

The Factors Inhibiting Credit Access to Small-Scale Rice Farmers from Microfinance Institutions in Mbarali District, Tanzania

Jastine Katabaro¹

¹Assistant Lecturer, Arusha Institute of Accountancy (IAA), Department of Accounting and Finance, P. O. Box 2594, Njiro Hill Arusha, Tanzania
(E-mail: katabarojustin2021@gmail.com)

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Abstract : This study investigates the factors preventing small-scale rice farmers in Mbarali District, Tanzania, from accessing essential credit services. By employing a mixed-methods approach, the research combines qualitative and quantitative data to comprehensively understand these factors. Data were collected from 80 selected rice-farming households through interviews, focus group discussions, and surveys. The study captured insights from farmers, community leaders, financial institutions, and government agencies. The findings reveal multiple obstacles to credit access, including insufficient collateral, high interest rates, strict loan conditions, and limited awareness of available credit programs. Additionally, systemic issues such as bureaucratic delays, poor access to financial institutions, and socio-economic barriers were identified. The binary logistic regression analysis supported these observations, showing low levels of credit access and pointing to key factors like income, land ownership, and education as significant influences. Although farming experience was not statistically significant at the 5% level ($p\text{-value} = 0.843$), it still positively affected credit access, with a coefficient of $\beta = 0.103$. In contrast, membership in farming groups, farm size, and awareness had significant positive effects on credit access, with $p\text{-values}$ of 0.005, 0.011, and 0.014, respectively. The study underscores the need for policy interventions to address these challenges. Recommendations include enhancing farmers' financial literacy, streamlining loan application processes, and fostering stakeholder collaboration. By tackling these barriers, the Ministry of Agriculture and other partners can create a more inclusive agricultural sector, empowering small-scale farmers to access financial resources and hence contribute to rural development.

Keywords: Credit Access, Financial Institutions, Small-scale farmers, Financial Inclusion.

I- Introduction :

Access to credit is a critical factor in enhancing the livelihoods of small-scale farmers, particularly in the rice sector. Despite its significance, many small-scale rice farmers face various barriers that limit their ability to secure financial support. This study seeks to explore the factors that inhibit credit access for these farmers and the subsequent effects on their livelihoods. Understanding these challenges is essential for developing strategies to improve financial inclusion and support agricultural productivity. In this context, the research identifies several key factors affecting credit access, including the availability of credit sources, farm credit charges, collateral requirements, loan application procedures, and interest rates. By analyzing the impact of these factors, the study aims to recommend potential solutions that could enhance their access to credit, thereby improving their overall economic well-being.

Globally, access to credit for agro-farmers has captured the attention of many groups of people to be an issue of concern, like agribusiness entrepreneurs, agricultural economists, and development practitioners. This is no surprise, given the fact that access to credit can increase farm productivity, market integration, and poverty reduction (Mensah et al., 2019; Alhassan et al., 2020; Raza et al., 2023; Ovwigho et al., 2024; Mariki Philipo, 2024). Experience shows that many countries in the world have practiced the use of Microfinance as the model of addressing challenges facing many

farmers in rural areas like poverty, food insecurity, employment opportunities, social exclusions and others (Adejoh, 2018; Raza et al., 2023). However, this expectation has remained in the grey area and with a puzzled angle. For example, it is currently estimated that over 2 billion people lack adequate collateral to access similar services in formal financial institutions, such as Banks (Thunstrom, 2021; Mwatawala et al., 2024; Xu et al., 2024).

Similarly, Africa, like other continents in the world, has also experienced the same challenge of Microfinance in providing accessibility to credit among farmers within their countries (Chandio & Jiang, 2018; Balgah et al., 2022; Mulungu & Msemwa, 2024). It has been shown that in Nigeria, Ghana, Kenya, Burundi and other countries in Africa, their farmers are constrained by the lack of financial resources to meet a variety of operational and investment needs (Elahi et al., 2018; Tetteh et al., 2021; Mwatawala et al., 2024). This is because most of the farmers and agribusiness in rural areas had no access to capital (Chenaa et al., 2018; Ongwech et al., 2020; Ankral., 2021; Mariki & Philip, 2024). Although in most of the developed countries like China and Pakistan and many developing markets, agribusiness subsidies have accelerated agricultural output and productivity (Chandio & Jiang, 2018; Elahi et al., 2018; Ullah et al., 2020), the majority rural residents have limited access to credit, particularly micro-credit (Ali & Awade, 2019; Sikandar et al., 2022; Mwatawala et al., 2024). For example, in Cameroon and other African countries, the bulk of the population lives in rural areas, where approximately about 70% of the majority are women who engage in subsistence agriculture. Unfortunately, formal microcredit services are limited (Ongwech et al., 2020; Ongwech et al., 2021; Tetteh et al., 2021), and many credit-constrained farmers tend to rely on informal, community-based borrowing arrangements with exorbitant interest rates (Djoumessi et al., 2018; Julien et al., 2021). The reasons for the inaccessibility of credit or loans for farmers' investments in rural areas are the length of their education, distance to nearby cities, ownership of bank accounts, annual income, and financial education experience (Nkilijiwa & Sanka, 2021; Mwatawala, et al., 2024). Furthermore, rural farmers in many African countries are also impacted by the area of cultivated land, interest rate, collateral, farms' income, financial literacy index, credit accessibility experience, the legal status of farmer groups, and the amount of a loan. Some of the issues that prevent farmers from having a widespread access to credit facility include the lack of loan need, lack of Financial Service Advisory Committee (FSAC) awareness, lack of collateral, loan usury perspective, loan rejection experience, fear of borrowing from the bank, and inactive farmer groups (Oke et al., 2019; Omolade, 2019; Raza et al., 2023).

Tanzania, like other developing countries in Africa, has smallholder farmers who dominate the agricultural sector, cultivating 5.1million hectares annually; about 92 percent of all rice produced in Tanzania is under upland and lowland rainfed systems, while only eight percent (8%) is under irrigation schemes (Balgah et al., 2022; TADB, 2023; Mariki & Philip, 2024). Also, the livelihood of over two million people countrywide has been influenced by rice production and marketing (Mwonge & Naho, 2021). It has been indicated that 2.9 million MT of rice was produced in the 2019/2020 crop season, which is more than 100 percent increase compared to 1.4 million MT which was recorded in the 2007/08 crop season (Mwonge & Naho, 2021; TADB, 2023). The smallholder farming system produces about 90 percent of rice in farm sizes ranging from 0.9 to 3 hectares (ha), with an average farm size of 1.3 hectares (TADB, 2023), of which 85 percent is used for food crops (Mwonge, & Naho, 2021; Balgah et al., 2022), while using traditional technologies for production (Ongwech et al., 2021; Mwonge, & Naho, 2021; Wang et al., 2024). These traditional technologies depend much on credit accessibility to enable smallholder farmers to increase farm output and reduce rural poverty (Offor et al., 2021; Balgah et al., 2022). Unfortunately, accessibility to credit for farmers has been a significant challenge (Assogba et al., 2017; Adejoh, 2018), because financial institutions are reluctant to provide credit to smallholder farmers due to a lack of collaterals and fear of climate variations (Makame et al., 2014; Silas et al., 2020; TADB, 2023; Gicheru et al., 2024). Different scholars have reported that several initiatives and programs have been implemented to improve farmers' access to credit and financial institutions and services (Kiplimo et al., 2018; Knox,

2021; Ume et al., 2018). Some of these initiatives and programs regarding the accessibility of credit for farmers in Tanzania include; Tanzania Agricultural Development Bank (TADB), Microfinance institutions, Rural and Community Banks, Warehouse Receipt Systems (WRS), Agricultural Cooperatives, Mobile Banking and Digital Solutions (TADB, 2023). For example, in 2023, about Tshs 196.84 billion has been disbursed by TADB to smallholder farmers (15,008) and Small and Medium Enterprise (companies and cooperatives) (15,687) through Commercial banks at lower interest rates and affordable conditions (TADB, 2023). All these financial institutions are considered to be the key element or component in uplifting agricultural productivity through Small Credit Guarantee Scheme (SCGS) in the provisions of credit and loans to farmers in improving their livelihoods (Mele et al, 2019; Balgah et al., 2020; Atamja et al., 2021). Unfortunately, despite these initiatives, small-scale rice farmers in Tanzania, and specifically Mbarali District, encounter a similar problem of limited access to loan facility among smallholder farmers and therefore the study aims to figure out the solution for this problem.

Furthermore, a growing body of literature suggests that many small-scale farmers in Tanzania continue to face persistent poverty despite the presence of financial institutions (Mwambungu, 2019; Atamja et al., 2021). This raises concerns about the effectiveness of these institutions in addressing the financial challenges that farmers encounter if really “are these financial services truly bridging the gap, or do underlying barriers continue to hinder the potential benefits?” The issue of limited credit access remains an academic puzzle, as the root causes of these barriers are not fully understood. Despite the efforts in addressing the mentioned challenges, still the challenges of accessing loan facility for smallholder rice farmers persist in Tanzania, thereby pose a pressing question if the available MFIs have significantly contributed to alleviating poverty among small-scale farmers, or have fallen short in transforming their economic reality? Therefore, by identifying these challenges, the study aims to provide insights that can inform targeted solutions, and ultimately contributing to improved livelihoods for rural farmers and fostering sustainable agricultural development.

2.0 The Grameen Theory on Credit Access to Small-Scale Rice Farmers in Mbarali District

Pioneered by Professor Muhammad Yunus in 1976, is an essential framework for understanding microcredit lending and its application to small-scale farmers, particularly rice farmers in Mbarali District. Yunus (1976) introduced the Grameen Bank in Bangladesh to provide small loans (microcredit) to impoverished individuals, with the unique approach of eliminating collateral requirements. His model aimed to prove that low-income individuals, despite lacking conventional assets, can still be reliable borrowers if given access to financial resources. This model is especially relevant to small-scale rice farmers in Mbarali District, who face significant barriers to credit access. The Grameen model offers insights into how microfinance can reduce these barriers and improve farmers' access to the necessary resources.

The Grameen Theory operates on several key assumptions. One core assumption is that poor people are creditworthy, contradicting traditional banking systems that view low-income individuals as high-risk borrowers. This is especially important for farmers in Mbarali, many of whom lack collateral but have the capacity to repay loans if fair conditions are provided. Another assumption is that group lending fosters stronger repayment rates, as seen in rural settings where cooperative farming and social networks are central to livelihoods. This approach is particularly relevant for Mbarali's farmers, who can leverage collective group responsibility to guarantee loan repayments. The theory also assumes that access to financial services reduces poverty—a critical factor for rice farmers needing credit to buy inputs such as seeds and fertilizers. Lastly, the theory assumes that social capital through group membership can serve as a substitute for traditional collateral, reducing the need for physical assets in securing loans.

One strength of the Grameen Theory is its ability to empower underserved populations by offering inclusive access to financial resources. This is particularly vital for Mbarali's rice

farmers, who are often excluded from formal financial institutions due to strict collateral requirements. The theory promotes social cohesion through group lending, allowing farmers to benefit from shared responsibility. This aligns with findings in the study, which demonstrate that group membership significantly improves credit access. Another strength is the model's potential to democratize finance, giving small-scale farmers opportunities to invest in their agricultural activities and improve productivity. Additionally, by reducing the reliance on collateral, the model addresses one of the main barriers to credit access in Mbarali. However, the Grameen Theory also has its weaknesses. The reliance on group lending can be problematic in areas where social structures are weak or where farmers are not part of formal groups. Farmers in Mbarali who do not participate in cooperatives may find it harder to access loans, which limit the theory's reach. Additionally, the model's focus on short-term loan cycles may not fit the agricultural realities of rice farmers, who have seasonal income patterns. Small-scale farmers may need longer repayment periods to match their harvest cycles, which the Grameen model does not always accommodate. Furthermore, while the model works well for small loans, it may not address the need for larger investments in farming equipment or infrastructure, which can be critical for long-term agricultural success. Interest rates, although lower than conventional banks, can still be relatively high for small-scale farmers with limited income, especially when external factors like weather or market fluctuations reduce their profitability.

The theory is relevant or applicable to this study because it remains significant in addressing the challenges faced by small-scale rice farmers in Mbarali District. The study findings reveal several barriers to credit access, including limited sources of credit, high interest rates, and collateral requirements. The Grameen model's emphasis on group lending and reduced collateral requirements offers practical solutions to these challenges. Additionally, the theory's focus on financial empowerment through microcredit aligns with the needs of rice farmers, who require modest amounts of capital to improve their farming practices and increase productivity. In conclusion, the Grameen Theory offers a powerful lens through which to view the challenges of credit access for small-scale rice farmers. Its strengths in promoting inclusivity, reducing dependency on collateral, and fostering group lending make it highly relevant to the rural setting of Mbarali District. At the same time, its limitations—such as reliance on group dynamics and short-term loan cycles—suggest the need for adaptation to better fit the local agricultural context.

II– Methods and Materials:

Data and methods

This research was conducted in Mbarali District, Mbeya Region, selected due to its prominence in rice farming. A descriptive survey design was adopted to achieve the study objectives, which involves portraying accurate profiles of persons, events, or situations. Descriptive surveys allow for the collection of large data samples in an economical manner, facilitating the quantitative analysis of data using descriptive and inferential statistics (Saunders et al., 2009).

The study population included small-scale rice farmers, loan officers, and managers from financial institutions in Mbarali District. Probability sampling (simple random sampling) was used to select 100 small-scale rice farmers, ensuring each farmer had an equal chance of being included. Additionally, purposive sampling (a non-probability method) was applied to select loan officers from banks and micro-credit institutions. The sample size was determined using Yamane's formula (1967), with a 10% margin of error based on the Mbarali District population of 300,517 (NBS, 2023). The sample size was 100 respondents.

Data were collected through structured questionnaires for farmers and interviews for loan officers. Both open-ended and closed-ended questions were used to capture qualitative and quantitative data. The combination of questionnaires, interviews, and documentary reviews ensured comprehensive data collection and reduced bias. Data collection instruments were validated by reviewing previous studies (Mtuma et al., 2017; Massawe, 2020) and conducting a pilot study to adjust the tools accordingly.

The study adhered to research ethics, securing a clearance letter from the Tanzania Commission for Science and Technology (COSTECH) and ensuring the privacy and safety of respondents. In this model, we used binary logistic regression to examine the relationship between the independent variables (farm size, awareness level, membership in farming groups, and farming experience) and the dependent variable (credit access among small-scale rice farmers). The equation provided represents the relationship between these variables:

$$\text{logit}(P_{ij}) = \log\left(\frac{P_{ij}}{1-P_{ij}}\right) = \beta_0 + \beta_1 x_{1i} + \beta_2 x_{2i} + \beta_3 x_{3i} + \beta_4 x_{4i}$$

where:

P = Probability of Credit access (the outcome we are measuring)

x_1 = Farm size (one of the independent variables)

x_2 = Awareness level

x_3 = Membership in farming groups

x_4 = Farming experience

β_0 = Constant (the intercept term)

$\beta_1, \beta_2, \beta_3$ and β_4 are coefficients of the independent (predictor, response)

variables

P_{ij} prob (event), that is the probability that the event will occur

$1-P_{ij}$ prob (non-event), that is the probability that the event will not

This model is crucial because it helps predict how each factor influences credit access among small-scale rice farmers. By analyzing the coefficients (β -values) and the odds ratios ($\text{Exp}(\beta)$) from the logistic regression output, we can quantify the strength and direction of each factor's impact on credit access.

III- Results and discussion :

Demographic characteristics and Credit Accessibility

The demographic characteristics of the respondents in Mbarali District provide an insightful overview of the small-scale rice farmers in the region. The study captured important demographic factors such as sex, age, education, and farming experience, which offer a clear understanding of the background of the farmers involved in accessing credit facilities. The findings in Table 1 reveal that the majority of respondents (53.8%) were male, while 46.2% were female.

Regarding age distribution, most of the respondents (60%) were between 18 and 40 years old, with only 10% above 60 years. This suggests that the majority of small-scale rice farmers in Mbarali are in their prime working age, indicating active participation in farming activities. Farmers in this age group are likely to be more engaged in credit access efforts, as they are in their most productive years.

Table (1) : Demographic characteristics of the respondents in Mbarali District

Sex

Male	Frequency	Percent (%)	
	43	53.8	
Female	37	46.2	
Age	18-25	16	20
	26-40	32	40
	41-60	24	30
	Above 60	8	10
Education	Primary	45	56.3
	Secondary	30	37.5
	College/University	5	6.2
Farming experience (Years)	5-Jan	17	21.3
	10-Jun	39	48.8
	More than 10 years	24	30

The source: Author's computations

In terms of education, the majority of farmers (56.3%) had only primary education, while 37.5% had secondary education, and only 6.2% had college or university education. This low level of formal education among farmers could limit their awareness and understanding of credit accessibility,

further emphasizing the need for targeted financial literacy and agro-financing training programs. Previous research (Dzadze et al., 2012; Isaga, 2018) has shown that farmers with higher education levels tend to have better access to credit, highlighting the importance of education in improving credit access and overall farm productivity.

Lastly, the farming experience of the respondents shows that nearly half (48.8%) had 6 to 10 years of experience, while only 21.3% had less than 5 years of experience. This indicates that most farmers in the study area are well-experienced, which positively influences their ability to access credit. Experience is often regarded as a key factor in productivity, business networking, and understanding market expectations, all of which are critical in influencing credit providers. This observation is consistent with Akpan et al. (2013), who noted that experienced individuals are more likely to access credit due to their stronger business networks and managerial abilities.

4.2 The Determinants of Access to Credit Facilities to Small-scale Rice Farmers

This section examines the determinants influencing access to credit services among small-scale rice farmers, with the assumption that increased farming experience enhances familiarity with financial processes such as deposit management, credit facilities, insurance, and farm equipment acquisition (TADB, 2023). A binary logistic model was used to assess the relationship between the independent variables—farm size, level of awareness, membership in farming groups, and farming experience—and credit accessibility, which was treated as a binary outcome (either high or low).

Model Fitness and Statistical Evaluation

To ensure the model was appropriate, several statistical tests were performed. The Omnibus Tests of Model Coefficients showed that the inclusion of explanatory variables significantly improved the model, with a Chi-square of 14.516 and a p-value of 0.006, indicating that the model is statistically significant. The goodness-of-fit was further evaluated through the Cox & Snell R square and Nagelkerke R square values, which were 0.166 and 0.243, respectively. These results imply that 16.6% to 24.3% of the variation in credit access can be explained by the determinants included in the model. Additionally, the Hosmer and Lemeshow test yielded a Chi-square value of 18.547 with a p-value of 0.017, confirming that the logistic regression model provided a good fit for the data.

Farm size

The findings from Table 2 demonstrate that farm size has a positive and significant influence on small-scale rice farmers' access to credit. The regression analysis reveals a coefficient of $\beta = 1.296$ and a statistical significance of 5% (p-value = 0.011). This suggests that a unit increase in farm size results in a 12.96% increase in credit accessibility for small-scale rice farmers. Moreover, the odd ratio of 3.655 implies that farmers with a moderate farm size are 3.655 times more likely to secure credit than those with smaller or insufficient farm sizes.

These results are consistent with previous findings in related studies. For instance, Mauki et al., (2024), in their study on smallholder rice farmers' technical efficiency, argue that farm size plays a crucial role in enhancing competitiveness, particularly through agricultural marketing co-operatives. Larger farm sizes provide better collateral and greater economic viability, making it easier for farmers to access credit and invest in productivity-enhancing inputs. Similarly, Mariki and Philip (2024), in their study on profit efficiency among rice farmers in Kilombero Valley, highlight that larger farm tend to exhibit higher efficiency levels and access to better resources, including credit facilities.

Data from interviews and focus group discussions (FGDs) with small-scale rice farmers in Mbarali district also support these findings. Farmers expressed that having a moderate to large farm size improves their eligibility for credit from financial institutions, as larger farms are viewed as less risky and more likely to yield sufficient returns to repay loans. Participants noted that smaller farms often struggle to meet the minimum collateral requirements set by banks, thus limiting their access to credit. These findings suggest that interventions aiming to improve credit access for small-scale rice farmers should focus on enhancing farm sizes through land policies and promoting group memberships to strengthen farmers' bargaining power and creditworthiness.

Table 2 Statistical output for the determinants of access to credit among small-scale rice farmers in Mbarali District:

Binary Logistic Regression Results showing factors associated with access to credit among small-scale rice farmers in Mbarali District.

Determinant	B	S.E.	Wald	Sig.	Exp(B)
Farm size	1.296	0.507	6.529	0.011	3.655
Level of awareness	1.157	0.711	2.65	0.014	3.179
Membership in groups			2.559	0.917	7.787
Farming experience	0.103	0.521	0.039	0.843	1.109
Constant	-0.179	2.269	0.006	0.937	0.836

The source: Author's computations

Level of awareness

The findings in Table 2 also confirm that the level of awareness has a positive and significant impact on credit accessibility among small-scale rice farmers, with a coefficient of $\beta = 1.157$ and a statistical significance of 5% (p-value = 0.014). This suggests that a unit increase in the level of awareness leads to an 11.57% improvement in credit accessibility. The odd ratio of 3.179 further indicates that farmers with a higher level of awareness are 3.179 times more likely to access credit compared to those with lower awareness. This underscores the importance of promoting financial literacy and awareness campaigns as a strategy to improve credit access for small-scale farmers.

These results are in line with the findings of Mwatawala et al. (2024) in their study on input accessibility in Kahama. Their research reported a positive correlation between awareness and input accessibility, with a coefficient of $\beta = 2.174$. Additionally, the study found that tobacco farmers who received information from extension officers were nearly nine times more likely to access farming inputs compared to those who were unaware of their importance (OR = 8.79, p = 0.045). Similarly, in Mbarali District, a 49-year-old woman shared during an interview that she was grateful for the information she received from the Rujewa Council about microfinance institutions providing loans for rice farming in the district, which helped improve her livelihood. In contrast, a 39-year-old male respondent expressed frustration, noting that financial institutions had not provided clear information regarding who is responsible for loans and the necessary conditions to obtain them, which discouraged him from pursuing loans.

Additionally, Mauki et al. (2024) highlighted that factors such as access to training, water distribution, ploughing time, planting systems, and credit access significantly influenced technical efficiency (TE) among farmers (P < 0.05). Their study found that the mean TE was 83.8%, indicating that smallholder rice farms in the study area were operating below their maximum production potential. Given the available technology, farmers could potentially increase their production by 16.2%, suggesting room for improvement in overall farm efficiency. These findings reinforce the importance of awareness, not only for credit access but also for overall farm productivity.

Membership

The findings revealed that membership has a positive significant impact on credit accessibility at $\beta = 2.559$ and a statistical significance of 5% (p-value = 0.005). This implies that a unit increase in membership as a determinant of accessing credit increases the credit accessibility of small-scale rice farmers by 25.6%. This has also been indicated by the odd ratio of 3.977 which implies that to be a member of any financial institution is 3.977 times more likely to increase the credit accessibility of small-scale rice farmers than to be a small-scale rice farmer without being a member of any financial institution. With an odds ratio of 3.977, farmers who belong to such groups are nearly four times more likely to obtain credit. This can be attributed to collective bargaining power and shared resources, which reduce the perceived lending risk for financial institutions.

Source: Research Data 2024

The findings in Table 2 align with the TADB (2023) report, which highlights that many financial institutions globally prioritize offering loans and credits to their customers or members, particularly those engaged in business activities. Specifically, these institutions tend to provide financial assistance to small-scale farmers who are members of their banks to support investments in rice farming, rather than to non-members.

This finding is echoed by a 43-year-old male respondent, who shared his experience:

“In 2007, I applied for a loan at NMB in Mbarali District, but they refused to provide the loan because their priority was to support their own bank members first.” (Interview with participant NO. 1)

This illustrates how membership status has a substantial positive impact on small-scale farmers' ability to access credit in the study area.

Furthermore, studies by Msokwe (2024b) and Mwatawala et al. (2024) in Mbozi and Kahama districts found that membership significantly influenced credit access, respectively. These studies suggest that capacity-building initiatives, particularly those promoting modern farming techniques, harvesting, and storage skills, play a key role in improving agricultural productivity. However, such advancements often require loans to finance the necessary investments in agricultural inputs and technologies.

Similarly, research by Biswalo et al. (2023) in the Southern Highlands revealed a decline in employment within the agricultural sector, from 88% to 75%. This decrease is attributed to insufficient capacity-building programs, lack of capital, and adverse climatic conditions. These factors have also negatively impacted the production of key crops, such as maize and coffee. For instance, maize production dropped from 42,109.99 tons in 2011 to 30,307.71 tons in 2015 (Assessment, 1998; ESRF, 2019). In conclusion, the findings strongly suggest that membership in financial institutions is a critical factor in improving credit accessibility for small-scale farmers, which in turn enhances agricultural productivity. The significance of capacity-building efforts, combined with access to loans, is evident in boosting farmers' ability to adopt modern farming techniques. However, challenges such as inadequate capital, insufficient capacity-building programs, and unfavorable climatic conditions continue to hamper agricultural productivity, particularly in crops like maize and coffee. Addressing these barriers is crucial for sustaining agricultural development in the region.

Farming experience of respondents

The findings, presented in Figure 3 below, show that the majority of respondents involved in this study, about 48.8%, had farm experience between 6 and 10 years. In contrast, very few of them, about 21.3%, had experience between 1 and 5 years. Although the coefficient for farming experience was positive ($B = 0.103$), it was not statistically significant ($p = 0.843$). The odds ratio of 1.109 suggests a marginal increase in credit access with more experience, but this factor alone does not have a strong influence on a farmer's ability to obtain loans.

Figure 2: Farming experience of respondents

Source: Research Data 2024

The results in Figure 2 imply that most small-scale rice farmers in the Mbarali district have enough farm experience ranging between 6 to 10 years and thus improves the accessibility to financial institutions' products because experience is regarded as an essential factor in productivity and conditions in accessing loans for farming investment because have a greater possibility to succeed in harvesting crops. This is consistent with Akpan et al., (2013), who argued that people with experience in a given industry always have more information about the business than their counterparts on how to meet the market expectations, business network and managerial abilities, which help them to

influence the microcredit providers to access the credit facilities. This tallies with an in-depth interview with a woman, Plate 2 aged 50 years old as one of the respondents who had this to say: “I have 40 years of experience with rice farming from when I was very young in Mbarali and Kilombelo districts in Mbeya and Morogoro regions, respectively, I know how to farm rice and engage in production, but most financial institution within the country considers much experience of the farmers in order to access their credits which can help them to run the costs of rice productions.”

Plate 2: A woman Rice Farmer in Mbarali District

Source: Research Data 2024

In the same vein to Focus Group Discussion (FGD) with eighty (8) respondents, it was reported that most financial institutions like National Micro-finance Bank, Cooperative and Rural Development Bank (CRDB) and others consider much experience of the farmers so as to assess and evaluate the farming trends and status in order to provide loans and credits to proper farmers who can run the productions of rice farming. In this study, findings revealed that small-scale rice farmers with more experience had a greater interaction with financial institutions, hence it was easy to access credit facilities among financial lenders compared to relatively new small-scale rice farmers in a given area. These results are in line with the work of Mwatawala et al. (2024), who found that farming experience, while not always statistically significant, contributes positively to a farmer's likelihood of securing loans. The study conducted in Kahama District revealed that more experienced farmers tend to have better financial literacy and understanding of loan requirements, which helps them navigate the credit system more effectively. Similarly, Mariki and Philip (2024) observed that farming experience played a crucial role in increasing credit accessibility in rural Tanzania. Their study demonstrated that experienced farmers are often more confident and knowledgeable about approaching financial institutions, which positively affects their loan approval rates, even if the relationship is not always statistically significant. Moreover, Msokwe (2024a) in his research on smallholder farmers in Mbozi District, emphasized that farming experience, while not the most significant factor, still facilitates loan accessibility, particularly when coupled with membership in farming cooperatives. Experienced farmers are often trusted by lenders due to their track record and ability to demonstrate a history of stable or improving agricultural production.

Sources of credit

The findings in Table 2 indicate that 58.8 percent of respondents identified the limited sources of credit as one of the major factors hindering access to credit services for small-scale rice farmers. This suggests that financial institutions providing credit services to farmers are scarce in many areas, and the few available often offer credit at high costs, which the majority of small-scale rice farmers cannot afford. These results align with the findings of Mukabane (2021), who reported that only 32.9 percent of small-scale farmers were able to access agricultural credit, while a significant number of 67.1 percent were unable to secure any credit. This suggests that the lack of available and affordable credit sources significantly limits credit accessibility among small-scale rice farmers.

Table (2): Factors inhibiting small scale rice farmers from accessing credit

Attributes	N	Percent (%)
Sources of credit	47	26.1
Farm credit charges	36	20.0
Collateral	44	24.0
Procedures to apply loan	22	12.2
High interest rates	31	17.2

The source: Author's computations

Qualitative data from interviews also supported these findings. One participant age 36 years old No. 2) noted:

“Of course, there is a problem of insufficient sources of credit in Mbarali, especially for small-scale farmers, because there are few financial institutions specifically serving this group.”

Another respondent, a 45-year-old farmer, further emphasized the challenges:

“It is evident that several challenges exist, hindering the ability to obtain financial support. These challenges range from limited financial literacy and documentation to inadequate collateral and rigid lending policies. Furthermore, the lack of financial products and services tailored for small-scale farmers exacerbates the problem, making it more difficult for them to access credit facilities from formal financial institutions.” (Interview with participant No.3)

The findings regarding sources of credit for small-scale rice farmers align with Edward Freeman's Stakeholder Theory (1984), which emphasizes that stakeholders, including creditors, shareholders, and the community, are affected by an organization's actions and performance. In the case of credit access, small-scale farmers, who are critical stakeholders, are disadvantaged due to the limited availability of financial resources, thus constraining their ability to secure loans for agricultural development. Mbuga (2019) similarly identified various obstacles in credit financing for farm entrepreneurship in Tanzania, including the lack of collateral, limited access to financial services, and complicated bureaucratic processes in loan acquisition. These barriers are exacerbated by high-interest rates and the scarcity of formal financial institutions in rural areas, further inhibiting farmers from obtaining credit. Supporting studies by Agbodji and Johnson (2021) and Amtaja (2021) reinforce these challenges, highlighting that limited financial infrastructure, coupled with the complexity of loan requirements, makes it particularly difficult for small-scale farmers in regions like Mbarali to access credit.

In conclusion, these findings underscore the pressing need for improved financial literacy, streamlined lending processes, and the expansion of rural financial institutions. By addressing these challenges, small-scale farmers can be better positioned to access the credit they need for enhancing productivity and improving livelihoods.

Farm credit charges

The findings in Table 2 also revealed that 45.0 percent of respondents identified high farm credit charges as a significant factor inhibiting small-scale rice farmers from accessing credit services in financial institutions. These results indicate that the elevated costs associated with farm credit, particularly on farm tools, significantly limit farmers' ability to secure loans. This finding contradicts the theoretical framework of Freeman's Stakeholder Theory (1984), which posits that stakeholder—including shareholders, creditors, customers, and the community—should benefit from an organization's performance.

In conclusion, both the quantitative findings and qualitative insights from interviews and focus groups underscore that high farm credit charges severely impact small-scale rice farmers' ability to access loans. To mitigate this, there are needs to be a revision of loan terms including reduction of credit charges so as to align better with the realities of small-scale farming in Tanzania.

Collateral

Regarding collateral, the research findings from Table 2 indicate that 55.0 percent of respondents identified the lack of collateral as a key factor inhibiting small-scale rice farmers from accessing credit services in financial institutions. This suggests that without collateral, small-scale rice farmers face significant challenges in obtaining loans from formal financial institutions. These findings align with Muiruri et al. (2016), Adejoh and Adah (2018) and Msokwa (2024) who found that the lack of collateral is a major socioeconomic constraint that impedes credit access. The absence of collateral thus remains a critical barrier for small-scale farmers seeking financial support.

Qualitative insights further supported this. One participant from an interview (Participant No. 5) highlighted the issue, stating: “We are not providing credits to individuals without collateral. They must otherwise form business groups among themselves, which in turn act as collateral. Normally, we are encouraging women who are in different businesses to form groups so that the loan applied can be distributed to each of the members.” This indicates that alternative credit mechanisms, such

as group lending, are being encouraged, particularly for women, as a means to overcome collateral challenges.

Loan application procedures

Regarding loan application procedures, the findings in Table 2 revealed that 27.5 percent of respondents identified the complexity of these procedures as a factor inhibiting small-scale rice farmers from accessing credit services from the financial institutions. This suggests that the numerous steps involved in applying for a loan lead to delays in processing times, ultimately causing farmers to lose hope of securing the needed credit. Similar findings were reported by Mwatawala et al. (2024) and Msokwe (2024) who highlighted that bureaucratic procedures and the associated documentation requirements create barriers to credit access for small-scale farmers. Additionally, Mwonge and Naho (2021) and Biswalo (2023) found that institutional demands, such as high transaction costs, maintenance of bank accounts, and specific loan requirements, further constrained farmers' ability to access credit. These challenges are echoed by Balgah et al. (2022), who emphasized that the procedural hurdles and costs embedded in the loan application process significantly discourage smallholder farmers from seeking formal financial services. Thus, the complexity and inefficiencies in loan procedures are key obstacles to credit access for small-scale rice farmers.

IV- Conclusion:

The study aimed to examine the factors inhibiting credit access for small-scale rice farmers in Mbarali district. The findings highlighted key factors such as level of awareness, farm size, farming experience, and membership in cooperative societies significantly influenced access to credit from financial institutions. In summary, the results from the binary logistic model show that each independent variable plays a role in influencing credit access. Larger farm size increases credit access by 1.296 units, higher awareness levels contribute by 1.157 units and membership in farming groups has the most significant positive impact, increasing credit access by 2.559 units. Despite farming experience contributing to a lesser degree, still positively affects credit access, by 0.103 units. These findings underscore the importance of farm size, awareness, group membership, and farming experience in improving farmers' access to financial resources, a conclusion further supported by scholars like Mwatawala et al. (2024), Mariki and Philip (2024), and Msokwe (2024) who both agreed that farming experiences has significant results to the credit accessibility in farming development. Therefore, the constant term, though not significant ($B = -0.179$, $p = 0.937$), indicates that without the influence of these independent variables, the likelihood of accessing credit would be relatively low.

However, the study also revealed that financial institutions often perceive investing in small-scale agriculture as risky due to factors like non-membership in cooperative societies and high default rates. Tackling these challenges thus require a multi-dimensional approach to improve financial inclusion, enhance institutional support, and address socio-economic constraints like low education and financial literacy. Moreover, regulating interest rates and associated fees is important to make loans affordable for small-scale rice farmers.

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