

**Financial Literacy and access to Agricultural credit: Evidence from the Livestock sub-sector in Murang'a County, Kenya.**

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**ABSTRACT**

*In Kenya, only less than 10% of farmers' access formal credit despite the availability of suitably priced loan products specific to the sector from commercial banks. Literature suggests low demand of formal agricultural is a result of self-exclusion, as evidence shows clients from the sector acquire credit from other expensive informal sources. Financial literacy was hypothesized to affect alignment of credit needs to individual credit needs and presumed to affect credit access. The study used a descriptive research design, adopting a cross sectional survey strategy in data collection to investigate credit access from commercial banks by dairy farmers. Questionnaires were issued to a sample of 384 respondents drawn from 21,576 dairy farmers. Data analysis was done using double-hurdle model which assumed participation and consumption as two sequential steps necessary for credit access. analyzed using normal Probit, and truncated Tobit models respectively. Findings revealed that financial literacy had a significant effect on credit access. Based on findings, the study recommends for acceleration of financial literacy programs to impart recipients with to enhance access of formal credit by small holder farmers.*

**Key words: Access, Agriculture, Credit, Financial Literacy**

**1.0 Introduction**

There is a need for sustainable financial services to support agriculture across the globe. This is due to the increasing world's population, which is projected to reach 8.5 billion people by year 2030 (United Nations, 2015). The increasing urbanization across the globe demand an increase in agricultural investments, with agribusiness projected to develop into a US\$1 trillion global industry by 2030, up from US\$313 billion in 2010 (World bank, 2016). These trends offer bright prospects for creating jobs and enhancing income in agricultural sector. Credit is recognized as an effective intermediating avenue necessary for a greater adoption of modern technologies, enhanced production efficiencies (Akpan, Inimfon, Udoka, Offiong, & Okon, 2013), and subsequent increase in farm incomes (Christen & Anderson, 2013). Access to formal credit enables the recipients to meet both short-term working capital and long-term investment needs (Kibaara & Nyoro, 2007). Credit is therefore essential for growth as it facilitates borrowers to obtain resources and other facilities necessary for production and other processes before output can generate earnings. Yet, there is a fear of borrowing from commercial banks and other formal institutions, reflected by a cautious approach in borrowings (Meyer, 2015).

Despite the availability of diverse formal agricultural credit products and delivery processes by the commercial banks, the percentage lending to the agricultural sector relative to other sectors has been consistently low in Kenya. Less than 10% of Kenyans seek agricultural credit from the commercial banks (Nahr, 2014). Literature suggest that the low demand of agricultural credit from commercial banks is a result of self-exclusion, anchored on borrower's misconceptions regarding commercial bank credit (Martínez, Hidalgo, & Tuesta, 2013). The aversion disadvantage clients who still acquire credit from other sources. This study sought to investigate how Financial Literacy impacts on Access to Formal credit by small-Holder Farmers. Specifically, the study sought to establish the effect of financial literacy on the relationship between borrower competences and access to agricultural credit access from commercial banks' credit in Kenya.

**1.1 Financial Literacy and credit access:**

Financial literacy is a notion that encompasses financial education intended to expose people about concepts and best practices necessary for making sound financial decisions. (Klapper, Lusardi, & Panos, 2013). Financial literacy forms an integral part of everyday life. It impacts on the daily decisions made by an average investor in an attempt to

have balanced financial plans. Financial literacy has various dimensions, including financial knowledge (Lusardi & Scheresberg 2013), financial understanding and attitude (Lasantha & Pathirawasam, 2015), numerical ability and financial planning (Disney & Gathergood, 2013). Although there is no single definition of financial literacy that encompass all the implied dimensions, Aren and Aydemir (2014) opine that financial literacy should include the application of financial knowledge; while Atkinson & Messy (2012) describe financial literacy as a combination of awareness, knowledge, skill, attitude and behavior, necessary for achieving individual financial wellbeing. Lusardi and Tufano (2015) expand the description as the ability to process economic information and make informed decisions about wealth accumulation, and debt management among others.

Low financial literacy levels are a widespread phenomenon at a global level and are clearly evident even in the developed economies such as the United States (Lusardi, Michaud, & Mitchell, 2017). Financial literacy enhances the ability to understand terms and conditions on financial products, and aid in the comparison of available products so as to choose the most appropriate to an individual's needs (Messy & Monticone, 2012). Thus, financial literacy can therefore promote the demand for formal financial products and services including credit, well as the confidence and ability in their use. Overall, an understanding of concepts in financial literacy such as risk management, savings, debt among others, and their correlation to each other is critical for an investor's financial health (Hieltjes & Petrova, 2013). An individual's financial literacy is beneficial to the financial system as a whole. Besides enhancing the economic activity, the financially literate consumer is knowledgeable and proactively seek financial products and services that match their needs from the financial service providers, thereby reducing the provider's cost of recruitment, including time and manpower needed to seek out clients (Lusardi & Scheresberg, 2013). However, the reality of financial literacy in Africa is far from ideal, and the resultant effect of financial illiteracy is exclusion of the affected individuals from sometimes basic financial services relating to the optimal financial and economic decision key among them balancing savings, debt, liquidity, and investment (Refera, Dhaliwal & Kaur, 2015). For most developing countries, the effect of lack of financial literacy is even more profound. Though there are many reasons that account for high levels of financial exclusion in developing countries, key among them are information and knowledge gaps, social constraints and behavioral biases, which all point to the need for increased financial literacy (Hieltjes & Petrova, 2013).

The Financial Sector Deepening report (2018) indicates that in Kenya's credit market, there are two very differently conceived practices of borrowing and lending: the first is the rational practice, which focuses on the relationship between resources and economic value. The second is a specific type of interaction between two actors in a relationship of "ask and assist" which is overlaid with expectations, and involves conditioned norms of reciprocity. These practices are informed by the level of financial education and understanding of the people involved. From these two practices, strands of access of credit from formal and informal sources can be traced, where rational actors almost always seek formal credit, while any other approach results in sourcing credit from informal sources in a continuum of costs, sometimes for free, and other times at outrageously high costs. The FSD (2018) report conclude that financial education and literacy can foster effective financial inclusion by making consumers aware of their choices, and promote rational practice that enhance their economic value. In line with the recommendations from the FSD report (2018), this study conceptualized financial literacy as enhancing rational behavior in the interaction between borrower capabilities and competences and employment of debt financing (credit) to create economic value. Thus, the study sought to determine the extent to which financial literacy impacted on credit access from commercial banks in Kenya.

## **2.0 Theoretical Framework**

The study was anchored on specific aspects in the application of the information asymmetry theory. Jensen and Meckling (1976) assert that a principal-agent relation exists at all levels of a lending contract, and the inherent information asymmetry justifies the need to seek information on either party to a contract. Adverse selection is an ordinary consequence of information asymmetry, manifested when the asymmetries are ex-ante in nature. Lenders need to differentiate beforehand between borrowers with different credit risks, in order to identify the promising borrowers before providing loans. However, Dwight (1991) avers that borrowers differ in their likelihood to default on loan repayment, and the determination of risk for each borrower involves a cost. In avoiding these costs, the financial intermediary negotiates between two types of risks. These are type I error, where the intermediary turns down a good proposal which would have turned out to be a success, and type II error, where a bank accept a request to finance a venture which later turns out to be a business failure (Fletcher, 1995). Most credit managers are careful to avoid type II errors, since type I errors can neither be discovered, nor are they discussed unless the profitability targets are not met. In either case, the lender is prone to adverse selection where loan applicants do not uphold the principle of utmost good faith. Some potential borrowers present inaccurate information regarding their potential strength while others may present assets that are not owned for the purposes of loan assessment, misleading credit assessors, and increasing the risk assumed by the lender in the credit contract (Crawford, Pavanini, & Schivardi,

2013). Where the lender is not able to verify facts presented by the potential borrower, lenders cushion themselves against potential losses by turning down a loan request as the agricultural sector has always been appraised as risky, due to the nature of activities which have high information asymmetries.

### 3.0 Methodology

Credit access was operationalized into two; participation evaluated as intention for credit access where operating a bank account was deemed as a basic prerequisite to accessing a loan, while consumption was operationalized as the demand for bank credit; whose basic indicator was having applied, and accessed a loan facility from a commercial bank in the five years preceding the study. A double-hurdle model adopting the Probit and Tobit models in each of the consecutive hurdles was used. The Cochran (1977) formula was used to calculate an adequate sample size which could estimate results for the whole population with a good precision. Since the population was large and degree of variability was not known, the study assumed a maximum variability equal to 50% ( $p = 0.5, q = 0.5$ ) taking 95% confidence level with  $\pm 5\%$  precision. The formulae yielded a sample of 384 respondents from the accessible population of 21,576 respondents. The double-hurdle model was used in context of this study, where involvement in commercial bank credit reflected the participation decision, while the loan amount sought, consumption decision as two consecutive hurdles assumed to stem from separate individual choices.

The first hurdle was evaluated using the ordinary probit model, which is a type of regression in which the dependent variable can take only two values. The Probit model aimed at estimating the probability that an observation will fall into one specific category (Greene, 2011), categorized as participation, or non-participation in commercial bank credit.

$$Pi^* = \alpha_0 + \alpha_1 X_1 + \alpha_2 X_2 + \alpha_3 X_3 + \alpha_4 X_4 + \mu$$

$$(Pi^* = 1 \text{ if } Pi^* > 0; Pi^* = 0 \text{ if } Pi^* \leq 0)$$

The second hurdle was concerned with the amount of loan (consumption decision), and was assessed using truncated Tobit model. Financial literacy was hypothesized to influence the relationship between the independent variables and credit access. A composite index (M) constructed using the Principal component analysis (PCA) was used to facilitate the measurement of financial literacy. Mazziotta and Pareto (2013) recommend the use of a single composite index to measure multi-dimensional phenomena of social- economic indicators.

$$Y^* = \beta_0 + \beta_1 X_1 M + \beta_2 X_2 M + \beta_3 X_3 M + \beta_4 X_4 M + \varepsilon$$

A geometric mean composite index  $\{I = (\prod X)^{1/n}\}$  was used to consolidate the scores of significant first hurdle constructs, for the determination of the second hurdle parameters. Hypothesis testing was conducted on the outcome at the second hurdle. A positive level of commercial bank credit access  $Y^*$  was observed only if there was participation ( $P^* = 1$ ) and actual use of commercial bank credit ( $Y > 0$ ). The model assumed a stochastic structure, implying a random probability distribution or pattern not precisely predicted.

A single index for measuring financial literacy was extracted using the sum of square loadings of the principal component analysis method. The index was then integrated into the econometric model to quantify the moderating effect of financial literacy on the relationship between independent variables and credit access. Findings from the analysis were then presented in form of tables and figures to facilitate discussions and to draw the conclusions from the study.

### 4.0 Discussions

The social and demographic factors considered critical for the study were the respondents' age, gender, level of education, and the number of years of farming experience. The demographic information was sought in the survey to portray the credit access patterns with a view of establishing if credit access had identifiable disparities along the social-demographic characteristics.

The study found that dairy farming in the study area was male dominated with 71.2% of the respondent farmers' male while 28.8% were female. The respondent's age at the time of the study was measured as a continuous variable. Age was grouped into four sub-categories as: Less than 30 years, 30 - less than 50 years, 50 - less than 70 years, 70 years and above. Findings indicated that the dairy sector in the study area, only 10.1% of the respondents were less than 30 years of age. The sector was dominated by persons in the age bracket of between 30 - less than 50 years who constituted almost half of the respondents (48.7%). The 50 - less than 70 years' age bracket comprised 32.6%, while very few respondents (8.6%) were aged 70 years and above. Age is a common proxy for maturity (Awunyo et al.,

2014) and the results suggested that most respondents were within the active working age group; hence could assume the rigours associated with the activities in the sector (Erasto, 2014).

Formal education levels amongst the respondents were high as only 6.3% did not possess the basic primary school certificate. The highest level of formal education acquired was categorized into five sub-groups; primary, secondary, diploma/certificate, degree, and post graduate. 7.6% and 19.6% had a primary and secondary school certificate as the highest education qualification respectively. A majority of the respondents (41.5%) had either a diploma or a certificate education. 22.5% had a bachelor's degree, while 2.5% had post graduate qualifications. High literacy levels supported the study because most of the respondents understood the context of the research with ease.

The study sought the length of time a respondent had been involved in dairy farming. The milk supply history which in most cases corresponded with the duration a respondent was registered with a cooperative society provided a proxy for assessing the respondent's dairy experience. Findings indicated that 53.5% of the respondents had over 3 years' experience, while 34.2% had between 1-3 years of dairy farming experience. 8.5% of the respondents had between 6 months and one year, while only 3.8% had not attained the minimum 6 months. Lenders are guided by experience in the lending decision, but differ in the experience requirement (Andersson, 2004). Preliminary findings indicated that the commercial banks in Kenya accepted certified cash flow records, accompanied by a recommendation for loan financing letter from the cooperative society as evidence and indication of the dairy agri-business performance. At the minimum, a farmer must have at least six months dairy farming experience supported by evidence of six months' milk supply in order to qualify for a dairy product credit facility in any of the commercial banks (Muema, 2015).

Reliability test tested if the data collection instrument would yield consistent results after repeated trials. The independent variables yielded Cronbach Alpha values that were all greater than 0.7 and were interpreted to be stable that the instrument had internal consistency that could be generalized to reflect respondent's opinions on the study problem. The primary indicators of financial capacity were respondent's savings, leverage, and cash inflows from the study's primary production activity. The study sought respondents' use of savings accounts. Findings revealed that 32.3% of the respondents had never operated a savings account with any commercial bank. Among those who operated savings accounts with commercial banks, 2.8% had operated the account for less than 6 months, while the rest had operated their accounts for a period exceeding 6 months. The study attributed this to an aggressive marketing activity that was ongoing at the time of the study by two of the commercial banks. The banks pitched tents during stakeholder field events that brought the target population together and facilitated account opening by clients. Those who had held an account for more than six months were eligible to apply for commercial bank credit as preliminary findings indicated that six months' activity on a savings account was the minimum requirements for accessing any commercial bank credit.

The study found that savings involvement was low as only 45.9% of those who held savings accounts made additional deposits after account opening. Agency banking enhanced savings activity as 72.4% of those who indicated that their savings accounts were active regularly deposited their savings through the agency banking outlets. Among the 32.3% of respondents who had never opened saving bank accounts with the commercial banks, the reasons for not opening included high opening fees (14.7%), lengthy and bureaucratic account opening and maintenance (10.8%), while 15.7% indicated high transaction fees / hidden charges. The rest 58.8% indicated they operated their savings with other formal institutions such as SACCO's. The results suggest misinformation and negative perception, given that most banks have zero opening fees, and simplified account opening processes.

On credit experience, respondents were asked to indicate their source of credit from amongst available sources in the study area including commercial bank, cooperative societies, Microfinance institutions or informal sources including ROSCA's, or other sources. 11.7% of the respondents indicated they had never used any form of formal credit, while cumulatively, 88.3% of respondents had used a credit facility formal institution. An assessment of the use of agricultural credit facility from commercial banks by the dairy farmers revealed that 201 respondents (63.61%) of the respondents had acquired some dairy product credit from a commercial bank in the last 3 years. This was verified against secondary data at the cooperative societies. Questions which addressed budgeting and spending behavior, saving practices, exposure to prudent financial practices, and borrowing and credit management were asked. The financial behavior displayed by an individual significantly impacts on their economic decisions, and is a convincing estimator of their financial literacy (Lusardi, Michaud, & Mitchell, 2017).

#### **4.1 Inferential Analysis**

Due to dependent variable's dichotomous nature, the study used a double hurdle model incorporating both Probit and Tobit models in statistical analysis to generalize results obtained from the sample back to the total population from

which the sample was drawn. The assumptions of Probit and Tobit models are similar to those of classical linear regression model (Abu, Domanban, & Issahaku, 2017). In a double-hurdle model, error terms are assumed to be uncorrelated. Adopting Christian, (2010), the study investigated if error terms were normal and uncorrelated as per the assumptions, such that  $U \sim (0, 1)$  and  $\varepsilon \sim (0, var)$ . Results showed standardized coefficient of 0.292, meaning that error term from first hurdle was statistically insignificant to second hurdle's error term. Further, under the assumption of null hypothesis of no correlation, Pearson correlation coefficient of 0.124 (with two tailed test) was insignificant at standard level of probabilities. Thus, the conclusion that error terms of the two separate stochastic processes were independent and normally distributed.

Probit and truncated Tobit regressions were organized in two consecutive steps. First, specified proportions for each independent variable were assembled to examine their relevance in the first hurdle decision (Participation) in commercial bank credit. The relationship was evaluated using corresponding P-values. Components with  $P < 0.05$  were deemed significant and were incorporated in the composition of each explanatory variables' summarized index. The abridged measure was then used to investigate influence of independent variables on credit amount accessed (Consumption), which was the second hurdle in econometric model. Hypothesis testing was done, where Z-statistic and P-values specified acceptance or rejection criteria, of corresponding null hypotheses.

#### 4.1.1 First Hurdle Estimates: Probit Regression Results

A Probit model was used as a first hurdle test to access likelihood of observations assuming either of two possible values of the dependent variable. At this step, there were only two possible outcomes, that is participation, or non-participation in commercial banks. The model was useful in estimating the importance of a predictor variable in influencing likelihood that an observation would fall into either of the two specified categories, where classification was based on predicted probabilities.

Probit model goodness of fit was assessed by evaluating the maximum likelihood ratio (LR) estimator, which clarifies if resultant parameters are significant and meaningful in the latent model (Christian, 2010). Parameters were obtained by maximization of log likelihood function in five iterative steps. The log likelihood corresponding to Financial literacy was negative (-59.26), while maximum likelihood ratio (LR) estimator was positive (LR chi2 = 30.16). This was interpreted alongside corresponding p-value (0.004), which was less than the specified 0.05 alpha level, affirming models' significance at 95% confidence level.

**Table 1: 1<sup>st</sup> and 2<sup>nd</sup> hurdles model fit**

Model	Number of obs	LR chi2 (4)	Prob > chi2	Pseudo R2	Log likelihood
Probit	316	30.16	0.004	0.0865	-59.26
Tobit	201	19.06	0.000	0.4976	-37.24

The study sought to establish the moderating effect of financial literacy on the relationship between borrower competences and access to agricultural credit access from commercial banks' credit in Kenya. Financial literacy was measured by a composite index comprising of a combination of retained indicators measures of knowledge, behavior, and attitude of budgeting (fb1), savings (fb2, 4, 10), inflation (fb5), insurance (fb9), and credit source (fb7, 12); all of which are interrelated financial concepts.

P-values corresponding to coefficients on interaction between financial literacy and all the explanatory variables were less than 0.05. This implied that corresponding coefficients on interaction terms were statistically significant. Significance of coefficients of interaction terms underscores the importance of the dimensions of financial literacy represented in the composite index in management of resources and processes that inform financial decisions as the choice and access to a credit source affects cost of debt, and ultimately affects financial wellbeing. Findings suggest that where financial literacy was inadequate, an individual was likely to participate in credit sources irrational to their needs. This was supported by descriptive analysis in which 61.4% of the respondents sought financing from other sources besides commercial banks as among them pawn brokers and expensive online lending platforms. The findings are consistent with previous research findings.

An analysis of marginal effects revealed that interaction between financial literacy and financial capacity accounted for up to 43.25% of likelihood to use bank credit. Compared to financial capacity's marginal effect before moderation of 0.386049 representing 38.6% findings demonstrated that financial literacy had significant influence on interaction between financial capacity and likelihood to access credit from a commercial bank. Similarly, there was

an increase in magnitude corresponding to production capacity (from 0.296559 to 0.342516); commercial orientation (From 0.097542 to 0.2145317) and technological competence (from 0.049004 to 0.2763542) respectively.

The findings demonstrate that financial literacy influenced credit choice decision. Although commercial banks have developed some financial products that are specific to agricultural sector, the credit products' demand remained low, despite being fairly priced, relative to other products in the market. This suggest that enhanced financial literacy can help to reduce demand-side barriers to financial inclusion. This is because financial literacy enhances borrower's ability to choose financial products that are most appropriate to their needs, promotes demand for formal financial products and services, well as increasing the confidence and ability in using them (Messy & Monticone, 2012). The sentiments resonate with findings in Financial Sector Deepening Report (2018) that concluded that financial education and literacy can foster effective financial inclusion by enhancing consumers' awareness of their opportunities and rights, and promote rational practice that enhance their economic value.

#### 4.1.2 Second Hurdle Estimates: Tobit Model results

The significance of a borrower's financial literacy was assessed. Results yielded a Log likelihood as negative (-37.24). This showed that regression coefficients in the model were not simultaneously zero. Wald Chi-Squared Test result yielded a score of 19.06 which was positive, which correspond to a Prob > chi2 = 0.000, implying that financial literacy had a significant contribution in second hurdle model at 95% confidence interval. Results show that financial literacy had a positive coefficient (0.502771), while test statistic on financial literacy yielded Z = 3.71(P-value= 0.000). This implied significant relationship between respondent's financial literacy and latent variable, agricultural credit access at 95% confidence interval. Further, parameters showing interaction between financial literacy and each of the borrower competences FC, PC, MO, TC had positive coefficients, with all respective P-values all less than 0.05. This affirmed that financial literacy had significant effect on independent variables respectively at 95% confidence interval.

**Table 2: Financial literacy truncated Tobit regression results**

Credit AP	Coef.	Std. Err.	Z	P>z	[95% Con	Interval]
FL	0.502771	0.135534	3.71	0.000	0.235512	0.770034
FC	0.195548	0.038587	5.07	0.000	0.119464	0.271623
FL*FC	0.391821	0.092562	4.23	0.000	0.209331	0.574342
PC	0.153237	0.058792	2.61	0.002	0.037308	0.269161
FL*PC	1.453696	0.733664	1.98	0.049	0.006943	2.900443
CO	0.21709	0.074887	2.89	0.004	0.069422	0.364742
FL*CO	1.241234	0.337593	3.68	0.000	0.575521	1.906941
TC	0.075105	0.036852	2.04	0.079	0.002432	0.147770
FL* TC	1.955272	0.896192	2.18	0.030	0.187914	3.722633
_cons	1.106263	0.258154	4.29	0.000	0.597173	1.615352
/sigma	4.741901	0.449937	10.54	0.000	3.854661	5.629141
Wald Chi2(1)	19.06					

The results show financial literacy had a positive and significant influence on relationship between borrower competences and the latent variable, agricultural credit access. The null hypothesis that a borrower's financial literacy had no significant influence on the relationship between borrower competences and access to commercial bank credit in Kenya was thus rejected at 95% confidence interval. The index measuring financial literacy evaluated knowledge and behavior towards budgeting, savings, insurance, inflation, and debt management. It is rationally expected that a potential borrower has limited financial resources relative to their financial needs, and must therefore consolidate, and use resources at their disposal to better their financial status. This is supported by the fact that financial literacy forms an integral part of everyday life (Lusardi & Scheresberg, 2013); and the fact that financial literacy represents a convergence of skills in cash and financial management, debt management, and wealth management, necessary to make ordinary as well as complex financial decisions (Aren & Aydemir, 2014).

**Table 3: Summarized findings on effect of financial literacy**

Model	1 <sup>st</sup> hurdle estimates		Marginal effect		2 <sup>nd</sup> hurdle estimates	
	Coefficient	Std. error	Coefficient	Std. error	Coefficient	Std. error
FL	0.392787*	0.165913	0.124982*	0.047546	0.502771*	0.135534
FL*FC	0.089914*	0.036913	0.432561*	0.073426	0.301135*	0.088012
FL *PC	0.129703*	0.044985	0.342516*	0.078654	1.453696*	0.733664
FL*MO	0.729519*	0.257159	0.214532*	0.091564	1.241234*	0.337593
FL*TC	0.351282*	0.123568	0.276354*	0.123568	1.955272*	0.896192
_cons	1.289242	0.536149	1.354617 <sup>ns</sup>	0.701971	1.106263*	0.258154

Constant Z-statistic; Probit, Marginal, Tobit; Z= 2.4; 1.92, 4.28.

a. \* significant parameter, P < 0.05, b. Dependent Variable: credit access

With the inclusion of financial literacy as a moderator, P-values corresponding to all interaction terms remained significant, and estimation model yielded a significant constant term (1.106263). This significantly improves credit access estimate, compared to overall model before moderation.

## 5.0 Conclusions

The study concluded that Financial literacy is an indispensable intervention necessary for promoting financial inclusion in the agricultural sector, since financial education expose recipients to concepts and best practices necessary for making sound financial decisions. The study observed that the quality of respondents' decision on the credit source, and other financial plans depended on the individual's level of financial literacy. The study concludes that since financial literacy is an essential part of everyday financial decisions made by an average investor, then to desirable financial behavior cannot be achieved unless the respondents achieved considerable levels of financial literacy. Respondents with high levels of financial literacy displayed desirable financial behavior such as previously successful debt management. From the responses, it was inferred that financial literacy impacted on routine and non-routine financial decisions, impacting on the signaled financial capacity. The findings affirmed that financial literacy forms an integral part of everyday life, and decisions made by an average investor in an attempt to have balanced financial plans. The study findings suggested that financial literacy corresponded to higher investments in assets, products and processes that enhanced farm output which could attract external debt financing. The study found involuntary exclusion by respondents who either, held the wrong assumptions on the collateral requirements to access commercial bank credit, or assumed they would face rejection from the banks given their own assessment of their production capacity. Specifically, lack of information on the provisions of legal and regulatory framework in Kenya suggested low financial literacy and resonated with the fact that daily financial management, investment and wealth accumulation; risk management; and routine liquidity management all constitute complex financial decisions. The study concluded that the problem of low use of agricultural credit from commercial banks could be explained at two levels: First, the study observed there was a voluntary exclusion from commercial bank credit, where respondents demonstrated a deliberate decision to patronize other financing establishments. Further, low use of agricultural credit from commercial banks could be explained by involuntary exclusion, in which case the respondent failed to access commercial bank credit as a result of respondent-related characteristics. This confirmed the theoretical position as presented in information asymmetry theory, proving that a credit market is characterized by uneven information, where borrowers have conventionally not been able to send the accurate signals regarding the viability of their ventures. This resulted in exclusion as the borrowers fail to meet the lending requirements. The involuntary exclusion was associated with the tendency by some of the respondents to patronize informal establishments as sources of credit.

## 6.0 Recommendations

From a policy perspective, this study recommends basic financial literacy and agricultural entrepreneurial training to equip young people with basic financial management competences necessary to practice farming as a viable and profitable self-employment venture. This would support desirable financial behavior and enhance their involvement in the agricultural sector to create job opportunities for the youth., given that the sector is dominated by the relatively older people with only about ten percent of respondents aged below thirty years.

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