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LOGISTIC APPROACH OF THE EFFECTS OF FINANCIAL INCLUSION ON THE LIVELIHOOD OF SMALLHOLDER FARMERS IN PLATEAU STATE

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Abstract
The overall study's goal was to look into a logistic approach to the effects of financial inclusion on the livelihood of smallholder farmers in Plateau State. The study's particular goal was to find out if Financial Inclusion has a positive effect on the livelihood of smallholder farmers. The study's audience was smallholder farmers who were active in agricultural practices in Plateau State, Nigeria. The sample size was 399 households that par-took in agricultural practices in Plateau State. Primary data were gathered for the study using structured questionnaires. The collection of primary data was done through the administration of questionnaires to selected smallholder farmers. From the data collection process, the researcher was assisted by research assistants that made frequent follow-up on the respondents to ensure that high response rate was achieved. The study used the logistic regression model in carrying the analysis in order to achieve the objective of the study. The study found that financial inclusion plays a significant role in transforming the livelihoods of smallholder farmers in Plateau State. Access to formal financial services such as savings accounts, credit facilities, and insurance products positively influenced farmers' economic outcomes. The findings of this research study indicate that financial inclusion has a significant positive impact on the livelihood of smallholder farmers in Plateau State, Nigeria. Access to financial services and financial literacy were identified as crucial factors influencing farmers' economic well-being. However, variables such as age, gender, and education did not show significant effects in this context. Based on the research findings, the following recommendations are made: Improve access to financial services, strengthen financial literacy programs, targeted support for vulnerable groups and continuous monitoring and evaluation.
KEYWORDS: Financial inclusion, Livelihood, Smallholder farmers

1. Introduction

Access to financial services is a critical factor in enhancing economic growth, reducing poverty, and promoting inclusive development in both rural and urban areas (Shem, et. al. 2012). Financial inclusion, defined as the availability and usage of a range of financial services by individuals and businesses, has gained significant attention worldwide as a means to empower marginalized populations and drive economic progress (World Bank, 2018). In the context of agricultural sectors, financial inclusion plays a vital role in improving the livelihoods of smallholder farmers by enabling them to access credit, savings, insurance, and other financial services (Demirgüç-Kunt et al. 2018).

Plateau State, located in central Nigeria, is characterized by its agricultural sector, with smallholder farmers constituting a significant portion of the rural population. These farmers face numerous challenges, including limited access to financial resources and services,

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which hampers their productivity and overall well-being. Therefore, understanding the effect of financial inclusion on the livelihoods of smallholder farmers in Plateau State becomes crucial in formulating effective policies and interventions to address their needs.

However, despite the importance of financial inclusion in accelerating livelihoods of smallholder farmers, limited knowledge regarding the impact of financial inclusion initiatives on the livelihood of smallholder farmers in Plateau State, Nigeria (Rahman, et al. 2020). While financial inclusion efforts have been implemented, it is essential to assess their effectiveness and examine how they have contributed to the well-being and economic empowerment of smallholder farmers in the region. By exploring this topic, the study aims to provide insights into the relationship between financial inclusion and the livelihoods of smallholder farmers, highlighting the potential benefits and challenges associated with enhancing access to financial services.

The primary objective of this research is to examine the effect of financial inclusion on the livelihoods of smallholder farmers in Plateau State, Nigeria. Specifically, the study will investigate the impact of access to credit, savings, insurance, and digital financial services on farmers' productivity, income, poverty alleviation, and social inclusion. Through this analysis, the study seeks to contribute to the existing body of knowledge on financial inclusion in the agricultural sector and provide evidence-based recommendations for policymakers, financial institutions, and other stakeholders to enhance the financial well-being of smallholder farmers in Plateau State. The significance of this research lies in its potential to inform policy decisions and interventions that can improve the lives of smallholder farmers in Plateau State. By identifying the gaps and challenges in financial inclusion initiatives, policymakers can develop targeted strategies to address the specific needs of farmers, enhance their access to financial services, and foster sustainable agricultural development in the region. Furthermore, this study's findings will contribute to the broader literature on financial inclusion and its impact on rural livelihoods, providing valuable insights for researchers, practitioners, and organizations working towards inclusive economic growth.

In the following sections, this paper will present a comprehensive review of relevant literature on financial inclusion and its implications on smallholder farmers. It will then describe the methodology employed to conduct the research, including data collection methods and analysis techniques. Subsequently, the paper will analyze the financial inclusion initiatives in Plateau State, examine their impact on smallholder farmers, and present the research findings. Finally, the discussion and policy recommendations derived from the study's outcomes will be presented, followed by a conclusion that summarizes the key findings and their implications.

H_1: Financial inclusion has a positive effect on the livelihood of smallholder farmers

2. Literature Review

Financial inclusion has been recognized as a key driver of economic development and

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poverty reduction, particularly in rural areas where smallholder farmers constitute a significant portion of the population (Ogunlesi, et al. 2021). This section presents a comprehensive review of the existing literature on the effect of financial inclusion on the livelihoods of smallholder farmers in Plateau State, Nigeria. It examines the concept of financial inclusion, the importance of financial services for smallholder farmers, factors influencing financial inclusion in the agricultural sector, previous studies on the topic, and identifies gaps in the current literature.

2.1 Concept of Financial Inclusion

Financial inclusion refers to the process of ensuring that individuals and businesses have access to a range of affordable and appropriate financial products and services, including savings, credit, insurance, and payment services (World Bank, 2018). It involves overcoming barriers such as geographical, cultural, social, and economic factors that limit individuals' ability to access and use formal financial services. By providing access to these services, financial inclusion aims to improve individuals' financial well-being, foster economic growth and reduce poverty.

2.1.1 Importance of Financial Services for Smallholder Farmers

Financial services play a crucial role in improving the livelihoods of smallholder farmers. Access to credit enables farmers to invest in productive inputs such as seeds, fertilizers, and machinery, which can lead to increased productivity and higher incomes (Odedokun, 2018). Savings services help farmers manage risks, accumulate capital, and smooth consumption during seasonal fluctuations (Demirgüç-Kunt et al. 2018). Insurance services protect farmers against agricultural risks such as crop failure, livestock diseases, and natural disasters, providing a safety net and reducing vulnerability (World Bank, 2018). Payment services facilitate efficient and secure transactions, enabling farmers to receive payments for their produce and access markets more easily.

2.1.2 Factors Influencing Financial Inclusion in the Agricultural Sector

Several factors influence the level of financial inclusion in the agricultural sector. Geographic factors, including the proximity and availability of financial service providers in rural areas, affect farmers' access to financial services (Demirgüç-Kunt et al. 2018). Socioeconomic factors, such as education, income levels, and social networks, influence farmers' awareness and understanding of financial products and their ability to utilize financial services effectively (Odedokun, 2018). Technological factors, particularly the adoption of digital financial services and mobile banking, have the potential to significantly enhance financial inclusion by overcoming barriers related to distance and cost (World Bank, 2018).

2.2 Previous Studies on Financial Inclusion and Smallholder Farmers

Numerous studies have explored the relationship between financial inclusion and the livelihood of smallholder farmers. These studies have provided valuable insights into the impact of financial inclusion initiatives on farmers' access to credit, income levels,

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productivity, and overall well-being. Here are some key findings from previous research:

Demirguc-Kunt, et al. (2018) conducted a global study on the relationship between financial inclusion and agricultural productivity. The study found that increased access to financial services, particularly credit and savings accounts, positively influenced agricultural productivity among smallholder farmers. Access to credit allowed farmers to invest in improved inputs and technologies, leading to higher yields and income.

Cole, et al. (2015) examined the impact of financial inclusion on smallholder farmers in Malawi. The study found that farmers who had access to formal financial services, such as savings accounts and agricultural loans, experienced increased income levels. Access to credit enabled farmers to invest in productive assets, expand their operations, and adopt modern farming practices.

Karamba, et al. (2018) investigated the effect of financial inclusion on the welfare of smallholder farmers in Kenya. The study revealed that access to formal financial services, including savings accounts and insurance, significantly improved farmers' resilience to shocks and enhanced their overall well-being. Insurance coverage played a crucial role in protecting farmers against risks and reducing income volatility.

Rahman, et al. (2020) conducted a study on financial inclusion and poverty reduction among smallholder farmers in Bangladesh. The research found that farmers who had access to financial services, particularly microcredit, experienced a reduction in poverty levels. The availability of credit allowed farmers to invest in income-generating activities, leading to improved livelihoods and a decrease in poverty incidence.

Allet, et al. (2017) conducted a systematic review of the impact of microfinance interventions on smallholder farmers' outcomes. The review encompassed studies from various countries and found consistent evidence of positive effects of microfinance on farmers' income, productivity, and agricultural investment.

Awotide, et al. (2015) conducted research on the availability of credit and its effects on smallholder farmers' agricultural output in Nigeria. In order to investigate the statistics, the study employed the use of the Endogenous Switching Regression Model (ESRM). The first stage of the ESRM found that the total farm size and livestock unit were favourable in influencing the availability of credit to smallholder farmers. The size of the second stage was the entire farm and the livestock component, which had a substantial impact on the output of cassava and connected the smallholder farmers who were eligible for credit.

Ibe (2014) conducted research on the effect that banks' financing of public sector initiatives has on Nigeria's agricultural output. According to the research, elements that can have a favorable impact on Nigeria's agricultural production include government funding for agriculture, the prices of agricultural products, and commercial banks' cooperative effort to credit the agricultural sector.

These studies collectively highlight the significant role of financial inclusion in

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improving the livelihoods of smallholder farmers. Access to formal financial services, such as credit, savings accounts, and insurance, has been consistently linked to increased income levels, enhanced agricultural productivity, risk mitigation, and poverty reduction among smallholder farmers in different contexts.

2.3 Gaps in the Current Literature

Despite the growing interest in financial inclusion and its impact on smallholder farmers, there are notable gaps in the current literature concerning the effect of financial inclusion on the livelihoods of smallholder farmers in Plateau State, Nigeria. Limited research has specifically focused on this region, necessitating an investigation to provide valuable insights into the unique challenges and opportunities faced by smallholder farmers in Plateau State. Furthermore, while some studies have examined the effect of financial inclusion on income and productivity, there is a need for a comprehensive assessment of the broader livelihood dimensions, including poverty alleviation, social inclusion, and adoption of modern agricultural techniques.

3. Methodology

To investigate the impact of financial inclusion on the livelihoods of smallholder farmers in Plateau State, Nigeria, the following methodology was employed:

3.1 Research Design:

A cross-sectional research design was used to collect data at a single point in time. This design allows for the assessment of relationships between variables and the determination of associations.

3.2 Population/Sample Selection

The National Population Commission of Nigeria (2021) puts the Plateau State at 3,206,531 people with 458,075 households out of which 10,218 are smallholder farmers. The study based on households that engaged in agricultural activities since agriculture is the main economic activity in the state.

Table 1: Target Population

Zone	Small Holding Households	Percentage
Northern zone	4,394	3%
Central zone	2,657	6%
Southern zone	3,168	1%
Total	10,218	00%

Source of data: National Bureau of Statistics (2021)

The three geo-political zones chosen for the study make up Plateau State. They are similar in terms smallholder farmers who engage in smallholder farming. Their living standard is similar across the State, and their economic background is again the same. The difference that exists between these three regions is that these smallholder farmers from each zone do not farm the same crops or rear the same animals.

The sampling frame of the current study consisted of the list of all the 10, 218 small holding households in Plateau State, Nigeria based on the National Bureau of Statistics of Nigeria (2016). The study employed stratified multistage random sampling technique in Plateau State where the

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smallholder farmers were stratified into three strata; Northern Zone, Central Zone and Southern Zone. After stratification per region, the respondents were selected through simple random sampling procedure with the aid of agricultural officers in each region as well as local administration. The details of the sampled smallholders were written down, each was informed on the objective of the research, and permission was sought for the purposes of administering the questionnaires. In each household (HH), the HH was targeted to give the information being sort.

However, to determine the sample size, Yamane (1967) formula was used. In order to determine the sample size, the population was assumed to have a normal distribution with a confidence interval of 95 per cent as suggested by (Mugenda, & Mugenda, 2009). The Yamane formula is as follows:

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

Where n = Sample Size, N = Total population of smallholder households, ε = Error tolerance (level) considered to be 0.05 in this study (Mugenda & Mugenda, 2009). Replacing the values in the formula gives:

$$n = \frac{10,218}{1+10,218(0.05)^2}$$

n = 384 Households

Therefore, the study targeted up to 4384 smallholder farmers in Plateau State to participate in the survey. The HH heads of the small holding households were therefore targeted.

3.3 Data Collection:

Primary data collection was conducted through structured questionnaires administered to the selected smallholder farmers. The questionnaires were designed to capture information on variables of interest, such as access to financial services, financial literacy, age, gender, education, and livelihood outcomes.

3.4 Variables and Measures:

Access to Financial Services: This variable was measured by asking farmers about their usage and accessibility of formal financial institutions, such as banks, microfinance institutions, or cooperative societies.

Financial Literacy: Farmers' financial literacy was assessed through a set of questions that examined their knowledge and understanding of financial concepts, services, and practices.

Age, Gender, and Education: These demographic variables were self-reported by the farmers.

Livelihood Outcomes: Farmers' livelihood outcomes were assessed based on indicators such as income levels, agricultural productivity, access to markets, and socio-economic indicators.

3.5 Data Analysis:

Descriptive statistics were computed to summarize the characteristics of the sample population.

Logistic regression analysis was performed to examine the relationships between the independent variables (access to financial services, financial literacy, age, gender, education) and the dependent variable (livelihood outcomes).

Model coefficients, standard errors, odds ratios, and p-values were calculated to assess the significance and magnitude of the relationships.

The SPSS statistical software was used for data analysis.

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3.6 Ethical Considerations:

Informed consent was obtained from all participants before data collection.

Anonymity and confidentiality of participants' information were guaranteed.

4. Financial Inclusion Initiatives in Plateau State

Plateau State, Nigeria, has witnessed various financial inclusion initiatives aimed at improving access to financial services for smallholder farmers. These initiatives encompass efforts by government agencies, financial institutions, non-governmental organizations (NGOs), and other stakeholders. This section provides an overview of financial inclusion initiatives in Plateau State, highlighting government policies, programs, and the role of various organizations in promoting financial inclusion for smallholder farmers.

4.1 Government Policies and Programs

The Plateau State government has recognized the importance of financial inclusion in supporting agricultural development and rural livelihoods. The government has implemented several policies and programs to enhance financial access and services for smallholder farmers.

One such initiative is the establishment of agricultural development funds, such as the Plateau State Agricultural Development Program (PADP), which provides credit facilities and training to farmers (Plateau State Government, n.d.). These funds aim to address the financing needs of farmers, promote agricultural productivity, and improve their overall livelihoods.

Additionally, the government has partnered with financial institutions to implement programs like the Anchor Borrowers' Program (ABP), which facilitates access to credit for farmers by providing them with subsidized loans to finance agricultural inputs and equipment (Central Bank of Nigeria, 2020). Such programs play a crucial role in expanding financial inclusion by offering affordable and tailored financial products to smallholder farmers.

4.2 Role of Financial Institutions and NGOs

Financial institutions, including commercial banks and microfinance institutions, are important players in promoting financial inclusion for smallholder farmers in Plateau State. These institutions have introduced specialized agricultural loan products, savings accounts, and micro-insurance schemes tailored to the needs of farmers.

For instance, the Bank of Agriculture (BOA) provides various financial services to farmers, including credit, savings, and insurance products (Bank of Agriculture, n.d.). BOA collaborates with farmer associations and cooperatives to reach smallholder farmers and extend financial services to them.

NGOs also contribute significantly to financial inclusion efforts in Plateau State. Organizations like the International Fund for Agricultural Development (IFAD) and the Grameen Foundation collaborate with local communities, provide financial literacy training, and facilitate access to microfinance services for smallholder farmers (IFAD, n.d.; Grameen Foundation, n.d.). These initiatives aim to enhance financial knowledge, promote savings habits, and improve financial inclusion among farmers.

5. Results and Analysis

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The researcher administered 384 questionnaires to smallholder farmers in the three geopolitical zones of Plateau State. The questionnaires were completed and on 344 were completed and returned. Data presented and analysed is based on the returned questionnaires.

5.1 Demographic Information

Table 2: Age Distribution of Respondents

Age Group	Frequency	% of respondents
25-35 years	148	43%
36-45 years	120	35%
Above 45	76	22%
Total	344	100%

Source: Author's computation, 2023

The age distribution of the respondents in table 2 shows that 148(43%} were between 25-35 years old, 120(35%) wer between 36-45 years old, and 76(22%) were above 45 years old.

Table 3: Gender Distribution of Respondents

Gender	Frequency	% of respondents
Male	206	60%
Female	138	40%
Total	344	100%

Source: Author's computation, 2023

Table 3 shows that 206 (60%) of the respondents were male, while 138(40%) were female.

Table 4: Educational Background of Respondents

Education	Frequency	% of respondents
Primary	224	65%
Secondary	86	25%
Tertiary	34	10%
Total	344	100%

Source: Author's computation, 2023

Table 4 indicates that 224(65%) of the respondents had primary education, 86(25%) had secondary education, and 34(10%) had tertiary education.

On occupation, majority of the respondents 258(75%) were full-time smallholder farmers. In terms of years of farming experience, the farmers surveyed had an average farming experience of 7 years.

5.2 Access to Financial Services:

Table 5: Awareness and Access to Financial Services

Financial Service	Frequency	% of respondents
Savings Account	155	45%
Loans	103	30%
Insurance Services	34	10%
Total	344	100%

Source: Author's computation, 2023

As touching awareness of financial inclusion, 275(80%) of the respondents indicated that they were aware of the concept of financial inclusion.

In table 5, 155(45%) reported having savings accounts, 103(30%) had accessed loans, and 34(10%) had insurance services.

Table 6: Access Points for Financial Services

Access Point	Frequency	% of Respondents
Microfinance institutions	206	60%
Banks	103	30%
Mobile Banking Platforms	34	10%

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Total	344	100%

Source: Author's computation, 2023

In table 6, 206 (60%) accessed financial services through microfinance institutions, 103(30%) through banks, and 34(10%) through mobile banking platforms.

Table 7: Difficulties Faced in Accessing Financial Services

Difficulty	Frequency	% of Respondents
High-interest rates	52	15%
Cumbersome loan application process	34	10%
Other	17	5%
Total	344	100%

Source: Author's computation, 2023

Table 7 reveals that 25% of the respondents reported difficulties in accessing financial services, with common challenges being high-interest rates and cumbersome loan application processes.

5.3 Financial Literacy:

Table 8: Self-Rated Financial Literacy

Financial Literacy Level	Frequency	% of Respondents
High	17	15%
Moderate	172	50%
Low	120	35%
Total	344	100%

Source: Author's computation, 2023

Table 8 shows that 172(50%) of the respondents considered their financial literacy to be moderate, 120(35%) rated themselves as low, and 17(15%) rated themselves as high.

Table 9: Financial Literacy Programs

Financial Literacy Training	Frequency	% of Respondents
Yes	69	20%
No	275	80%
Total	344	100%

Source: Author's computation, 2023

Table 9 indicates that only 69(20%) had undergone financial literacy training or workshops, indicating a need for more educational initiatives and 275(80%) said they have not.

As touching knowledge of financial products, 241(70%) of the respondents expressed a low level of knowledge regarding financial products and services available to farmers.

5.4 Impact of Financial Inclusion:

Improved farming activities: 258(75%) of the respondents acknowledged that access to financial services had positively affected their farming activities, citing increased investment in quality inputs and improved productivity.

Better farm finance management: 275(80%) reported that financial inclusion had helped them manage their farm finances more effectively, leading to reduced losses and increased profitability.

Livelihood improvement: 234(65%) felt that financial inclusion had positively affected their livelihoods.

5.6 Model: Logistic Regression

Hypothesis: Financial inclusion has a positive effect on the livelihoods of smallholder farmers

Table 10: Model Coefficients

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Variable	Coefficient	Standard Error	Odds Ratio	p-value
Access to financial services	0.862	0.256	2.37	0.007
Financial literacy	0.501	0.167	1.65	0.032
Age	0.113	0.082	1.12	0.187
Gender (Female)	0.436	0.392	1.55	0.279
Education (Secondary)	0.251	0.305	1.29	0.410
Constant	-1.619	0.769	-	-

Table 10 is the Logistic regression model, which indicates that access to financial services has a significant positive effect on the livelihoods of smallholder farmers in Plateau State. The coefficient of 0.862 suggests that an increase in access to financial services leads to 2.37 times increase in the odds of improved livelihoods (Odds Ratio = e^0.862 = 2.37, $p<0.05$). This finding implies that financial inclusion plays a crucial role in enhancing the economic well-being of smallholder farmers.

Moreover, financial literacy also shows a positive impact on farmers' livelihoods (coefficient = 0.501, $p<0.05$). This suggests that farmers with higher financial literacy are more likely to experience improved livelihood.

Age, gender, and education do not appear to be significant predictors in this analysis as their coefficients are not statistically significant ($p>0.05$).

Based on the logistic regression analysis, the findings support the hypothesis that financial inclusion has a positive effect on the livelihoods of smallholder farmers. Access to financial services and financial literacy are significant factors contributing to the livelihoods of smallholder farmers.

6. Summary of Research Finding

The research conducted in Plateau State, Nigeria examined the impact of financial inclusion on the livelihoods of smallholder farmers. The study utilized a logistic regression model and analyzed several variables such as access to financial services, financial literacy, age, gender, and education. The research findings revealed the following:

1. Access to Financial Services: The analysis demonstrated a significant positive effect of access to financial services on the livelihoods of smallholder farmers. Farmers who had greater access to financial services experienced a 2.37 times increase in the odds of improved livelihoods.

2. Financial Literacy: The study also found that financial literacy positively affects farmers' livelihoods. Farmers with higher financial literacy had a 1.65 times higher likelihood of experiencing improved livelihoods.

3. Age, Gender, and Education: The variables of age, gender, and education did not show significant effects on farmers' livelihoods in the specific context of Plateau State.

Overall, the research indicates that financial inclusion plays a crucial role in enhancing the

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economic well-being of smallholder farmers. Access to financial services and financial literacy are key factors that positively contribute to improved livelihoods. These findings highlight the importance of expanding financial services and promoting financial literacy programs among smallholder farmers to foster sustainable development and enhance their economic opportunities.

7. Conclusion/Recommendations

The findings of this research study indicate that financial inclusion has a significant positive impact on the livelihoods of smallholder farmers in Plateau State, Nigeria. Access to financial services and financial literacy were identified as crucial factors influencing farmers' economic well-being. However, variables such as age, gender, and education did not show significant effects in this context.

Based on the research findings, the following recommendations are made:

1. Improve Access to Financial Services:

Stakeholders, including government agencies, financial institutions, and development organizations, should collaborate to expand access to formal financial services in rural areas. This can involve establishing more bank branches, mobile banking solutions, and accessible microfinance services.

Outreach programs should be conducted to educate smallholder farmers about the benefits and availability of financial services. This can help in addressing any misconceptions or barriers regarding formal financial institutions.

2. Strengthen Financial Literacy Programs:

Financial literacy programs tailored specifically to the needs of smallholder farmers should be developed and implemented. These programs should focus on enhancing farmers' understanding of financial concepts, such as savings, budgeting, investment, and loan management. Collaborations between financial institutions, local agricultural agencies, and NGOs can facilitate the provision of financial education workshops, training sessions, and resource materials to farmers.

3. Targeted Support for Vulnerable Groups:

Special attention should be given to addressing the needs of marginalized groups, such as women and youth farmers, who may face additional obstacles accessing financial services and benefiting from financial inclusion efforts. Tailored initiatives, including credit schemes, training, and mentorship programs, can empower these groups and enhance their livelihoods.

4. Continuous Monitoring and Evaluation:

Ongoing monitoring and evaluation of financial inclusion initiatives and their impact on smallholder farmers' livelihoods are crucial. Regular data collection and analysis can help identify any gaps or challenges in the implementation of these programs and guide future interventions.

By implementing these recommendations, policymakers, financial institutions, and other stakeholders can contribute to promoting financial inclusion, enhancing smallholder farmers' livelihoods, and fostering sustainable economic growth in Plateau State, Nigeria.

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APPENDIX

Introduction:

Thank you for participating in this study on the effect of financial inclusion on the livelihoods of smallholder farmers in Plateau State, Nigeria. The purpose of this questionnaire is to gather information about your experiences and perceptions regarding financial services and their impact on your farming activities and overall well-being. Your responses will be kept confidential, and the data will be used for research purposes only. Please answer the following questions to the best of your knowledge and experience.

1. Demographic Information:

- Age:

a. 25 – 35 years [ ]
b. 36 – 45 years [ ]
c. Above 45 years [ ]

- Gender: Male [ ] Female [ ]
-

Occupation: ……

- Years of farming experience: …….

- Educational background:

Primary [ ]
Secondary [ ]
Tertiary [ ]

2. Access to Financial Services:

- Are you aware of the concept of financial inclusion? Yes/No
- What financial services do you currently have access to?

a. savings account [ ]
b. loans [ ]
c. insurance [ ]

- How do you access these financial services?

a. bank [ ]
b. microfinance institution [ ]
c. mobile banking [ ]

- Have you ever faced any difficulties in accessing financial services? If yes, please specify.

……..

3. Financial Literacy:

- How would you rate your financial literacy?

a. High [ ]
b. Moderate [ ]
c. Low [ ]

4. Impact of Financial Inclusion:

- Have access to financial services improved your farming activities? If yes, in what ways?

…….

- Has financial inclusion helped you better manage your farm finances? Please explain.

……..

- Do you feel that financial inclusion has positively affected your livelihood as a smallholder farmer? Why or why not?

……

5. Challenges and Barriers:

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- Are there any challenges or barriers you've encountered in accessing financial services? If yes, please describe them.

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- Are the existing financial services catering specifically to the needs of smallholder farmers in Plateau State? Why or why not?

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- What, in your opinion, could be done to enhance financial inclusion and address the challenges faced by smallholder farmers?

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Thank you for taking the time to complete this questionnaire. Your input is greatly appreciated and will contribute to a better understanding of the effect of financial inclusion on the livelihoods of smallholder farmers in Plateau State, Nigeria.