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DETERMINANTS OF CREDIT ACCESS AMONG SMALLHOLDER DAIRY FARMERS IN KINANGOP SUB-COUNTY, KENYA

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ABSTRACT
Dairy farming plays a major role in the Kenyan agricultural sector as it is dominated by smallholder farmers who contribute approximately 80 per cent of the total milk production. In Kinangop Sub County, there are many credit service providers however, not all smallholder dairy farmers have benefited from such services, instead smallholder dairy farmers have continued to experience challenges such as limited access to financial services. This study therefore analyzed the determinants of credit access among smallholder dairy farmers in Kinangop Sub-County using a binary logistic regression model. Following this, the marginal effects of the predictor variables on the likelihood of accessing credit were estimated. A total of 230 respondents were sampled from a population of 35,840 smallholder dairy farmers using both stratified and simple random sampling techniques and both structured and semi structured questionnaires were used to collect data. The study adopted descriptive survey research design. Descriptive analysis revealed that majority: 59.57% of smallholder dairy farmers were males, 69.57% were married and had a mean age of 39.4 years. The average household size was 4 members per household. Formal schooling was also attained by the respondents, majority having an average of about 8 years of schooling. On average farmers had 2 dairy cattle per household, produced 341litres of milk per month and had 11 years of farming. The binary logistic regression analysis and the marginal effect calculation revealed marital status, years of schooling, savings frequency, dairy farming as a primary occupation, financial education, association membership and number of dairy cattle as the significant determinants of credit access. The study therefore concluded that there were significant determinants of credit access in the study area and recommended that formulating policies geared towards enhancing educational attainment of farmers would be vital in enhancing credit accessibility to farmers in the study area. There is also need for the Government and other stakeholders to encourage dairy farmers to join farmer based associations and eliminate stringent collateral barriers and bureaucracies that tend to discourage smallholder dairy farmers from accessing and participating in different credit schemes.

KEY WORDS: *Credit access, determinants, smallholder dairy farmers, Kinangop Sub-County.*

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1. INTRODUCTION

Agriculture is a proven path to prosperity and no region in the world has developed a diverse modern economy without first establishing a successful foundation in Agriculture [1]. [2] posits that agricultural sector accounts for one third of global GDP. In Kenya, Agriculture contributes 24% of the GDP valued at approximately 342 billion. Further, the sector contributed 65% of export earnings and employed 70% of the population in rural areas [3] and [4]. Dairy sector in Kenya is rural based and contributes 14% of agricultural GDP, 40% of livestock sector GDP and (4-8)% of total GDP [5]. Smallholder farmers are the main actors in the Kenyan dairy sub-sector producing up-to 80% of the total milk [6]. Dairy farming is majorly practiced in the Central, Rift valley and Coastal lowlands which offer favourable agro climatic conditions (ACZ) 1-4 [3]. There has been an increase in the livestock population in Kenya. [7] estimates that the Kenyan dairy population comprises: 14.1 million indigenous cattle and 3.4 million exotic cattle totaling to 17.5 million. This is approximately 27% of total livestock population in Kenya.

Previous studies attempted to determine the role of agricultural credit in enhancing farm household income, for instance [8] observed that credit access is crucial for improving farm profitability index and rural living in developing countries. [9] also conducted a study on access to micro credit and its impact on farm profits among rural farmers in Dry- land of Sudan and found credit users to be having higher level of profits than non-credit users. [10] also examined the effect of credit on farm profits in Tunisia and found elasticity of profits with respect to credit to be 0.20 and 0.04 for rationed and non-rationed farmers respectively and concluded that better access to credit would significantly improve farm profits for rationed farmers.

Despite the positive role played by credit towards enhancing agricultural incomes, access to credit is however, still inadequate in developing countries. [11] estimated agricultural credit in Kenya to be less than 10% of the total credit provided through the domestic financial system. [12] identified limited credit services as a major constraint clouding the Kenyan dairy sector. In Kinangop region, dairy farmers have continued to face challenges such as inadequate access to agricultural credit. which limits the competitiveness of the sector [13].

2. MATERIALS AND METHODS

2.1 Study Area

The study was conducted in Kinangop Sub-County located in Nyandarua County, Kenya. The site was selected due to the dominance of dairy farming as the main source of livelihoods.

2.2 Research Design

The study adopted descriptive survey research design since it allows for the application of descriptive statistical methods hence allowed for collection of data so as to test the set hypothesis [14]. Descriptive survey research design was therefore applied in order to obtain the current information in regards to the socio-economic profile of smallholder dairy farmers and to determine what exists with respect to the determinants of credit access in the study area.

2.3 Population

The population for this study constituted smallholder dairy farmers in Kinangop Sub County.

2.4 Sampling Procedures

The study adopted [15] approach in determining the sample size. According to [15], the sample size of a finite population is given by: $n = \frac{NC^2}{C^2+(N-1)e^2}$ Where: n = sample size, N = Study population, C = Coefficient of variation and e is the error term. This study used a coefficient of variation of 0.30 and a standard error of 0.02 so as to increase the sample size and minimize the error. As notes [15] if the population exceeds 10,000, the standard error should lie between ($0.02 \leq e \leq 0.05$) and the confidence interval should range from ($0.21 \leq C \leq 0.30$) Therefore $n = \frac{35,840(0.30)^2}{(0.30)^2+(35,840-1)(0.05)^2} =$ 3,226/14 = 230 Afterwards, both stratified and simple random sampling techniques were applied. In stratified sampling, the researcher used the sample frame to classify the smallholder dairy farmers on the basis of the wards that they come from. Each ward therefore

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formed a stratum. The researcher then randomly selected the final subjects in each stratum proportionately based on the sample size as illustrated in table 1.

2.5 Analytical techniques

The study adopted a binary logistic regression to test if there were significant determinants of credit access. A binary logistic regression model essentially determines the likelihood of an event occurring relative to the likelihood of an event not occurring; the effect of the independent variable is usually explained in terms of odds. Hence the dependent variable has a binary outcome (1=access to credit and 0=otherwise) thereby making the model suitable for the study. The model was explicitly stated as:

$$y = \alpha + \beta_1 GE + \beta_2 AGE + \beta_3 MS + \beta_4 HH + \beta_5 YOS + \beta_6 FS + \beta_7 EXP + \beta_8 SF + \beta_9 OFFinc + \beta_{10} ONWT + \beta_{11} FinEDU + \beta_{12} AssnMBSHP + \beta_{13} VA + \beta_{14} PDN + \beta_{15} DCTLE + \beta_{16} DIST + \varepsilon_{ij} \quad 1$$

X_{ijs} = are the predictor variables of interest. (Gender, age, marital status, head of household, years of schooling, family size, farming experience, savings frequency, off farm income, ownership type, financial education, association membership, value addition practice, milk production levels, number of dairy cattle, distance to credit source), ɑ and $\beta_1 \ldots \beta_{16}$ are the structural coefficients of the model and ε is the error term.

Table 1. Illustration of Sample Size Determination

Geographical area/Ward	Population (P)	Sample size (P/T)n
Engineer	4,659	30
Njabini	3,942	25
Magumu	2,150	14
Nyakeo	5,376	35
Murungaru	6,093	39
Gedhabai	4,301	27
Gadhara	4,309	28
North Kinangop	5,010	32
TOTAL (T)	**35, 840**	**230**

Table 2. Description of the independent variables used in the binary logistic regression model

Variable	Coding System	Category	Expected sign
X_1 = Gender	1 if male, 0 if female	Dummy	+/-
X_2 = Age	Number of years	Continuous	+
X_3 = Marital status	1 if married, Otherwise 0	Categorical	+
X_4 = Head of household	1 if yes, 0 if otherwise	Dummy	+
X_5 = Years of schooling	Number of years	Continuous	+
X_6 = Household size	Number of members	Continuous	+
X_7 =Farming experience	Number of years	Continuous	+
X_8 = Savings frequency	1 if save regularly, 0- otherwise	Dummy	+
X_9 = Main employment	1- Formal, 2- informal. 3- dairy farming, 4- others businesses	Categorical	+
X_{10} = Off farm income	Kenyan shillings	Continuous	+
X_{11} = Ownership	1 if sole trader, 0 if Partnership	Dummy	+/-
X_{12}=Financial education	1 if member, 0 if Otherwise	Dummy	+
X_{13} = Association	1 if member, 0 if otherwise	Dummy	+
X_{14} = Value addition	1 if yes, otherwise 0	Dummy	+
X_{15} = Total land size	Number of hectors	Continuous	+
X_{16} = Dairy cattle HH	Number of cattle	Continuous	+

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3. RESULTS AND DISCUSSIONS

3.1 Socio-economic profile of the respondents

Table 3. Distribution of respondents according to their socio-economic profiles

Variable	Frequency	Percentage
Gender		
Male	137	59.57
Female	93	40.43
Age Distribution		
≤30	46	20
31-40	90	39.1
41-50	69	30
Above 50	25	10.87
Marital Status		
Single	3	13.48
Married	160	69.57
Widow	20	8.7
Divorced	13	5.65
Widowed	6	2.61
Years of Schooling		
0	18	7.83
1-8	116	50.43
9-16	96	41.74
Household Head		
Yes	166	72.17
No	64	27.83
Family size		
1-5	187	81.3
6-10	36	15.65
11-15	7	3.04
Source of Labour		
Family	148	64.35
Hired	56	24.35
Both	26	11.3
Main employment		
Formal employment	36	15.65
Informal employment	29	12.61
Dairy farming	115	50
Other businesses	50	21.74

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The results presented in table 3 established that majority, 59.57% of the respondents were males, as compared to 40.43% who were females. The findings concur with that of [16] which also revealed a greater percentage of smallholder dairy farmers in rural areas to be males. It can therefore be inferred that most smallholder dairy farming enterprises in the study area are managed by males. This could be explained by the fact that more males in developing countries have greater access to resources at the household level than females [17] and as such are able to engage in more income generating activities such as dairy farming.

Majority of the respondents 39.13% belonged to the age group of between (31-40) years, 30% of the respondents were aged between (41-50) years, 20% having less than 30 years while 10.87% were above 50 years (table 3). Similar results were revealed by a study conducted by [18] and [16]. Based on their findings, majority of rural farmers were in the middle class age hence considered as active working age category.

To establish marital status of the respondents, findings showed that about 70% of the sampled dairy farmers were married while those not married (single, widow, widowed, divorced) were approximately 30% (table 3). This indicate that majority of the respondents were married. A study conducted by [19] also revealed a greater percentage of livestock farmers in Nigeria to be married and attributed it to the greater demand for food and nutrition security that comes as a result of being married.

Majority of the respondents, 50.43% had between (1-8) years of schooling, 41.74% had between (9-16) years of schooling with only 7.83% having not attained formal schooling (table 3). An indication that most dairy farming enterprises in the study area are managed by people with relatively low years of schooling. The implication for this is that, sustainable dairy management practices would hardly be observed since dairy farmers need good education on dairy farming practices for them to be able to harness all available resources to the advantage of production. Meanwhile, credit service providers would be attracted to dairy enterprises that are sustainable as it will enhance loan repayment.

Majority of the dairy farmers, 72.17% were household heads while 27.83% were non-household heads (table 3). This implies that household heads were more aggressively involved in dairy farming than non-household heads.

To establish the household sizes of the respondents, the findings revealed that majority, 81.30% had a household size of between (1-5) members, 15.65% had a household size of between (6-10) members and only 3.04% having household sizes of between (11-15) members (table 3). This is an indication of smallholder household sizes. The implication for this is that there could be overreliance of hired labour as a supplement for family labour which might be a drain to the profits.

Majority, 50% of the sampled households practiced dairy farming as their primary occupation (table 3). An indication that dairy farming is the main economic activity of farmers in the study area. Consequently, 21.74% primarily engaged in other businesses, 12.6% cited informal employment as their primary occupation while 15.65% % cited formal employment as their primary occupation. These results suggest that secondary occupation is critical in generating off farm income for smallholder dairy farmers.

3.2 Access to credit, credit sources and repayment attitude of the respondents

Table 4 Distribution of respondents based on access to credit, credit sources and repayment attitude

Variable	Frequency	Percentage
Obtained Credit		
Yes	79	34.35
No	151	65.65
Credit source		
Commercial banks	11	4.78
Dairy cooperatives	25	10.87

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NGOs	5	2.17
Govt. credit schemes	7	3.04
SHGs	11	4.78
Professional money lenders	1	0.43
Friends and relatives	5	2.17
SACCOs	1	0.43
Mobile platforms	13	5.65
Never obtained credit	151	65.65
Repayment attitude		
Constraint	20	8.7
Otherwise	59	25.65
No responses	151	65.65

Majority, 65.65% of the respondents never obtained credit (table 4). The respondents cited that inadequate collateral, limited information on different credit products offered by credit service providers, inadequate guarantorship and lack of interest were the main factors that constrained their ability to access credit. Only 34.35% of the respondents obtained credit from different sources. This therefore implies that majority of smallholder dairy farmers were credit constrained.

Majority, 10.87% of the respondents obtained credit from dairy cooperatives, 4.78% obtained credit from commercial banks, 2.17% from NGOs, offering microfinance services to farmers, 3.04% from Government credit schemes, 4.78% from SHGs, 0.43% from professional money lenders, 2.17% from friends and relatives, 0.43% from other SACCOs and 5.65% from mobile money platforms (table 4). This implies that semi-formal credit sources such as dairy cooperatives, NGOs,
Government credit schemes were highly preferred due to farmer friendly loan products. Moreover, some of the informal credit providers such as dairy cooperatives take the lead in marketing the milk on behalf of farmers hence attracting most farmers. Informal sources such as self-help groups, friends and relatives and professional money lenders was second in preference due to their relatively lower interest rates in comparison to formal credit sources even though loan security is not guaranteed. The formal financial sources was least in preference due to rigorous pre-lending bureaucracies as well as the stringent collateral requirements that tends to lock out most smallholder dairy farmers from accessing credit from formal credit sources.

Further results shows that 8.7% of the respondents perceived loan repayment as a constraint due to inadequate grace period, loan inadequacy as well as shifting the loan purpose to non-farm activities. Majority, 25.65% had a positive attitude towards loan repayment and found it easy to repay their outstanding loan balances. 65.65% however, did not give their responses since they never obtained credit. The majority cited loan adequacy, flexible repayment and availability of top-ups as some of the factors that enhanced their loan repayment ability (table 4).

3.3 Credit attributes of respondents

Table 5: Distribution of respondents according to credit attributes that influenced source preferences

Variable	Frequency.	Percentage
Source preference		
No collateral barriers	38	16.52
Financial training	9	3.91
Technical training	16	6.96
Reduced loan processing fee	7	3.04

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No bureaucracies	2	0.87
Low interest rates	5	2.17
Flexible repayment	1	0.43
Possibility of top ups	1	0.43

Table 5 presents the attributes that influenced the credit source preferences of smallholder dairy farmers in the study area. From the table it is apparent that smallholder dairy farmers preference for different credit sources was influenced by collateral requirements, availability of financial education, availability of technical training on dairy farming, reduced interest rates, reduced bureaucracies, reduced loan processing fee, flexibility in loan repayment and possibility of top-ups. The results indicate that relaxation of collateral barriers was a key attribute of credit source preference as it had the highest percentage of 16.52%, second to it was technical training which had a percentage of 6.96%, followed by financial training with a percentage score of 3.91%, reduced loan processing fee with a percentage of 3.04%, reduced interest rates with a percentage of 2.17%, absence of bureaucracies with a percentage of 0.87% while flexible repayment and possibility of top-ups having a percentage of 0.43% each.

3.4 Summary statistics for continuous variables

Table 6. Descriptive summary of various continuous variables among smallholder dairy farmers in Kinangop Sub County

Variable	Mean	Std. Dev.	Min	Max
Age	39.44	8.718	22	59
Farming Experience	11.41	4.477	2	18
Years of schooling	7.635	4.179	0	16
Family size	4.318	2.502	0	15
Distance to credit source	2.689	1.940	0	11
Dairy cattle	2.482	1.435	1	10
Milk production	341.13	201.92	120	1200

Total observations (N) = 230

Table 6 above presents a descriptive summary of the socio-economic profiles of smallholder dairy farmers in the study area. The respondents had a mean age of 39.5 years with a minimum age of 22 years and a maximum age of 59 years an indication that most of the dairy enterprises in the study area are being managed by relatively young and active members of the society. On average respondents had 11.4 years of farming with a minimum of 2 years and a maximum of 18 years. Expectedly, the more years of farming the greater the management competitiveness since experienced farmers are more able to manage their dairy farming enterprises professionally. Cases of feed, disease and marketing management could easily be handled by experienced farmers.

On average respondents recorded 7.6 years of schooling with the highest having 16 years of schooling. This means that majority of smallholder dairy farms were managed by people with relatively low years of schooling. The mean family size was 4 members per household with the largest household having 15 members hence most households were smaller in number. As such, dairy farmers might consider alternative sources of labour which might be a drain to profits. This explains why most smallholder farming enterprises collapse due to inability to meet their current obligations.

The mean distance to credit source was 2.7 km with the least distance being zero km. This is attributed to the fact that lenders who embraced the digital lending platforms gave borrowers easy time in loan application and disbursement since borrowers are able to access credit without necessarily travelling to the premises of their lenders. On average, respondents had 2 dairy cattle with the least having only one cattle and the highest having 10 dairy cattle. The low

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number of dairy cattle could be as a result of land fragmentation which diminishes portions allocated for forage production and grazing, unreliable and unpredictable rainfall patterns which increases the risk of keeping more cattle, high cost of farm inputs such as drugs, artificial insemination and medication which could also discourage smallholder dairy farmers from increasing their herds of dairy cattle.

3.5. Results from the binary logistic regression model and the marginal effect calculation.

Table 7: Summary results from binary logistic regression analysis and the marginal effect calculation

Credit Access	Coef.	eβ	Std. Err.	Z	dy/dx	Std. Err.	Z
Gender	1.1497	3.1571	1.0949	1.05	0.0409	0.0388	1.05
Age	0.0240	1.0242	0.0747	0.32	0.0008	0.0026	0.32
Marital status	0.8439*	2.3251	0.5028	1.68	0.0300*	0.0172	1.74
Head of HH	-0.9106	0.4022	1.1791	-0.77	-0.032	0.0422	-0.77
Years of schooling	0.2205*	1.2466	0.1165	1.89	0.0078**	0.0039	1.97
Household size	-0.5015	0.6056	1.2976	-0.39	-0.017	0.0463	-0.39
Farming Exp.	-0.0753	0.9275	0.1143	-0.66	-0.002	0.004	-0.66
Savings frequency	2.2349**	9.3451	1.1417	1.96	0.0796**	0.0396	2.01
Primary occupation							
Informal	1.7271	5.6241	1.5873	1.09	0.0580	0.0522	1.11
Dairy farming	2.1518*	8.6007	1.3041	1.65	0.0749*	0.0427	1.75
Other businesses	2.0277	7.5964	1.4484	1.4	0.0698	0.0492	1.42
Off farm income	-2.2E-05	0.9999	4.14E-05	-0.53	-7.74E-07	1.47E-06	-0.53
Ownership	-2.6774	0.0687	1.9583	-1.37	-0.0953	0.0688	-1.39
Financial education	2.5223**	12.457	1.0045	2.51	0.0898**	0.0340	2.64
Association	1.5431*	4.6792	0.8731	1.77	0.0549*	0.0295	1.86
Value addition	-0.3335	0.7163	1.3023	-0.26	-0.0118	0.0464	-0.26
Total land size	-0.3479	0.7061	0.4586	-0.76	-0.0123	0.0164	-0.75
Dairy cattle	3.3450***	28.362	0.7400	4.52	0.1191***	0.0215	5.52
_cons	-14.223	6.65E-07	4.569477	-3.11			
Number of obs	=	230					
LRchi2 (18)	=	238.76					
Prob>chi2	=	0.000					
Psuedo R2	=	0.8068					

Significant at: *** 1%, **5%, *10%

From the empirical estimation of the binary logistic regression model, 10 out of 16 variables were consistent to *a priori* expectation. 6 variables however, did not have the hypothesized signs. Seven variables; Marital status, years of schooling, savings frequency, dairy farming, financial education, association membership and dairy cattle of households significantly influenced credit access. The marginal effect calculation also revealed (marital status, years of schooling, savings frequency, dairy farming, financial education, association membership and dairy cattle of households as significant factors

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influencing credit access. The model has a Pseudo R2 value of 0.8068 indicating that about 80.68% of the variation in the dependent variable is explained by the predictor variables. This indicates a good fit. The computed Chi square of 238.76 which was significant at (P<0.01) demonstrates the overall significance of the independent variables in predicting the response variable.

Marital status was positive and significant at 90% confidence interval (p<0.1) implying that married households or those with counterparts are 2.33 times more likely to obtain credit than non-married households. The marginal effect results indicate that farmers who are married have a higher likelihood of obtaining credit by 0.02 than non – married farmers. [20] also presented similar results. This implies that there is high preference for disbursing credit to married households since they can easily co-guarantee each other hence overcoming the guarantorship requirements.

Years of schooling had a positive coefficient which was significant at 90% confidence interval (p<0.1) implying that an additional increase in formal education increases the odds in favor of credit access by 1.25. The marginal effect calculation was however significant at 95% confidence interval (p<0.05) implying that an additional increase in years of schooling increases the likelihood of obtaining credit by 0.01. [21] also revealed years of schooling as a significant factor influencing access to credit. Educated farmers are taken into confidence by credit providers since they are considered as being well informed with current knowledge that is essential in enhancing productivity. And as such, they are mostly at the forefront in different rural development programs targeting farmers. Other researchers such as [17] and [22] also observed that being educated enhances the likelihood of credit access.

Saving frequency was positive and significantly related to credit access at 95% confidence interval (p<0.05) implying that farmers who regularly save are 9.35 times likely to obtain credit than farmers who are non – regular savers. Based on the marginal effect calculation, the predicted probability of obtaining credit is 0.08 greater for regular savers than for non - regular savers. Savings are considered as a form of security by credit providers hence regular savers are perceived to be more credit worthy.

Dairy farming had a positive coefficient which was significantly related to credit access at 90% confidence interval (p<0.1), an indication that engaging in dairy farming as a primary occupation enhances access to credit. Hence farmers who primarily engaged in dairy farming were 8.06 times more likely to obtain credit than farmers who were in formal employment. Based on the marginal effect calculation, the predicted probability of obtaining credit was 0.07 greater for farmers whose primary occupation was dairy farming than for farmers who were in formal employment.

Financial education was positive and significantly related to credit access at 95% confidence interval (p<0.05). Farmers who received financial training were 12.46 times more likely to obtain credit than farmers who never received financial training. Based on the marginal effect calculation, the predicted probability of obtaining credit was 0.09 greater for farmers who received financial training than for farmers who never received financial training. This could be attributed to the fact that training interventions impart new knowledge and skills to farmers which enhances their management competencies. As notes [23] managerial competitiveness is one of the internal factors influencing credit access among SMEs since they are able to make informed decisions geared towards optimizing returns. Financially literate farmers are able to plan and document their farming activities with ease.

Association membership had a positive coefficient which was significantly related to credit access at (p<0.01). This implies that farmers belonging to association(s) were 4.68 times more likely to obtain credit than farmers who never belonged to any association(s). Based on the marginal effect calculation, members of associations have a higher likelihood of accessing credit by 0.03 than non-association members. [21] also revealed membership to a Farmer Based Organization

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as a significant factor influencing credit access hence the results from this study could be attributed to the fact that associations create an avenue where farmers can easily seek assistance and support from different credit providers. [17] also noted that being a member of association(s) enhances the credit access status of farmers since association membership serve as one of the key requirements by credit providers dealing with self-help groups.

Number of dairy cattle was positive and significant at 99% confidence interval ($p<0.01$) implying that an additional increase in number of dairy cattle increases the odds in favor of credit access by 33.62. From the marginal effect calculation, an additional increase in dairy cattle of farmers increases the likelihood of accessing credit by 0.12 [24] reported a positive significant influence of firm size on credit access. [21] also found similar results and reported that large farms are less likely to default hence taken into confidence by credit providers.

CONCLUSION

From the study, factors such as marital status, savings frequency, financial education, association membership, dairy cattle of household and years of schooling were critical in enhancing access to credit. Thus, for more smallholder dairy farmers to obtain credit, governments and other stakeholders such as non-governmental organizations, commercial banks, micro-finance institutions, dairy cooperatives among others should initiate and implement financial training programs to smallholder dairy farmers, encourage smallholder dairy farmers to join farmer based associations or other associations, eliminate stringent collateral barriers and bureaucracies that tend to discourage smallholder dairy farmers from accessing and participating in different credit schemes, enhance educational attainment of farmers through establishing adult literacy training centers, conduct technical training to dairy farmers with the aim of encouraging expansion of farm sizes and adoption of sustainable dairy husbandry practices in smallholder dairy farming systems. Such interventions will enhance access to credit. There is also need to come up with stringent loan monitoring mechanisms to ensure that the loans disbursed are not shifted to non-farm activities. This can be done through offering post loan education as well as intensifying the interactions between the credit officers and the clients.

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Consent for Publication

The Authors accepts and consents to publish the manuscript.

Conflict of Interest Statement

The authors declare no conflicts of interest.

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