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Factors influencing credit access for rural small-scale farmers in Lesotho: Evidence from maize farmers in Masianokeng

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Abstract

Maize is a staple food and an important source of starch for many households in Lesotho. However, for many years, its domestic supply has failed to meet demand. As a result of this capital investment through adequate access to credit is needful to develop the agricultural sector in Lesotho. Therefore, the study analysed factors that influence small scale maize farmers' access to credit facilities using logistic regression model. The study used the purposive sampling method to identify and gather a sample of 70 farmers. Data was collected utilizing a semi-structured questionnaire. The empirical results revealed that level of education, farm size, savings and employment status influence farmers' access to credit facilities. Furthermore, this study revealed that socio-economic factors play a key role in farmers' access to credit in the study area. The study concludes that adequate access to credit is needful to promote a sustainable agricultural development and to improve livelihoods of small-scale farmers in Lesotho. The study recommends financial literacy programmes for small-scale farmers to enhance their decision making and chances of accessing credit due to a good understanding of how the financial system works and how best it can meet their needs and requirements. There is a need for the local credit policy to address the issues and needs of farmers in the credit market through encouraging financial services to avail innovative products and services that meets the financial needs and requirements of small-scale farmers.

Keywords: Access to Credit; Smallholder Farmers; Probit Regression Model; Production

1. Introduction

Agriculture remains the main source of food, employment, and income for much of the rural populace. Maize is the staple food in most countries in the Southern Africa region Lesotho included. Farmers' access to credit may not directly affect productivity, however it may indirectly affect productivity through positive effects emanating from enhanced ability to adopt technologies. Mariano *et al*. [1] assert that access to credit has positive effects on smallholder farmers' adoption of agricultural technologies. When a farmer has access to credit, they can hire more labour and increase the level of investments on the farm which contributes to productivity indirectly. Although agricultural credit is an essential input along with modern technology for increased productivity it remains elusively challenging for poor rural farmers to access either. Sustainable Development Goals (SDGs) 1, 2 and 13 frame eradicating malnutrition through increasing agricultural production sustainably under the changing climatic conditions, thus achieving food and nutrition security [2,3]. Therefore, achieving resilient and sustainable food systems under climate change requires sustainable agricultural practices for climate adaptation and mitigation. Climate change and its associated risks is here to stay which makes it needful for farmers to adopt climate smart technologies, however some of these technologies and practices

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require financial resources. Access to credit will be a huge contributor and enabler for maize farmers to adopt improved maize production technologies.

A broad sum of literature has investigated the factors that influence smallholder farmer's demand for and use of formal credit. Most of these studies have concluded that smallholder farmers' socioeconomic, demographic and farm-level characteristics influence their demand and use of credit [4;5;6,7,8]. There is generally low affinity from financial institutions to extend credit to farmers in Lesotho, as they perceive this sector as highly risky. Therefore, even though, the demand for agricultural credit is high, most farmers struggle to access credit. Cereal production in Lesotho is low despite maize status as a staple crop. This leaves the country highly reliant on maize imports from South Africa both for human consumption and animal feed. Often lack of access to credit by farmers has been known to exert adverse effects on farmers ability to purchase the required input materials for sufficient production.

Even though maize is a staple food and plays an important role in food availability in Lesotho [9], there are still financial constraints to fund small scale maize farmers. Financial institutions regard small-scale maize farmers as high-risk clients as they lack the necessary collateral to qualify for loans. On the other hand, farmers are discouraged by high interest rates charged on loans. Access to credit facilities from banks and other financial institutions is a major problem for small-scale farmers. These problems include the need for collateral and the high interest rates in repayment terms of the loan. Limited access to credit for small scale maize farmers, especially in developing countries like Lesotho has been identified as a barrier that limit their size, growth, adoption of new technology and scope of production [10]. Access to credit is one of the major drivers to improve agricultural production especially for small scale maize farmers in the developing countries such as Lesotho. This study seeks to investigate factors that influence access to credit for small scale maize farmers in Lesotho. There is a dearth of literature on access to credit for smallholder maize farmers in Lesotho and this study seeks to fill that gap in knowledge.

1.1. The Theoretical framework of the study

1.1.1. The Credit Rationing Theory and Access to credit facilities

The credit rationing theory, propounded by [11], provides a framework for analysing financial market inefficiencies. The theory states that, information asymmetry is the main cause of financial market malfunctioning in developing countries. Therefore, in our world today where people can easily get all the information they need, banks could precisely predict all actions by borrowers but may not be able to control such actions. According to Magembe [10], the financial institutions design the terms of loan in a manner that induces borrowers to take actions in the interest of banks, and that also attracts low risk borrowers. For both reasons, the expected returns of banks increase less rapidly than the interest rate and beyond a certain point, actually declines. The moral hazard problem, on the other hand, is that a risk-neutral firm will prefer projects with low probability of bankruptcy and hence make lower expected returns.

The most important conclusion from Stiglitz and Weiss [11] argument is that information asymmetry in the form of adverse selection and moral hazard is the source of market inefficiency in developing countries and this leads to high-risk borrowers such as smallholder farmers exclusion from the stream of potential borrowers and their discrimination regarding access to financial services. Most small-scale farmers groups experience difficulties in obtaining credit for production inputs. With the collapse of agricultural development banks and the closure of many exports crop marketing boards, which in the past supplied farmers with inputs on credit, difficulties in accessing credit have increased. The development and commercial banks view the small- scale and micro entrepreneurs as risk borrowers and extending loans to them is to cut down their profitability in the transactions and to incur irrecoverable losses to the banks [12]. There is a believe that smallholder famers, borrowers are much riskier than commercial farmers for reasons often related to the difficulty in obtaining accurate information about and that they do not keep farm records [13].

1.2. Access to Agricultural Credit

Agricultural credit is one of the major inputs in the development of the economy especially in the agricultural sector. Access to this credit entails among other procedures applying to the institutions that offer credit. These institutions include the formal sources like commercial banks, microfinance institutions and other approved lenders. The other one is through the informal sector like the rotating and saving credit schemes, saving and cooperative credit schemes, contributions from friends and relatives, and subscriptions fee [14].

The applicant must meet the necessary requirements before accessing credit. Kosgey [15] stated that these requirements are common in most of the formal credit lending institutions than the informal ones. Some of the requirements are the collateral security, which is the sufficient prove that shows that a farmer can pay back the loan on time, the guarantors, and the signed commitments showing that the borrower agreed to abide by the terms and

conditions of the credit contract. Lending agencies require collateral to reduce the risks related to lending therefore cushioning themselves from the setback of default by the small-scale farmers. However, Sebatta *et al*. [16] shows that the requirements have made the access of credit to be a not friendly exercise for many famers. The bureaucracy involved and tedious procedures to access loans has discouraged many farmers in their quest for accessing the needed credit.

1.3. Empirical evidence of factors determining small scale farmers' access to credit

Empirical evidence from the literature suggests that institutional factors, product features and household socio-economic characteristics influence small scale farmer's access to credit facilities from both formal and informal sectors [16]. Baiyegunhi & Fraser [18] indicated that formal lenders in the credit markets incur high costs in assessing the creditworthiness of small borrowers; yet make low returns due to the small loan amounts involved. Strauss Commission [19] indicated that some institutions spend as much as R1.50 to lend one rand, excluding the cost of capital. The commission concluded that this motivates formal lenders to adopt strict collateral requirements as a screening device to minimize default risk, hence keeping small borrowers out of formal credit markets or rationing their credit.

Access to formal financial services tends to be limited to salaried workers, therefore excluding self-employed and informally employed [20]. This is attributed to the fact that most banks demand a pay slip as a pre-condition for account opening. In a study of rural credit accessibility in Northern Nicaragua, Vaessen [21], showed that, the target group (either women, men or both), the geographical area of operation, and the features of financial products are to be provided to address sustainability concerns, and are identified as important factors which lenders base their decision on when lending to small scale farmers.

The borrower's characteristics such as the strength of previous business relationships, borrowers' reputation in the market, borrower's credit history, borrowers' debt-service capacity and borrowers' wealth status all influences access to credit. In their study, Sebatta *et al*. [16] found that level of education, off-farm activities such as employment status and access to extension services are all positive and significantly influence the probability of access to credit.

Access to credit is positively influenced by age and household income, while being female has a statistically significant negative effect, [17]. Chandio *et al*. [22] concluded that the result implies that an older person who had control of household resources is likely to be rated to be more creditworthy, while women were discriminated against in the credit market. According to Mohamed [23], empirical evidence of the study carried out among fishermen in Zanzibar indicates that age, gender, education and income levels are factors that influence credit accessibility by smallholder business producer groups. Daniels [24] asserted that collateral requirements are a major determinant of household access to credit, especially in the formal sector. He observed that the low levels of collateral among the poor to a great extent explained their limited access to financial instruments in the formal financial market.

1.4. Barriers to small scale maize farmers' access to credit facilities

One of the most promising ways to reduce poverty, improve farm productivity and ease the smooth transition from subsistence farming to large scale and agribusiness farming is access to credit and other financial services by small-scale farmer [25]. Small scale maize farmers still encounter a number of challenges that hinder their maize productivity and growth. Some of the challenges include the key long standing challenges of low productivity stemming from the lack of access to modern technology; failure to comply and meet grades, standards and quality in product markets, weak legal framework regarding agricultural marketing; and a lack of access to formal financial services.

It is not only small-scale maize farmers who experience difficulties, but also banks as major suppliers of credit face various challenges in providing the same to small scale farmers. Banks have to handle the challenge of asymmetric information as they have difficulty in assessing the creditworthiness of agribusiness entrepreneurs, especially those located in remote areas and those who lack financial records [26]. According, to the World Bank [27], unfavourable interest rates, complex application procedures, information asymmetries and high collateral requirements are among the major challenges arising from both the demand and supply side of the credit market. Small scale maize farmers in most cases lack credit history and accounting records, which banks normally use to assess their credit worthiness. As a result, banks tend to require more collateral and set higher interest rates to compensate for the high risk of borrowing smallholder farmers [28].

2. Material and methods

2.1. Description of study area, sampling procedure and data collection

Masianokeng is in the Maseru district of Lesotho. It is approximately 12.1km, via main South 1 road in the southern part of Maseru, the capital city of Lesotho where most of financial institutions are concentrated. This research adopted a descriptive survey design. Descriptive research is used to describe characteristics of a population or phenomenon being studied. It does not answer questions about how/when/why the characteristics occurred. Rather it addresses the "what" question. Surveys allow the collection of large amounts of data from a sizable population in a highly economical way. It allows one to collect quantitative data which can be analysed quantitatively using descriptive and inferential statistics [29]. As a result, this study considers the descriptive survey as the best strategy to fulfil the objectives of this study.

The study used purposive sampling technique since the study had limited resources and the researcher needed to identify and select information rich respondents for the effective use of the limited resources. Purposive sampling technique is a non- probability sampling method that occurs when the researcher chooses the sample. The study uses this method among all other methods because it is economically effective and believed to be most appropriate since it allows the researcher to get a sample of subjects that will provide relevant information for the study due their characteristics [30]. The target population was comprised of small-scale maize farmers from different areas whose maize production is around Masianokeng and they have access to financial institutions operating in Maseru town.

The study collected primary data using semi- structured questionnaires. Experts in the Department of Agricultural Economics and Extension at National University of Lesotho validated the semi-structured questionnaire. The researcher conducted a pilot study using 10 questionnaires in Roma Valley to check reliability of the instrument. The coefficient of reliability was determined using Cronbach's Alpha and was 0.76 in Statistical Package for Social Sciences (SPSS) and this coefficient value implies that the instrument was reliable.

2.2. Data analysis

The study used descriptive statistics which include frequency distribution and percentages to describe the demographic and socio-economic characteristics of small-scale farmers. To analyse the factors determining access to credit and constraints to lending for small scale maize farmers the study used the logistic regression model. The logistic regression model assesses the impact of independent variables on a dichotomous dependent variable [31].

2.2.1. The logistic regression model

The logistic regression model was used to determine the factors determining access to credit and constraints to lending for small scale maize. The study chooses this method because it is a standard method of analysis when the outcome variable is dichotomous [32], measured as having a value of 1 or 0, where 1 = access and 0 = no access.

This is the type of regression where the dependent variable can only take two values. The purpose of the model is to estimate the probability that an observation with particular characteristics will fall on one of specified categories. The study estimates the logistic regression model using the maximum likelihood procedure [33]. It takes form of:

$$Pi = \frac{e^{ui}}{1+e^{ui}}$$

Where P_i denotes the probability that the ith farmer's access to credit is 1, then (1 − Pi) is the probability that access to credit is 0. The odds (A = 1 versus A = 0), this study uses are the ratio of the probability that a farmer has access to credit (P_i) to the probability of non-access (1 – P_i). There are still other methods that can be used besides the logistic regression models to explain the relationship between the independent variable and the dependent variable. Such methods include linear regression models and multinomial regression models. However, logistic regression model was preferred because the study dependent variable is of a binary nature and the secondly the logistic regression model has the advantage of avoiding confounding effects by analysing the association of all variables together. It also assumes ordinary least squares which states that rate of change per unit change in the value of explanatory variables is constant. In this study, the factors will either affect access to credit facilities positively or negatively hence why the study chose to adopt the logistic regression model.

Table 1 A priori expectations for the explanatory variables used in the logit model

Variable	Description	Measurement	Variable Type	Expected sign (+/-)
Age	Age of a farmer	number of years	Continuous	(+/-)
Gender	Gender of a farmer	D 1= Male 0 = Female	Categorical	(+)
Marital status	Marital status of a farmer	D 1=married 0 = otherwise	Categorical	(-/+)
Household size	Household of a farmer	number of people in the house hold	Continuous	(+)
Level of education	Level of education of a farmer	Levels of school attended	Categorical	(+)
Farm size	Total amount of land cultivated maize	Acres	Categorical	(+)
Employment status	Employment status of a farmer	D 1 = Yes, 0 = No	Categorical	(+)
Savings	Funds from his savings	D 1 = Yes, 0 = No	Categorical	(+)
Grants	Grants received by a farmer	D 1 = Yes, 0 = No	Categorical	(+)
Extension services	Farmer's access to extension services	D 1 = Yes, 0 = No	Categorical	(-/+)

Source: Authors Priori Expectations

2.2.2. Model specification

The factors the study hypothesizes to affect access to credit facilities are gender, marital status, household size, level of education, farm size, employment status, savings, grants and extension services. The study model specification is as follows:

Y (access to credit) = $ß_0$ + $ß_1$(Age) +$ß_2$(Gender) + $ß_3$(Marital status) + $ß_4$(Household size) + $ß_5$(Education) + $ß_6$(Farm size) + $ß_7$(Employment status) + $ß_8$(Savings) + $ß_9$(Grants) + $ß_{10}$(ext. services)

Where; $ß_0$= constant

The study used econometrics software Stata 13 to calculate the logistic coefficients and estimate maximum likelihood ratios were the basis for the confirmation of the validity of the model.

3. Results and discussion

3.1. Demographic and socio-economic characteristics

The data was analysed using descriptive statistics showing frequencies and percentages. Table 2, survey results indicate that 46% of the respondents in Masianokeng have access to credit facilities while 24% do not have access to credit facilities. According to the descriptive statistics results a significant proportion of respondents in the study area have access to credit given that 46% of the respondents have access to credit facilities which helps them to acquire new and appropriate farming technologies. However, this is below 50 % which indicates that majority of the farmers still struggle to access credit, which ultimately effects their farm operations. Financial institutions in Lesotho have a low appetite to extend credit to local farmers since they consider the sector risky. The descriptive statistics in Table 2 also indicate that 71.43% of the respondents were males while 28.57% were females which show that males are more engaged in farming activities in this area compared to females. Depending on the level of education, the highest percentage was 28.57% of respondents and obtained secondary education. On the issue of the household size, the majority (64.29%) of respondents had household size ranging from 4 to 6 individuals in a household, the study also observes that 35.71% of the farmers had farm sizes ranging from 4 to 6 acres and 22.86% of the farmers had between 10 to 12 acres of farmland,

17.14% had 12 acres of farmland and above, whereas only 14.29% of farmers had 1 to 3 acres of farmland. This could be since majority of the urban farmers have low access to arable land.

Table 2 Socio-Demographic Descriptive statistics

Variable	Frequency	Percentage (%)
Gender		
Female	20	28.57
Male	50	71.43
Access to credit		
Access	46	65.71
No access	24	34.29
Marital status		
Married	54	77.14
Otherwise	16	22.86
Household size		
1 to 3	13	18.57
4 to 6	45	64.29
7 to 9	10	14.29
10 and above	2	2.86
Level of education		
Primary	18	25.71
Secondary	20	28.57
High school	18	25.71
Tertiary	14	20
Farm size		
1 to 3	10	14.29
4 to 6	25	35. 71
7 to 9	7	10
10 to 12	16	22.86
13 and above	12	17.14
Access to extension services		
Access	32	45.71
No access	38	54.29

Source: Field Survey (2019)

Table 3 shows that most of the respondents were employed in the formal employment market (64%). This may indicate that farming is a part-time job to them, and they might rely on household and hired labour. Many of the households in the study area appear to have savings (43%), this is positive and it is important for them to know they can use the savings as collateral in the event they need to borrow money from the financial institution where they keep their savings. The relationship with the bank can assist in a favourable consideration of their loan application. The descriptive statistics in Table 3 indicate that most of the households depends on grants such as old age grant as a source of income.

Table 3 Socio-Economic Descriptive Statistics

Employment status		
Employed	64	91.43
Not employed	6	8.57
Savings		
Have savings	43	61.43
No savings	27	38.57
Grants		
Access	54	77.14
No access	16	22.86

3.2. Logistic regression results

3.2.1. Factors determining access to credit facilities for small scale maize farmers in Masianokeng.

The results of the factors that were hypothesized to have an impact on the small-scale maize farmer's access to credit facilities in the study were analysed using binary logistic regression model. Table 4 presents the results of the logistic regression model. The odds ratios have been used for the interpretation of the results. The higher the odds ratio, the higher the likelihood of that farmer to receive loans from lenders.

Gender

The results show for the variable gender is significant at 1% level of significance and positively affects access to credit for small scale maize farmers in Masianokeng. The odds ratio for gender is 29.0, which imply that a male maize farmer is more likely to have access to credit 29.0 times the odds of a female maize farmer. The findings are therefore consistent with the priori expectations. These results concur with the findings of Baiyegunhi & Fraser [18] who indicated bias of credit access against women, as household resources are in most cases controlled by men, thus lenders perceived men as more creditworthy.

Level of education

The results indicate that level of education measured by the number of years of schooling was statistically significant with a positive effect on small scale maize farmers access to credit facilities in Masianokeng. The odds ratio for farmer's level of education is 26.5, which implies that an increase in the number of years of schooling increases the probability of accessing credit facilities by 26.5 times. These results are consistent with the priori expectation and the findings of [34]. This could be due to the fact that farmers with higher level of education have a tendency to engage in other off-farm income occupational activities which empower them to acquire the necessary assets that can enable them to access credit facilities. These results are in line with the findings of Kiplimo *et el.* [35] concluded that higher level of education is associated with the ability to access and comprehend information on credit terms and conditions, and ability to complete loan application forms properly.

Farm size

The findings of the study show that the coefficient for the variable farm size was positive significant indicating a positive relationship between maize farmer's access to credit facilities and farm size. The odds ratio for farm size is 8. 90, implying that a unit increase in acres of the farm size increase the probability of a maize farmer of obtaining access to credit facilities by 8.90 times. Society perceives landholding size as a symbol of social status and barometer of wealth. Therefore, farmers with large landholding are more likely to access loans from formal and informal sources, [36]. Furthermore, land is the most important readily acceptable form of collateral. Lacking collateral deprives a large number of tenants and landless people from participating in formal credit markets, [17]. Contrary to these findings, Dzadze *et al*. [37] reported that there was no link between landholding and access to credit.

Employment status

The coefficient for the variable employment status was statistically significant and positive which suggests that employment status influences the small-scale farmer's access to credit facilities. Since most of the farmers in the study area were employed according to the descriptive statistics they have off farm income, which could be the reason this variable was significant. Employment status is a proxy for off-farm income and therefore the higher the farmer's monthly income, the higher the probability that a credit agent will lend the farmer credit since the farmer has alternative source of income for repaying the debt. This concurs with the priori expectation and the findings of Nwaru *et al*. [34] who concluded that higher level of household income implies a greater repayment capacity and may serve as a measure of creditworthiness, thus farmers with more income are more likely to have access to credit facilities.

Household savings

The coefficient for the variable household savings was statistically significant and had a positive influence on small scale maize farmer access to credit. That is the higher the households' savings, the more likely that a credit agent will lend to that farmer's household. The odds ratio for household's savings is 9.84, implying that an increase in households' savings increases the probability of accessing credit by 9.84 times. This is consistent with a priori expectation and the findings of Dong *et al*. [38]. Farmers with significant household savings can substitute their savings for collateral, especially if the households deposit their savings with the financial institution providing the credit.

Age and Household size

The coefficients of the variables age and household size were statistically insignificant therefore conclude that they have no impact on the farmers access to credit facilities. Kiplimo *et al.* [35] also found age and household insignificant with negative coefficients.

Marital status

The coefficient for the variable marital status was insignificant therefore the study concludes that small scale maize farmers who are married have equal chances of accessing credit facilities as those who are not married. These results concur with findings of Donkor & Anane [39].

Table 4 Logistic regression estimates of determinants of small-scale maize farmer's access to credit facilities

Variables	Coefficients	Standard Error	Odds ratios	Significance
Age	-0.025	0.06	1.02	0.66
Gender	3 .37	1.57	29.0	0.03**
Marital status	2.25	2.05	9.53	0.27
Household size	-1.47	1.31	0.23	0.26
Level of education	3.28	1.35	26.5	0.02**
Farm size	2.12	1.06	8.37	0.05**
Employment status	7.35	4.22	0.00	0.08*
Savings	2.29	1.65	9.84	0.17
Extension services	-3.68	2.28	0.025	0.11
Constant	-9.34	4.84	0.00	0.05

Source: Field Survey (2019) Note: ***, ** and * denote statistical significance at 1 %, 5% and 10% prob levels
Log likelihood = -10.098, Number of obs = 70, LR chi2(10) = 69.81, Prob > chi2 = 0.0000; Pseudo R2 = 0.7756

Access to extension services

The coefficient for the variable farmer's access to extension services was statistically insignificant hence the study concluded that there is no relationship between access to credit and extension services. A farmer with access to extension services has equal chances of accessing credit facilities as those who do not have access to extension services. The results contradict findings by Wossen *et al*. [40] who assert that there is a positive relationship between farmer's access to access to credit and extension services.

3.2.2. The constraints to lending for small-scale maize farmers.

Table 5 illustrates the binary logistic results for the factors that possibly constrain small scale maize farmer's access to credit facilities in Masianokeng.

Gender

The results in Table 5 show that the coefficient for the variable gender is statistically significant at 10% level of significance with a positive coefficient. This result suggests that gender influences farmer's access to credit. The odds ratio for gender is 11.2, which imply that a male maize farmer is more likely to be credit constraint 29.0 times the odds of a female maize farmer. These results are in harmony with the results obtained by Omonona *et al.* [41] who argued that female farmers' scale of production is higher than that of their male counterparts and hence lenders favour them in terms of approval of credit applications.

Collateral

The results in Table 5 show that the coefficient for the variable collateral is statistically significant at 5% level of significance and coefficient it is positive. This result indicates that there is a positive relationship between collateral and constraints to credit access. The odds ratio of collateral is 31. 8 implying that for a unit increase in collateral demanded by the lender the odds/chances of a farmer to be credit access constraint increases by 31.8 times. According to Mukasa *et al*. [25] collateral security is a major constraint to credit access. In his survey, he found out that the farmers interviewed had applied for loans and financial institutions rejected their applications while others had decided not to apply since they knew they would not receive the loans because of lack of collateral security.

Level of education

The coefficient for the variable level of education is significant at 1% level of significance and it is negative. This result indicates a negative relationship between level of education and constraints to access to credit. This is in line with findings by Baiyegunhi *et al*. [18] who found a positive relationship between access to credit and the level of education. The odds ratio of the level of education is 8.40 which means that a one-year increase in level of education will reduce the chances/odds of credit access constraints 8.40 times. Farmers with higher level of education tend to engage in other off- farm income generating activities which empower them to acquire the necessary assets that can enable them to access credit. Therefore, a farmer will be able to overcome the barriers to obtain credit. Educated farmers are financially literate which helps them in loan applications since they fully understand requirements and strive to comply.

Farm size

The results in Table 5 show that the coefficient for the variable farm size is positive and significant at 5 % level of significance. The odds ratio for farm size is 3.64, implying that a unit increase in acres of the farm size significantly reduces the likelihood of being credit constrained by 3.64 times. Often part of the farm land is put in place as collateral if the farmer's repayment capacity does not satisfy the lender. These results are in line with Mukasa *et al*. [25]. They concluded that an increases in agricultural land size decrease farmers' propensity of having his loan application rejected or partially approved. The explanation for this might be the fact that prospective lenders view large farmers as more capable of repaying their loans without default because of their high-income generation potential.

Table 5 Factors that constrain credit access facilities for small scale maize farmers in Masianokeng

Variables	Coefficients	Odds Ratio	Standard Error	Significance
Gender	2.415	11.191	15.195	0.075*
Interest rate	0.825	2.282	3.461	0.586
Collateral	3.461	31.849	54.547	0.043**
Education	-2.129	8.401	7.325	0.015***
Farm size	1.609	3.636	2.125	0.027**
Extension services	1.610	5.001	7.291	0.27
Constant	12.077	5.69	0.000	0.002

Source: Field survey (2019); Note: ***, ** & * denote statistical significance at 1%, 5% & 10% prob levels respectively.
Log likelihood = 13.582, number of obs = 70, LR ch 2(6) = 62.87, Prob> ch2 =0.000; Pseudo R2 = 0.6982

Interest rates

Interest rates coefficient insignificant at all levels of significance hence the conclusion that they do not constrain farmers from accessing credit. During the interviews with farmers, most of the farmers indicated that interest rates charged by the micro finances were still acceptable hence the conclusion that interest rates do not affect their access to credit. These results differ with Chandio [22] who found that interest rates negatively affect smallholder farmers' access to credit therefore suggested that financial institutions responsible for disbursing agricultural loans to farmers should reduce the high interest rate and stringent conditions for small scale farmers to access loans.

4. Conclusion

The study has found that obtaining credit for agricultural projects in Lesotho is not simple or easy, even for active farmers because of lack of desire from financial institutions to provide farmer friendly credit access instruments and services. Some of the lending agencies clearly indicated that they do not provide credit facilities to small scale maize farmers unless they have an alternative source of repayment such as other businesses. They indicated that this is because small scale maize farmers lack crop insurance, security or fenced fields and proper irrigation which exposes them to more risks. The financial institutions opine that local smallholder farmers crop and livestock enterprises are highly exposed to risk and uncertainty and they are not convinced with the current risk mitigation measures by small scale farmers.

However, the study concludes that small scale maize farmers have the potential to access credit facilities provided they have the necessary collateral required by the lending agency, they keep proper financial records of their farming business operations to increase their creditworthiness and that they have other sources to repay the loan which except agriculture that will help improve their repayment capacity. The lending agencies have indicated that they can provide credit facilities to small scale maize farmers only if they can repay the loan and their ability to repay the loan should not depend on their farm output alone.

According to the findings of the study, the government should promote the implementation of policies that focus on the development of effective training programs capacitate farmers with knowledge and skills on mitigation of risks in maize production, improve financial literacy of small-scale maize farmers to enhance their ability to effectively understand and analyse financial information. Such interventions will assist farmers' ability to utilise financial services which will ultimately enhance their maize production.

Since the study concluded that education and employment status positively influence access to credit for small scale maize farmers, young prospective farmers should strive for the highest level of education and training. Mature farmers must take advantage of adult learning and extension services capacity building programmes. Farmers with less level of education cannot have access to full-time employment and therefore, will not have the luxury of financial savings due to farm incomes as they operate small-scale enterprises. Government must incorporate financial literacy programs into school curricula to help the smallholder farmers in dealing with one of the key underlying barriers to accessing credit.

Compliance with ethical standards

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Disclosure of conflict of interest

The authors declare no confliction of interest.

Statement of informed consent

All the respondents to this study where granted the opportunity to exercise their right to informed consent. The study obtained informed consent from all individual participants included in the study.

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