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EFFECT OF AGRICULTURAL FINANCE TO SMALL SCALE FARMERS IN TANZANIA

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ABSTRACT

This paper analyses the effects to agricultural finance to small scale farmers in Tanzania. Specifically, it describes the sources of credit facilities available to the rural area and the factors determining access to agricultural finance in the study area. A multistage random sampling technique was used. A total of 180 farming households were selected from the small scale farmers using a simple random sampling technique. Data on demographic and farmer-household socioeconomic characteristics that are likely to affect small-scale farmers' decisions to take out agricultural finance were collected using a semi-structured questionnaire. In this study, descriptive statistics and the logit model were used. The study revealed that sources of agricultural finance were cooperative institutions, personal savings, individual money lenders), relatives/Friends, Microfinance Institutions, and Commercial Banks. Furthermore, the study found that factors such as gender, household size, and household income, membership in cooperative institutions, land size, and asset value positively influence agriculture credit in the study area. However, age and livestock ownership found to have a negative influence in accessing agricultural finance. The study recommends that farmers and cooperative stakeholders insist that farmers form the self-help groups like cooperative institutions as the compatible source of agricultural finance in the rural area.

INTRODUCTION

Undoubtedly, one of the major challenges facing smallholder farmers in Africa is the access to financial support to scale up their agricultural production and income. This challenge is also faced by rural farmers in Tanzania who make about 80 percent of the country's population (World Bank, 2012). Tanzania remains primarily a rural country with an agriculture-based economy that employs the majority of the national labour force (FAO, 2013). Tanzania is comprised primarily of poor, rural, smallholders whose livelihoods are reliant on agriculture. Tanzania's agriculture sector is extremely diverse. Crop production accounts for 55% of agricultural GDP, livestock for 30%, and natural resources for 15%. The main export crops are sugar, coffee, cotton, tobacco, and tea. The most prevalent staple crops include maize, cassava, rice, sorghum, and millet. Agricultural production is dominated by smallholders who represent most of the rural families. The agricultural sector on average contributes about 24 per cent of GDP compared to about 30 percent a decade ago; and it contributes about 24 percent of exports, down from about 45 percent ten years earlier, mostly due to the growth of alternative foreign exchange earning opportunities from minerals and tourism services (Leigh, Karina & Mary, 2011).

Agriculture plays an important role in the economy of Tanzania. The country is dominated by smallholder farmers and farming is predominantly rain-fed with traditional farming techniques, making smallholder farmers vulnerable to climatic, economic and seasonal shocks which expose farmers to poverty. Smallholder farmers are constrained by limitations of subsistence farming practice that leave them vulnerable to climate change effects, lack of access to finance, biological, agrochemical and mechanical inputs. Others include low knowledge of good agricultural practices (GAP), low margin and poor access to efficient market, giving rise to low productivity and income (Ejewule, 2017).

Agriculture dominates the economies of developing countries, contributing significantly to income generation, employment, and gross domestic product (GDP). For example, in Tanzania, agriculture accounts for about 29.1% of the country's GDP, contributing to about 40% of export earnings, and employs 75% of the country's workforce (NBS, 2017). The agricultural sector's growth and devel-

opment are linked to the economy's growth and farmer welfare (Cheong, et al., 2013). Raising farmer productivity and output allows agricultural products to be diversified into agro-processing and commercialization, resulting in economic structural changes (Salami, et al., 2010).

The adoption of modern agricultural technology, which is dependent on small scale farmers' access to agricultural finance, is critical to the farming sector's productivity (NBS, 2017). On the other hand, increasing agricultural productivity creates employment, enhances farm incomes, and boosts farm household self-sufficiency, both of which enhance food security (FAO, 2015; IFAD, 2011). Low agricultural productivity is commonly attributed to the use of inefficient equipment as a result of limited access to agricultural finance. Furthermore, it is believed that the lack of finance has discouraged many young people from entering the agricultural sector, leaving the majority of them jobless due to a lack of investment resources and incentives (FAO, 2015; IFAD, 2011).

Agricultural financing is an essential factor in farming operations because it allows poor farmers to meet their basic needs, introduce advanced technologies, and increase their earnings. Agricultural financing is a crucial component of agricultural growth, assisting poor farmers in meeting their basic needs, implementing cutting-edge technology, and raising their incomes (Abdalla and Ebaidalla, 2012). As a result, credit is an effective tool for growing agricultural production, fostering economic development, and reducing poverty. In addition, the financial sector is said to play an essential role in agricultural production because it facilitates the acquisition of capital for farm productivity growth, storage, processing, and packaging, transportation, insurance, and marketing of agricultural products.

Around 60 percent of African workers are employed in the agricultural sector with about three-fifth of African farmers being subsistence farmers. Larger farms tend to grow cash crops such as coffee, tea, cotton, cocoa, fruits and rubber. These farms typically operated by large corporations, it covers tens of square kilometers and employ large number of laborers, subsistence farms provide a source of food and relatively small income for families, the situation in which African nations exports crops while a significant amount of people on the continents struggle with hunger has been blamed on developed countries including United state, Japan and European Union

Tanzania has a broad scope for agricultural diversification and a great potential to enhance production through agricultural intensification. The country has 945,090 km2 of land and 40 million hectors 42% is cultivatable; but only 16% (6.3 million ha.) are currently being cultivated. However, enhancing production, both intensively and extensively, requires a mix of agricultural services: irrigation, agricultural extension, finance and credit, inputs and output marketing services.

Considering the fact that the agricultural sector is the main pillar of the Tanzanian economy, which contributes about 60% of the country's GDP, 61% of the export earnings and 84% of the rural employment; accelerated agricultural growth can be achieved by increasing smallholder involvement and participation in the Technology Development and Transfer (TDT) process. Coffee is one of the leading cash crops in Tanzania grown by more than 400,000 households on acreage of 250,000 ha. The crop contributes about 15% of the foreign exchange in the country. The major growing areas are Kilimanjaro, Arusha, Mbeya, Ruvuma, Tanga, Morogoro, Kagera, Kigoma, Iringa, Rukwa, Mara and Manyara regions.

The Tanzanian economy is heavily based on agriculture, which accounts for 24.5% of gross domestic product, provides 85% of exports and accounts for half of the employed workforce. The agricultural sector grew 4.3% in 2012, less than half of the Millennium Development Goal target of 10.8%. 16.4% of the land is arable with 2.4% of the land planted with permanent crops. The agriculture sector in Tanzania which includes its subsectors of crops , livestock ,hunting and gathering, fisheries and forestry remain the target sectors in the economy .in 2010 the sector contribute nearly 28% to GDP (gross domestic product) and approximately 24%of the country exports earnings(Msambichaka et. al 2009).

The main food crops grown in the country are maize, sorghum, millet, cassava, sweet potatoes, bananas, pulses, paddy and wheet. A traditional cash crop grown in Tanzania includes coffee, cashew nuts, tea, tobacco and sisal. On average the crop sub sector contributes about 34 percentage of agricultural gross domestic product (GDP).

However, only 6% of Tanzanians have access to bank loans, with only 1% of total loans with agricultural loans. This is because high-risk lending to farmers is one of the main bottlenecks in the banking industry (ESRF, 2015). Furthermore, it is believed that a shortage of credit has discouraged many young people from entering the agricultural sector, leaving the majority of them jobless due to a lack of investment resources and incentives. Small scale credit acquisition is one of the most important aspects of agriculture and economic growth. Still, its access remains a significant challenge for small scale farmers in many developing countries, including Tanzania. The possible reasons for this are that small scale farmers often need small loans that are difficult to handle, and the majority of them lack the necessary collateral to obtain a loan from formal financial institutions (Taremwa et al. 2021; Oke et al., 2019; Michael et al. 2018; Nwankwo, 2017).

Ensuring that farmers have adequate access to financial resources is a key tenet of successful rural development strategies. Policymakers have long understood that rural producers who cannot meet their needs for capital must settle for suboptimal production strategies. When producers are unable to make the necessary upfront investments or cannot bear additional risk, they have to forgo opportunities to boost their productivity, enhance their income and improve their well-being (Besley, 1995; Boucher et al., 2008, and; World Bank 2008). Meanwhile, producers who have access to well-designed credit, savings and insurance services can avail themselves of capital to finance the inputs, labour and equipment they need to generate income.

As part of the efforts to provide solution on the issue of rural financing facing smallholder farmers in Tanzania, the government of Tanzania in partnership with International Fund for 11 Agricultural Development (IFAD) has created the Marketing Infrastructure Value Addition and Rural Finance Support (MIVARF) Programme to contribute to reduction of rural poverty and accelerate economic growth on a sustainable basis. Based on this, the MIVARF Programme was designed to up-scale the successful activities under Agricultural Marketing Systems Development Programme (AMSDP) and Rural Finance Support Programme (RFSP).

Since agriculture is the most crucial sector in developing countries, small scale farmers need access to finance. In addition, Kimaro (2020) argued that microfinance institutions should make credit sources with affordable conditionality accessible and affordable to small scale farmers to obtain financial services for livelihood diversification strategies. Moreover, he stated that local government authorities, in collaboration with extension officers, should take deliberate steps to mobilize small scale farmers to take advantage of available economic opportunities such as loans from microfinance institutions like Savings and Credit Co-operative Society (SACCOS) and Village Community Banks (VICOBA), where they can obtain capital for investment.

Since low agricultural productivity is commonly attributed to poor technology as a result of restricted access to agricultural finance, the following questions arise: what are the sources of agricultural finance in the study area? What factors influence small scale farmers' access to credit? This study is timely, particularly when Tanzania's government is advocating for transforming the agricultural sector from subsistence farming to commercialized activities. Agricultural finance is critical in transforming the agricultural sector because it creates multiple job opportunities for many people and improves the livelihoods of Tanzania's small scale farmers. Agricultural finance is required to purchase agricultural inputs such as high-quality seeds, fertilizers, pesticides, and herbicides and the adoption of improved farm technology, farm implements, and the rental of arable land.

LITERATURE SURVEY

The As a result of the agricultural sector's importance, more resources must be allocated to poor small scale farmers to boost agriculture production, especially in obtaining agricultural finance. These, therefore, justify conducting the study on available sources of agricultural finance and determinants of farmers' access to agricultural finance in Tanzania. Furthermore, there is a substantial number of empirical studies on the sources and factors that influence farmers' access to agricultural finance in developing countries. (Taremwaet al. 2021; Moahid & Maharjan, 2020; Ullahet al., 2020; Okeet al., 2019; Chandioet al., 2018; Isaga, 2018; Michael et al. 2018; Ogundejjiet al., 2018; Saqib et al., 2018; Nwankwo, 2017; Fin-Scope Tanzania2017; Ahmad et al., 2016; Ananget al., 2015; Ijioma & Osandu, 2015; Motsoariet al., 2015; Gandhimathi & Ambigadevi 2014; Idoko , 2013; Ugwumba and Omojola2013; Abdalla and Ebaidalla, 2012; Wabei 2012; Nyende, 2011; Doan et al., 2010).

In developing countries the majority of these studies investigate the factors that affect small scale farmers' access to agricultural financing, while others examine agricultural finance channels (Jha, 2019). In terms of agricultural finance, the findings revealed that informal relatives, neighbors, selling some crops/livestock and using the capital, accumulated personal savings, and formal sources such as borrowing from financial institutions were all common sources of credit in rural areas. Land tenure status, family labor, marital status, literacy status, off-farm income, the value of non-fixed assets, the value of assets related to agricultural activities, infrastructure quality, collateral, high-interest amount.

For example (Mgebebu and Achike, 2017), found that bureaucratic loan processing family size; experience of the household head in credit use; ownership of a farm were all common factors that determined access to agricultural finance. While some empirical studies on the sources and determinants of small scale farmers' access to agricultural finance have been conducted in developing countries, there is a paucity of empirical literature in Tanzania. For example, studies (Isaga, 2018; Stein et al., 2016) focus on the factors that influence small scale farmers' access to bank credit. Isaga (2018) looked into the factors influencing small scale farmers' access to bank credit in Mvomero District. Still, it didn't look into other sources of credit, which are also crucial to policy makers. Stein et al., 2016 studied customary rights and credit allocation to agriculture, but the study did not solely focus on determinants of agricultural finance access.

All small-scale entrepreneurs face problems in providing loan collateral to financial institutions. Either they have few assets, or these are in a form that is not liquid and hence not acceptable as loan security as noted by authors of (Jessop, 2015). According to World Bank the number one reason why individuals do not apply for or are denied loans is insufficient collateral, which is the result of both an inefficient registration system for moveable assets and the lack of adequate documentation for ownership claims. Formal credit remains inaccessible to most households because many Africans hold their assets (such as livestock, commodity stocks or property) without proof of Ownership (title deeds). As a result, they struggle to provide collateral to financial institutions. Although a recent study conducted by author (Owuor, 2019) suggested that there has been an emergence of Grameen type Micro-Credit Institutions that lend through groups to overcome collateral problems, access to agricultural credit from formal financial institutions such as banks and MFIs is still low. This is due to lack of collateral by small scale farmers according to author (Kihimbo, 2018).

Therefore, the results of this study cannot be generalized to other agricultural finance sources available to small scale farmers in rural areas. By quantifying different sources of agricultural finance for small scale farmers and determinants of credit access in Tanzania using a logistic regression model, this study contributes this information and narrowing this relevant knowledge gap. The findings of this study will help advice policy makers on how to promote adequate agricultural finance and how this can help Tanzania achieve long-term rural development.

METHODOLOGY

The study was in Tanzania, whereby simple random sampling was applied to select respondents. A total of 180 farming households were selected from the farming community using a simple Random Sampling Technique. This technique was used, considering cost implications and other relevant factors such as the extent of the study area and time. The study concentrated on short-term credit; thus, cross-sectional data was used as a research design.

ANALYSIS

The study was analyzed using the logistic regression model. The logistic regression model is a binary choice model based on the assumption that farmers would have to choose between two options based on unique identifiable characteristics. This means that one can predict which of the two alternatives an individual or household is likely to belong to given certain observed information (Verbeek 2004: Green 2003). When the dependent variable y is binary (a dummy), It is usually set to one for all observations in the data for which the event of interest has occurred (success) and zero for the rest (failure). The sample mean of the binary choice variable is an unbiased estimate of the unconditional likelihood that the event occurs if we have a random sample (Söderbom, 2009).

RESULTS & DISCUSSION

Sources of Agricultural Finance

Table 1 presents various sources of agricultural finance in the study area. The study findings revealed that the source of agricultural finance in the study area includes; commercial banks, microfinance institutions, cooperative societies, individual money lenders, personal savings, and friends or relatives. Furthermore, the findings revealed that 3.89 percent of respondents obtained credit from commercial banks, 8.33% from Microfinance Institutions such as Non-Governmental Financial Institutions, and 33.89% from Cooperative Societies such as Savings and Credits Cooperative Societies (SACCOS), Village Co-operative Banks (VICOBA), and Rotating Saving Schemes Association (ROSCAs) and Sukuma Traditional Saving Schemes. Similarly, about 27.22% obtained agricultural finance from their savings, 17.78% from local money lenders, and 8.89% from friends or relatives.

Table 1: Finance Sources of Farm Activities

Sources of Credit	Frequency	Percentage (%)
Commercial Banks	7	3.89
Microfinance Institution	15	8.33
Co-operative Institutions	61	33.89
Personal Savings	49	27.22
Individual money lenders	32	17.78
Friends or Relatives	16	8.89
Total	180	100

Source: Field Data (2021)

The study's results imply that cooperative institutions (registered and unregistered) are the primary source of agricultural finance in the study area, accounting for 33.89% of all sources of credit in the study area. The cooperative institutions seemed to be more appealing due to the ease with which they can obtain loans, such as the lack of a need for collateral and the low interest rates charged. In most cooperative institutions, collateral is substituted for personal guarantees since credits are issued to members known to a group, simple loan processing procedures, and loan conditions are set by their members. Meanwhile, personal savings from crop stock sales, livestock sales, and entrepreneurial activities were the next most preferred source of credit, as this source was thought to have no costs such as interest rates. Individual money lenders tended to be one of the credit sources, but respondents reported a costly source due to the higher interest rate expected to be paid.

Farmers were forced to obtain credit from this source because it was an easy choice for them with unsophisticated procedures, and the average interest rate paid ranged between 15% and 25% per month. In light of these results, farmers had fewer options for credit from more formalized financial institutions such as commercial banks. The likely explanation is the difficult conditions placed in obtaining credit (for example, collateral protection, a borrower's need to go through legal entities, etc.) and the small number of banks in the region where this study was conducted. The other probable reason is that agricultural activities, especially small scale farming activities, are perceived as high-risk activities in the absence of weather crop index insurance. It can be concluded that, despite the availability of various credit sources in the study area, farmers' preferred credit sources are determined by the following criteria: loan application procedures, credit institution presence, credit institution form (member-based/cooperative or non-member based), and credit costs.

Determinants of access to Agricultural finances

This sub-section reports the discussion of the results of the logistic regression model. The explanatory variables were included in the model to determine factors that drive or constrain agricultural access. These variables were credit, age, gender, marital status, education level, household size, household income, access to extension services, land size, membership in cooperative societies, and distance from the source of credit, livestock ownership, and the asset's value of the farming households. The study findings revealed that the gender of the household head, household size, household income, land size, membership in cooperative societies, and asset value positively influence access to agricultural finance. In contrast, the age of the respondents and livestock ownership were observed to constraints access to agricultural finance in the study area.

The findings indicate that the gender of the household head positively affects access to agricultural finance. The study revealed that being a male is likely to affect 3.64549 times the access to agricultural finance than being female. The positive relationship is statistically significant at a 5% level of significance (p=0.013). The explanation for this may be that men are better endowed with re-

sources favored by cultural norms and more collateral, making them more likely to access and take out agricultural loans. The results of this study agree with the previous research (Quisumbing & Pandolfelli, 2009), which shows that female farmers in Sub-Saharan Africa have less access to credit than men. Moreover, they argue that some factors contribute to this, including women's lack of asset ownership and control over resources, such as land and valuable equipment that can be used as loan collateral, as well as limited education, cultural, and social barriers.

Table 2: Factors that drives or constraints access to agricultural finance in the study area

Variable	Odd ratio	Standard error	t-value	P-value
Age	0.4790361	0.1674568	-2.11**	0.035**
Gender	3.64549	1.898344	2.48**	0.013**
Marital status	4.592706	2.748414	-1.85	0.17
Level of education	1.426443	0.4291234	1.18	0.238
Household size	1.634	0.3762	2.87**	0.023**
Household income	1.167	0.047	3.850***	0.001***
Access to extension service	1.148	0.340	0.98	0.641
Land Size	1.034	0.013	3.24***	0.004***
Membership in cooperative societies	1.322	0.061	3.14***	0.001***
Distance to credit source	0.532	0.179	1.04	0.313
Livestock ownership	2.425	0.876	-2.84**	0.017**
Asset value	2.181	0.572	2.97***	0.003***
Constant	0.031830	0.0482132	-2.28 0.023	

N=100, LR chi2(5) =27.87, Prob>chie2 =0.0000, Pseudo R2 = 0.2250
Note *** Significant at 1%; ** Significant at 5%; * Significant at 10%

Similarly, the study revealed that at the 1% p level of significance (p= 0.001), household size and access to agricultural finance are positively and significantly related. When a household increases by one member, the likelihood of obtaining agricultural finance rises by 1.634 times. The positive relationship between household size and agricultural loan access could be due to the fact that as household size increases, so makes the demand for household expenditure. The household is more likely to have dependents in the form of children and the elderly, resulting in a higher demand for agricultural finance that could aid in adopting more productivity-enhancing technologies. The study findings corroborate with earlier results from past studies (Moahid & Maharjan, 2020; Saqib et al., 2018; Motsoari et al., 2015; Wabei 2012, Gandhimathi & Ambigadevi 2014), which reported that household size positively influences access to agricultural finance.

Moreover, the findings revealed a positive and significant association between household income and access to farm credit (P=0.001). As per the findings, a one-unit rise in household income or one Shilling increase in household income is likely to increase access to agricultural finance 1.167 times. The fact that farmers who economically well have an advantage on having a variety of valuable assets recommended for accessing credit, as well as economic strength, leads to more innovative practices to increase farm yields, is most likely to have led to the positive and significant relationship between household income and access to agricultural finance. Poor households are considered high-risk borrowers, so they are only given small loans and are correlated with loan defaults. Similarly, (Moahid & Maharjan, 2020; Ullahet al., 2020; Okeet al., 2019; Saqibet al., 2018; Nwankwo, 2017 & Ananget al., 2015) found a positive relationship between household income and agricultural finance access.

Similarly, the study found that having more land increases access to agricultural finance by 1.03 times. Their relationship is positive and statistically significant (p = 0.004) at the 1% significance level. One potential reason is that as the size of the farm increases, more resources are needed to fund farm operations, which leads to a rise in the demand for credit. Furthermore, having a large piece of land as an immovable asset gives a farmer strong social standing when getting credit from nearby non-formal financial institutions. This study's results align with those of (Moahid & Maharja, 2020; Ullah et al., 2020; Oke et al., 2019; Saqib et al., 2018; Nkwankwo, 2017; Chandio et al., 2018; & Ugwumba and Omojola 2013).

Cooperative membership is also 1.322 times more likely to affect agricultural finance access in the study field. At the 1% significance level, this relationship is positive and statistically significant (p =0.001).This means that being a member of a cooperative institution increases the chances of getting farm credit. Since the members own these institutions, services are given exclusively to members. Members can save small amounts of money and accumulate funds for potential use, including agricultural activities. Furthermore, members have the power to make decisions about their organization, especially when it comes to formulating regulations and policies, which means there is a better chance of serving members' needs and developing simple loan procedures. This finding corroborate with the previous study (Sodeeq et al., 2019; Ogundejji et al., 2018; Ijioma & Osandu, 2015), which found that a farmer's membership in a cooperative institution increases his or her chances of obtaining credit because cooperative societies encourage members to save and mobilize funds that can be used to receive credit.

Farm credit accessibility is influenced by asset ownership and the value of owned assets by farmers, such as houses, tractors, and lands. The findings show that asset value has a significant and positive impact on agricultural finance access. It implies the asset value is 2.181 times more likely to increase credit availability. The relationship is positive at the 5% significance level (p= 0.035), indicat-

ing that the more desirable an asset a farmer owns, the more likely he or she is to obtain credit. The presumption that since a farmer owns valuable assets, these assets can be pledged as collateral to credit institutions may have contributed to the positive relationship. This implies that asset value is 2.181 times more likely to increase the likelihood of access to agricultural finance. The association is positive at a 5% significance level (p= 0.035), which means the more valuable asset possessed by a farmer, the more is likely to access credit. Positive connection possibly contributed by the assumption that as a farmer owns valuable assets, these assets can be pledged as collateral to credit institutions. The findings from this study corroborate with the results from earlier studies by (Ullah et al., 2020; Hainz & Teksoz 2006).

However, in the study area, the findings revealed that livestock ownership has a significant and negative relationship with access to farm credit at a 5% significance level (p= 0.017). The negative relationship between the need for agricultural finance and livestock ownership is likely due to the fact that livestockowning households generate additional income from the selling of livestock products, and livestock ownership is often seen as a source of savings in rural communities. As a result, the extra revenue generated by livestock keeping and sales helps farmers during the farming season. The finding of this study corroborate with the findings of Anang et al. (2015), who found that households with cattle have more liquidity than those without cattle.

Similarly, the findings revealed that the age of the respondents in the study area had a statistically significant and negative relationship with access to agricultural finance (p= 0.035), which means that having one more year of birth reduces access to agricultural finance by 0.4790361 compared to being younger. The negative relationship between household head age and agricultural finance access is most likely due to the fact that older small scale farmers are less likely to receive loans, are less risk-takers, and credit institutions preclude them from resisting loan defaults because they are considered less profitable. The results are consistent with previous studies (Sebopetji and Belete 2009), which found that farmer age has a negative relationship with farm credit access, with access to farm credits decreasing 0.0018% as farmer age increases.

Furthermore, the study results are consistent with those of Michael et al., 2018, who found that the household head's age is negatively linked to access to agricultural finance.

CONCLUSION

The study analyzed effects of agricultural finance among small scale farmers in Tanzania. It examined the sources of agricultural farm credit by descriptive statistics and the factors that drive or constraints access to agricultural finance by the logistic regression model. One of the significant agricultural facilities that obstruct small scale farmers from adopting modern agricultural technologies to enhance their production and productivity in Tanzania is credit access. The results show that the available sources of agricultural finance in the study area were Commercial Banks, Microfinance institutions, Cooperative Institutions, personal savings, individual money lenders, and Friends/Relatives.

Furthermore, the study found that cooperative institutions are the most preferred source of agricultural finance in the study area (33.89%), followed by personal savings (27.22%), individual lenders (17.78 %), relatives/friends (8.89 %), and microfinance institutions (8.33 percent), and commercial banks are the least preferred source of agricultural finance (8.33 %) (3.89%). In terms of determinants of access to agricultural finance, the research reveals that the gender of the household head, household size, and household income, membership in a cooperative institution, land size, and asset value all positively affect access to agricultural finance. However, the study findings revealed that access to credit is negatively related to age and livestock ownership when it comes to agricultural finance.

The study recommends that farmers and cooperative stakeholders focus on forming self-help groups similar to cooperative institutions. In comparison to other sources, this source was found to be consistent in rural areas. Moreover, these institutions are formed locally, are owned and managed by members, offer services only to members who are known to the association, and allow members to make micro-savings that can be used as loan collateral. Since cooperative institutions are established locally and controlled by members, they help to reduce loan transaction costs, simplify loan applications, processing processes, and repayment, and ensure timely credit delivery.

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