Journal of Economics and Sustainable Development
ISSN 2222-1700 (Paper) ISSN 2222-2855 (Online)
Vol.16, No.5, 2025

Determinants of Access to Credit among Youth Tomato Farmers in Mvomero District, Tanzania

Huldah Too [1]*, Margaret Ngigi [1], Edith Gathungu [1] and Victor Manyong [2]

1. Department of Agricultural Economics and Agribusiness Management, Egerton University, Kenya, P. O. Box 536, Egerton, 20115, Kenya.

2. International Institute for Tropical Agriculture (IITA), Dar es Salaam, Tanzania

*Email of the corresponding author: toohuldah@gmail.com

Abstract

Access to agricultural credit remains a key constraint to youth participation in high-value crop production in Tanzania. In rural areas, formal financial services are often limited, and youth face unique challenges including lack of collateral, minimal financial history, and limited knowledge of formal financial lending requirements. This study analyzes the determinants of access to agricultural credit among youth tomato farmers in Mvomero District, Tanzania. Data were collected from a cross-sectional sample of 562 youth aged 18 to 35 years using a structured questionnaire. A binary logistic regression model was applied to estimate the effects of socio-economic, institutional, and farm-level variables on credit access. The results show that level of education, farming experience, farm size, group membership, and proximity to lending institutions significantly and positively influenced access to credit. In contrast, longer distance to credit institutions and higher annual income were associated with reduced likelihood of borrowing. Gender also emerged as a significant factor, with female youth farmers more likely to access informal credit, possibly due to their stronger participation in organized social groups. These findings suggest that both structural barriers and social capital influence financial inclusion among youth in agriculture. The study recommends policies that support group-based lending models, enhanced financial literacy, and promotion of mobile banking solutions to expand credit access. Strengthening institutional support for youth in agribusiness can contribute to improved productivity, income, and long-term sector engagement.

Keywords: agribusiness, youth, credit, tomato, income, binary logit, Tanzania
DOI: 10.7176/JESD/16-5-01
Publication date: July 30th 2025

1. Introduction

Access to agricultural credit is widely recognized as a key driver of productivity and growth in smallholder farming systems across low-and middle-income countries (LMICs) (Agbodji & Johnson, 2021; Awotide *et al.,* 2015; Baffoe *et al.,* 2014). Credit enables resource-constrained farmers to obtain essential inputs such as fertilizers, improved seeds, farm tools, machinery, and hired labour, inputs that are often beyond their financial reach (Chandio *et al.,* 2017; Mushi *et al.,* 2022; Sanka & Nkilijiwa, 2021). Without access to affordable financing, smallholder farmers may struggle to adopt new technologies or expand production, thereby limiting their ability to contribute meaningfully to national food security and rural development (Benjamin *et al.,* 2015; Kosgey, 2013; Taremwa *et al.,* 2021).

In Tanzania, tomato farming stands out as a high-value enterprise within the horticultural sector, offering promising income opportunities for young people. However, youth participation in tomato production remains relatively low, raising concerns about the long-term sustainability of this sub-sector. Studies from other African countries suggest that young people are often discouraged from engaging in agriculture due to barriers such as limited access to land, markets, inputs, and especially credit (Ahaibwe *et al.,* 2013; Ng'atigwa *et al.,* 2020). Evidence from Tanzania shows that many youth farmers rely on informal credit sources such as friends, relatives, or personal savings, which are often insufficient to support commercial farming activities (Mahama *et al.,* 2017; Ng'atigwa *et al.,* 2020).

While several studies have examined the general challenges that smallholder farmers face in accessing agricultural credit, limited attention has been paid to the unique barriers confronting youth, despite their growing share of the population. Young people often face distinct constraints such as lack of collateral, limited credit history, minimal engagement with formal financial institutions, and weak social networks, all of which limit their ability to secure credit compared to older farmers (Ahaibwe *et al.,* 2013; Bezu & Holden, 2014). These constraints are particularly important in the Tanzanian context, where youth make up the majority of the

population and are central to the future of agriculture. Yet, little is known about how these youth-specific factors influence access to and use of credit, especially in high-value crops like tomatoes. This gap is significant given that youth represent a growing share of the rural population, and enhancing their participation in agriculture is central to Tanzania's development agenda.

This study addresses this gap by determining the factors that influence access to credit by youth tomato farmers in Mvomero District, Tanzania. By focusing specifically on youth aged 18 to 35 years, the study provides insights that can inform targeted policies and programmes to improve youth participation in agriculture through better access to credit. The key research question guiding this study is, what factors influence access to agricultural credit among small-scale youth tomato farmers in Mvomero District?

2. Literature Review

Understanding the factors that influence access to agricultural credit among youth is essential for designing effective financial interventions and policies that support their participation in agriculture. Several studies have explored how individual characteristics, institutional arrangements, and socio-economic factors affect farmers' ability to access credit. For youth, these challenges are often more pronounced due to age-related constraints such as lack of collateral, limited credit history, and exclusion from formal financial systems. This section reviews empirical studies on the determinants of credit access among smallholder and youth farmers, and discusses relevant theoretical frameworks that explain borrowing behaviour, credit constraints, and financial decision-making in agricultural contexts.

2.1 Determinants of access to agricultural credit

In Nigeria, Aliero *et al.* (2013) conducted a study to determine factors influencing smallholder farmers' access to agricultural credit. The probit regression model results showed that age, marital status, literacy level, annual income level, and asset endowment had a positive and significant effect on credit access. The study also explored the effect of institutional factors, where it reported that interest rate and transaction cost had a negative and significant effect on the ability of smallholder farmers to access agricultural credit from formal sources. In the conclusion and recommendations, the authors noted that most rural farmers had limited access to credit from formal sources. Hence, social groups were used as collateral to enable farmers, particularly youth and women, to access credit from formal sources (Ayomide *et al.,* 2022). However, the study did not explore how credit access influences household income or crop productivity, a gap the current study aims to fill. This limitation is overcome in this study by considering credit access from both formal and informal institutions and analysing the effect of credit access on productivity to inform the policymakers appropriately.

Ololade (2013) used the Binomial Logit regression to identify factors influencing access to credit among rural farmers in Oyo State, Nigeria. The study findings show that collateral (assets) and social capital (guarantors) played a crucial role in access to credit from formal sources. However, in this study, Ololade (2013) reported that high interest rates and short payback periods were key factors hindering smallholder farmers from accessing credit. The study results also show that marital status significantly and negatively influenced access to credit from a formal institution. Where unmarried smallholder household heads were less likely to access credit. Besides, male household heads had higher chances of accessing credit from a formal institution than female household heads. Similar to the findings of (Ayomide *et al.,* 2022), collateral and guarantors played a crucial role in credit access. Hence (Ololade, 2013) recommended that smallholder farmers form a cooperative group to pool resources and allow easy access to credit from banks and lending institutions.

A study done by Awotide *et al.* (2015) to explore factors influencing credit access among smallholder cassava farmers in Nigeria showed that the number of tropical livestock units, access to credit-related information, household adult members, and farm size owned by the household had a positive and significant effect on the ability of the household head to access credit. In South Africa, Chauke *et al.* (2013) used the binary regression model to explore drivers of access to credit among smallholder farmers. In the findings, Chauke *et al.* (2013) found that access to credit-related information through extension service providers played a crucial role in smallholder farmers' access to credit. However, attitude towards risk, repayment period, lending procedures, and the total value of assets negatively affected the willingness and ability of the smallholder farmers to apply for credit from formal institutions.

Kosgey (2013), in a study on agricultural credit access by grain growers in Uasin Gishu County, Kenya, noted that financial institutions favoured male farmers over female farmers in advancing agricultural credit. Furthermore, (Kosgey, 2013) reported that the experience of the household heads played a key role in the ability

to access credit, where farmers with more years in grain cultivation were more likely to access agricultural credit than farmers with fewer years of farming. These findings were associated with financial lenders' trust in more experienced farmers. Gakuu *et al.* (2014) studied factors influencing access to credit Services by Women Entrepreneurs in Kenya. The study established that lack of collateral and awareness of financial lending opportunities are critical determinants of access to credit.

A study done in Benue State, Nigeria, on the factors influencing young farmers' access to credit, showed that farmers' age, educational level, farm, and household size were significant determinants of formal agricultural credit allocation (Oboh & Ekpebu, 2011). Djoumessi *et al.* (2018) used Cragg's double-hurdle model to investigate determinants of credit access among smallholder vegetable farmers in the Southwest region of Cameroon. The results showed that the highest level of education, access to extension services, distance to the credit source, and membership in a farmers' association positively and significantly influenced smallholder farmers' ability to access credit. While distance to the nearest lender, membership of a farmer's association, extension services, and farm size affected the amount of credit accessed (second tier).

Ajagbe and Oyelere (2012), in a study in Oyo State in Nigeria, analysed the determinants of access and demand for credit by small-scale entrepreneurs. The results showed that respondents' age, membership of a social group, household resource endowment, and education of the household head played a crucial role in access to credit. Credit-related requirements and regulations were also identified as key factors influencing an individual's ability to access credit. Oladeebo and Oladeebo (2008) used a multiple regression econometric model to explore determinants of credit access among smallholder farmers in Nigeria. The study reported that access to credit was influenced by years of farming, previous experience with a credit institution, and level of formal education.

2.2 Theoretical Framework

This study draws from three interrelated theories: Information Asymmetry Theory, Credit Rationing Theory, and Social Capital Theory. These theories collectively provide a comprehensive understanding of how both institutional and relational dynamics influence access to financial credit. Information Asymmetry Theory explains the implications of unequal access to information in transactions, particularly between borrowers and lenders (Akerlof, 1970). Building on this, Credit Rationing Theory posits that lenders may restrict loan supply not due to market failure, but as a rational response to perceived borrower risk under imperfect information conditions (Stiglitz & Weiss, 1981). Social Capital Theory complements these perspectives by highlighting how trust, social networks, and relational ties can serve as informal mechanisms that facilitate or hinder credit access (Claridge, 2018); Tsounis & Xanthopoulou, 2024). Together, these theories provide a robust conceptual basis for examining the institutional and social dimensions of access to credit.

2.2.1 Information asymmetry theory

Information Asymmetry Theory provides a foundational lens for understanding how uneven access to information between two parties can lead to inefficient outcomes in transactions. Akerlof (1970) introduced the theory through his 'market for lemons' model, demonstrating how private knowledge by sellers leads to market distortions. In credit markets, borrowers typically have more information about their financial behaviour and intentions than lenders, making it difficult for financial institutions to assess risk accurately. This leads to two central problems: adverse selection and moral hazard. Adverse selection occurs when riskier individuals are more likely to seek loans, while moral hazard arises when borrowers alter their behaviour post-loan due to limited monitoring.

Bergh et al. (2019) emphasize that information asymmetry not only affects transactional efficiency but also influences how institutions design contracts and monitor performance. The theory has been widely applied to areas like corporate governance, managerial decision-making, and inter-firm relationships. However, it faces several critiques. First, it assumes rational agents and overlooks the role of behavioural biases. Second, the theory often underplays power dynamics that intersect with informational disparities. Third, its empirical application is constrained by the difficulty of measuring information flows and knowledge gaps directly. Despite these critiques, Information Asymmetry Theory remains a pivotal framework for examining institutional responses to uncertainty in financial relationships.

2.2.2 Credit rationing theory

Credit Rationing Theory extends the application of information asymmetry to explain credit supply decisions under uncertainty. Stiglitz and Weiss (1981) argue that lenders may choose not to raise interest rates to balance loan demand because doing so can worsen the quality of the borrowing pool. Higher interest rates may attract riskier borrowers (adverse selection) and lead borrowers to undertake riskier ventures post-lending (moral

hazard). Consequently, rather than adjust interest rates upward, lenders may ration credit by denying loans even to some willing and seemingly creditworthy applicants. This leads to an equilibrium in which demand exceeds supply.

This theory diverges from classical market assumptions where price adjusts to ensure equilibrium. It also shifts focus to non-price mechanisms used by lenders, such as collateral requirements, credit scoring, and client history. However, it has notable limitations. It assumes uniformity among borrowers, ignoring advancements in risk profiling. It also treats lenders as risk-neutral actors and underemphasizes institutional, regulatory, and behavioural dynamics. Despite these criticisms, Credit Rationing Theory remains a vital explanation for persistent financial exclusion even in liberalized credit environments, especially in settings where monitoring is costly and borrower information is difficult to verify.

2.2.3 Social capital theory

Social Capital Theory introduces a relational perspective to understanding access to credit. The theory posits that individuals and communities derive value from social networks, shared norms, and mutual trust. These relationships can facilitate access to information, lower transaction costs, and enhance compliance through informal enforcement. As Tsounis and Xanthopoulou (2024) noted, social capital serves as a form of non-material collateral, especially in settings where formal financial institutions are weak or inaccessible. Trust-based networks can substitute for or complement formal lending systems by strengthening peer accountability, improving creditworthiness, and enabling resource-sharing among members of a community.

However, the theory has not gone unchallenged. Claridge (2018) critiques Social Capital Theory for often assuming that social networks are inherently beneficial while overlooking their potential to reinforce exclusivity, marginalization, and unequal access. Furthermore, he points out that power dynamics within networks can disadvantage vulnerable or peripheral groups, a reality that challenges the assumption of universal access to social capital. Despite these limitations, Social Capital Theory remains valuable in explaining the informal, socially embedded mechanisms that shape access to credit, especially in underbanked or rural settings where formal financial systems alone are insufficient for inclusion.

3. Methodology

3.1 Study area

The study was conducted in the Mvomero district, formerly a part of the Morogoro district. Mvomero district is among the six districts of the Morogoro Region in Tanzania. To the north, Mvomero district is bordered by the Tanga Region, to the east and southeast by Morogoro Rural district and Morogoro Urban district, to the northeast by the Pwani region, and to the west by Kilosa district. The Mvomero district is located at 5º 58′ and 10º 0′ latitudes south of the equator and longitudes 35º 25′ and 35º 58′ to the east of the Greenwich Meridian.

3.2 Sample size determination

To determine the sample size, Cochran's formula was adopted, given the large population and the absence of prior information on the population proportion (Cochran, 1977). While the calculated sample size was 657, a total of 562 youth farmers were successfully interviewed. This sample size is considered statistically adequate for social science research, as it remains within acceptable confidence and error margins for large populations (Krejcie & Morgan, 1970).

3.3 Sampling procedure

The study used the multi-stage sampling technique to identify the target respondents. In the first stage, Mvomero district was purposively selected because it is well known for producing horticulture products such as tomatoes, carrots, vegetables, eggplants, and fruits. Four wards were selected in the second stage, as they were the highest tomato production areas. Mlali, Doma, Mzumbe, and Melela wards were purposively selected using this criterion. In the third stage, all the villages were listed, and later only two villages were selected per ward, which resulted in 8 villages in total. The fifth stage listed all the young farmers in tomato production within the study regions. Simple random sampling was used to identify the sample size to be interviewed from the larger list. The distribution of respondents is shown in table 1 below.

Table 1. Distribution of respondents in the study area

S/N	Ward	Male	Female	Total	Percentage%	Sample Size
1.	Mzumbe	9,264	9,792	19,056	28.5	160
2.	Mlali	11,470	11,850	23,320	34.8	196
3.	Doma	6,580	6,461	13,041	19.4	109
4.	Melela	5,776	5,742	11,518	17.2	97
	Total	33,090	33,845	66,935	100	562

3.4 Analytical framework

Access to agricultural credit is a binary variable with the option of access to credit or no access to credit, hence the binary logit model was employed. Whereby, the dependent variable is dichotomous, and the independent/predictor variables are a set of socio-economic characteristics. The Maximum Likelihood Estimation (MLE) is used to predict the probability of a youth tomato farmer accessing credit or not. The equation 3.3 below expresses the mathematical representation of the binary logit model where, P, denotes the probability of youth farmers accessing credit and predictor variables X1 to X11.

$$Y=\text{Logit}(P)=\ln(P/(1-P)) = \propto+\beta\_1 X\_1+\beta\_2 X\_2+\cdots+\beta\_11 X\_11 \quad (1)$$

Where P is the probability that a youth farmer accesses credit, 1-P is the probability that the youth farmer does not access credit. X1 is the sex of the farmer (1=male, 0=female); X2 is the age of the farmer in years; X3 is marital status (1=married, 0=single); X4 is the level of education (years of formal schooling); X5 is the household size; X6 is the farming experience (in years); X7 is access to extension services (1=with access, 0=no access); X8 is group membership (1=yes, 0=No); X9 is distance to the nearest lending institution (in kilometers); X10 is farm size (in acres) and X11 is annual income (in Tshs). In the equation 3.3 above β_1,……..,β_11 denote the slope coefficients of the explanatory/predictor variables X_1, ……, X_11, and α is the intercept.

4. Results and Discussion

4.1 Descriptive Results

A total of 562 youth tomato farmers were interviewed and the descriptive results showed in table 2. Of the total 25.60% had access to credit which they used on tomato crops within the survey period. The results show that from the youth who had accessed credit, 46.53% sourced credit from formal sources like banks, micro-finance institutions and cooperative societies, while the remaining 53.47% had obtained credit from informal sources such as merry go round, social groups, and some from friends and relatives. The respondents reported using the loans on farming, particularly for tomato farming, and part of the money was used for other household and personal needs.

Table 2. Socio-economic characterization of youth tomato farmers

Variables	With access to credit n=144		Without access to credit n=418		Pooled n=562		t statistic or chi-square.
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Household characteristic							
Age of the respondent in years	30.68	3.68	28.82	4.41	29.29	4.31	4.55***
Gender of the respondents	0.70	0.46	0.77	0.42	0.76	0.43	3.42*
Marital status of the respondent	0.75	0.43	0.72	0.44	0.74	0.44	0.48*
Education (years of formal schooling)	8.26	3.18	7.06	2.88	7.37	3.07	4.29***
Household size	4.38	1.78	4.08	1.80	4.15	1.80	1.68*
Farming experience in years	5.09	2.91	4.15	1.67	4.39	2.13	3.92***
Annual household income (Tshs)	3,339,580	295,388	3,609,870	203664	3,540,614	169,279	-0.70
Farming and farm-related characteristics							
Farm size in acres	1.56	0.95	0.88	0.58	1.06	0.75	10.17***
Type of tomato varieties grown (1=local varieties)	0.55	0.50	0.64	0.48	0.61	0.49	1.93
Institutional characteristics							
Access to extension services (1=yes)	0.18	0.38	0.14	0.35	0.15	0.36	3.64
Frequency of visits by extension service officers or providers	3.24	1.01	3.25	1.07	3.24	1.05	0.02
Distance to the lending institution in km	3.37	3.89	6.97	11.00	6.04	9.84	-4.18***
Group membership (1=yes)	0.36	0.48	0.05	0.21	0.12	0.33	97.07***

Note 1: *** significant at 1%, and * at 10% 2. Income figures in Tanzania shillings (exchange rate at the time of data collection, 2298.3 TZS =1 USD).

A majority (70%) of the youth tomato farmers who had access to credit were male. The results are probably because of the patriarchal society where the male child inherits family assets and key production resources such as land. These resources and assets can be used as collateral for accessing loans from the lending institutions. Youth tomato farmers who have access to credit were relatively older, with a mean age of 30.68 years, compared to those who had no access to credit (28.82 years).

Regarding marital status, 76% of the smallholder youth tomato farmers who had accessed credit were married. Majority of the youth farmers had attained primary level of education (an average of 7.54 years of formal education). However, youth tomato farmers who had access to credit were relatively more educated (8.26 years of formal education compared to 7.06 years of formal education). The findings were expected since studies have

shown that formal education is a key to empowerment. Literacy enables individual to comply with formal loan requirements and alternative lending platforms

The overall (pooled) average tomato farming experience was 4.39 years. The young tomato farmers who had access to agricultural credit had tomato farming experience of 5.09 years compared to 4.15 years for those who did not access credit. The difference in farming experience between youth with access to agricultural credit and those who did not have access to credit was statistically significant at a 1% level. Average annual household income from tomato farming for household that access credit was slightly lower (TZS 3,339,580) compared to those who did not have access to agricultural credit from formal sources (TZS 3,609,870). However, the statistical difference in annual incomes was not significant.

Youth tomato farmers with access to agricultural credit had more land acreage under farming than those without credit. The difference in average farm size among the two groups was statistically significant at 1% level. The average distance to the nearest formal agricultural credit lending institution was 5.96 kilometres. Smallholder youth tomato farmers with access to credit lived approximately 3.05 kilometres from lending institutions, while those who did not access agricultural credit were, on average, 6.97 kilometres away from lending institutions. The statistical difference in distance to the closest lending institutions by credit access was significant at the 1% level.

In this study, most (36%) of small-scale youth tomato farmers who accessed agricultural credit were members of at least one social group compared to only 5% for those who did not. The statistical differences in group membership between the two groups of youth tomato farmers were significant at 1% significance level.

4.2 Factors influencing access to agricultural credit

A logit model was used to estimate the determinants of access to agricultural credit by small scale youth tomato farmers. Table 3 presents results on the determinants of access to agricultural credit. The dependent variable is a binary variable, which equals one if a youth tomato farmer accessed credit and zero otherwise. The model has a good fit, as shown by a higher and significant Wald Chi^2 showing a strong explanatory power of the variables used in the model.

The gender of the youth farmer had a negative and significant effect on access to credit at a 5% significance level. The result implies that male youth tomato farmers had a lower likelihood of accessing credit than female farmers. Female youth farmers are more likely to be in social groups than males. Therefore, this factor increased the probability of female farmers accessing credit over male farmers. This finding is consistent with those of (Girabi and Mwakaje, 2013) and (Sedem *et al.,* 2016).

The coefficient of the education level of the youth tomato farmer was positive and significant at 1%. These results imply that youth tomato farmers with more years of schooling had a higher likelihood of accessing credit than those with lesser education. The finding can be attributed to more knowledge and skills in finance-related issues and the ability to understand loan requirements and seize opportunities. Additionally, educated youth tomato farmers have skills and knowledge that enable them to handle the credit application bureaucracy. These results conform with those of (Etonihu *et al.,* 2013; Kiplimo, 2015; Samuel and Asana, 2021; Saqib *et al.,* 2016). Moreover, education increased the young farmers' access to information about the procedures involved in credit borrowing. This result corresponds to Adeyonu et al. (2017), who found that formal education positively impacted the amount of credit awarded to smallholder farmers.

Farming experience significantly and positively influenced credit access at a 1% significance level. Youth tomato farmers with more experience in tomato farming had a higher likelihood of accessing credit than those with lower experience. The result could be attributed to the social networks that the youth tomato farmers had developed over time and therefore used to seek credit. Similar findings were reported by (Mukhwami *et al.,* 2020).

Table 3. Results of the logit model showing the determinants of access to agricultural credit

Variables	Coefficient	Standard error	P>|z|
Dependent variable			
Access to credit (1=yes)			
Independent variables			
Socio demographics			
Gender (1-male)	-0.343**	0.164	0.037
Marital Status of the respondent (1=married)	0.059	0.081	0.471
Education level of the respondent (schooling years)	0.092***	0.026	0.000
Experience in tomato farming	0.089**	0.037	0.017
Age of the youth in years	0.027	0.019	0.157
Total household members	0.006	0.043	0.889
Farm characteristics			
Land size under tomato farming	0.665***	0.094	0.000
Annual income from tomato farming (ln)	-0.177***	0.064	0.006
Institution characteristics			
Group membership	1.180***	0.213	0.000
Distance to lending institution	-0.041***	0.012	0.001
Access to extension Services (1=yes)	0.150	0.191	0.432
Constant	-0.629	0.980	0.521
Number of observations	557		

Note 1: *** significant at 1%, and * at 10% 2. Income figures in Tanzania shillings (exchange rate at the time of data collection, 2298.3 TZS =1 USD).

Farm size significantly and positively influenced access to credit at a 1% significant level. Youth tomato farmers with larger farms had a higher likelihood of accessing credit than those with smaller farms. The observation is that farmers who own large farms require more capital to purchase fertilizers, seeds, and agrochemicals and hire machinery and labour to facilitate production. On the other hand, credit providers preferred farmers who owned larger pieces of land since the default rates among these farmers are likely to be lower. Land ownership is key to accessing credit from formal sources (Domeher & Abdulai, 2012). Additionally, experience in farming increases smallholder farmers' social capital, which they can use to gain information about formal money lenders and have each other as guarantors. Besides, lending institutions consider land ownership as prime collateral; therefore, large farm sizes mitigated the credit risks, resulting in more credit (Chandio *et al.,* 2017; Sangwan & Nayak, 2021; Ullah *et al.,* 2020).

Farmer group membership had a significant and positive coefficient at 1% level. These results suggest that youth tomato farmers who belonged to groups had a higher chance of accessing credit than those who did not belong to such groups. These results also imply that group membership increases the likelihood of a smallholder youth tomato farmer to access agricultural loans. This could be because group members can use each other as guarantors when borrowing money from formal credit sources in case of external credit borrowing. Similar findings were reported by (Afari-Sefa *et al.,* 2018; Denkyirah *et al.,* 2016; Heikkilä *et al.,* 2016). Besides, smallholder farmers can take advantage of social groups to share knowledge and information through social groups. This result conforms with those of (Afari-Sefa *et al.,* 2018).

The distance to the nearest formal loan lender had a negative and significant coefficient at 1% level. This result suggests that young farmers who stay closer to lending institutions are more likely to borrow and access information than those in distant areas. The ease with which these farmers could visit lending institutions and receive additional advice on the financing options could explain the finding. The result above is consistent with Chauke *et al.* (2013), who found that farmers are discouraged from borrowing credit when financial institutions are far from their residences.

Annual income negatively and significantly affected credit access at a 5% significant level. The result implies that the more annual income a young farmer earns, the less likely they would seek credit. Empirical evidence from previous studies shows that when youth tomato farmers income grew, they became less likely to take out loans since they were self-sufficient (Kiplimo, 2015; Kiros & Meshesha, 2022). However, a study in Kenya shows that households with more annual income are more likely to use their resource endowment to access credit from formal credit sources (Kiplimo, 2015). On contrary, studies have shown that farmers with higher annual incomes are more likely to get access to credit and be awarded more money than those with lower annual incomes (Luan & Bauer, 2016).

5. Conclusion

The study findings show that access to credit among youth tomato farmers in Mvomero District is significantly influenced by individual capacities, farm characteristics, and institutional factors. Education and farming experience increase the likelihood of accessing credit, suggesting that knowledge and practice enhance credit readiness. Land size and group membership also play a critical role, serving as tangible and social forms of collateral. Higher income was associated with reduced credit uptake, indicating that economically stable youth may rely less on external financing. Distance to lending institutions remains a practical constraint, limiting the reach of credit services in remote areas. The positive association between female gender and credit access underscores the role of group affiliation and social capital. These findings highlight the need for inclusive financial strategies that address physical accessibility, enhance youth financial literacy, and promote collective lending schemes. Strengthening these pathways can empower youth farmers and foster sustainable agricultural transformation in rural Tanzania.

6. Recommendation

To improve access to credit among youth tomato farmers, stakeholders should prioritize the development of inclusive financial products tailored to youth needs. Expanding mobile banking and agent-based services can address distance-related barriers, while promoting group-based lending schemes can leverage social capital to reduce risk for lenders. Additionally, integrating financial literacy and agribusiness training into youth agricultural programs will enhance credit readiness and loan utilization. Policymakers should also consider mechanisms that recognize land use rights and farming experience as alternative forms of collateral. These interventions can strengthen youth engagement in agriculture and support inclusive rural financial systems in Tanzania.

Acknowledgements

This research was financed by the International Fund for Agricultural Development (IFAD), through the International Institute of Tropical Agriculture (IITA), under the project “Enhancing Capacity to Apply Research Evidence (CARE) in Policy for Youth Engagement in Agribusiness and Rural Economic Activities in Africa” under Grant Number 2000001374.

References

Adeyonu, A., Ajiboye, B., Isitor, S., & Faseyi, S. (2017). An analysis of the factors influencing access to credit by poultry farmers in Abuja, Nigeria. *Agriculturae Conspectus Scientificus, 82*(1), 55–62.

Afari-Sefa, V., Bidogeza, J. C., Djoumessi, Y., & Kamdem, C. (2018). Determinants of smallholder vegetable farmers credit access and demand in the southwest region, Cameroon. *Economics Bulletin, 38*(2), 1231–1240.

Agbodji, A. E., & Johnson, A. A. (2021). Agricultural Credit and Its Impact on the Productivity of Certain Cereals in Togo. *Emerging Markets Finance and Trade, 57*(12), 3320–3336.

Ahaibwe G, Mbowa S. Lwarga M.M. (2013). Youth Engagement in Agriculture in Uganda. *Economic Policy Research Centre (EPRC) Research series*, 106.

Ajagbe, F., & Oyelere, B. (2012). Determinants of small-scale enterprise credit demand: evidence from Oyo state, Nigeria. *American Journal of Social and Management Sciences, 3,* 45–48.

Akerlof, G. A. (1970). The market for “lemons”: Quality uncertainty and the market mechanism. *The Quarterly Journal of Economics, 84*(3), 488–500. https://doi.org/10.2307/1879431

Aliero, H. M., Ibrahim, S. S., & Mohammed, M. M. (2013). Determinants of smallholder farmers' access to formal credit in Northwest Nigeria. *Research Journal of Finance and Accounting, 4*(2), 1–10.

Awotide, B. A., Abdoulaye, T., Alene, A., & Manyong, V. M. (2015). Impact of Access to Credit on Agricultural Productivity: Evidence from Smallholder Cassava Farmers in Nigeria. *International Conference of Agricultural Economists.*

Ayomide-Emmanuel, A., Apollos Nwabuisi, N., & Sunday Alao, O. (2022). An Empirical Investigation into the Relationship Between Financial Risk and Bank Performance. *International Journal of Finance and Banking Research, 8*(2), 67.

Baffoe, G., & Matsuda, H. 2015. Understanding the Determinants of Rural Credit Accessibility: The Case of Ehiaminchini, Fanteakwa District, Ghana. *Journal of Sustainable Development, 8*(6), 183–195.

Benjamin, T. A., Timo, S., Stefan, B., & Jukka, K. 2015. Factors influencing smallholder farmers access to agricultural microcredit in Northern Ghana. *African Journal of Agricultural Research, 10*(24), 2460–2469.

Bergh, D. D., Ketchen, D. J., Orlandi, I., Heugens, P. P. M. A. R., & Boyd, B. K. (2019). Information asymmetry in management research: Past accomplishments and future opportunities. *Journal of Management, 45*(1), 122–158. https://doi.org/10.1177/0149206318798026

Bezu, S., & Holden, S. (2014). Are rural youth in Ethiopia abandoning agriculture? *World Development, 64,* 259–272. https://doi.org/10.1016/j.worlddev.2014.06.013

Chandio, A. A., Jiang, Y., Wei, F., Rehman, A., & Liu, D. (2017). Famers' access to credit: Does collateral matter or cash flow matter? Evidence from Sindh, Pakistan. *Cogent Economics and Finance, 5*(1), 1–13.

Chauke, P., Motlhatlhana, M., Pfumayaramba, T., & Anim, F. (2013). Factors influencing access to credit: A case study of smallholder farmers in the Capricorn district of South Africa. *African Journal of Agricultural Research, 8*, 582–585.

Claridge, T. (2018). Criticisms of social capital theory: And lessons for improving practice. Social Capital Research.

Cochran, W. G. (1977). Sampling Techniques (3rd ed.). John Wiley & Sons.

Denkyirah, E. K., Aziz, A. A., Denkyirah, E. K., Nketiah, O. O., & Okoffo, E. D. (2016). Access to Credit and Constraint Analysis: The Case of Smallholder Rice Farmers in Ghana. Journal of Agricultural Studies 4(2), 53–72.

Djoumessi, Y. F., Kamdem, C. B., Afari-Sefa, V., & Bidogeza, J. C. (2018). Determinants of smallholder vegetable farmers' credit access and demand in Southwest region, Cameroon. *Economics Bulletin, 38*(2), 1231–1240.

Domeher, D., & Abdulai, R. (2012). Land registration, credit and agricultural investment in Africa. *Agricultural Finance Review, 72*(1), 87–103.

Etonihu, K. I., Rahman, S. A., & Usman, S. (2013). Determinants of access to agricultural credit among crop farmers in a farming community of Nasarawa State, Nigeria. *Journal of Development and Agricultural Economics, 5*(5), 192–196.

Gakuu, K. J., Kiragu Mwangi, A., & Ngigi, N. S. (2014). Analysis of Factors Influencing Access to Credit Services by Women Entrepreneurs in Kenya. *Research Journal of Finance and Accounting, 5*(11), 34–41.

Girabi, F., & Mwakaje, A. (2013). Impact of Microfinance on Smallholder Farm Productivity in Tanzania: The Case of Iramba District. *Asian Economic and Financial Review, 3*(2), 227–238.

Heikkilä, A., Kalmi, P., & Ruuskanen, O. P. (2016). Social Capital and Access to Credit: Evidence from Uganda. *Journal of Development Studies, 52*(9), 1273–1288.

Kiplimo, J. C. (2015). Determinants of access to credit by smallholder farmers in eastern and western Kenya. *Journal of Development and Agricultural Economics, 7*(9), 303–313.

Kiros, S., & Meshesha, G. B. (2022). Factors affecting farmers' access to formal financial credit in Basona Worana District, North Showa Zone, Amhara Regional State, Ethiopia. *Cogent Economics and Finance, 10*(1), 1–22.

Kosgey, Y. K. K. (2013). Agricultural Credit Access by Grain Growers in Uasin Gishu County, Kenya. *IOSR Journal of Economics and Finance, 2*(3), 36–52.

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement, 30*(3), 607–610.

Luan, D. X., & Bauer, S. (2016). Does credit access affect household income homogeneously across different groups of credit recipients? Evidence from rural Vietnam. *Journal of Rural Studies* 47, 186–203.

Mukhwami, J. T., Edith, G. W., & Kalio, A. M. (2020). Econometric Modelling of Rural Farm Household Credit Allocation in Kakamega County, Kenya. *Journal of Economics and Sustainable Development, 11*(4), 172–181.

Mushi, G. E., Serugendo, G. D. M., and Burgi, P. Y. 2022. Digital Technology and Services for Sustainable Agriculture in Tanzania: A Literature Review. In: *Sustainability, 14*(4).

Ng'atigwa, A. A., Hepelwa, A., Yami, M., & Manyong, V. (2020). Assessment of factors influencing youth involvement in horticulture agribusiness in Tanzania: A case study of Njombe region. Agriculture (Switzerland) 10(7), 1–17.

Oboh, V. U., & Ekpebu, I. D. (2011). Determinants of formal agricultural credit allocation to the farm sector by arable crop farmers in Benue State, Nigeria. *African Journal of Agricultural Research, 6*(1), 181–185.

Oladeebo, J. O., & Oladeebo, O. E. (2008). Determinants of Loan Repayment among Smallholder Farmers in Ogbomoso Agricultural Zone of Oyo State, Nigeria. *Journal of Social Sciences, 17*(1), 59–62.

Ololade, R. 2013. Ololade R.A. & Olagunju F.I. (2013). Determinants of Access to Credit among Rural Farmers in Oyo State, Nigeria. *Global Journal of Science Frontier Research (D), 13*(2),17-22.

Samuel, A. A., & Asana, A. K. (2021). Factors influencing credit access among small-scale poultry farmers in the Sunyani West District of the Bono region, Ghana. *Journal of Agricultural Extension and Rural Development, 13*(1), 23–33.

Sanka, M. B., & Nkilijiwa, A. L. (2021). Access to Agricultural Credit for Smallholder Farmers in Shinyanga Region – Tanzania. *East African Journal of Social and Applied Sciences, 3*(1), 181–191.

Sangwan, S., & Nayak, N. C. (2021). Factors influencing the borrower loan size in microfinance group lending: a survey from Indian microfinance institutions. *Journal of Financial Economic Policy, 13*(2), 223–238.

Saqib, S. E., Ahmad, M. M., & Panezai, S. (2016). Landholding size and farmers' access to credit and its utilisation in Pakistan. *Development in Practice 26*(8), 1060–1071.

Sedem, E. D., William, A., & Gideon, D. A. (2016). Effect of access to agriculture credit on farm income in the Talensi district of northern Ghana. *Russian Journal of Agricultural and Socio-Economic Sciences, 55*(7), 40–46.

Stiglitz, J. E., & Weiss, A. (1981). Credit rationing in markets with imperfect information. *The American Economic Review, 71*(3), 393–410. https://doi.org/10.2307/1802787

Taremwa, N. K., Macharia, I., Bett, E., & Majiwa, E. (2021). Impact Of Agricultural Credit Access on Agricultural Productivity Among Maize and Rice Smallholder Farmers in Rwanda. *Journal of Agribusiness and Rural Development, 59*(1), 39–58.

Tsounis, A., & Xanthopoulou, D. (2024). Social Capital Theory: A Review. In S. Papagiannidis (Ed.), Theory Hub Book. Newcastle University.

Ullah, A., Mahmood, N., Zeb, A., & Kächele, H. (2020). Factors determining farmers' access to and sources of credit: Evidence from the rain-fed zone of Pakistan. *Agriculture, 10*(12), 1–13.