

Original Research Article

Contribution of Agricultural Loans Accessibility to Performance of Small Holder Sugar Cane Farmers in Kakamega County, Kenya

D. S. Wanjawa¹, Dr. C. T. Yugi², W. M. Muli³

¹Masters Student, ²Senior Lecturer, ³Lecturer,
Department of Accounting and Finance, P.O. Box 190-50100, Masinde Muliro University of Science and Technology Kakamega, Kenya.

Corresponding Author: D.S.Wanjawa

ABSTRACT

Agricultural growth is important for alleviation of poverty and stimulation of economic growth and development. The main objective of this study was to investigate the contribution of agricultural loans on performance of sugarcane farming in Kenya a case study of smallholder sugar cane farmers in Kakamega County. The study was guided by pecking order theory. The study employed causal research design. The target population comprised of 1850 sugar cane farmers in Kaka mega County who received agricultural loans for a period of more than 2 years and financial institutions which offer agricultural loans. A sample of 329 respondents was selected using stratified proportionate sampling techniques. Qualitative data was analysed using verbatim and narrations depending on theme while quantitative data was analysed using both descriptive analysis such as percentages and frequencies while inferential analysis comprised of correlation and regression analysis at 0.05 significance level. The findings revealed that agricultural loans have significant effect on performance of small holder cane farmers in Kakamega county Kenya as it explained significantly up to 19.8% change in performance. Loan accessibility had the highest effect ($R=0.402$) In conclusion, agricultural loans have significant effect on performance of small holder sugar cane farmers in Kakamega county Kenya hence this study recommends that there is need for government to come up with policies which would target sugar sector financing especially on interest rate which would increase accessibility of loans by the smallholder sugarcane farmers.

Key words: Agricultural loans accessibility, Performance of small holder sugar cane farmers, Kakamega County-Kenya

1.0 INTRODUCTION

Agriculture remains critical to economic growth and development and has therefore ultimately remained the largest platform from which growth could be stimulated especially for developing countries. Agricultural credit and rural finance play important role in the recovery and growth of transitional countries. A positive effect of agricultural loans to agriculture causes a positive effect on the

exports, that is, increases exports and therefore reducing agricultural imports (Kiplimo et al., 2015). This is a positive effect on the country's economy when compared to the economies of other nations. An increase in agricultural loans may cause such effect. This increased loan is accompanied by good management of the loans such that they are effectively offered, utilized and repaid. Agriculture has been the backbone of the economies of most

developing nations and therefore greatly affects both micro and macro- economic variables. An effect on the agricultural factors also affects the economy, either positively or negatively (World Bank, 2013)

1.1 Statement of the problem

In spite of agriculture remaining critical to alleviation of poverty and stimulation of economic growth and development in Kenya, available evidence reveals that financing remain the major constraint in agriculture development and it is more severe to farmers than any other group of workers. Nyoro (2002) states, agricultural funding has been unstable and

does not attract local funds to make it sustainable after the withdrawal of donors and the importance of the sector to the economy and as a source of government revenue; it is ironical that it should receive only 3.4 percent of the total government allocation.

1.2 Research Objective

Establish the effect of loan accessibility on performance of smallholder sugar cane farmers in Kakamega County

1.3 Research hypothesis

H₀₁: There is no significant effect of loan accessibility on performance of smallholder sugar cane farmers in Kakamega County

1.4 Conceptual Framework

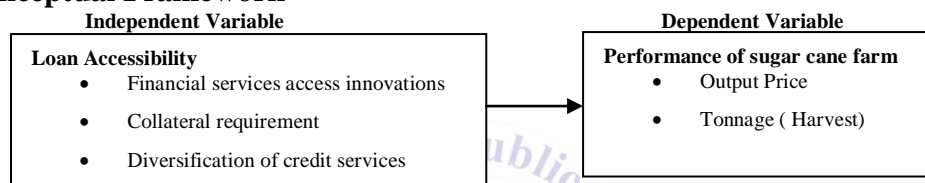


Figure 1.1: Conceptual Framework
Source: Author (2017)

From Figure 1.1, Agricultural loans have been used as independent variable under a construct-accessibility, dependent variable which is performance of sugar farm was conceptualized as pricing of the sugarcane and tonnage.

Since most farmers are categorised under informal sector, their accessibility to loan is limited. This is also affected by the climatic changes which adversely affects yield from the farm. Sugar cane farmers in Kakamega County are basically small scale as such many banks find it difficult to give them loans.

This accessibility to loan affects their farm produce since they cannot invest in getting good cane suckers, fertilizer as well as labour to weed their farms. In this study, accessibility of loan was operationalized in form of flexibility of loan delivery, diversification of the loans and the innovative financial delivery services.

2.0 LITERATURE REVIEW

2.1 THEORETICAL LITERATURE

This section contains a review of the theories underpinning under which the study is hinged. It specifically covers the Threshold Decision-Making Theory.

2.1.1 Threshold Decision-Making Theory

The study used the threshold decision-making theory proposed by Hill and Kau (1973) and Pindyck and Rubinfeld (1998) to analyse the determinants of credit demand by farmers. The theory points out the fact that when farmers are faced with a decision to adopt or not to adopt an innovation, in this case demand agricultural loans, every farmer has a reaction threshold, which is dependent on a certain set of factors. As such, at a certain value of stimulus below the threshold, no adoption is observed while at the critical threshold value, a reaction is stimulated. In this study this factors are loan interest rates, disbursement of loan and accessibility of loan

When the borrower approaches a lender, he or she is confronted with two different types of costs that he or she will

incur to obtain any amount of money from any financial institution that is to say, cost incurred in trying to get a loan and after getting a loan. This cost would determine the decision of farmer to approach the financial institution for agricultural loans. The decision of the farmer to take loan would determine on the accessibility of the financial institution offering agricultural loans and their mode of disbursement. If the disbursement is cost advantage to the farmer, there is tendency of farmers making easy decision on loan application.

However, if costs associated with loan disbursement are high and prohibitive, farmers would abhor loans from those financial institutions. Financial costs is the actual cost of money, including the interest to be paid for the use of the loan and the fees paid to the lender for processing and disbursing the loan. The borrower will incur this cost when servicing the loan he/she got from any source of funding that will be requiring refund with interest. Transaction costs are indirect costs incurred to obtain loans e.g. transport cost to lenders place, cost of obtaining documents required for the loan, the cost of time spent by the borrower fulfilling the requirements for the loan. Transaction costs are usually greater than financial costs if lenders are inefficient in their loan approval or disbursal process.

Because transaction costs do not benefit either the lender or the borrower, lenders should minimize them to the greatest extent possible. Financial costs on the other hand provide income to the lender in the form of interest and few lenders who minimize transaction costs make it easier for borrowers to afford higher financial costs (Heimsing, 1993). Financial costs should be established carefully by the lender in order to generate the income that the institution needs for survival and growth.

2.2 Empirical Literature Review

2.2.1 Effect of Loan Accessibility on Performance of Farmers

Byaruhanga (2013) sought to find out relationship between credit accessibility and the performance of agricultural farmers

in Rwanda through their cooperative society. A random sample of 196 active agricultural cooperatives was obtained from various districts in the southern province. The findings revealed a positive and significant relationship between credit accessibility and the performance of agricultural cooperatives and it explained about 17.6% of the performance of agricultural cooperatives. The study reveals that credit accessibility is the most significant determinant of the performance of agricultural cooperatives.

Abdelateif and Bauer (2013) intended to assess access to micro credit and its impact on farm profit among rural farmers in dry land of Sudan. The study relies on filed survey that is conducted in 2009, using structured questionnaire. It surveyed 200 farm households, which were selected through a multi-stage random sampling technique. Descriptive statistical analysis and Heckman model were applied to analyse the data. Results obtained from a probit model showed that savings, value of assets and incomes are significant variables determining the credit constrained conditions. In addition, the results of Heckman model showed that credit has limited effect on farm profits. This indicates that loan volumes may be too small for making a significant impact on farm production.

Hancock (2014) investigated effects of credit and credit access on smallholder maize farmer storage behaviour in northern Ghana. This analysis is based on data collected on 527 farmers in Ghana's four northernmost regions obtained from an agricultural production survey conducted in 2013 and 2014 by USAID-METSS – a project funded by the Economic Growth Office of the USAID mission in Ghana. Ordinary Least Squares modelling was employed to determine the marginal effects of formal and informal credit on storage. The results indicate that formal credit and on-farm storage had statistically significant negative effects on maize storage at both the mean and median, but only farm output

proved to be statistically significant at different levels across the storage distribution.

Jumare (2006) assess the impact of credit on agricultural production with specific objectives to determine its effect on farm size, cost of labour, cost of production, quantity of inputs as well as output among small scale farmers in Makarfi Local Government Area of Kaduna State, Ghana. Structured questionnaires were administered to borrowers and non-borrowers, who had been selected using the stratified random sampling technique, and the data obtained were summarized into percentages. The Analysis of Means technique was used to determine if there were statistically significant differences between the two groups. The independent variables; loan amount, farm size, and inputs reasonably explained the variation in the total value of output of the farmers. The study shows therefore, that access to microcredit over a long period of time impacts positively on agricultural production. Government and the organised private sector should regular and timely credit to farmers.

2.3 Critical Review and Research gaps

A lot of research has been carried out locally and internationally reviewing agricultural loans (Nasir, 2007; Fayaz, 2006 & Nguthi, 2007). Critical review of the empirical studies revealed various gaps that this study ought to fill.

Byaruhanga (2013) determined the relationship between loan accessibility and performance of farmers within cooperative society while Hancock (2014) concentrated on storage performance of farmers in Ghana.

The current study considered individual farmers and will focus pricing and tonnage of sugar cane. Abdelateif and Bauer (2013) considered loan accessibility in terms of volume of loans awarded to farmers while Jumare (2006) considered accessibility in terms of short and long term. This current study sought to examined accessibility of agricultural loans in terms of financial Innovative Service Delivery,

collateral and diversification of loan services

RESEARCH METHODOLOGY

3.0 RESEARCH DESIGN

The causal research design was used to carry out this study. According to Cooper and Schindler (2006), a causal study is designed to establish the influence of one variable(s) on another variable(s) which depicts causation. Causal research is typically structured with a clearly stated objective of discovering associations and causal relationships among different variables. This design is perceived to be suited to this study in that it involves collection, verification, and synthesis of evidence to establish facts that defend or refute a hypothesis. This design is further useful in that there is no possibility of researcher-subject interaction that could affect the findings. Historical sources can also be used over and over to study different research problems or to replicate a previous study (Cooper and Schindler, 2006).

Gay and Airasian (2003) note that causal research designs are used to determine the causal relationship between one variable and another; in this case, the cause and effect relationship between agricultural loans and performance of small holder sugar cane farmers in Kakamega county, Kenya.

Causal research design is consistent with the study's objective which is to determine the effect of agricultural loan accessibility, agricultural loan disbursement and agricultural loan interest on the performance of small holder sugar cane performance in respect to tonnage.

3.1 Study area

The study was conducted in Kakamega County. Kakamega County borders the following Counties: Bungoma to the North and North West, Uasin Gishu to the North East and East, Nandi to the South East, Vihiga to the South, Siaya to the South West and Busia to the West. The County is classified as moist mid-altitude zone (MM) (Lynam and Hassan, 1998).

The county has three sugar industries, Mumias Sugar Company, West Kenya Sugar Company and Butali Sugar Company. The county is defined by two sugar growing zone according to location of sugar industry. Kakamega County is divided into three sugar zones according to location of the industry. Mumias Sugar Company zone (Mumias East, Mumias west, Matungu, Butere and Navakholo sub counties), West Kenya Sugar Company and Butali Sugar Company (Malava, Shinyalu, Kakamega Central, Matete and Lugari sub counties).

The study was conducted in Kakamega County since sugar cane farming is the main cash crop in the county and over eighty percent of households depend directly or indirectly from sugar cane industry. There has been a decline in cane production per given unit area and hence an increase in poverty for approximately 6 million people who depend on sugarcane farming either directly or indirectly (KSB, 2008). This has also forced Mumias Sugar Company to temporarily close due to lack of sugar cane farmers. MSC supports a population of 2 million people directly and over 5 million indirectly and the Company has a workforce of 1,896 permanent employees and 40,000 seasonal and contracted workers. Therefore, increase in sugar cane productivity would results to uninterrupted operation of sugar milling companies in Kakamega County.

3.2 Target Population

Target population for in statistics is the specific population about which information is desired. According to Ngechu (2004), a population is a well-defined or set of people, services, elements, and events, group of things or households that are being investigated.

The study targeted sugar cane farmers in Mumias west, Mumias East, Malava and Navakholo Sub Counties in Kakamega County who have received agricultural loans for the past 2 years. Also, the study targeted financial institutions which offer agricultural loans to sugar cane

farmers in the County. Mugenda and Mugenda, (2003), explain that the target population should have some observable characteristics, to which the researcher intends to generalize the results of the study.

3.3 Sampling Technique and Sample Size

Ngechu (2004) underscores the importance of selecting a representative sample through making a sampling frame. From the population frame the required number of subjects, respondents, elements or firms was elected in order to make a sample.

Stratified proportionate random sampling technique was used to select the sample. According to Kothari (2004), stratified proportionate random sampling technique produce estimates of overall population parameters with greater precision and ensures a more representative sample is derived from a relatively homogeneous population.

Stratification aims to reduce standard error by providing some control over variance. The study grouped the farmers' population into three strata i.e. Mumias, Malava and Navakholo Sub counties.

From each stratum the study used simple random sampling to select 329 farmers from 1850. This in turn increases the precision of any estimation methods used. The formula that the study used to arrive at a sample of 329 was based to the following formula according to Yamane (1967:886)

$$n = \frac{N}{1 + e^2(N)}$$

Where: n is the desired sample size

N is the Target population

e is the standard error

When we substitute the values as per the formula

$$\frac{1850}{1 + 0.05^2(1850)} = 328.8889$$

Which are approximately 329 respondents?

The selection was as follows:

Table 3. 1: Sampling Frame

Region	Target	Sample
Mumias West and East Sub Counties	851	151
Malava Sub County	555	99
Navakholo Sub County	444	79
Total	1850	329

Source: Author Computation (2017)

The selection captured in the above table was done proportionately on the basis of the number of farmers per sub-county forming the total population as follows;

$$n = x/N*S$$

Where;

S = Total sample size

N = Total population

n = Sample size per sub-county

x = Population in the sub county

The study used purposive sampling techniques to select 9 officials who are tasked with loans provision in Kakamega County. These individuals were selected purposively due to the information they possess regarding application and disbursement in the Kakamega County.

3.4 Data Collection Instruments

The two mostly used sources of data involve collecting primary data and secondary data. Primary data was collected using questionnaires and interview schedules. On the other hand secondary data was collected from journals and other sources such as the annual financial reports.

3.4.1 Questionnaire

A written questionnaire is a data collection tool in which written questions are presented that are to be answered by the respondents in written form. Questionnaires were chosen because they can be self-administered or administered through assistance. A semi-structured questionnaire was used to collect primary data. In order to ensure uniformity in response and to encourage participation, the questionnaires were kept short and structured with mostly multiple-choice selections in a likert scale. The questionnaires are preferred in this study because respondents of the study are literate and quite able to answer questions asked adequately. According to Mugenda and Mugenda (2003), questionnaires are commonly used to obtain important information about a population under study. The questionnaires were carefully designed and tested with a few members of the population for further improvements. This

was done in order to enhance its validity and accuracy of data to be collected for the study.

3.4.2 Interview

Interview is a method of data collection that involves presentation of oral-verbal stimuli and reply in terms of oral-verbal responses (Kothari, 2007). They were suitable to use with both literate and illiterate population as they permit clarification of questions and have higher response rate than written questionnaire. It allowed the researcher to observe verbal and non-verbal behaviour of the respondents and reduces anxiety so that potentially threatening topics can be studied. However, the presence of an interviewer may influence the responses and reports of events may be less complete than information gained through observation. The researcher conducted interview session with official responsible for agricultural loan in financial institutions in Kakamega County and sugar cane farmers on pricing, tonnage and return.

3.5 Data Collection Procedure

This study was collected quantitative data using a self-administered questionnaire while qualitative by use of interview guides. The researcher informed the respondents that the instruments being administered were research purpose only and the responses from the respondents would be kept secret and confidential.

The researcher obtained an introductory letter from the University to collect data from the farmers and financial institutions then personally conduct the interviews while with the help of research assistants deliver the questionnaires to the respondents and have them filled and then collect them later: the drop and pick later method.

3.9 Data Analysis and Presentation.
The researcher used both quantitative and qualitative techniques for data analysis putting in mind Hussey and Hussey (1997) remarks which state that if one has collected mainly quantitative data, they will need to conduct some form of statistical analysis. Quantitative approach

was used to collect and analyse data from the questionnaires close ended questions. Descriptive statistics such as mean, frequencies and percentages were used to present the responses obtained from the respondents. Quantitative data was also analysed by use of inferential statistics such as Pearson correlation analysis and regression analysis to come with coefficients, betas and coefficient of determinations or R Square that are going to be presented in tables and tested at 5% significance level. Qualitative technique was used to analyse open ended questions on the questionnaire and interview schedule so as to provide more-in-depth details. Content analysis was used to test data that was qualitative in nature or aspect of the data collected from the open ended questions.

According to Baulcomb (2003) content analysis uses a set of categorization for making valid and replicable inferences from data to their context. Statistical product and service solution (SPSS), software version 22 was used for statistical analysis. The data was presented in form of tables and charts.

3.6 Data Analysis and Presentation.

The researcher used both quantitative and qualitative techniques for data analysis putting in mind Hussey and Hussey (1997) remarks which state that if one has collected mainly quantitative data, they will need to conduct some form of statistical analysis.

Quantitative approach was used to collect and analyse data from the questionnaires close ended questions. Descriptive statistics such as mean, frequencies and percentages were used to present the responses obtained from the respondents. Quantitative data was also analysed by use of inferential statistics such as Pearson correlation analysis and regression analysis to come with coefficients, betas and coefficient of determinations or R Square that are going to be presented in tables and tested at 5% significance level. Qualitative technique

was used to analyse open ended questions on the questionnaire and interview schedule so as to provide more-in-depth details. Content analysis was used to test data that was qualitative in nature or aspect of the data collected from the open ended questions.

4.0 RESULTS AND DISCUSSION

4.1 RESPONSE RATE

In this study, a total of 329 questionnaires were administered to the smallholder sugar cane farmers in Kakamega County, 276 were successfully completed by the respondents which is a response rate of 83.89% of the total questionnaires. Richard (2005) observed that the Australian Vice Chancellors' committee and graduate careers council of Australia (2001) regarded an overall institutional response rate for the course experience questionnaire of at least 70% to be both desirable and achievable.

Though (Richard, 2005) concluded in his comments that a response rate of 60% or more was both desirable and achievable for students who have satisfactory assessment and evaluation. The response rate of 83.89% which was attained during this study is acceptable because it is above the 60%.

4.2 Descriptive Information on Demographics

The demographic information of the respondents is considered very crucial not only for subsequent discussions of the findings but also for the authenticity and generalization of the results.

4.3 Descriptive Analysis of the Variables in the Study

Descriptive analysis included an assessment of the loan accessibility, loan disbursement, loan interest rate, agricultural loan policy and performance. The statements were anchored on a five point Likert-type scale ranging from 1=Strongly Agree to 5= Strongly Disagree and respondents were asked to indicate the extent to which they agreed to the statements. Descriptive measures included

percentage, frequency, mean and standard deviation. Mean is a measure of central tendency used to describe the most typical value in a set of values. Standard deviation shows how far the distribution is from the mean.

4.3.1 Agricultural Loan accessibility

Accessibility of agricultural loans is one of crucial determinants of performance

of smallholder sugar cane farmers in Kakamega County. To measure loan accessibility, a set of five statements were formulated. The respondents were asked to indicate the extent of agreement with each of the loan accessibility statements. The pertinent results are presented in **Table 4.1**:

Table 4. 1: Descriptive Statistics-Agricultural Loan accessibility

Accessibility of agricultural loans	1	2	3	4	5	Mean	SD
Agricultural loans do require collateral which makes it easy to acquire loans	0.0% (0)	6.16% (17)	13.04% (36)	74.28% (205)	6.52% (18)	3.811	.639
The financial innovative services are offered in line with the ability of sugar cane farmers	0.0% (0)	8.33% (23)	3.62% (10)	75% (207)	13.04% (36)	3.928	.704
Financial institutions have continuously offered various agricultural loans that have attracted sugar cane farmers to take loans	6.16% (17)	3.99% (11)	32.61% (90)	45.29% (125)	11.96% (33)	3.529	.970
The repayment period for various agricultural loans differs which gives sugar cane farmers easy time to service their loans	0.0% (0)	8.33% (23)	7.97% (22)	81.52% (225)	2.17% (6)	3.7754	.621
Most of the financial institutions are located in rural areas hence easily accessible.	0.0% (0)	4.35% (12)	10.51% (29)	65.58% (181)	19.57% (54)	4.00	.690

Source: Author Computation (2017)

Majority of the respondents 74.28 % (205) agreed that agricultural loans do require collateral which makes it easy to acquire loans and further 6.52 % (8) strongly agree. With a mean of 3.81 and standard deviation of 0.64, there is a strong indication that most of the respondents were confirmed that they needed collaterals to acquire agricultural loans. Further, 75 % (207) of the respondents agreed that financial innovative services are offered in line with the ability of sugar cane farmers and additional 13.04% (36) strongly agree. The mean of 3.93 and standard deviation of 0.70 also reveal that most of the respondents confirmed that there are various financial products and services that suits farmer's ability.

The results further revealed that 45.29 % (125) of the respondents agreed that financial institutions have continuously offered various agricultural loans that have attracted sugar cane farmers to take loans and 11.96% (33) strongly agreed with a mean of 3.53 and standard deviation of 0.97. The standard deviation (0.97) revealed that the attractiveness of agricultural loans to farmers is not uniform across the board. Most of the respondents agreed that most of the financial institutions are located in rural areas hence easily accessible as shown by

65.58% (181) and additional 19.57 % (54) strongly agreed.

With a mean of 4.00 (agree) this indicates that majority of the respondent are concentrated around the mean and the standard deviation of 0.69 revealed the respondents are concentrated around the mean of 4 (agreed) 4.5 Inferential Statistics Inferential statistics were used to test the four study hypotheses of the study as derived from the study objectives. This comprised of correlation analysis, simple, multiple and hierarchical regressions as a significance level of 0.05 (95.0% confidence level)

4.4 Effect of loan accessibility on performance of smallholder sugar cane farmers

The first objective of the study was to establish the effect of loan accessibility on performance of smallholder sugar cane farmers in Kakamega County.

The objective sought to test the hypothesis: H01: There is no significant effect of loan accessibility on performance of smallholder sugar cane farmers in Kakamega County. This was accomplished by use of Pearson correlation (r) and linear simple regression (R²) with aid of SPSS version 20

4.5 Correlation between Agricultural Loan Accessibility and performance

The Pearson correlation analysis was used to investigate the relationship between agricultural loan accessibility and performance of smallholder sugarcane farmers in Kakamega County. In establishing the effect of performance of smallholder sugarcane farmers in Kakamega County on performance of smallholder sugarcane farmers in Kakamega county, the study established a coefficient of correlation (r) as 0.402** , P<0.01 at 99.0% confidence

level. This shows that there exist a moderate and significant positive relationship between agricultural loan accessibility and performance of smallholder sugar cane farmers in Kakamega County. This imply that the performance of smallholder sugarcane farmers increase with an increase in agricultural loans accessibility and a decrease in loan accessibility leads to a decrease in their performance. The results are as shown in **Table 4.8**:

Table 4.2: Correlation between agricultural loan accessibility and Performance

		Agricultural Loan Accessibility	Performance
Agricultural Loan Accessibility	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	276	
Performance	Pearson Correlation	.402**	1
	Sig. (2-tailed)	.000	
	N	276	276

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Author Computation (2017)

4.6 Regression Results of Agricultural Loan Accessibility and Performance

Regression analysis was used to tell the amount of variance accounted for by one variable in predicting another variable. Regression analysis was conducted to find

the proportion in the dependent variable (Performance) which can be predicted from the independent variable (agricultural loan accessibility) **Table 4.7** shows the analysis results.

Table 4. 2: Model Summary Agricultural Loan Accessibility and Performance

Model	R	R ²	Adj. R ²	B	SE	B	T	df	F	Sig.
(Constant)				1.249	.290		4.303			
loan accessibility	.402	.161	.158	.548	.075	.402	7.260	(1,275)	52.707	.000

Predictors: (Constant), agricultural loan accessibility Dependent Variable: performance

Source: Author Computation (2017)

The results revealed a coefficient of determination (r²) of 0.161. Meaning agricultural loan accessibility can explain u to 16.1 % of the variance in performance of smallholder sugar cane farmers in Kakamega County. The adjusted r square attempts to produce a more honest value to estimate r square for the population.

The F test gave a value of (1, 275) = 52.707, P<0.01, which supports the goodness of fit of the model in explaining the variation in the dependent variable .It also means that agricultural loans accessibility is a useful predictor of performance of smallholder sugar cane farmers in Kakamega County. The unstandardized regression coefficient (β) value of agricultural loan accessibility was 0.548 with a t-test of 7.260 and significance

level of p< .001. This indicated that a unit change in agricultural loan accessibility would result to change in performance by 0.548 significantly.

The regression equation to estimate the performance of smallholder sugar cane as a result of agricultural loan accessibility was hence stated as:

$$\text{Performance} = 1.249 + 0.548 \text{ Agricultural Loan Accessibility}$$

The research hypotheses were tested using the significance level of both the R and R²; the research aimed to test the hypothesis with an aim of accepting whether there was any effect by the variable on performance. The first research hypothesis posted H₀1: There is no significant effect of loan accessibility on performance of smallholder sugar cane farmers in

Kakamega County. From the results, agricultural loan accessibility had significant positive effect on performance with $P < 0.01$ and it significantly accounted for 16.1% variance in Smallholder sugar cane farmer performance in Kakamega County. Therefore the null hypothesis is rejected as agricultural loan accessibility has significant effect on performance of smallholder sugar cane farmers in Kakamega County

4.7 CONCLUSION

The study conclusion was derived from study findings after testing the study hypothesis which was derived from the study objectives.

Basing on first objective of the study, it was concluded that there is significant effect of loan accessibility on performance of smallholder sugar cane farmers in Kakamega County. The effect of agricultural loans on performance was found to be moderate. The repayment period for various agricultural loans differs which gives sugar cane farmers easy time to service their loans while at the same time increasing the annual returns through increase in tonnage

Basing on second objective of the study, it was concluded that there is significant effect of loan disbursement on performance of smallholder sugar cane farmers in Kakamega County. However, the effect was found to be weak as compared to loan accessibility. This indicates that as far as farmers are able to access loans, disbursement of the same loans was still an issue especially in respect to the amount disbursed. Nonetheless, there was decentralization of disbursement as well as various mode of disbursing the loans to farmers which assisted some of the farmers to acquire farm inputs.

Basing on third objective of the study, it was concluded that there is significant effect of loan interest rate on performance of smallholder sugar cane farmers in Kakamega County. However, the

effect was found to be weak as compared to loan disbursement.

This was revealed by a few respondents who indicated that loan interest rate were affordable, flexible and low as compared to other loans available in the market.

Lastly, there was significant effect of agricultural loan policy on the relationship between agricultural loans contribution and performance of small holder sugarcane farmers in Kakamega County.

The moderation of agricultural loans had a positive effect on agricultural loans interest rate on the effect of the performance of smallholder sugar cane farmers in Kakamega County. The study concluded that, regulation of interest rate enabled farmers in the county to maximise utilization of their loans on cane production rather than servicing the loan.

Therefore, the overall conclusion of the study is that, agricultural loans have significant effect on the performance small holder cane farmers in Kakamega county Kenya.

This is driven by their accessibility which has resulted to increase in farms size under sugar cane cultivation, output level in the production and annual returns through increase in tonnage. The general objective of the study was achieved

4.8 Recommendations

It is recommended that financial institutions offering agricultural loans should make them more accessible to sugar cane farmers. This can be done by offering various loan products which are in line with the ability of the farmers. This would enable the farmers to pick loan products they are comfortable with. Further, there is need for financial services to be accessible through various means not relying on physical banking loans. This can be done through adoption of mobile banking where farmers can apply loans through mobile devices.

It is also recommended that there is need to diversify the mode of loan disbursement and shorten loan processing period. This can be through releasing funds through mobile money so that farmers can buy farm input at the right time and thereby realise high yields.

Further, there is need to increase the volume of loan disbursed. The disbursement should adequately meet the need of the farmers for increase in yield.

REFERENCES

- Aila, F.O. and Ombok, A. (2015). Effect of consumer attitudes, consumer characteristics and bio security principles on consumer preferences for indigenous chickens in Kisumu City, Kenya. An unpublished PhD Thesis, Department of Business Administration, Maseno University.
- Akudugu, M. (2012). Estimation of the Determinants of Credit Demand by Farmers and Supply by Rural Banks in Ghana's Upper East Region. *Asian Journal of Agriculture and Rural Development*. 2012; 2(2):189-200.
- Amonoo, E., Acquah, P. K., & Asmah, E. E. (2003). *The Impact of Interest Rates on Demand for Credit and Loan Repayment by the Poor and SME's in Ghana*. Geneva: ILO Publications Bureau.
- Aryeetey, E. (1996). "Rural finance in Africa: Institutional developments and access for the poor". The World Bank Annual Conference on Development Economics, 25– 26 April, Washington, D.C.
- Atieno, R. (2001). *Formal and Informal Institutions' Lending Policies and Access to Credit by Small-scale Enterprises in Kenya: An Empirical Assessment*. AERC Research Paper 111 presented at the African Economic Research Consortium. November. Nairobi, Kenya.
- Baulcomb, J. (2003). Management of change through force field analysis. *Journal of Nursing Management*. 11, 4, 275-280.
- Benard, A. (2011). *Effect of Interest Rates on Loan Repayment; A Case Study of Equity Bank Masindi Branch*. Master Thesis. Makerere University
- Bernard, B., Sare, Y., and Musah, A. (2014). The Effects of Interest Rate on Micro, Small and Medium Enterprises Financing Decision in Wa Municipality of Ghana. *International Journal of Business, Humanities and Technology* Vol. 4, No. 4; July 2014
- Besley, T. (1994). How do Market Failures Justify Interventions in Rural Credit Markets? *The World Bank Research Observer*, Vol. 9, No. 1, (January), pp. 27-48.
- Blackman, A. (2001). Why don't lenders finance high-return technological change in developing-country agriculture? *American Journal of Agricultural Economics*, 83, 1024-1035.
- Bolliger, D. U., & Inam, F. A. (2012). Development and validation of the online student connectedness survey (OSCS). *The International Review of Research in Open and Distance Learning*, 13(2), 41-65.
- Burton, L. J., & Mazerolle, S. M. (2011). Survey instrument validity part I: Principles of survey instrument development and validation in athletic training education research. *Athl Train Educ J*. 6(1):27-35.
- Carter, M., 1989. "The Impact of Credit on Peasant Productivity and Differentiation in Nicaragua." *Journal of Development Economics* 103: 13-36.
- CGAP. (2005). Mozambique Agricultural Microfinance: An Overview. The Challenge of Agricultural Lending, Case Study No. 1. August.
- Chauke, P. K., Motlathlana, M. L. Pfumayaramba, T. K. and Anim, F. D. K. (2013). Factors Influencing Access to Credit: A Case Study of Smallholder Farmers in the Capricorn District of South Africa. *African Journal of Agricultural Research* Vol. 8(7), pp. 582-585
- Claessens, S. (2005). Access to Finance Services: A Review of the Issues and Public Policy Objectives. World Bank Policy Research Working Paper 3589 May 2005. <http://econ.worldbank.org>, 12 September 2006.
- CUDS (Center for Urban Development Studies) (2000). Housing microfinance initiatives. Synthesis and regional summary: Asia, Latin America, and Sub-Saharan Africa with selected case studies. Center for Urban Development Studies, Harvard University, Cambridge, MA
- Dia, M. (1996). African management in the 1990s and beyond: Reconciling indigenous and transplant institutions. Washington, D.C.: The World Bank. *Economic Development and Cultural Change*, 32(2), 277-302.
- Diagne, A. & Zeller, M. (2001) Access to Credit and Its Impact on Welfare in Malawi International Food Policy Research Institute, Washington, D.C.
- Diagne, A. (1999). Determinants of Household Access to and Participation in Formal and Informal Credit Markets in Malawi: International Food Policy Research Institute. Washington, D.C. U.S.A.

How to cite this article: Wanjawa DS, Yugi CT, Muli WM. Contribution of agricultural loans accessibility to performance of small holder sugar cane farmers in Kakamega county, Kenya. *International Journal of Research and Review*. 2017; 4(10):1-11.
