Kabarak Journal of Research & Innovation Volume 10 Number 2 (2020)
ISSN 2305-784X (print) ISSN 2410-8383 (online) http://ojs.kabarak.ac.ke/index.php/journal1/

Effect of Microfinance Services on Financial Inclusion in Arid and Semi-Arid Lands in Kenya: A Case Study of Baringo County, Kenya

Silvano K. Cherutich[1*], Patrick Kibati, Symon Kiprop

[1]Kabarak University, P.O Box Private Bag, 20157, Kabarak, Kenya

Submitted: 6th November 2020; Accepted: 17th November 2020; Published online: 1st December 2020

Abstract
Micro-Finance Institutions (MFIs) have been known to offer various financial services that include savings mobilization, micro-credits, money transfers and financial education to its clients which are important to financial inclusion. However, there is uncertainty over the effect of microfinance services on financial inclusion in Arid and Semi-arid lands in Kenya such as Baringo County where currently 14 MFIs are operating. The objectives of this study, therefore, were to determine the effect of savings products and lending services provided by microfinance institutions on financial inclusion in Baringo County grounded on the Financial Intermediation theory. The study adopted descriptive research study method targeting 14 microfinance institutions operating in the area from which the accessible population was 476 individuals comprising 56 MFIs managers and credit officers and 420 clients of the MFIs. A total sample size of 254 respondents was used. Data was collected using pretested structured questionnaires and was analyzed using both descriptive and inferential statistics. The findings revealed that both savings products and lending services significantly affected financial inclusion in the area with lending services having a more significant effect than savings products. Cumulative savings were the most important assessment tools for loans qualification compared to guarantors and ability to pay. Low access to savings impeded savings mobilization. most of the loans were processed within one month. Majority of the microfinance institutions offered standardized products and services. All the microfinance institutions respondents indicated that the considered client's ability to pay and a considerable percentage indicated to consider cumulative savings and guarantors when awarding loans. A significance level of 95% (α=0.05) was used in the analysis of the effect of microfinance institutions services on financial inclusion. The probability values for the variables; lending services, savings products, payment services and financial education were 0.037, 0.000, 0.016 and 0.024 respectively. The probability values of the independent variable were less than α=0.05 thus implies that the predictor variables were significant to influence financial inclusion.

Key words: Microfinance, Financial inclusion, Financial Education, Financial Intermediation, Lending, Savings

1. INTRODUCTION

Financial Inclusion is the process of ensuring that there is easy accessibility to appropriate financial products and services required by all sections of the society in general, and vulnerable groups such as weaker sections and particularly low-income groups, at an affordable price fairly and transparently by regulated mainstream institutional players (Chakrabarty, 2010). Financial inclusion means that individuals and enterprises can access beneficial and reasonably priced financial products and services that suit their day to day needs which include: savings, transactions, payments, insurance and credit delivered responsibly and sustainably. World Bank, (2018). World Bank Group's Universal Financial Access 2020 initiative focuses on ensuring that all people globally can have access to a transaction account which serve as an access road to other financial services which include saving money, sending and receiving payments. The advocates of financial inclusion suggest that financial exclusion leads to loss of opportunity

* *Corresponding author email: **silvanokoech22@gmail.com**;*

to grow, increased levels of poverty and a retarded country's growth. The rate of financial inclusion in Kenya has been increasing significantly over the years according to the Fin Access Household Surveys conducted in years 2006, 2009, 2013 and 2016. The surveys main purpose was to determine the range that the country has reached out to the financially excluded segment of the population. The latest survey showed that 75.3 % of the Kenyan population is now banked which represent a 50 % increase from the preceding survey conducted in 2016, CBK, KNBS & FSD Kenya, (2016). There has been an increasing emphasis on improving access to financial services to the poor over the last decade in the development agenda of most developing countries. This is since reaching out to the financially excluded population considerably reduces poverty. Kimani, (2012).

The Global Findex database indicates that an average of 515 million adults worldwide opened an account at a financial institution or through a mobile money provider between the years 2014 and 2017. This implies that 69 percent of adults worldwide now have an account. This is an increase from 62 percent in 2014 and 51 percent in 2011, Demirgüç-Kunt, Klapper, Singer, Ansar, and Hess, (2017). In high-income economies, an average of 94 percent of adults have an account while account ownership in developing economies is at 63 percent. There is also wide variation in account ownership among individual economies, where it is evenly distributed in developed economies compared to developing economies. The variation in account ownership is huge and to achieve the goal of ensuring that there is universal access to formal financial services, financial institutions need to come up with products tailored to suit the needs of the unbanked. This will help to draw them into adopting the use of formal financial services. Diamond and Dybvig, (1983) hypothesized that the basic role that the banking sector plays in the provision of liquidity which facilitates increased investments in productive assets which in turn enhances the efficiency of capital accumulation and economic growth. Financial services are capable of distributing opportunities more evenly to poorer households and economically disadvantaged geographical regions. Financial institutions are the major players in the financial system and are significant in the economy of every country. Deliberate effort is therefore needed to ensure that there is universal access to financial services by all. Olugbenga and Olankunle (1998). Financial inclusion initiatives can help achieve these deliberate efforts.

Microfinance institutions provide a wide range of financial services which include; deposits, loans, money transfers/payments, financial education and insurance to poor and low-income households and their microenterprises. However, microcredit loan provision by microfinance institutions to the poor has dominated sector globally. The growth of the microfinance sector has been termed as a revolution. Robinson, (2001). The Kenyan Microfinance sector is one of the most vibrant in Sub-Saharan Africa. The sector includes a variety of institutional forms and a fairly large branch network offering services to the poor. The MFIs take different forms ranging from those regulated as deposit-taking MFIs, those registered as Non-governmental organizations, Church-based, Merry go round (Chamas), Rotating Savings and Credit Associations (ROSCAs), accumulative savings and credit associations (ASCAS) and investments groups. Majority of the microfinance institutions in Kenya provide financial services at a community level and have helped change the lives of many households and small-scale entrepreneurs. They help provide their members with financial and social intermediation services to help better their businesses. It has expanded to several other developing countries since its inception in Bangladesh and also to some developed countries. However, the role of Microfinance Institutions (MFI) is an important issue especially in financing the small and medium enterprises who find it expensive to access credit services from Commercial Banks. Warue (2012). Deposit-taking MFIs offer the deposit/savings services to their clients. The clients' savings form an important pool of funds that will be used to finance the activities of the firm e.g lending services. The members' deposits can also be used by the MFI as a guarantee for loans advanced to the depositors. Wide coverage of the telecommunication services has boosted lending to the

marginalized areas which are characterized by high illiteracy levels, poor infrastructure and a vicious cycle of poverty.

Baringo County is classified as an arid and semi-arid region of Kenya. According to the Association of Microfinance Institutions of Kenya (AMFI-K) (2017), there are 14 microfinance institutions are operating in Baringo County. The main types of microfinance service providers in Baringo County include; commercial banks, non-bank financial institutions, licensed saving and credit cooperatives and NGOs (regulated by the Central Bank of Kenya) and several unregulated small Non-Deposit Taking enterprises. Regulation and supervision of Non-Deposit Taking Microfinance Institutions are yet to be put in place. The Ministry of Finance (Kenya) is in the process of discussing the way forward. Because of the restrictions in the Banking Act, most MFIs have developed as credit-led programmes, hence limiting the extent to which they can mobilize deposits. Several leading microfinance institutions like Faulu Kenya, Kenya Women Finance Trust, and some SACCO-based MFIs have savings and credit products.

Baringo County is categorized as one of the most rural County and an Arid and Semi-Arid land in Kenya that has been largely marginalized with a poverty incidence of 52.2% against 45.2% nationally (Kenya National Bureau of Statistics [KNBS], 2017). Cheptumo, (2016) study on Microcredit and Women Empowerment in Kabartonjo Division in Baringo County, Kenya, found out that access to credit, cost of credit, group savings and insurance services significantly influenced women empowerment. MFI services helped in improving the standards of living of the women's families by providing them microcredit to have the pride to start and own small business. This shows there could be promise of higher financial inclusion in the area with the consequent reduction of poverty if MFI subscription increased. However, poverty levels are still high in the county yet there are microfinance institutions present in the area. This could imply that there are significant issues with the availability and subscription to the MFI products. This motivated the study to examine the effects of savings and lending products provided by microfinance institutions on financial inclusion in Baringo County.

1.1 Objective of the Study

The objective of the study was to examine the effects of savings and lending products provided by microfinance institutions on financial inclusion in Baringo County.

1.2 Research Hypotheses

The study sought to test these two hypotheses;

H01: Lending services by microfinance institutions have no statistically significant effect on financial inclusion in Baringo County.

H02: Savings products offered by microfinance institutions have no statistically significant effect on financial inclusion in Baringo County.

LITERATURE REVIEW

2.1 Theoretical Framework

Financial intermediation theory was established in 1960 by Gurley and Shaw based on information asymmetry theory and the agency theory. Financial intermediation is a process where those institutions that have a surplus from their expenditure and those with a deficit in their expenditure are brought together. Ndebbio (2004). According to Scholtens & Van Wensveen, (2003) the current financial intermediation theory is based on the notion that intermediaries serve to reduce transaction costs and informational asymmetries. Bisignano (1998) and Leland and Pyle (1977) pinpointed that financial intermediaries can be

differentiated by four criteria; class of liabilities in form of deposits, deposits typically short-term and of a much shorter term than their assets, the proportion of liabilities which are liquid and liabilities and assets that are largely not transferable. Financial institutions must have the ability to screen and keep track of the borrowers, which helps lower the risk of losing out their clients' deposits. They are hence able to optimally allocate the resources with less risk of loss. This theory is acceptable since microfinance institutions play an important role in intermediating the financial resources between the surplus units and the deficit units.

2.2 Lending Services by Microfinance Institutions and Financial Inclusion

Microfinance institutions offer their lending services to groups and individuals. Group lending approach is a very common approach used by microfinance institutions to advance credit to their clients. The group usually members come together, select themselves, and form a group where the group membership differs from one group to another build on the groups' constitution determined upon by the members. The members' loans are disbursed and they are secured by the co-guarantee mechanism. The group members offer a guarantee to each other's loan. In some cases, the group members may be needed to contribute some money first which will be used to serve as collateral. The group members determine who is qualified to receive the loans and not determined by the creditor, Murray and Boros, (2002).

Microfinance institutions also offer their lending services to individuals who are not members of a group. The individuals are mostly established by microfinance institutions' clients. Commercial banks do not practice individual lending to the poor because the poor individuals are not in a position to provide the collateral required to secure the loans given to them. Besides, commercial banks consider the offering of small amounts of loan to be unprofitable hence they highly discourage the offering of small loans to individuals. However, microfinance institutions have come up with ways of tailoring their products and services to suit the needs of individual borrowers. These tailored products and services help microfinance institutions to meet the needs of the individual borrowers who would otherwise have not accessed these loans. Murray and Boros, (2002).

Christabell and Raj (2012) investigated on how microfinance enables financial inclusion of the poor women of rural India. The researcher used secondary sources of data published by diverse finance institutions such as World Bank, Consultative Group to Assist the Poor (CGAP) and Reserve Bank of India among others to analyze the growth of Self-Help Groups to Bank linkage. The report confirmed that there was a positive influence of microfinance on moving the poor women of rural India to adopt and use formal banking. The report concluded that microfinance like was a lubricant steering development. The researcher also observed that the biggest challenge faced by the institutions in the quest for broad-based financial inclusion was bringing microfinance services to poor rural clients. The report recommended the use of new technologies and simplified branch regulations to broaden the reach of microfinance services to the poor.

2.3 Savings Products by Microfinance Institutions and Financial Inclusion

Mutua and Oyugi (2007) researched on poverty eradication through enhanced rural access to financial services in Kenya. The research investigated various rural financing programmes in Kenya that included MFIs, SACCOs and ROSCAs. They found out that the financing programmes positively impacted poverty reduction among the low-income earners and the poor. The study further found that the saving mobilization by the rural poor, making use of their potential and their varying banking requisites are not fully exploited and catered for adequately. The impact of formal banking institutions has been restricted by a lack of clear rural financing policy and the presence of poor rural infrastructure. The shortcoming of this study is that it confined its analysis on the link between access to financial services and poverty reduction by using outreach levels and financial sustainability indicators.

Karlan, Ratan and Zinman (2013), study laid out five sets of barriers that obstruct the poor from adopting and effectively using microfinance services. The barriers include; regulatory barriers, transaction costs barriers, lack of trust, information and knowledge gaps, social constraints and behavioural biases. Khandker (2016), researched the role of microfinance institutions in poverty alleviation in Turkey where a descriptive survey research design was adopted in the study. The study found that in as much as microfinance institutions can transform the lives of their customers, it was not a solution to poverty eradication and may not work for everyone everywhere. A comparable study done by Ittner and Larcker (2016), found out that MFIs positively impacted on the livelihoods of the poor and low-income earners.

METHODOLOGY

The study was carried out in Baringo County which is classified as an arid and semi-arid region of Kenya. Baringo County is located in the Great Rift Valley region and borders Turkana County and Samburu County to the North, Laikipia County to the East, Nakuru County to the South and Kericho County, Nandi County**,** Uasin Gishu County**,** Elgeyo Marakwet County and West Pokot County to the West. It covers an area of 11,015Km^2**.** The study adopted descriptive research design to examine the effect of MFIs services on financial inclusion in arid and semi-arid lands in Kenya. The target population for this study was 14 MFIs operating in the County from which the accessible population was 476 individuals comprising 56 managers and credit officers from the MFI and MFI 420 clients. A sample size of 254 for this study derived from the population using the formula proposed by Yamane (1967) and simple random sampling technique was used to select the respondents to participate in the study.

This study used primary data which was collected using two sets of structured questionnaires containing both open and closed ended questions. One questionnaire was administered to MFI's officials whereas the other questionnaire was administered to the randomly selected customers of the MFIs. The questionnaires were pretested for validity and reliability before being administered. Both construct and content validity of the questionnaires was obtained from the judgment of experts in the field of study, specifically the researcher's university academic supervisors. The reliability of the instrument was tested using Spearman Brown prophesy formula of split half technique, where a coefficient of 0.6-0.7 is a commonly accepted rule of thumb that is used to indicate acceptable reliability and 0.8 or higher indicate good reliability. The instrument test yielded a reliability coefficient of 0.658 for the first set of questionnaires and a reliability coefficient of 0.621 for the second set of questionnaires. The data was analyzed using descriptive statistics and inferential statistics using the Statistical Package for Social Scientists (SPSS) version 22.0. Descriptive statistics involved frequencies and percentages while inferential statistics comprised multiple-linear regression to analyze the relationship between the independent variables and dependent variable. The multiple linear regression model adopted as under;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

Where;

Y= Financial Inclusion (dependent variable)

X_1 = MFI Lending services

X_2, = MFI Savings products, and

ε = Error term (assumed to be normally distributed with mean zero and constant variance)

B_0, β_1, β_2 – Coefficients of the independent variables; X_1 and X_2 measures the change in financial inclusion as a result of a one-unit change in the independent variables.

RESULTS AND DISCUSSIONS

4.1 Introduction

The aim if this study was to determine the effect of savings and lending services by microfinance institutions on financial inclusion in Arid and Semi-Arid Lands focusing on Baringo county Kenya. Out of all 14 targeted MFIs in Baringo, 10 responded to the questionnaires. MFIs operating in Baringo county, representing 71.4% response rate. The response rate from the MFI clients was 87.7%. where 59% of the respondents were female and 41% male.

4.2 Savings Products and Financial Inclusion

The results of the effects of saving products described in terms of savings mobilization, Accessibility of Savings and MFIs Deposit Policy are presented and discussed as follows. First, it emerged that all MFIs in the area accepted savings from their clients despite not being categorized as deposit taking MFIs. As such, it was important to establish the effectiveness of the MFIs in collecting savings. The results are given in Table 1.

Table 1: Effectiveness of MFIs in Savings Mobilization

	Frequency	Percent	Valid Percent	Cumulative Percent
Very Effective	125	70.2	70.2	70.2
Fairly Effective	52	29.2	29.2	99.4
Ineffective	1	.6	.6	100.0
Total	178	100.0	100.0	

From the results in Table 1, it is evident that majority (70.2%) of the respondents rated the MFIs as very effective in savings mobilization as compared to the negligible 0.6% who felt that the MFIs were ineffective in savings mobilization. As a consequence, there was need to assess the effectiveness of the savings mobilization by establishing the frequency of savings in the MFIs. The findings are presented in Table 2.

Table 2: Frequency of Saving

	Frequency	Percent	Valid Percent	Cumulative Percent
Weekly	25	14.0	14.0	14.0
Monthly	150	84.3	84.3	98.3
Quarterly	3	1.7	1.7	100.0
Total	178	100.0	100.0	

Table 2 shows that majority (84.3%) of the MFI clients made their savings deposits on a monthly basis in the MFIs followed by a weekly basis (14%). However, few deposited their savings on a quarterly basis (1.7%). This indicates that overall, there was regular savings in the MFIs. The weekly and monthly savings trends could be explained by the means of livelihoods of the MFI clients as most of them employed in monthly jobs rather than running their own enterprises. However, this could also be explained by lack of depositing facilities such as mobile money applications. In the same vein, there was need to establish the levels of savings being deposited on average by the clients. The results are tabulated in Table 3.

Table 3: Average Savings Per Month

	Frequency	Percent	Valid Percent	Cumulative Percent
Below 1000	33	18.5	18.5	18.5

Between 1000-5000	120	67.4	67.4	86.0
Between 5000-10000	22	12.4	12.4	98.3
Over 10000	3	1.7	1.7	100.0
Total	178	100.0	100.0	

The results in Table 3 suggests majority (67.4%) of the MFI clients on average saved between Kshs 1,000 and Kshs 5,000 with their MFI per month. However, fewer MFI clients (14.1) saved above Kshs. 10,000 per month. This could be explained by the earnings of the clients as well as prevailing economic conditions which could limit savings.

The study also sought to establish whether the savings were accessible to the MFI clients. The findings are given in Table 4.

Table 4: Accessibility of Savings

	Yes		No	
	Frequency	Percent	Frequency	Percent
Accessibility of Savings	86	48.3	92	51.7
Whether MFIs Deposit Policy Met Client's Expectations	173	97.2	5	2.8

From the research findings, 51.7% of the respondents indicated that their savings were not readily accessible as and when they needed them compared to 48.3% who indicated that their savings were easily accessible. This could partly explain the effectiveness of savings mobilization. Consequently, the study sought to establish whether MFIs deposit policy met clients' expectations. Majority of the respondents as shown by 97.2% agreed that the MFIs deposit policy met their expectations whereas 2.8 % of the respondents indicated that the MFIs deposit policy failed to meet their expectations. Majority of the respondents further indicated that they were informed of the terms and conditions of saving with their MFIs.

4.3 Lending Services

The results of the lending services measured by availability and actual accessibility of loan types, simplicity of the loan application process, loan security, transaction fees and loan duration. Most of the clients on average borrowed loans was 3 times per year and borrowed a cumulative Ksh. 186,539.89. Majority of the respondents were of the view that the loan application procedure was simple in most of the MFIs.

Table 5: Credit Products Accessed from the MFIs

Loan type	Loan available to clients		Loans accessed	
	Frequency	Percent	Frequency	Percent
Emergency	77	18.30%	9	3.40%
School Fees	142	33.70%	116	43.80%
Household Supply loan	46	10.90%	6	2.30%
Development loan	156	37.10%	134	50.60%

From Table 5, it is evident that development loans (37.1%) and school fees (33.7%) were the most available loan products available to the clients from the MFIs in the area. Others were the emergency loans (18.3%) and household supply loan (10.9%). However, most clients borrowed development loans (50.6%) and school fees (43.8%). However, emergency loans (3.4%) and household supply loans (2.3%) had the least uptake among the respondents. The research findings imply that the respondents could access different types credit from their MFIs though majority of the respondents took development and school fess loans.

The study also sought to establish whether the respondents were required to provide security for their loans and also whether the clients paid any transaction fee for the loan to be processed. The findings are given in Table 6.

Table 6: Transaction fees and loan security

	Yes		No	
	Frequency	Percent	Frequency	Percent
Loan processing fees requirement	83	46.6	95	53.4
Loan security requirement	76	42.7	102	57.3

The findings indicate that majority (53.4%) of the clients were not required to pay loan processing fees by their MFIs whereas 46.6% were required to do so. Further, the findings indicate that most (57.3%) of the MFI clients were not required to provide security for their loans while 42.7% were obliged to do so. The findings imply that majority of the respondents could access credit with minimum transaction costs and little security requirements. There was also need to determine the qualifications for loan amounts applied for. The findings are given in Table 7.

Table 7: Qualifications for loan amount applied

	Frequency	**Percent**
Collateral	5	0.9%
Ability to Pay	136	25.7%
Previous Loan Experience	75	14.2%
Guarantors	151	28.5%
Cumulative Savings	162	30.6%
Total	529	100.0%

Table 7 indicates that cumulative savings with the MFIs (30.6%) was the major qualification used in determining the amount of loan that could be advanced to the clients. This was followed by the availability of guarantors (28.5%) and ability to pay (25.7%) respectively in that order. However, there was a very limited demand for collateral (0.9%) which effectively meant that the MFIs were providing unsecured loans to their clients.

The respondents were requested to indicate the duration which the loan took to be processed. And the findings are given in Table 8.

Table 8: Loan Processing Duration

	Frequency	**Percent**	**Cumulative Percent**
Instant	8	4.5	4.6

One Week	25	14.0	18.9
Two weeks	50	28.1	47.4
One Month	77	45.0	91.4
More than one month	15	8.4	100.0
Total	178	100.0	

The research findings showed that in majority (44%) of the cases, loan processing took an average of one month. It can further be inferred that most loans (87%) took between one week to one month to be processed by the MFIs in the area. However, there were also those loans that were instantly processed and advanced to the clients (4.5%).

4.4 Regression Analysis

Multiple regression analysis was carried out to test the effect of the two predictor variables – savings products and lending services - on financial inclusion. The findings presented in the Table 9.

Table 9: Linear Regression Analysis Model Summary

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	2.709	0.872		3.107	0.000
Lending Services	0.638	0.168	0.398	3.798	0.000
Savings Products	0.422	0.181	0.243	2.330	0.005
R Square	0.266		F	10.93	(2, 175)
Adjusted R-Square	0.251		Sig.	.002b	

The regression analysis in Table 9 indicates that the two-factor model predicted by savings products and lending services could explain up to 25.1% of the variations in the financial inclusion variable enabled by the MFIs in the area on the basis of the adjusted R-Square, $R_{adj} = 0.251$. This shows that the model's predictive power could improve when more variables were included in the model. The findings further show that there was a significant difference between means of MFI savings products and lending services and the mean of the dependent variable predicting financial inclusion in Baringo County ($F_{o'} = 10.93 > F_c = 4.00$; $\alpha < 0.05$; df = 2, 175; p = 0.002). Regarding the comparative effect of the two independent variables, MFI lending services ($\beta = 0.398$, p = 0.000) was the most effective predictor of financial inclusion while MFI savings products though equally significant ($\beta = 0.243$, p = 0.000) was less effective in the model. These findings further suggest that a unit change in lending services by MFIs would result to a change in financial inclusion by a factor of 0.638, a unit change in savings products by MFIs would change financial inclusion by a factor of 0.422. Therefore, the resulting predictive model for inclusion based on the two variables is;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 \text{ also rewritten as:}$$

$$Y = 2.709 + 0.638X_1 + 0.422 X_2$$

4.5 Hypothesis Testing

In relation to the effect of microfinance services on financial inclusion in arid and semi-arid lands in Kenya, the following null hypotheses were formulated.

H_{01}: Lending services by microfinance institutions have no significant effect on financial inclusion in Arid and Semi-Arid Lands in Baringo county, Kenya.

In respect to the hypothesis the value of t-statistic was 3.798 and p-value was less than 0.05 since the hypothesis was being tested at 5% level of significance. This led to the conclusion to reject the null hypothesis and accept the view that lending services by microfinance institutions significant affected financial inclusion in Baringo County, Kenya.

H_{02}: Savings products offered by microfinance institutions have no significant effect on financial inclusion in Baringo county, Kenya.

In respect to this hypothesis, the t-statistic was 2.330 and p-value was less than 0.05 since the hypothesis was being tested at 5% level of significance. This led to conclusion to reject the second null hypothesis and accept the view that savings products offered by microfinance institutions have significant effect on financial inclusion in Baringo County, Kenya.

CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

Based on the findings, the study concludes that the services offered by the microfinance institutions positively affected financial inclusion in arid and semi-arid lands in Kenya. On lending services, the study also concludes that the MFIs need to offer tailored products and services that will suit the different needs of the residents of arid and semi-arid lands. The study also concludes that individual lending services are expanding and that the MFIs are innovating new products to meet their client's needs. On savings products, the study concludes that savings products offered by microfinance institutions had significant effect on financial inclusion in arid and semi-arid lands in Kenya. The study also concludes that savings mobilization lifts up important considerations development programs that are working to boost productive income. MFIs programs play an important role in fostering savings among the poor population in arid and semi-arid lands in Kenya.

5.2 Recommendations

On lending services, the study recommends that MFIs work on reducing time taken to process loans to be processed to two weeks at most. Since most the respondents indicated that they had to wait for up to a month for their loans to be processed. Since most of the MFI clients indicated that they could not access their savings as and when they needed, this study recommends that the MFIs should work on offering various savings products that will not limit the client's accessibility to their savings, that is by offering various savings accounts for various purposes.

The study also recommends that the MFIs should increase awareness of the products they offer to those who don't use formal financial services so as to increase financial inclusion. Further, MFIs should work on providing tailored products and services so as to bring those who find standardized products unsuitable for their needs into adopting the use of formal financial services.

REFERENCES

AMFI_K, 2017 *Microfinance Sector Report 4th edition.* Nairobi, Kenya: AMFI-Kenya.

Bisignano, J., (1998) "Precarious Credit Equilibria: Reflections on the Asian Financial Crisis," *Paper presented at the conference, Asia: An Analysis of Financial Crisis. October 8-10,*

CBK, KNBS & FSD Kenya, (2016) *Household Survey on financial inclusion.* Nairobi, Kenya: FSD Kenya.

Chakrabarty, K.C., (2010), *Financial Inclusion and Banks: Issues and Perspectives,* Reserve Bank of India.

Cheptumo, I. J., (2016), Microcredit and Women Empowerment in Kabartonjo Division: Baringo County, Kenya. *Journal of Investment and Management. Vol. 5, No. 6, 2016, pp. 171-183.*

Christabell, P. J., & Raj, V., (2012). Financial inclusion in rural India: The role of microfinance as a tool. *Journal of Humanities and Social Sciences, 2(5) 21-25.*

Demirguc-Kunt, A., Klapper, L., Singer, D. and Van Oudheusden, P., (2014) *Measuring Financial Inclusion around the World.* World Bank Group.

Demirgüç-Kunt, A., Klapper, L., Singer, D. Ansar, S., Hess, J., (2017) *Measuring Financial Inclusion and the Fintech Revolution.* The Global Findex Database 2017.

Diamond D., & Dybvig, P., (1983). Bank runs, deposit insurance, and liquidity. *Journal of Political Economy 91 (June): 401–19.*

Gurley, J.G., and Shaw, E.S. (1960), *Money in Theory of Finance.* Brookings, Washington DC.

Ittner, C. D., & Larcker, D.F., (2016). Innovations in performance measurements: trends and research implications, *Journal of Management Accounting Research, 10, 205238.*

Karlan, D., Ratan A. L., & Zinman J., (2013). Saving by and for the poor: *A research review and agenda.* Center for Global Development Working Paper No. 346, November 2013.

Khandker, S. R., (2016). Microfinance and poverty evidence using panel data from Turkey. *Policy Research Working Paper Series 2945*, the World Bank.

Kimani, P., (2012). *The impact of collective investment schemes on financial inclusion in Kenya,* Unpublished MBA Project, University of Nairobi.

KNBS, (2017) *Economic Survey 2017* Kenya 2nd February 2019 https://www.knbs.or.ke/download/economic-survey-2017/

Leland, H.E., and Pyle, D.H., (1977) Informational Asymmetries, Financial Structure, and Financial Intermediation. *Journal of Finance, 32, 371-387.*

Murray, U., & Boros, R., (2002). "A Guide to Genders Sensitive Microfinance", p. 11

Mutua J., & Oyugi, L.N., (2007). *Poverty reduction through enhanced rural access to financial services in Kenya.* Institute for Policy Analysis and Research (IPAR).

Ndebbio, J., (2004). Financial deepening, economic growth and development: Evidence from selected sub Saharan African countries. *AERC Research Paper 142 African Economic Research Consortium, Nairobi, August 2004.*

Olugbenga, S.O., and Olankunle, A.P., (1998) Bank Performance and Supervision in Nigeria: Analysing the Transition to a Deregulated Economy, African Economic Research Consortium

Robinson, M.S., (2001). *The Micro Finance Revolution Sustainable Finance for the Poor.* Washington DC: The World Bank

Scholtens, B., and Van Wensveen, D., (2003). *The Theory of Financial Intermediation:* An Essay on What It Does (Not) Explain. Vienna: SUERF – The European Money and Finance Forum.

Warue, N.B., (2012). Factors Affecting Loan Delinquency in Microfinance Institutions in Kenya. *International Journal of Management Sciences and Business Research. Vol 1, No. 12*

World Bank, (2018). *The Little Data Book on Financial Inclusion 2018.* World Bank, Washington, DC.

Yamane, T., (1967). *Statistics: An Introductory Analysis, 2nd Ed.,* New York: Harper and Row. ... "Statistics: an introductory analysis." New York: Harper & Row.