



DETERMINANTS OF ACCESS TO CREDIT AMONG SMALLHOLDER RICE FARMERS IN WESTERN AGRICULTURAL ZONE OF BAUCHI STATE, NIGERIA

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ABSTRACT

The study examined the determinants of access to credit among smallholder rice farmers in western agricultural zone of Bauchi State, Nigeria. Multi-stage sampling techniques was used in selecting 209 respondents. Data were collected using questionnaires and analyzed using both descriptive and inferential statistics. The result revealed that majority (**82.8%**) of the respondents were **male** and (**80.9%**) were **married** with a mean age of 39years. (60.3%) engaged primarily in crop farming, with a mean of 6people in their household and cultivate an average of 5ha of land. The finding also revealed that **51.7%** of the respondents relied on **informal credit sources**. The logistic regression result showed that farming experience had a positive significant influence on access to credit at ($p<0.01$), cooperative membership and access to extension services were positive and significant at ($p<0.05$) and years of membership had a negative significant influence at ($p<0.05$). Major constraints faced by the respondents were limited access to formal credit (73.2%), lack of collateral (67.9%) **and** inadequate information about available credit (64.1%). The study concludes that farming experience, cooperative membership, years of membership to cooperative and access to extension services were the determinants of access to credit in the study area. Based on the constraints highlighted the study recommends enhancing small-scale rice farmers access to formal credit through the strengthening of cooperative associations, adoption of alternative collateral systems, sensitization of farmers about credit opportunities through radio programs, extension agents and community meetings.

Keywords: Access, Credit, Rice, Smallholder, Farmers, Productivity

INTRODUCTION

Rice (*Oryza sativa*) is increasingly becoming an important staple crop in Nigeria that is rich and cheap source of carbohydrate to both man and animals. It is one of the world's top three food crops, alongside maize and wheat. It has served as a vital staple cushioning the effect of malnutrition and extreme hunger in Nigeria and many other developing countries throughout the world (Bose *et al.*, 2020). Recognizing the crucial role of agricultural credit in promoting sustainable agricultural development, the Nigerian government, CBN and various external organizations, has implemented numerous agricultural credit schemes to enhance farmers' access to financial resources. According to Effiong *et al.* (2020) the objective of the agricultural credit policy in Nigeria is to make adequate investment funds available to the agricultural sector at the right time and at such rates that will make returns from agriculture more attractive. Some of these Agricultural credit schemes include: Agricultural Credit Guarantee Scheme (ACGS) 1977-date, National Agricultural Policy (NAP) 1988-date, National Agricultural Land Development Authority (NALDA) Program 1992-date, Fadama III Project (2008-date), Commercial Agriculture Credit Scheme (CACCS) 2009-date, Nigeria Incentive-Based Risk Sharing System for Agricultural Lending (NIRSAL) 2011-date, Growth Enhancement Support Scheme (GESS) 2012-2015, Anchor Borrowers' Programme (ABP) 2015-date, Presidential Fertilizer Initiative (PFI) 2017-2022. These programmes were expected to improve credit availability to farmers but face challenges such as bureaucratic delays, corruption, and difficulty in meeting collateral requirements, inadequate loan utilization and diversion of the loan by the farmers for other purposes. As observed by Effiong *et al.* (2020) the efficacy of any agricultural credit scheme is determined not only by its availability, accessibility, and cost, but also by the right and efficient allocation and utilization by beneficiaries for the intended purpose. Smallholder rice farmers face significant challenges in accessing credit, which is essential for improving productivity and sustaining



agricultural activities. Limited access to formal financial services due to factors such as lack of collateral, high-interest rates, and stringent loan requirements forces many farmers to rely on informal lending sources with unfavorable terms. Socio-economic factors like age, sex, education level, farm size, cooperative membership, as well as institutional constraints such as the availability of financial institutions and government policies, influence their ability to secure credit. Despite various agricultural financing initiatives, many farmers still struggle to obtain adequate funding. Previous studies shows there is little literatures on the determinants of access to credit in the study area. It is against this backdrop this research wish to be conducted. The broad objectives of the study was to examine the determinants of access to credit among smallholder rice farmers in Bauchi state. The specific objectives were to;

- i. describe the socio-economic characteristics of the respondents in the study area,
- ii. identify the sources of credit available to the respondents,
- iii. determine the factors influencing access to credit among the respondents, and
- iv. Identify the constraints to access to credit among the respondents in the study area.

METHODOLOGY

The Study Area

The study was carried out at Western Agricultural Zone of Bauchi State, Nigeria. Bauchi State comprises of three Agricultural Zones namely: Northern Zone (9 LGAs) Central Zone (4 LGAs) and Western Zone (7 LGAs). The Western Zone has 7 Local Government Areas, namely; Bauchi, Dass, Tafawa- Balewa, Toro, Kirfi, Bogoro and Alkaleri Local Government. The study area is located between Latitudes 9°30' and 10°48' North of the equator, and between Longitudes 8°45' and 15' East of the Greenwich meridian. The area has a total land mass of 49,259 square kilometres. The study area has a projected population of 3,281,489 million people (NPC/NBS 2024 Projection at 3.7% p.a). The climate of the study area is characterized by long dry season (October-May) with a short rainy season [May-October], (Ibrahim *et al.*, 2024). The study area falls within the Sudan Savannah vegetation zone with an annual rainfall of 1300 mm per annum, which commences in April and ends October. The State has an average temperature of 28.30C. Bauchi State is bordered in a clockwise 36 direction by Yobe, Gombe, Taraba, Plateau, Kaduna, and Kano and Jigawa State respectively. The major occupations of the people are farming, livestock rearing and trading (Itse *et al.*, 2023).

Sampling Procedure and Sample Size

Multi-stage sampling procedure was used in selecting the respondents. In the first stage western agricultural zone was purposively selected because of their potentials for rice production. In the second stage, three (3) Local Government Areas (LGAs) were purposively selected from the zone due to their high intensity of rice production which include; Toro, Tafawa Balewa and Dass. The third stage, involved purposive selection of nine (9) villages from the three (3) LGAs due to high intensity of rice production viz; Gumau, Kogin Salla, Nabordo, Burga, Zwall, Wuro Jiban, Wandu Kagama and Dot. The final stage, involved proportionate selection of 10% of registered farmers from the total sampling frame of 2,107 farmers obtained from BSADP.



Table 1: Sample Selection Plan

Local Govt. Area	Villages	Sampling Frame of the farmers	Percentage sample size of the farmers (10%)
Toro	Gumau	230	23
	Kogin Salla	211	21
	Nabordo	215	21
Tafawa Balewa	Burga	300	30
	Zwall	275	27
	Wuro Jaban	225	22
Dass	Wandi	210	21
	Kagadama	221	22
	Dot	220	22
Total		2,107	209

Source: Author's Computation

Method of Data Collection

Primary data was obtained from the respondents through the administration of structured questionnaires in the study area.

Method of Data Analysis

Data for the study were analyzed using both descriptive and inferential statistics to achieve the research specific objectives. Descriptive statistics such as; mean, median, frequency and percentages was used to achieve objectives i, ii, and iv while logistic regression was used to achieve objective iii. For logistic regression, the model is specified as follows;

$$P(Y) = \frac{1}{[1 + exp - (\alpha - \sum \beta_i X_i)]} \quad \dots (1)$$

In order to linearize the right hand side a logit transformation was applied by taking logarithm of both sides therefore we have;

$$Logit P(y) = \alpha + \sum \beta_i X_i \quad \dots (2)$$

Where:

$y_i = 1$ i.e. respondent has access to credit;

$y_i = 0$ i.e. if respondent did not have access to credit

β = Logistic coefficient for independent variables

α = constant term

X_i = vector of independent variables

The independent variables specified as determinants of access to credit were

X_1 = Sex (1 = Male, Female = 0)

X_2 = Age (years)

X_3 = Marital Status (yes = 1 and No = 0)

X_4 = household size (numbers)

X_5 = Membership of association to farmer's group (Yes = 1 and No = 0)

X_6 = Years of experience in Rice farming (years)

X_7 = Educational level (years of schooling)

X_8 = Years of membership to cooperative group (yrs)

X_9 = Farm size (in hectares)

X_{10} = Contact with extension agent (yes = 1 and No = 0)



RESULTS AND DISCUSSION

Socioeconomic Characteristics of the Respondents

Distribution of the Respondents Based on Quantitative Socioeconomic Characteristics

The result revealed that 20.6% of the respondents were within the age range of 20-29years, 33.5% were within 30-39years and 32.1% were within 40-49years, with a mean age of 39years. This indicates majority of the respondents were within their economically active age, this indicates a vibrant and productive farming population capable of adopting improved farming and financial practices. 9.6% of the respondents were within the age of 50-59years, and 4.3% were within the age of 60years above. This agrees with the finding of Effiong *et al.* (2022) who concluded that most of the rice farmers in Lagos state had a mean age of 38 years. This contradicts the finding of Ibitunde *et al.* (2021) who reported that the mean age of the farmers in Osun State, Nigeria was 53.04 years. The moderate representation of youths with a mean age of 39years suggests growing interest among younger individuals in rice farming, which may positively influence access to credit, as they are often perceived by lenders as more experienced, reliable, and financially active.

The finding in Table 2 showed that 17.2% of the respondents operate on 1-3ha, 20% had 2-3ha, 24% had 4-5ha, 11.5% had 5-6ha, 13.9% had 7-8ha, and 13.4% had 9-10ha. The mean farm size of the respondents was 5ha, this indicates that most of the respondents in the study area engage in farming on a small scale, which aligns with the definition of smallholder agriculture. The predominance of smaller farms may limit productivity and access to credit, as financial institutions often prefer lending to farmers with larger farm sizes and higher production capacity. This is in line with the finding of Francis *et al.* (2022) in Benue State, Nigeria and Kolapo *et al.* (2021) in Ondo State, Nigeria that reported majority of their respondents are smallholder farmers with farm size of between 2-5hectares. It contradicts the finding of Daemane and Muroyiwa, (2022) and Chandio *et al.* (2020) who reported that majority of their respondents had an average farm size of about 10.53 acres.

The findings further showed that 14.4% of the respondents had 1-3years of farming experience, 15.3% had 4-6years of experience, 17.7% had 7-9years of experience, 29.2% had 10-12years of experience and 23.4% had 13-15years of farming experience. With a mean farming experience of 9years, this indicates that most smallholder rice farmers in Bauchi State are well-experienced, which may enhance their productivity, management skills, and credibility when seeking credit. Experienced farmers are generally more familiar with farming risks and opportunities, making them more attractive to lenders compared to less experienced ones. This agrees with the finding of Adebayo *et al.* (2022) in Kogi State, Nigeria and Chandio *et al.* (2020) in Sindh, Pakistan who reported that majority of their respondents had an average of 10years of farming experience. The result showed that 33.0% of respondents had small households (1-4 members), 35.9% had moderate households (5-8 members), and 31.1% had large households (9 members above) with a mean size of 6people. This indicates that most smallholder rice farmers in the study area maintain moderate to large family size, which may provide adequate family labour for farming activities and influence household income, expenditure, and access to credit facilities. This agrees with the finding of Ambong and Pasco, (2022) that the small-scale rice farmers in Philippines and Chandio *et al.* (2020) in Pakistan maintained moderate to large household size.



Table 2: Distribution of Respondents based on Quantitative Socioeconomic Characteristics (n=209)

Characteristics	Frequency	Percentage	Mean
Age			
18-29years	43	20.6	39
30-39years	70	33.5	
40-49years	67	32.1	
50-59years	20	9.6	
60years above	9	4.3	
Farm size			
1-2ha	36	17.2	5
2-3ha	42	20	
4-5ha	50	24	
5-6ha	24	11.5	
7-8ha	29	13.9	
9-10ha	28	13.4	
Years of farming experience			
1-3years	30	14.4	9
4-6years	32	15.3	
7-9years	37	17.7	
10-12years	61	29.2	
13-15years	49	23.4	
Household size			
1-4 people	69	33.0	6
5-8 people	75	35.9	
9 or more people	65	31.1	

Source: Field survey, 2025

Distribution of the Respondents Based on Qualitative Socioeconomic Characteristics

Qualitative characteristics are non-numerical attributes, they describe categories, qualities, or perceptions that cannot be expressed in exact numbers but in words or labels. Qualitative socioeconomic characteristics such as farmers’ attitudes toward borrowing, trust in financial institutions, membership in cooperatives or savings groups, financial literacy and awareness and religious or cultural beliefs strongly influence both the demand for and actual access to credit. Even where formal credit products exist, negative perceptions of banks, low trust, and fear of debt reduce application rates and uptake; in similar Nigerian farming contexts, behavioral and perceptual barriers have been associated with low take-up (Balogun *et al.*, 2021).

The findings in Table 3 revealed that 39.2% of the respondents sourced their initial capital from personal savings and 36.4% from farming activities, 14.8% obtained funds from trading, 4.3% from microfinance bank, and 1.9% from cooperatives. This indicates that smallholder rice farmers in the study area rely heavily on self-financing and informal means to start their farming enterprises, reflecting limited access to formal credit institutions. The low patronage of microfinance banks and cooperatives suggests challenges such as strict lending conditions, limited awareness, or lack of trust in formal financial systems. This is in line with finding of Ambong and Pasco, (2022) in Philippines and Effiong *et al.* (2020) in Lagos State, Nigeria that concluded informal sources of credit play a vital role in promoting the small-scale agricultural productivity of rice farmers in their study area.

The result showed (82.8%) majority of the respondents in the study area were male, while females constitute only 17.2%. This indicates that rice farming in the area is predominantly a male-dominated activity, reflecting cultural and social norms that often limit women’s participation in agricultural production and access to productive resources. The low female representation may also imply that women face greater barriers in accessing farmland, credit facilities, and other agricultural inputs. Consequently, sex appears to be a key factor influencing access to credit, as men are more likely to own assets and meet lending requirements compared to their female counterparts. This agrees with the finding of Chandio *et al.* (2020) in Pakistan and Kolapo *et al.* (2021) in Ondo State, Nigeria discovered in their study that majority of the respondents were male. The findings further revealed that



most (80.9%) of the respondents were married, 15.3% are single, 3.3% divorced, and only 0.5% widowed. This indicated that rice farming in the study area is largely practiced by married individuals who are likely to have family responsibilities and dependents. Being married may enhance access to credit, as married farmers often have greater social stability, stronger community ties, and joint decision-making power that can improve their credibility with lenders. This is in line with the findings of Effiong *et al.* (2022) in Lagos State, Nigeria and Kolapo *et al.* (2021) who reported majority of the rice farmers were married. Conversely, the small proportion of single, divorced, and widowed farmers indicates limited participation by individuals without family support, which may affect their ability to secure credit or expand their farming operations.

The result showed that 37.8% of the respondent's attained secondary education, 25.8% had non-formal education, while smaller proportions (10.5%) had primary education, (13.9%) had national diploma, (5.3%) had higher national diploma, and (6.7%) had degree qualifications. This indicates that majority of smallholder rice farmers in the study area had at least basic education, which may enhance their understanding of farming practices and record-keeping. This is in line with Kolapo *et al.* (2021) and Adebayo *et al.* (2022) who discovered majority of their respondents are literate with at least secondary level qualifications but in contrast with the finding of (Danji *et al.*, 2024) that rice farmers in ADP zone I of Taraba State, Nigeria and Adigun (2022) that smallholder women farmers in Kwara State, Nigeria had formal education.

The result further showed (60.3%) majority of the respondents are primarily engaged in crop farming, followed by 16.7% in other occupations, 12.0% as civil servants, 8.6% in trading, and 2.4% in livestock rearing. This indicates that rice farming is the main livelihood activity among the respondents, emphasizing their dependence on agriculture for income and sustenance. The presence of civil servants and traders suggests some level of income diversification, which could enhance financial stability and potentially improve access to credit for farming operations. This agrees with the finding of Jabo and Muhammad, (2020) who reported majority of the respondents had practice farming as their major occupation.



Table 3: Distribution of Respondents based on Qualitative Socioeconomic Characteristics (n=209)

Characteristics	Frequency	Percentage
Source of initial capital		
Personal savings	82	39.2
Microfinance bank	9	4.3
Cooperative society	4	1.9
Farming	76	36.4
Trading	31	14.8
Others	7	3.3
Sex		
Male	173	82.8
Female	36	17.2
Marital Status		
Single	32	15.3
Married	169	80.9
Divorced	7	3.3
Widowed	1	0.5
Educational qualification		
Primary	22	10.5
Secondary	79	37.8
National Diploma	29	13.9
Higher National Diploma	11	5.3
Degree	14	6.7
Non-formal education	54	25.8
Primary Occupation		
Crop farming	126	60.3
Livestock rearing	5	2.4
Civil servant	25	12.0
Trading	18	8.6
Others	35	16.7

Source: Field survey, 2025

Distribution of the Respondents based on Qualitative Socioeconomic Characteristics

The finding in Table 4 showed 62.7% of the respondents belong to farmers’ associations and 37.3% were not members of any group. This indicates that most smallholder rice farmers in Bauchi State participate in cooperative or farmers’ groups, which can enhance their access to training and support, market access, shared resources, better prices and access to credit facilities. Membership in associations often improves farmers’ bargaining power and credibility with lenders, making them more likely to secure loans or financial support compared to non-members. This agrees with the finding of Ambong and Pasco, (2022) in Philippines and Danji *et al.*, (2024) in ADP zone I of Taraba State, Nigeria that majority of their respondents were members of cooperative societies. The result in Table 4 showed that 67.5% of the respondents have access to extension services and 32.5% do not have access to any extension services. This indicates that most smallholder rice farmers in the study area benefit from agricultural extension support, which provides them with technical knowledge, improved farming practices, and information on credit opportunities. This agrees with Ambong and Pasco, (2022) in Philippines who reported majority of the respondents had contact with extension services but disagree with the finding of Danji *et al.*, (2024) in ADP zone I of Taraba State, Nigeria who discovered that majority of the respondents had no contact with extension agents. However, the 32.5% without access may face challenges in adopting modern techniques or meeting credit institutions’ requirements. The result further showed that 36.2% of respondents had monthly contact with extension agents, (28.4%) had weekly, (17.7%) had fortnightly, and (17.7%) had quarterly. This indicates that although most smallholder rice farmers in the study area receive some form of extension support, the frequency of contact is generally low. Regular interaction with extension officers enhances farmers’ knowledge,



productivity, and awareness of credit facilities, while infrequent or no contact may limit access to vital information and reduce the likelihood of benefiting from agricultural credit programmes.

Majority of the respondents (86.6%) agreed they had easy access to markets, and 13.4% disagreed. This indicates that most of the respondents in the study area can easily sell their produce and obtain inputs when needed. Access to markets enhances farmers’ income, business networks, and ability to repay loans, thereby improving their creditworthiness. Conversely, limited market access among a few farmers may hinder profitability and reduce their chances of securing credit for agricultural expansion. The result in Table 4 further revealed 52.2% of the respondents had benefited from government interventions, and 47.8% did not benefit from any intervention programmes. This implies that slightly more than half of the smallholder rice farmers in the study area accessed government support programmes such as input distribution, credit schemes, or training initiatives. According to Balana and Oyeyemi, (2022) government interventions such as crop insurance, information access and extension services are needed to increase credit access, technology adoption, and smallholder’s agricultural productivity.

Table 4: Distribution of Respondents based on Qualitative Socioeconomic Characteristics (n=209)

Characteristics	Frequency	Percentage
Membership to farmers association		
Yes	131	62.7
No	78	37.3
Access to extension services		
Yes	141	67.5
No	68	32.5
Frequency of extension contact (n=141)		
Monthly	51	36.2
Weekly	40	28.4
Fortnightly	25	17.7
Quarterly	25	17.7
Access to market		
Yes	181	86.6
No	28	13.4
Beneficiary of government intervention		
Yes	109	52.2
No	100	47.8

Source: Field survey, 2025

Access to Credit and other Services among the Respondents

The result in Table 5 showed that 51.7% of respondents obtained credit from informal sources, 25.4% from semi-formal sources, and 21.5% from formal institutions. This indicates that majority of the smallholder rice farmers in the study area rely heavily on informal credit sources such as friends, relatives, traders, and moneylenders, likely due to easier access, flexible repayment terms, and fewer collateral requirements. The relatively low patronage of formal and semi-formal credit institutions suggests that bureaucratic procedures, high interest rates, and stringent collateral demands continue to limit farmers’ access to institutional finance. This reliance on informal credit may restrict the amount of capital available to farmers and, consequently, hinder expansion and productivity in rice farming. This agrees with Ambong and Pasco, (2022) in Philippines and Effiong *et al.* (2022) in Lagos State, Nigeria who concluded that the most preferred source of loan among rice farmers in their study area was an informal source. The result in Table 5 revealed that formal credit source accessed were from Bank of Agriculture; 26.8%, commercial banks; 24.4%, microfinance banks; 24.4%, and Bank of Industry; 24.4%.

The result in Table 5 revealed that semi-formal credit accessed were from NGOs; 26.4%, cooperative societies; 26.4%, ADPs; 24.6% and 22.6% from the RBDAs. This indicate that NGOs and cooperatives play a notable role in providing semi-formal credit to smallholder rice farmers in the study



area. However, the high proportion of respondents relying on non-formal sources suggests limited coverage and outreach of semi-formal institutions. The result in Table 5 revealed that informal credit accessed were from family members and relatives; 29.6%, contribution groups; 27.8%, friends; 20.4%, and 22.2% from moneylenders. This indicate that family and social networks are the dominant informal sources of credit among smallholder rice farmers in the study area. Such sources are often preferred because they offer flexible repayment conditions, little or no collateral requirements, and quick access to funds. However, the reliance on informal credit limits the amount of capital available for investment and may not support large-scale farming operations.

Table 5: Distribution of the Respondents based on Source of Credit and other Services

Sources	Frequency	Percentage
Sources of credit (n=209)		
Formal credit source	45	21.5
Semi-formal credit source	53	25.4
Informal credit source	108	51.7
Others	3	1.4
Formal credit source accessed (n=45)		
Micro-finance bank	11	24.4
Bank of Agriculture	12	26.8
Bank of industry	11	24.4
Commercial bank	11	24.4
Semi-formal credit source accessed (n=53)		
Non-governmental organization	14	26.4
Cooperative societies	14	24.6
Bauchi State Agricultural Development Project (BSADP)	13	26.4
River Basin Lower Development Authorities (RBDAs)	12	22.6
Informal credit source accessed (n=108)		
Family\relatives	32	29.6
Friends	22	20.4
Contribution	30	22.2
Money lenders	24	27.8

Source: Field survey, 2025

Factors Influencing Credit Access among the Respondents

The regression coefficients estimate the relative contribution of each demographic variable to access to credit. The coefficients (B) represent the amount of change in the dependent variable (access to credit) for a one-unit change in the predictor, while holding other variables constant. The significance levels (p-values) indicate whether the relationships are statistically meaningful. Constant (B = 1.542, $p < 0.001$): The constant term is statistically significant, indicating that when all predictors are held constant, the baseline level of access to credit is positive. The model summary shows how well the logistic regression model fits the data after including the independent variables. The -2 Log Likelihood ($-2LL$) value decreases to 73.494, which is much lower than the value in the baseline model. A lower $-2LL$ indicates a better-fitting model, meaning that the predictors included in the analysis substantially improve the model's ability to explain access to credit. The Cox and Snell R^2 value of 0.433 suggests that the variables in the model explain about 43.3% of the variation in access to credit, while the Nagelkerke R^2 , which adjusts the value to a scale more comparable to traditional R^2 , is 0.720. This means the model accounts for approximately 72% of the variation in the dependent variable. In practical terms, these values indicate a very strong model, showing that the independent variables collectively provide a powerful explanation of whether respondents have access to credit.

Table 6: Factors Influencing Credit Access among the Respondents

Variables	(Coefficients) B	Std. Error	P-Value	Sig.
(Constant)	1.542	.442	3.485	.001
Age	-.028	.071	-.398	.691
Gender	-.017	.138	-.123	.902
Marital Status	.043	.127	.342	.733
Household Size	.008	.084	.089	.929
Farm Size	-.083	.113	-.728	.467
Farming Experience	.217	.076	2.858	.005
Education Qualification	-.040	.029	-1.365	.174
Cooperative Association	.346	.141	2.456	.015
Years of membership	-.182	.078	-2.324	.021
Access to Extension Services	.332	.139	2.388	.018
-2 Log likelihood	73.494			
Cox and Snell R²	.433			
Nagelkerke R²	.720			

Source: Field survey, 2025 *** significant at 1% ($p < 0.01$), ** significant at 5% ($p < 0.05$)

Farming experience ($B = 0.217$, $p < 0.01$) has a positive and statistically significant influence on access to credit at 1% level. This means that more experienced farmers are more likely to access credit, possibly because experience improves credibility and familiarity with lending procedures. Cooperative membership ($B = 0.346$, $p < 0.05$) has a positive and significant influence on access to credit at 5% level. This implies that farmers who belong to cooperatives are more likely to obtain credit due to collective bargaining power, group collateral, and improved information flow. Years of membership to farmers cooperatives ($B = -0.182$, $p < 0.05$) is negative and significant at 5% level, indicating that longer membership duration may not necessarily improve credit access possibly due to saturation effects or reduced participation over time. Access to extension services ($B = 0.332$, $p < 0.05$) has a positive and significant influence on credit access at 5% level. This suggests that farmers who frequently interact with extension agents are better informed about credit opportunities and requirements. This agrees with finding of Umeh *et al.* (2023) that the logistic result coefficients of membership of cooperative society significantly determine the probability of small scale cassava farmer's access to credit, also farming experience and extension contact significantly determine the probability of small scale cassava farmer's access to credit.

Constraints to Credit Access among Smallholder Rice Farmers in the Study Area

The result from Table 7 revealed that the respondents face multiple, interrelated challenges that restrict their ability to access agricultural credit from both formal and informal sources. These constraints are not isolated but tend to overlap, meaning that most farmers face a number of obstacles simultaneously like financial and institutional constraints. The most common barriers identified were limited access to formal credit (73.2%), lack of collateral (67.9%), and high interest rates (56.5%). These findings suggest that many farmers depend heavily on informal lenders, cooperatives, or personal savings because they cannot meet the strict requirements of formal financial institutions. In rural settings, most farmers do not own land with valid titles and cannot present acceptable collateral for loans. Even when they do, the interest rates offered by banks and microfinance institutions are often too high, discouraging borrowing or leading to partial loan requests that are insufficient for full production costs. This agrees with Chandio *et al.* (2020) that stated the major constraints to smallholder farmers access to credit from formal sources is because of the undersupply and shortage of qualified collateral, high interest rate and other circumstances. Also Gb1gb1, (2022) reported that smallholder farmers have limited access to loan facilities due to inability to obtain formal loans, smallholder farmers often borrow from informal sources to pay an exorbitant interest rate, which ensures that at the end of the production season, they are left with an unreasonable net farm income.

Table 7: Distribution of the Respondent’s based on Constraints Faced

Variables	Frequency	Percentage
Limited access to formal credit	153	73.2
Inadequate information about available credit	134	64.1
Fear of repayment due to farm risks (pests, drought, etc.)	128	57.9
Bureaucracy in loan processing	125	59.8
Lack of collateral	124	67.9
High interest rate	123	56.5
Inadequate knowledge of credit application process	115	55.0
Lack of formal land titles	101	48
Cultural or religious beliefs against interest-based loans	98	37.3
Poor relationship with financial institutions	96	45.9
Long distance to credit institutions	93	44.5
Discrimination or bias in credit allocation	84	40.2

Source: Field survey, 2025 *Multiple response

Furthermore, bureaucratic loan processing (59.8%) was widely reported as a major issue, many farmers experience delays and complex documentation requirements, causing them to miss planting seasons or abandon the loan application process altogether. These institutional inefficiencies reflect structural weaknesses within the credit delivery system and a lack of farmer-centered lending practices. This agrees with the finding of Ibitunde *et al.* (2021) that concluded delay in approval/disbursement and complex documentation requirements was among the major constraints to credit access among the arable crop farmers in Osun State, Nigeria. Majority (64.1%) indicated inadequate information about available credit programmes as a major barrier. This highlights a significant communication gap between financial institutions, government schemes, and rural communities. 55.0% indicated inadequate knowledge of credit application process as their barrier. Most farmers are either unaware of existing credit opportunities or lack the knowledge required to navigate the application process effectively. This problem is worsened by long distances to financial institutions (44.5%), which make it difficult for rural farmers to make inquiries, submit forms, or follow up on loan applications. The combined effect of low financial literacy, distance, and poor outreach contributes to persistent exclusion from formal credit systems.

This finding is in line with Alabi and Anekwe, (2022) who stated that major constraints encountered by smallholder rice farmers in accessing loan facilities were: cumbersome administrative procedures, late disbursement of loan, long distant to financial institutions for formal sources, small amount of loan, and short re-payment period. Farmers also face social, cultural, and psychological constraints that hinders them from having access to credit. For example, fear of loan repayment due to farm risks (57.9%), these risk make credit appear unsafe or burdensome, especially when repayment is tied to unpredictable harvest outcomes. This agrees with Zakari, (2022) who reported that risk of not paying back because of crop failure was among the major constraints faced by the respondents in credit acquisition. Similarly, 37.3% of farmers mentioned religious or cultural beliefs against interest-based loans, reflecting the influence of Islamic finance ethics prevalent in northern Nigeria. This belief discourages many from borrowing through conventional banking systems, reinforcing dependence on informal, interest-free community arrangements. About 45.9% of respondents reported poor relationships with financial institutions, and 40.2% mentioned bias or discrimination in credit allocation. This implies a lack of trust and inclusivity between lenders and smallholder farmers. Financial institutions may perceive small farmers as high-risk clients, while farmers, may view banks as unfriendly or exploitative. Such mutual mistrust reduces the willingness to engage, further deepening credit exclusion. This finding agrees with Ibe *et al.* (2024) who concluded that communication problem between financial institutions and farmers was a major constraints to having access to credit.

CONCLUSION AND RECOMMENDATIONS

The study concludes that cooperative membership, years of membership, farming experience, and access to extension services were the determinants of rice farmer’s access to credit in the study



area. Also access to credit were constraint by **limited access to formal credit, lack of collateral and inadequate information about available credit source to mention few.**

Based on the findings of the study the researcher makes the following recommendations;

- i. Financial institutions should design flexible, low-interest, and farmer-friendly credit products that accommodate the unique needs of smallholders.
- ii. Bureaucratic bottlenecks in credit disbursement should be minimized to ensure that funds are released before the planting season, when they are most needed.
- iii. Financial institutions should be influenced by government to accept group guarantees, warehouse receipts, and movable assets as collateral substitutes to support farmers without land titles.
- iv. Government and NGOs should improve cooperative governance, financial transparency, and capacity to ensure these groups effectively facilitate access to credit rather than hinder it.
- v. Government, NGOs and other stakeholders should consider cultural and religious values to introduce Islamic microfinance models that will promote and encourage non-interest loans to foster wider acceptability.

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