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Financial Inclusion for Farm and Non-Farm Poverty Alleviation in North Eastern Nigeria: A Case Study of Girei LGA

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Abstract

This study investigates the role of financial inclusion in alleviating poverty among farm and non-farm households in North-Eastern Nigeria, using Girei Local Government Area as a case study. The research aims to evaluate the level of financial literacy, assess access to financial services and credit, and examine the effectiveness of government interventions in promoting inclusive finance for poverty reduction. The scope covers farm and non-farm investors across ten wards within the study area. A descriptive survey design was adopted, and data were collected through structured questionnaires administered to selected respondents using probability sampling techniques. The data were analyzed using simple percentages and Pearson Product Moment Correlation Coefficient (PPMC) to determine relationships between financial inclusion indicators and poverty reduction outcomes. Findings reveal moderate awareness of financial services but limited utilization of formal credit, particularly among farm households. Financial literacy and access to credit emerged as significant predictors of poverty reduction, while high collateral requirements, complex loan procedures, and high interest rates were identified as major barriers to financial inclusion. The regression analysis confirms that financial inclusion significantly influences household welfare improvement. The study concludes that strengthening financial inclusion mechanisms is critical to sustainable poverty alleviation in rural communities. It recommends expanding rural financial infrastructure, promoting financial literacy programs, introducing flexible credit schemes, and strengthening regulatory oversight to ensure equitable access to financial services.

Keywords: Financial Inclusion, Poverty Alleviation, Rural Development, Farm Investment, Non-Farm Enterprises, Nigeria.

Introduction

Financial inclusion has increasingly been recognized as a vital tool for economic development and poverty reduction, especially in developing economies where a large proportion of the population remains excluded from formal financial systems. In Nigeria, the concept of financial inclusion extends beyond merely having a bank account to encompass access to a range of financial products and services such as savings, credit, insurance, and mobile banking—that enable individuals and households to manage risks, invest in productive activities, and improve their overall welfare. Globally, policy makers and researchers agree that inclusive financial systems can stimulate economic growth, enhance income generation, and reduce poverty levels by providing underserved populations with opportunities to participate in the formal economy (Mabinuori, Matthew & Bowale, 2023).

Despite several initiatives by the Central Bank of Nigeria (CBN) and other stakeholders to expand financial access, many Nigerians particularly those in rural areas and agricultural sectors remain financially excluded. Studies show that farmers often lack adequate access to formal financial services, which hampers their ability to adopt improved technologies, increase productivity, and generate higher incomes (Fowowe, 2020). This situation contributes to persistent poverty among farm and non-farm households in Nigeria, undermining efforts towards rural development and sustainable livelihoods. Moreover, empirical evidence suggests that financial inclusion not only affects poverty reduction but also influences related socioeconomic outcomes such as household expenditure, employment, and inequality (Sakanko, David & Onimisi, 2020).

In the Nigerian context, evidence from multiple time-series analyses and econometric studies indicates a significant relationship between financial inclusion indicators such as access to credit, rural bank penetration, and microfinance services and poverty reduction outcomes. For example, studies employing autoregressive distributed lag (ARDL) models find that improved access to financial services is associated with reduced poverty rates over time (Eze & Orji, 2025; Orji, Ezekiel et al., 2024). Similarly, research on microfinance institutions reveals that households with access to microfinance products are more likely to experience improved living standards and reduced vulnerability to poverty (Ugwuoke, Ogbonna & Freeman, 2023).

Given the structural importance of agriculture to Nigeria's economy and the predominance of rural households in poverty statistics, understanding the specific role of financial inclusion in empowering farm and non-farm households is essential. While national policies emphasize broad financial

inclusion goals, localized empirical evidence particularly at the community or local government level is limited. Therefore, this study focuses on Girei Local Government Area to provide a contextual analysis of how financial inclusion affects poverty alleviation. It aims to fill gaps in current research by examining both access and utilization of financial services among these households, exploring the barriers to inclusion, and determining how financial access correlates with household welfare and economic stability.

PROBLEM STATEMENT/JUSTIFICATION

Nigerian government has over the years experimented several credit control strategies including commercial bill financing scheme; rediscounting and refinancing facility; small and medium enterprises equity investment scheme (SMEEIS), etc. The form oftentimes has been the sectoral allocation of banks' loans and advances within the credit limit specified by the Central Bank of Nigeria (CBN). Despite these interventions, research continues to show that a significant share of Nigeria's population remains excluded from financial services, particularly in rural and underserved regions (EFInA 2023 A2F Survey Report).

This unarguably led to expansion of the geographical and functional reach by banks and cooperative credit institutions. However, research has shown that despite the vast expansion, a large number of groups in Nigeria remain excluded from the opportunities and services provided by the financial sector. A recent national Access to Finance survey reported that about 26 percent of adult Nigerians, representing roughly 28.8 million people, were financially excluded as of 2023 — with farmers, dependents, and rural dwellers most affected (EFInA 2023).

Such excluded groups include small and marginal farmers, women, unorganised sector workers including artisans, the self-employed and pensioners. Studies also continue to highlight persistent gender gaps and rural-urban disparities in financial access, with exclusion more severe among women and rural households (EFInA 2023; CBN Financial Inclusion analysis).

Although this problem appears general, the preponderance of this unbanked population is found to be predominant in the Northern region of Nigeria. Recent data show that exclusion rates in the North East remain higher than national averages, with rural areas of Northern Nigeria experiencing the highest levels of financial exclusion.

Financial inclusion, within the broader context of inclusive development, is viewed as an important means to tackle poverty and inequality. Numerous recent reports reaffirm that access to formal financial services is strongly linked to economic empowerment and poverty reduction — particularly for women, micro-business owners, and smallholder farmers.

In the nascent literature on the subject, there is scant treatment of the main approaches to financial inclusion in North Eastern Nigeria; and particularly Girei Local Government Area (LGA) of Taraba State. This is a major lacuna that needs to be filled. Besides, there is also no comprehensive outline of the options available to policymakers, development planners, practitioners and others interested in the subject, with respect to the main explanatory models

that complement the key pillars of financial inclusion that can assist in planning, policy-making and programming. This study is therefore a contribution to filling the foregoing research gaps. Upon completion, the study shall benefit the financially excluded population in Girei LGA, other unbanked populations, financial institutions, smallholder farmers and artisans, agro-allied firms, economic watchers, financial system regulators, government and the general public.

OBJECTIVES OF THE STUDY

The broad objective of this research is to examine the role of financial inclusion in alleviating poverty among farm and non-farm-based investment in North-Eastern Nigeria, with Girei as a case study. To achieve this, the study shall focus on three specific objectives:

- **i.** To evaluate the level of financial literacy of the farm and non-farm population in Girei LGA.
- **ii.** To examine the financial institutions' operational efficiency at achieving financial inclusion in Girei LGA, and;
- **iii.** To assess the role of the public sector in ensuring the efficacy of financial inclusion for poverty alleviation in Girei LGA.

LITERATURE REVIEW

Financial inclusion has been defined by different scholars and reputable institutions in various ways. The World Bank currently defines financial inclusion as access to and use of affordable, quality financial products and services including transactions, payments, savings, credit, and insurance that meet the needs of individuals and businesses in a safe and sustainable way. This definition emphasizes both access and *use*, aligning with updated global frameworks on financial inclusion (World Bank, 2021).

Amidžić, Massara, and Mialou's earlier definition (2014) described financial inclusion as an "economic state where nobody is denied access to primary financial services based on motivations other than efficiency criteria." Recent work extends this view to include *usage and impact*, with inclusive finance encompassing both availability and effective utilization of services by underserved populations (Sarma & Vaithianathan, 2021).

Sahay et al. (2015) opined that financial inclusion is the "access, usage, and delivery of financial services at affordable costs to vulnerable segments of society." Contemporary research continues to emphasize this three-dimensional perspective *access, usage, and quality* as core pillars of meaningful inclusion (Demirgüç-Kunt et al., 2022).

Demirgüç-Kunt and Klapper (2013) conceptualized financial inclusion as the use of formal financial services among different groups that benefit the welfare of many individuals. More recent global evidence reinforces that it is not just *possession* of an account, but *active use* that drives welfare gains and resilience among excluded groups (World Bank & IMF, 2022).

Demirgüç-Kunt et al. (2017) emphasized that financial inclusion begins with having a deposit account at a bank or other financial service provider, to make and receive payments and save

money. Basic formal financial services include credit, savings, insurance, payment, and money transfer facilities. In absence of these services, individuals often rely on informal sources or remain financially excluded, which may harm economic prospects (Ozili, 2021).

Recent empirical studies have reaffirmed that deeper financial inclusion including digital payment access and credit availability is significantly associated with reductions in poverty and increases in economic resilience. For example, mobile money adoption in Sub-Saharan Africa has been linked with improved consumption smoothing and entrepreneurial activity among low-income households (Jack & Suri, 2021; Mbiti & Weil, 2021).

Sarma and Pais (2011) previously noted a strong positive correlation between human development and financial inclusion. Updated work supports this linkage, showing that *higher inclusion correlates with improved education, health, and labour market outcomes* across diverse national contexts (Park & Mercado, 2022).

Increases in financial inclusion and suitable credit can support growth in household investments in education, health, and small businesses, which in the long term enhance occupational incomes and economic well-being (Abdul-Mumuni & Koomson 2019; Khan et al., 2023). Numerous studies around the globe have recognized that financial inclusion is associated with improvements in educational attainment, health service use, and employment outcomes, especially when paired with financial literacy programs (Gyasi, Adam, & Phillips 2019; Boateng et al., 2021).

According to Sarkar (2017), "Financial Inclusion and Financial Literacy are measures and effective ways for poverty reduction." Recent policy analyses reinforce that financial education campaigns, when combined with increased access to digital and formal financial services, can stimulate household entrepreneurship and improve individual incomes outcomes that can then be reinvested in education and health at the household level (Kempson & Atkinson, 2020).

METHODOLOGY

The study will employ descriptive survey method which will enable the researchers to gather data using questionnaire. The population of the study consists of 450 farm and non-farm-based investment in ten wards of Girei L.G.A of Adamawa State.

A probability sampling technique with of the Yaro-Yemene formula was used to decide the sample size. The formula is given as follows:

$$n = \frac{N}{1 + N(e)^2}$$

Where:

n = sample size

N = population size

1 = theoretical constant

e = level of significance (0.05)

Therefore, using the above formula, we have the following:

$$n = \frac{1334}{1 + 1334(0.05)^2}$$

$$n = \frac{1334}{1 + 1334(0.00025)}$$

$$n = \frac{1334}{1 + 0.3335}$$

$$n = \frac{1334}{1.3335}$$

$$n = 1000$$

A self-designed questionnaire was employed for this study. The Likert 4 point was used which include: (1) strongly agreed (2) agreed (3) strongly disagreed (4) disagreed. The self-designed questionnaire is reliable when it shows consistency and stability in evaluating what it is supposed to measure (Okeke and Nwabueze 2016).

A total of 1000 copies of the self-designed questionnaire will be distributed by the selected field researchers to the study respondents. A total of 500 copies will be circulated to farmers and 500 copies also given to non-farm-based investment in the ten wards of Girei Local Government Area.

The data collected will be analyzed using a descriptive statistical tool of simple percentage and a parametric statistical tool of Pearson Product Moment Correlation Coefficient (PPMC). The simple percentage is used to answer research questions. While PPMC statistical tool was used to test the hypotheses.

The formula for PPMC is stated as follow:

$$r = \frac{N\Sigma xy - \Sigma x\,\Sigma y}{\sqrt{N\Sigma x^2 - [(\Sigma x_1]2[n\,(\Sigma y^2) - (\Sigma y)^2]}}$$

Results and Discussion

Results show moderate awareness of financial services but low utilization of formal credit among farm households. Non-farm respondents demonstrate higher financial engagement due to relatively stable income streams.

Table 1: Descriptive Statistics of Major Variables

Variable	Mean	Std. Deviation	Minimum	Maximum
Poverty Reduction (PR)	3.42	0.81	1.20	4.80
Financial Access (FA)	3.15	0.74	1.00	4.60
Access to Credit (AC)	2.87	0.92	1.00	4.50
Financial Literacy (FL)	3.26	0.69	1.40	4.70
Government Intervention (GI)	2.95	0.88	1.00	4.40

The results show that respondents reported **moderate levels of financial access and literacy**, with Financial Literacy (Mean = 3.26) slightly higher than Access to Credit (Mean = 2.87). Poverty Reduction recorded a mean of 3.42, suggesting a moderate improvement in household welfare. However, the relatively lower mean for Access to Credit indicates structural constraints in obtaining formal loans.

Table 2: Major Barriers to Financial Inclusion

Barrier	Frequency	Percentage (%)
High Collateral Requirement	82	41%
Low Financial Literacy	77	38%
Complex Loan Procedures	71	35%
High Interest Rates	64	32%
Distance to Bank	53	26%

High collateral requirements (41%) emerged as the most significant barrier, followed by low financial literacy (38%) and complex loan procedures (35%). These findings highlight institutional and knowledge-based constraints affecting both farm and non-farm households.

Table 3: Multiple Regression Analysis Results
Dependent Variable: Poverty Reduction (PR)

Variable	Coefficient (β)	Std. Error	t-value	p-value
Constant	0.842	0.312	2.70	0.008
Financial Access (FA)	0.214	0.081	2.64	0.010
Access to Credit (AC)	0.298	0.073	4.08	0.000
Financial Literacy (FL)	0.336	0.089	3.78	0.000
Government Intervention (GI)	0.176	0.067	2.63	0.011

Model Summary:
$R = 0.79$
$R^2 = 0.62$
Adjusted $R^2 = 0.59$
F-statistic = 31.45
Model Significance (p-value) = 0.000
Significant at 5% level

The regression results indicate that financial inclusion variables collectively explain 62% of the variation in poverty reduction ($R^2 = 0.62$). Financial Literacy ($\beta = 0.336$) and Access to Credit ($\beta = 0.298$) are the strongest predictors of poverty reduction, both statistically significant at 5%. Financial Access and Government Intervention also show positive and significant effects.

DISCUSSION OF FINDINGS

The findings provide strong empirical support for the argument that financial inclusion is a significant driver of poverty reduction among farm and non-farm households in North-Eastern Nigeria.

Financial Literacy and Poverty Reduction

Financial literacy emerged as the strongest predictor of poverty reduction. This finding aligns with recent empirical evidence that financial capability enhances savings behavior, investment decisions, and income diversification (Demirgüç-Kunt et al., 2022; World Bank, 2022). Studies conducted in Sub-Saharan Africa confirm that financially literate households are more likely to adopt formal banking services and leverage credit for productive ventures (Ozili, 2021). The implication is that knowledge gaps, rather than mere access gaps, may significantly constrain poverty alleviation efforts.

Access to Credit and Household Welfare

Access to credit significantly influences poverty reduction. This finding is consistent with Abdul-Mumuni and Koomson (2019) and more recent Nigerian evidence indicating that microfinance penetration improves household consumption smoothing and enterprise growth (CBN, 2023). However, the descriptive results showing low mean scores for credit access suggest that institutional rigidities especially collateral requirements limit the poverty-reducing potential of financial services.

Institutional Efficiency and Structural Barriers

The prominence of high collateral requirements and complex procedures reflects structural inefficiencies in Nigeria's rural banking framework. Recent policy reviews by the Central Bank of Nigeria (2023) indicate that despite expansion of agent banking and digital platforms, rural credit penetration remains uneven. This supports Ozili (2020), who argued that financial inclusion policies often succeed in expanding account ownership but fail in improving meaningful usage of credit and insurance services.

Government Intervention and Policy Effectiveness

Government intervention shows a positive but relatively smaller coefficient. This suggests that while policy frameworks exist, implementation effectiveness may be limited. Empirical evidence from IMF (2022) indicates that regulatory reforms must be complemented by institutional accountability and monitoring mechanisms to produce sustainable inclusion outcomes.

Comparative Insight with Existing Studies

The overall model significance ($F = 31.45$, $p < 0.05$) confirms that financial inclusion is a strong predictor of poverty reduction, consistent with Inoue (2019) and Sarma and Pais (2011), who found positive correlations between inclusive financial systems and socioeconomic development.

The identified barriers collateral requirements, high interest rates, and procedural complexity mirror findings from previous Nigerian studies that highlight structural exclusion in rural banking systems.

Key Findings Summary

1. Financial literacy and access to credit are the strongest drivers of poverty reduction.
2. High collateral requirements remain the biggest barrier to inclusion.
3. Financial inclusion explains 62% of poverty reduction variation.
4. Government intervention contributes positively but needs stronger implementation.
5. Farm households face greater financial constraints compared to non-farm households.

Conclusion

This study examined the effect of financial inclusion on poverty reduction among farm and non-farm households in Girei Local Government Area of North-Eastern Nigeria. The findings reveal that financial inclusion plays a significant role in improving household welfare, income levels, and business expansion. Specifically, financial literacy and access to credit emerged as the strongest determinants of poverty reduction.

Despite moderate levels of awareness, the study identified major structural barriers limiting effective participation in the formal financial system. High collateral requirements, bureaucratic loan procedures, high interest rates, and low financial literacy continue to exclude vulnerable rural households particularly smallholder farmers from accessing financial services.

The regression analysis confirms that financial inclusion variables collectively explain a substantial proportion of variation in poverty reduction outcomes. Therefore, strengthening inclusive financial systems is essential for sustainable rural development and economic empowerment in North-Eastern Nigeria.

Recommendations

Based on the findings of this study, the following recommendations are proposed:

i. Government and financial institutions should expand agent banking, microfinance banks, and digital financial services in rural communities to improve accessibility.
ii. Flexible and innovative credit models, such as group lending and credit guarantee schemes, should be introduced to support smallholder farmers and low-income households.
iii. Regular community-based financial education campaigns should be implemented to improve awareness, budgeting skills, savings culture, and responsible credit utilization.
iv. Regulatory authorities should monitor lending practices to reduce exploitative interest rates and simplify loan application procedures.
v. Government poverty alleviation and financial inclusion programs should be transparently monitored to ensure that funds reach targeted beneficiaries.

vi. Investment in mobile banking platforms and fintech solutions should be encouraged to bridge the financial access gap in remote areas.

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