominent among these policies in Nigeria is the introduction of a microfinance scheme specially tailored towards the provision of microfinance services to the poor (Stanley & Ezeanyeji, 2017; Abiyeyi, 2020). Enabling the poor to engage in various economic activities will lead to self-reliance, generate employment, increase income, and improve the standard of living (UN Report, 2020). Chepkwei (2020) affirmed that microfinance banks are anti-poverty in nature.

For over two decades, Micro-Finance Banks (MFBs) in Nigeria have continued to avail a series of financial services to low-income earners and their microenterprises with the principal objective of empowering them financially to undertake economically productive ventures capable of generating income and pushing them out of poverty (Awojobi, 2019; Mecha, 2017). They provide a broad range of financial services such as deposits, savings, loans, money transfer, payment system, insurance, and other services to the deprived and meager-income households that were debarred from orthodox pecuniary services for the nonexistence of security in addition to non-financial services (Al-Shami et al., 2014; Gyimah & Boachie, 2018).

However, despite the introduction of MFBs, the poverty incidence is yet to reduce significantly (Akanni, 2022). Over 40 percent of Nigerians (equivalent to 83 million individuals) live below the poverty line, while another 25 percent (equivalent to 53 million individuals) are helpless; this has increased by another 2 million due to the COVID-19 pandemic (World Bank, 2024). This number is expected to increase due to subsidy withdrawal, constraints in reaching dispersed poor client, especially in rural areas, due to a lack of improved infrastructural services, resulting in increased unemployment, impoverished lives, and difficulty in attracting funds (Akanni, 2022).

Based on the foregoing, empirical literature on the effects of MFBs services on poverty level in Nigeria is characterized with varying outcomes, hence, inconclusive. The objective of this study is to contribute to the debate by trying assessing the impact of microfinance banks on Poverty alleviation in Nigeria?

Literature Review

Concept of Microfinance

Microfinance is a term used to denote diverse methods of providing access to financial services to the poor people (Araga et al., 2022; Osamwonyi & Obayagbona, 2012). They are nicknamed "micro" because of their low interest rates, which are a blessing to the poor who depend on them to keep their small enterprises viable and provide for their families (Araga et al. 2022). Microfinance involves building a system of finance that effectively and efficiently addresses the financial needs of the economically disadvantaged section of the populace like the masses, the unemployed, low-income clients (individuals, families, and businesses) and rural persons to participate in the market economy, who traditionally lack access to banking and related services (Central Bank of Nigeria [CBN], 2013; Osamwonyi & Obayagbona, 2012;

Stanley & Ezeanyi, 2017). It encompasses both formal and non-formal financial organizations that provide microfinance services to low-income people (Araga et al. 2022). The idea of microfinance is to create a system of change in the financial system worldwide as a strategy for fighting global poverty, promoting economic empowerment of the masses, and facilitating financial inclusion (Godfrey, 2022; Stanley & Ezeanyi, 2017; Godfrey, 2022; Osamwonyi & Obayagbona, 2012).

Concept of Poverty and Poverty Alleviation

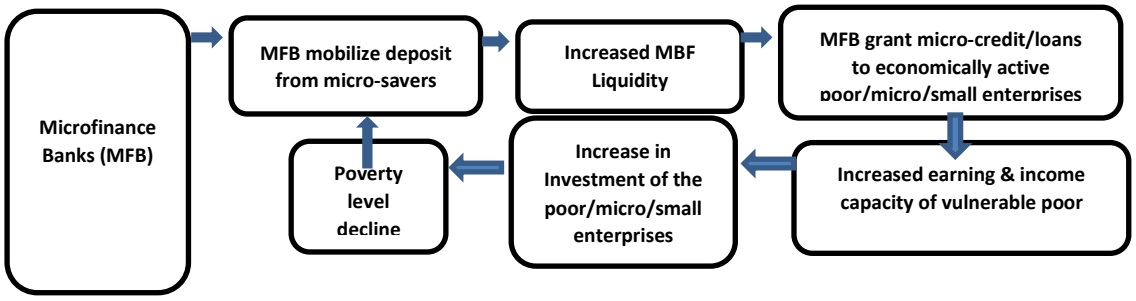
Poverty is generally seen as a lack of resources that moderates livelihood. It is a condition in which the resources of individuals or families are grossly insufficient to offer a socially acceptable standard of living (African Development Bank [ADB], 2018; Ifamose, 2001; Akanni, 2022). Poverty is seen as dearth of material resources of a certain period and to such an extent that participation in normal activities and ownership of amenities and living conditions become very limited or impossible (WB, 2022).

Poverty eradication is seen as enabling or empowering individuals to get them out of poverty; not only to increase the income and assets of households or individuals but also to increase the social services and security of the people (Kasali et al., 2015). It involves the development of human capital and the availability of infrastructural facilities that will support the efficiency of the poor (Calderon & Serven, 2010). It involves implementing strategies and policies to improve the living standards, access to basic needs, and economic opportunities for people living in poverty.

The Nexus between Microfinance Banks and Poverty Alleviation

The conceptual link between MFBs and poverty alleviation is explained through their financial intermediation responsibilities (CBN, 2013; Mago, 2014). MFBs provides financial services to the poor and their micro enterprises through deposit mobilization, which in turn increase the liquidity level of the bank to extend micro loans/credits to empower the economically active poor, and their micro enterprises, which is expected to increase their earning and income capacity (Christensson, 2017; Obayagbona, 2018), thereby increasing investment flow into the rural areas, and create employment opportunities, and in turn make the poor earns more, accumulate assets, increase productivity and ultimately leads to a decline in poverty, as illustrated in Figure 1.

Figure 1:
Link between Macrofinance Band and Poverty Level



Source: Onyele, and Onyekachi-Onyele. (2020), PP-260.

Theoretical Review

This study is anchored on two theories – the Vicious Circle of Poverty theory and the theory of the Grameen Model.

The Vicious Circle of Poverty theory posits that poverty is caused by a low level of income, which engenders low savings and consequently leads to low investment, which in turn provokes low productivity, and the circle continues (Jhingan, 2005). In other words, the theory postulates that an individual or a country is poor as a result of fewer saving, less capital formation, low productivity, and low income (Akanni, 2022). This infers that a circular assemblage of forces tending to act and react upon another in such a way as to keep poor people or a country in a state of poverty. In LDCs, total productivity is low owing to a low level of real income that results to a low level of demand, which in turn leads to a low rate of investment and thus back to a deficiency of capital to low productivity, and a low level of real income. The vicious circle of poverty is seen as a pattern of behaviour not easily revertible and impossible to be broken as poor people lack enough resources to escape poverty, hence, poverty is seen as self-perpetuating (Valentine, 1968).

The Grameen Model of microfinance banking that was tested in Bangladesh to provide informal credit facilities to the rural poor, particularly women, which could not obtain them through the formal commercial banks (Khan & Rahaman, 2007). The Grameen Bank, which started with the concept of group informal lending to the poor, was established to assist landless poor people and to improve the economic condition of the rural poor via the creation of opportunities for self-employment. The bank's credit facilities are not secured by any physical collateral as obtained in commercial banks; rather, they are secured by group collateral complemented with peer monitoring and pressure to enforce repayment. The Grameen Bank model is operationally based on collective guarantees modalities, close supervision, and peer pressure from the members of the group. It is successfully considered as a programme for the poor - a bank and a social movement founded on the principles of awareness and training, and has eased active participation of the poor (Stanley & Ezeanyeji, 2017).

Empirical Review

El-yaqub et al. (2024) found that access to MFB loans and deposit liabilities has a positive relationship with poverty in Nigeria. This was confirmed earlier by Araga et al. (2022), who showed a long-run relationship between MFBs, poverty alleviation, and economic growth, while the assets and deposits of MFBs have a significant impact on poverty alleviation, different from the loans and advances that do not have a significant effect on poverty alleviation in Nigeria. Similarly, Chikwira et al. (2022) with quarterly data revealed a significant long-run relationship between microfinance bank credit and agricultural growth. However, microfinance turned out to raise the level of poverty in the long run, while agricultural development and the SMEs turned out to reduce the poverty level in the short and long runs.

On the contrary, Akanni (2022) found that MFBs' loans and deposits have a negative impact on the poverty rate, while interest rates have a positive impact poverty level. In disagreement, Onyele and Onyekachi-Onyele (2020) showed that the bounds test revealed a long-run relationship between poverty rate and MFBs' activities, suggesting that the MFBs' loans-to-deposit ratio and liquidity ratio caused poverty reduction in the long-run. However, the short-run estimates indicated that the MFBs were unable to ensure poverty reduction, though all the variables exhibited significant coefficients within one year. These findings imply that the ability of MFBs to reduce poverty takes a long time.

Bamidele (2020) concluded that there is a negative relationship between MFBs' services and poverty alleviation in Nigeria. A similar result was obtained by Ezeanyeji et al. (2020) who concluded that MFBs' loans contributed significantly negative to poverty in the long-run. The

same conclusion was reached by Babatunde (2018) using co-integration analysis that there is a long-run link between MFBs, inequality, and poverty alleviation in Nigeria. Similarly, Obayagbona (2018) revealed that gross earnings, loan-to-deposit ratio, and assets of microfinance institutions were significant determinants of poverty reduction in Nigeria, while liquidity ratio and deposits were less significant.

Observations from the empirical review so far indicate that the literature is inconclusive on the connection between microfinance and poverty alleviation. This study aimed to contribute to the debate by examining the impact of microfinance banks on poverty alleviation in Nigeria with updated data.

Methodology

Data

Annual data covering the period 1992 – 2023 is employed for the study. The choice of study period is informed by data availability. Data for the study were sourced from the publication of the World Bank and the Central Bank of Nigeria, on the following variables:

- **Poverty level (POVL)** is the endogenous variable; the ratio of the number of people living below the poverty line (income level of $1.90/day) expressed as a ratio of the total population is used as a measure of poverty level. The series is in percentage (%).
- **Microfinance Loans and Advances (MBLA):** This is the total loans and advances granted by MFBs to economically active poor and their microenterprises. The series is in millions of Naira, converted and expressed in natural log.
- **Number of Microfinance banks (NMFB):** This measures accessibility of MFBs' services to the poor. The larger the number across the country, the more enhanced the financial accessibility of the poor. The series is in numbers, converted and expressed in natural log.
- **Number of Microfinance Bank Customers (NMBC):** The Total number of customer deposits in active accounts is used as a proxy for the number of MFB's customers. It measures outreach and coverage of the number of client being served. The series is in millions of Naira, converted and expressed in natural log.
- **Size of Microfinance Banks (SMFB):** The Total asset of MFBs is used as a proxy for the size of MFBs. It measures the strength of MFBs. The series is in millions of Naira, converted and expressed in natural log.
- **Average Lending Rate (AVLR):** This is the average of prime and maximum lending rates and an indicator of the affordability of MFBs' services to the poor. The series is in percentage (%).

Model Specification

Guided by the Vicious Circle of Poverty theory and the Grameen Model, the study adapted the model in El-yaqub, et al., (2024) who examined microfinance bank's impact on poverty reduction in Nigeria, with some modification. The implicit function of their model is specified as:

$$POV = f(LMB, AMB, DLM) \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Where POV is poverty index; LMB is loans from microfinance banks; AMB is access to microfinance banks; DLM is deposit liabilities of microfinance banks. In this study,objective is to assess the impact of microfinance banks on poverty alleviation in Nigeria. The implicit functional model is specified as:

$$POVL = f(MFBL, NMBC, NMFB, SMFB, AVLR) \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

The econometric form of the model is given as:

$$POVL_t = \beta_0 + \beta_1 MFBL + \beta_2 NMBC + \beta_3 NMFB + \beta_4 SMFB + \beta_5 AVLR + \varepsilon_t \ldots\ldots\ldots\ldots (3)$$

Introducing log into the equation (3), we have:

$$POVL_t = \beta_0 + \beta_1 LMFBL + \beta_2 LNMBC + \beta_3 LNMFB + \beta_4 LSMFB + \beta_5 AVLR + \varepsilon_t \ldots\ldots (4)$$

Where: POVL = National poverty index proxy for poverty level in Nigeria; LMBLA = Log of microfinance loans and advances; LNMFB = Log of number of operating microfinance banks; LNMBC = Log of number of microfinance Bank Customer; SMFB = Log of size of microfinance banks; AVLR = Average lending rate; β_o = intercept; β_1 – β_5= coefficient of the explanatory variables, and ε_t = stochastic error terms.

Model Estimation Procedure

The variables used in the study were analyzed to determine their stochastic properties and to aid in the selection of the right econometric framework for analysis. The traditional Augmented Dickey-Fuller (ADF) unit root test was employed, and complemented by the Phillips-Perron (PP), based on the premise that it is commonly regarded as having a superior consistency than the ADF owing to its robustness amid serial correlation and heteroskedasticity (Hamilton, 1994). By rejecting the null hypothesis of the unit root test it implies that the time series variable is I(I) or non-stationary. Second, the Autoregressive Distributed Lag, a bound testing method established by Pesaran and Shin (1999) and Pesaran, Shin, and Smith (2001), is used to examine whether there exists a long-run relationship between the series. The ARDL superiority lies in its flexibility to incorporate both I(0) and I(I), making it suitable for small sample sizes and ensuring unbiased estimates of long run parameters.

The long-run form of the model can be specified as:

$$\begin{aligned}\Delta POVL_t = \beta_0 &+ \sum_{t=1}^{k} \beta_1 \, \Delta POVL_{1-i} \\ &+ \sum_{t=1}^{k} \beta_2 \, \Delta LMFBL_{1-i} + \sum_{t=1}^{k} \beta_3 \, \Delta LNMBC_{1-i} + \sum_{t=1}^{k} \beta_4 \, \Delta LNMFB_{1-i} \\ &+ \sum_{t=1}^{k} \beta_5 \, LSMFB_{1-i} \\ &+ \sum_{t=1}^{k} \beta_6 \, IAVLR_{1-i} + \mathrm{y}_1 POVL_{1-i} + \mathrm{y}_2 LMFBL_{1-i} + \mathrm{y}_3 LNMBC_{1-i} + \mathrm{y}_4 LNMFB_{1-i} \\ &+ \mathrm{y}_5 LSMBF_{1-i} + \mathrm{y}_6 AVLR_{1-i} + \varepsilon_{1t} \qquad (5)\end{aligned}$$

Δ is the first difference. β_0 and ε are constant and error term respectively. Equation (5) tests the null hypothesis$H_0: y_1 = y_2 = y_3 = y_4 = y_5 = y_6 = 0$, there is no cointegration between the variables against the alternative hypothesis $H_0: y_1 \neq y_2 \neq y_3 \neq y_4 \neq y_5 \neq y_6 \neq 0$ using the bounds testing procedure. First, the top optimal lag length for the model will be chosen, and then the F-test will be used to give the upper and lower bounds critical values. The test's decision rule is that if the F-statistic is greater than the upper boundary, we reject the null hypothesis of no cointegration. When a long-run cointegration exists, the conditional ARDL model is estimated using the ordinary least squares method (OLS) determined by a given information criterion in the second phase. The short-term relationship can be estimated using the error correction model. The short-run form of the model can be specified as:

$$\Delta POVL_t = \beta_0 + \sum_{t=1}^{k} \beta_1 \Delta POVL_{1-i} + \sum_{t=1}^{k} \beta_2 \Delta LMFBL_{1-i} + \sum_{t=1}^{k} \beta_3 \Delta LNMBC_{1-i} + \sum_{t=1}^{k} \beta_4 \Delta LNMFB_{1-i} + \sum_{t=1}^{k} \beta_5 LSMFB_{1-i} + \sum_{t=1}^{k} \beta_6 IAVLR_{1-i} + \delta ETC_{t-i} + \varepsilon_{1t} \ldots\ldots\ldots\ldots\ldots\ldots (6)$$

where δ is the coefficient of the ECT (the error correction term), which quantifies the haste of conjunction of the series to the long-run equilibrium and represents the residual. For short-run convergence to occur, the coefficient should be statistically significant and negative.

Result and Discussions

Result of the Descriptive Statistics

Table 1 presents the results of the descriptive statistics of the variable used for the study. The result indicated that the mean and standard deviation are higher for the size of microfinance banks. Five variables showed positive skewness (MFBL, NMBC, NMFB, SMFB & AVLR), implying that their distributions are characterized by a long right tail. Kurtosis is less than 3 for one variable (POVL), which means that it is Platykurtic, while all other variables are leptokurtic. The Jarque-Bera test rejects the null hypothesis at the 5% significant level for all the variables except POVL, which implies that these variables are normally distributed.

Table 1: Result of the Descriptive Statistics

	POVL	MFBL	NMBC	NMFB	SMFB	AVLR
Mean	54.89719	184,445.5	124,476.6	881.9688	338,581.8	13.69531
Median	57.70000	35,628.93	53,449.80	882.0000	100,369.5	13.50000
Maximum	88.00000	1,488,235.	1,030,916.	1,368.000	3,772,737.	26.00000
Minimum	29.60000	135.8000	639.6000	401.0000	967.2000	6.000000
Std. Dev.	14.18931	349,822.7	203,611.6	177.5268	714,963.6	3.868678
Skewness	-0.001050	2.509132	3.038043	0.558901	3.770656	0.781440
Kurtosis	2.300625	8.667913	13.44787	5.515897	18.02145	5.031259
Jarque-Bera	0.652173	76.41094	194.7692	10.10563	376.6873	8.758147
Probability	0.721743	0.000000	0.000000	0.006391	0.000000	0.012537
Observations	32	32	32	32	32	32

Source: Author's Computation with E-views 12, 2025

Result of Unit Root Test

Table 2 reports the results of the Augmented Dickey-Fuller (ADF) and Philip Perron (PP) unit root tests conducted with constant and trend specification. The results of both the ADF and PP tests indicate that all the variables employed in the model are stationary at level (i.e., I(0) variables), except the average lending rate (AVLR) of MFBs; hence, we reject the null hypothesis of no unit root for these variables. However, AVLR became stationary after the first difference. Irrespective of the test technique considered (ADF or PP), the results imply that the variables employed in the model have different orders if integration, hence, the justification for the use of the ARDL approach.

Table 2: Result of ADF and PP Unit Root Tests

ADF Test Techniques					
Variable(s)	Levels		1st Difference		Decision
	t-statistic	Prob.	t-statistic	Prob.	
POVL	-5.8820	0.0002***	-	-	I(0)
MFBL	-5.5874	0.0004***	-	-	I(0)
NMBC	-4.1282	0.0144**	-	-	I(0)
NMFB	-5.0101	0.0017***	-	-	I(0)
SMFB	-3.7948	0.0305**	-	-	I(0)
AVLR	-2.8478	0.1922	-9.3894	0.0000***	I(1)
PP Test Techniques					
Variable(s)	Levels		1st Difference		Decision
	t-statistic	Prob.	t-statistic	Prob.	
POVL	-6.5884	0.0000***	-	-	I(0)
MFBL	-5.5512	0.0004***	-	-	I(0)
NMBC	-4.2657	0.0105**	-	-	I(0)
NMFB	-4.7125	0.0036***	-	-	I(0)
SMFB	-3.9578	0.0212**	-	-	I(0)
AVLR	-2.7343	0.2308	-8.9823	0.0000***	I(1)

Notes: *, **, *** denote significance at 10%, 5% and 1% levels respectively.
Source: Author's computation with E-views 12, 2025

Result of ARDL Bound Test

Prior to the Bound test, the optimal lag length was selected based on the understanding that the F-statistic for cointegration is sensitive to lag length, and the majority of the lag length selection criterion suggested 2; hence, 2 is used as the maximum lag length. Table 3 reports the result of the ARDL bound test estimated with restricted constant and no trend specification using (1, 0, 2, 0, 0, 2) selected based on the Akaike information Criterion (AIC). The result of the bound test reported that the value of the F-statistic, which is 4.561680, exceeds the critical values for the upper and lower bounds of 3.79 and 2.62 at 5% significant level, respectively. This implies that the null hypothesis of no long run cointegration is rejected at the 5% level of significance, hence, an indication that there exists a long run relationship between poverty level and the microfinance variables included in the model over the study period. The result is consistent with Araga et al. (2022), Chikwira et al. (2022), and Onyele and Onyekachi-Onyele (2020).

Table 3: Result of the ARDL Bound Test

F-Bound Test		Null Hypothesis: No level relationship		
Test Statistics	Value	Significance	I(0)	I(1)
F-statistics	4.561680	10%	2.26	3.35
K	5	5%	2.62	3.79
		2.5%	2.96	4.18
		1%	3.41	4.68

Source: Author's computation with e-views 12, 2025

Result of ARDL Long Run Analysis

Table 4 presents the result of the long-run analysis, which indicates that the coefficient of the size of MFBs and number of MFB's customers are both negative and statistically significant at 5% and 10% respectively. This suggests that increase in the size of MFBs and number of microfinance bank's customers will reduce poverty level by 0.209239 (equivalent to 20.92%) and 0.942612 (equivalent to 94.26%) respectively, in the long run. This is consistent with our a priori expectation as strong assets base and solid customer base is an indication of strength and breadth and depth of outreach of micro financing services to the economically active poor and hence, reduction in the poverty level. This result aligns with our a priori expectations and the findings in Araga, et al., (2022).

The long-run coefficient of microfinance bank loans and the number of MFBs showed the appropriate sign but were statistically insignificant. This is indicates that the amount of loans granted by MFBs is were not capable of covering the financial requirements of the teeming poor population possibly due to insufficient liquidity or credit default, while branch coverage is insufficient as MFBs might have struggled to remain in business in the area due to high cost of operation due to poor state of infrastructures, which explains why voluntarily liquidation and closing offices within a very short period of operation is very frequent. The insufficiency of the microfinance bank loans and the number of MFBs implies that it might not guarantee a long-run reduction in the poverty level in Nigeria. This finding aligns with the result in Chikwira et al. (2022) and is contrary to Onyele and Onyekachi-Onyele (2020). The coefficient of the lending rate has the appropriate positive sign but is statistically insignificant. This revealed that an increase in the cost of credit granted by MFBs will increase the poverty level.

Table 4: Result of the ARDL Long-Run Analysis

Dependent Variable: Poverty Level (POVL)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LSMFB	-0.209239	0.543011	-2.276288	0.0346**
LMFBL	-0.146418	0.235334	-0.502350	0.6212
LNMBC	-0.942612	0.526742	-1.948396	0.0663*
LNMFB	-0.436053	0.025838	-0.847891	0.4071
AVLR	0.627832	0.801988	0.782845	0.4434
C	0.743918	0.014472	1.249836	0.2265

Source: Author's computation with e-views 12, 2025.

Result of Error Correction Mechanism (ECM) and ARDL Short Run Analysis

Table 5 presents the result of the ECM, which indicates the speed of adjustment at which the poverty level returns to the equilibrium position after a change in the independent variable. The lagged coefficient of the ECM is negative (-0.184015) and statistically significant at the 1% level, implying that about 18.4% of the disequilibrium errors in the short run can converge to form a long-run equilibrium relationship in the current period. This affirms the existence of long-run cointegration among the variables employed in the model as suggested by the result of the bound test in Table 3.

The short-run dynamics indicated that the coefficient of the size of microfinance bank is positive and statistically significant at 5% level, implying that an increase in the size of MFBs will increase poverty level by 0.976383 (equivalent to 97.6%). This is not consistent with our a priori expectation. A probable reason for this could be attributed to the fact that most MFBs are not located in the core rural area where the majority of the poor people lives. The coefficients of the lagged value of microfinance loans, and the number of microfinance bank customer are negative and statistically significant, implying that an increase in these variables will reduce the poverty level by -0.592244 (equivalent to 59.2%) and -0.660693 (equivalent to 66.1%), respectively. This is consistent with our a priori expectation as an increase in microfinance loans to the poor and the number of poor who patronize these banks will reduce the poverty level. This result agrees with our a priori expectation. The coefficient of the number of microfinance banks is negative, as expected, but is statistically insignificant. A plausible reason for this could be due to the limited number of banks and their branches. The coefficient of average lending rate is positive and statistically significant at 5% level, implying that an increase in the cost of microfinance banks' borrowing will reduce the affordability of

the poor to access the loans and hence, will remain in poverty. This is also in agreement with our a priori expectation and affirms the findings in Akanni (2022).

Table 5: Result of the ARDL Short-Run Analysis

Dependent Variable: Poverty Level (POVL)

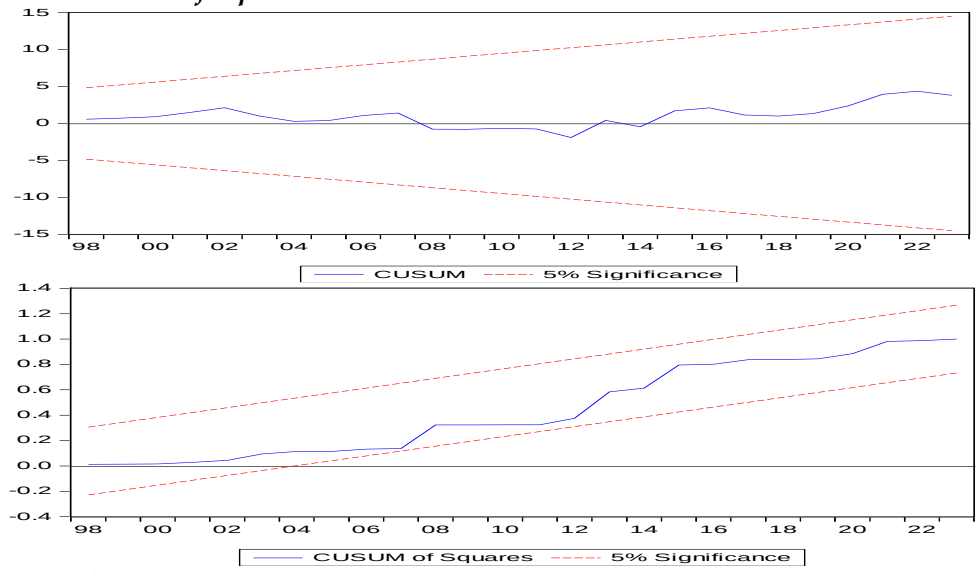
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LSMFB)	0.976383	2.018010	2.269796	0.0351**
D(LMFBL)	-0.440922	4.043820	-1.099482	0.2853
D(LMFBL(-1))	-0.592244	5.840898	-2.840701	0.0105**
D(LNMBC)	-0.660693	2.884435	-1.995653	0.0605*
D(LNMFB)	-0.092507	2.363199	-0.839382	0.4117
D(AVLR)	-0.926597	1.266683	-1.520979	0.1447
D(AVLR(-1))	0.927395	0.824153	2.338638	0.0304**
CointEq(-1)	-0.184015	0.205718	-5.755528	0.0000***

Source: Author's computation with e-views 12, 2025.

Stability and Diagnostic Tests

The cumulative sum (CUSUM) and the cumulative sum of squares (CUSUMSQ) are used to test the stability of the model. The result shows that the plots fell within the confidence boundary at 5% level of significance (see Figure 2), hence, the estimated model is relatively stable, consistent, and reliable for policy.

Figure 2:
CUSUM and CUSUM of Squares



Source: Author's computation with e-views 12, 2025.

To ensure the validity of the estimated ARDL model, serial correlation, normality test, and heteroscedasticity test was performed, and the results (Table 6) showed no evidence of autocorrelation at a 5% confidence level. The residuals proved to be normally distributed, indicating that the model has passed the test for normality, while there was no existence of heteroscedasticity; hence, the model is stable and reliable.

Table 6: Diagnostic Test

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	1.567634	Prob. F(2,24)	0.2292
Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	0.486239	Prob. F(9,20)	0.8668
Normality Test:			
	0.143454		0.9307

Source: Author's computation with E- views 12, 2025.

Conclusion

This study assessed the impact microfinance banks on poverty alleviation in Nigeria using data from 1992 to 2023. The overall results from the ARDL estimation indicated that the microfinance variable and poverty rate are bound by a long-run relationship in Nigeria. Key long-run findings of this study are the fact that the size of MFBs and the number of microfinance bank customers significantly reduce poverty, while microfinance bank loans and the number of MFBs showed an appropriate sign but were statistically insignificant, implying that MFBs were unable to meet the financial requirements of the poor, probably due to insufficient liquidity. On the other hand, the coefficients of the short-run dynamics indicated that the poverty rate continues to increase notwithstanding the size of several MFBs, implying that a few poor people enjoy the services of MFBs. This aligns with the survey carried out by Enhancing Financial Innovation and Access (EFInA), which exposed that the MFBs in Nigeria were able to serve only 3.8% of the poor (EFInA, 2019). while microfinance loans and the number of microfinance bank customers significantly reduce the poverty levels within a short time period, as a result of due attention received by the poor at the initial point of operation. These calls for the need to reposition MFBs via recapitalize to enhance their liquidity, improve supervisory oversight to ensure delivery of their services to the targeted population, and improve infrastructure, specifically in the rural areas, to widen their service coverage.

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