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Effect of Financial Innovations on Financial Sustainability of Microfinance Institutions in Eldoret Town, Kenya

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Abstract: *Microfinance institutions (MFIs) provide strength to lift the economic activities of low-income earners and thus contributing towardsabolition of poverty. However, microfinance institutions in Kenya face rigorous challenges as studies have shown that most MFIs collapse just after being in operation for a period less than two years. In order to stay competitive MFIs develop various innovations and this is why the study intended to establish the effect of financial innovationson financialsustainability of MFIs in Eldoret town,Kenya.The specific objectives of the study was toassess the effect of service innovations onfinancial sustainability of MFIs in Eldoret town.The study wassupported bythe theoryof innovation diffusion. The study used primary data through the use of research questionnaires.The study usedcensusresearch design since it consents the use of questionnaires that are to be completed by the respondents involved in the study and helps in presenting constructive and precise information. The study narrowedits research to MFIs found in Eldoret town. The study targeted all employees of MFIsin Kenya and the accessible population for the study were 120 employees working in 15MFIs in Eldoret town. Pre-testing of research instrumentswas conducted in MFIs found in Elgeyo Marakwet Countybeforethe main studywas conductedin order to determineif the research instrumentswere reliable. Validity of the research questionnaire was tested using content validity. Cronbach's alpha coefficientwas used to test reliability of the research questionnaire. Statistical Package for Social Science (SPSS)was used during data processing and analysis. Descriptive statistics used included mean, frequencies, percentages and standard deviation. Inferential statisticsused was Pearson's product moment ofcorrelation and multipleregression analysis.The study findings indicated that there was a positive and significant effect of financial innovations on financial sustainability of MFIs in Eldoret town, Kenya($p<0.05$).The study recommends that the concerned management of MFIs should stay updated by adopting recent financial innovations in their institutions in order to compete favorably with other financial institutions and also to be financially sustainable. The study will be useful to the government and industry supervisors in order to understand the types of financial innovations in the microfinance industry so as to ensure that the regulations that exist cover all the innovations and fill allthe gaps that exists within the institutions.*

Keywords: *Microfinance Institutions, Financial Innovations, Service Innovations and Financial Sustainability.*

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I. Introduction

Microfinance institution is defined as per Microfinance Act(2006)as an institution that offers financial services to those whoare poor and those who earn low income.The microfinance history is traced back to the middle of 1800 when the theorist Lysander Spooner was writing concerning the benefits entrepreneurs getfrom small credits and farmers as a way of enabling people get out of poverty. Today's use of the expressionof micro financing has its roots back to 1970s when organizations like Grameen Bank of Bangladesh with the microfinance pioneer Mohammad Yunus (Yunus, 2008).

According to a report by World Bank (2010) microfinance institutions in developing countries have largely applied low-rate finance and using the unique technique of lending to groups as a financial service for thepoor in the society. Those who are less privileged are thusallowed to gain control over their lives and become instruments of economic growth provided they do their own work using their skills. For a number of yearsMFIs have existed in various forms but in the recent time they havegained global attention as a commercially sustainable activity that offers opportunities which are realfor entrepreneurs who are still small (Gomez & Santor, 2018).

Microfinance has grown in order to extend credit topoor people more. The main objective of the movement of microfinance is the provision of financial support for investors in micro business sector in order to boost people out of poverty and lift their economic development.Microfinanceinstitutions are currently

recognized as an appropriate tool that helps inpoverty compatibility. The process of economic growth especially when it is on high growth trajectory must strive to encompass participation of the society in all sections. Lack of access to the more institutionalized financial institutions by the poor segments in the society has been recognized as a serious hazard to economic growth process (World Bank, 2010).

In order to stay afloat in the current competitive environment MFIs have strived to innovations which are financial in nature. These financial innovations include service innovations which is defined as innovations which emanates as a result of competition among financial institutions including microfinance institutions in which each institution tries to maintain and increase its market niche and meet the clients demand within the prescribed time period (Frame & White, 2010).

MFIsacross the globe is currently increasingirrespective of size and ageof MFIs and that there is a required level in which social performance must be met by the microfinance programs in the country(Llanto & Fukui, 2013).MFIs in Africa are in general growing and they are very dynamic since there are some great improvement in the performance of such MFIs up to now. The sector is expanding since the African MFIs are among the most dynamic institutions globally in relation to the number of borrowers and savers per each microfinance institution. These institutions also demonstrates a higher levels of quality portfolio. However, African MFIs face diverse challenges in the sense that expenses are high and on average revenues remain down as compared to other regions globally. Efficiency in terms of cost per an individual who is borrowing from the institution is low. Accessible data indicates that the continent of Africa still have along long way to go in order to bridge the gap between demands by poor households for financial institutions (Nugroho & Miles, 2009).

Microfinance banks are registered in Kenya under the Microfinance Act (2006) and these institutions are not fully registered banks though they are subject to many of the similar conditions given byCBK due to the fact that such institutions use deposits of the customers to raise capital for independent loans. Microfinance banks in Kenya accept demand deposits and use the deposits as a means to generate capital for the extension of credit to customers**.** With the changing business environmentfinancial system has become moreinnovative in theprocess, product and market grounds. Due to rising information technology this has led to innovations that are new in designing product in financial institutions industry as well as services to customer and their contentment(Muriuki *et al.,* 2015).

1.2 Statement of the Problem

Microfinance sector has evolved as an economic development approach that is used to assist small enterprises and poor households that cannot access funds from more established financial services providers. Due to innovations there is great outreach for instance when technology is embraced in conducting business (Kinde, 2012). Competition in financial institutions is very high hence MFIs need to be innovative to stay in the industry. However, the significance of financial innovations in clarifying its effect on financial sustainability of MFIs is lowly upheld (Mabrouk & Mamoghli, 2010). Poor performance of MFIs has deteriorated its ability that enables them absorb shocksthat are negative and afterwards affect their creditworthiness. MFIs institutions offers employment opportunities to many Kenyans and in the event that these institutions post poor performance and reduce their staff or close the institutions altogether, such Kenyans would be directly and indirectly affected. In addition, MFIs pay taxes to the government and poor performance leads to reduced tax remittances(Yenesew, 2014). The Spanish microfinance sector suffered a big loss which led to collapse of the Spanish saving bank. During the first quarter of the year 2013, nearly thirty MFIs collapsed in Ghana as a result of an alleged incompetence to sustain their activities and much later in the year twenty more MFIs became insolvent. Kenya’s micro-finance banking sector loss hit $7.31 million for the period ended December 2017, from a loss of $3.77 million over a similar period in 2016, largely attributed to reduction in financial income. In Eldoret town, Kenya Emara Credit Limited collapsed and Opportunity credit was taken over by Getbucks Microfinance Limited (MFRC, quarterly report, 2017).Research has been done on the contribution of financial innovation towards the sustainability of financial institutions. For instance, Korir (2014) and Mururi (2014) examined the effect of financial innovations on sustainability of commercial banks in Kenya and the findings of the study indicated that there is a significant relationship between financial innovations and sustainability of commercial banks in Kenya. These studies concentrated on the banking industry and the current study focused on MFIs.

1.3 Objective of the Study

Toassess the effect of service innovations on financialsustainability of MFIs in Eldoret town, Kenya.

1.4Research Hypothesis

H_{04}: There is no significant effect of service innovations on financialsustainability of MFIs in Eldoret town.

II. Literature Review

Both theoretical and empirical literature were reviewed.

2.1 Theoretical Review

A theory refers to a set of ideas that are intended to explain the occurrence of something(Tabachnick & Fidell, 2011). Thoughthere could be manytheories explaining financial innovations thestudywas supported bythe theory of innovation diffusion since it clearly explains how innovations in general are adopted.

Theory of Innovation Diffusion

This theory was pioneered by Rogers (1995). The theory clearly states that innovation diffusion is established on the idea that for innovation to be implemented it involves new spread of ideas that are eitherunplanned or planned. The theory explainsfinancial innovationsin which institutional, process, product and service innovations are types. Rogers defined innovationas a practice or anidea that is new to users of products and services. The theory stresses that change is perceivedto be important and when the idea seems to be new to the suitable adopter, it is thusdescribedas innovation. The existence of innovations is regarded to cause uncertainty in the minds of adopters who are potentialthough with time as the adopters understands the importance of innovation they will embrace (Rogers, 1995).

Rogers further described diffusion to be an information exchange process amongst members of aninteractive social network driven by the need to reduce doubt. Uncertainty is the degree to which a number of alternatives are perceived in relation to the occurrence of a certain event. Diffusion theory opposes that a technological innovation symbolizes information and due to this adoption acts to reduce uncertainty. According to Yaron (2014) innovation diffusion is subject of five important characteristic which include its relative advantage, compatibility, complexity, trialability and observability. The theory rests on the assumption that diffusion research centers relating to the conditions whichresults to increase or decrease in the likelihood that a new idea, product, or practice is adopted by members of a given culture. The theory anticipates that social media and interpersonal contacts provide information and effect opinion and verdict concerning innovations. Rogersargued as per his studythat innovation consists of four stages which include invention, diffusion through the social system, time and consequences. The information flows through networks and the innovation that will be adopted depends on the nature of networks and the roles opinion leaders play in them (Rogers 1995).

The theory has been criticized in the sense that variations in research constructs are usually restricted to the choice of adopting units and to the number of variables included in the model. The models are not very specific about the items of diffusion and seldom question whether the studied technology makes a difference (Monteiro & Hanseth 1995; Prescott & Conger 1995). The theory is relevant to the study as it explains how various financial innovations spreads from early adopters to majority audiences, face-to-face communication therefore becomes more essential to the decision to adopt the exact type of innovation that is perceived to influence the performance or sustainability of the concerned institution.

2.2 Empirical Review

This section reviews what otherresearchers have studied on service innovations with their effect on financial sustainability in financial institutions and clearly showing the findings from such studies.

Service Innovations and Financial Sustainability of Microfinance Institutions

Kagan, Acharya, Rao and Kodepaka(2010)carried a research on the effect of adoption of service innovations in banking sector in Ghana. The study used a cross-sectional research design to determine if services offered by the banks though the use of internet have an effect on the performance of community banks in Ghana. The study results indicated that banks which provide online banking services to widen their reach tend to have better and improved performance and also found out that online banking enables community banks to have a better chance of earningas measured by their returns and improved assets in terms of quality while reducing the proportion of assets that are overdue and those that are not performing effectively. This study concentrated on banks and failed relate the effect of internet banking in MFIs as a service that these institutions are offering.

Noyer (2017)did a study onservice innovations and its influencein Kenyan commercial banks. The study used a census research design whereby all managers in the head office were interviewed for the study. The study findings showed that service innovations has not just opened up new opportunities for the participants in the sectorbut has also increased market players who are new arising from new productsin themarket.The study further found that enlarged developments have enabled the series of financing and investment opportunities to

be available to the economic agencies.The study recommends that as financial markets become more liquid and become complete, changes in official interest rates are going to be readily diffused to the whole term structure.This study focused on the banking industry and not MFIs which the current study concentrated on the same.

Robert and Maria (2015) carried out a study to determine the impact of service innovation and technology on microfinance sustainable governance in Kenya. The study used a descriptive design and the study results indicated that service innovation is mostly an opportunity for MFIs risk mitigation, even if with some possible unwanted side effects and the impact of risk factors on microfinance is still an under investigated field there is a link between innovation and sustainability, incorporating risk, is even less explored. The study narrowed on technology as an indicator of financial innovation unlike the current study which will concentrate on service innovation in which technology is part of its indicators.

Berry (2016) did a study on the influence of service innovation practices towards improving the competitive advantage commercial banks in Kenya. The study resultsrevealed that service innovations enables managers to understand how to allocate resource better in a better way, with a view of maximizing profits, revenue generation and the number of customers who come to make deposits. The study recommended that a necessary condition for survival of an innovation needs to be considered important by the organizations that directly determine whether the innovation is used or not and if the innovation is to persist the firm must find a new service innovations to generate more profits. The study concluded that in order to create new markets, firms must implement specific service innovation practices to develop scalar business models, manage customer experience, monitor employee performance and provide managerial innovation. The study addressed issues of banks without dealing with MFIs.

2.3 Conceptual Framework

Naceur and Kandil(2009) defined a conceptual framework to be an illustrative outline that shows the relationshipbetween variables under study. Figure 2.1 is the conceptual framework that clearly shows the variables used in the study.

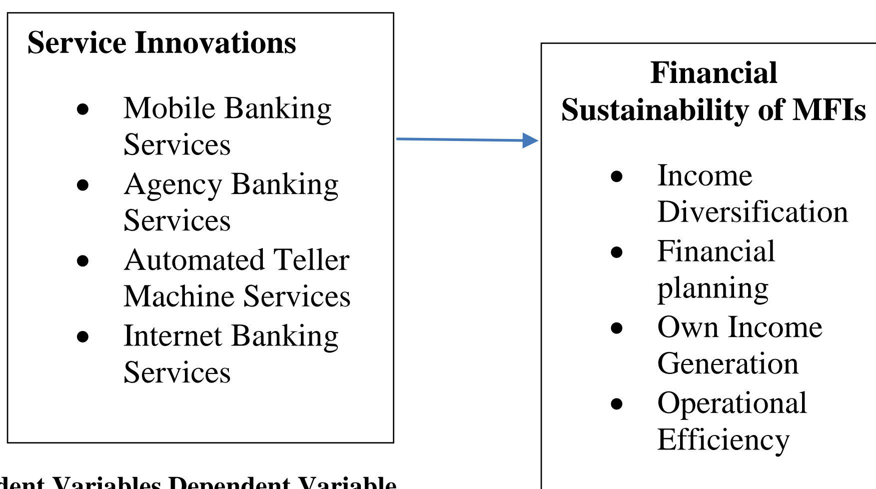

Figure 2. 1: Conceptual Framework

III. Methodology

The study adoptedcensusas the research design.Through the use of census research design it will enable a researcher to use questionnaires that are to be completed by the respondents involved in the study and this design also helps in presenting constructive and precise information (Mitchell &Jolley, 2012). The study purposively targeted 1 branch manager, 1 operations manager, 2 senior credit officers and 4 business development officers from each of the 15 MFIs found in Eldoret town, Kenya making a total of 120 respondents. The study usedquestionnaires as the tool for datacollection. A questionnaire is a research instrument used in research that has variety of questions which enables a researcher to gather information from respondents involved in the study(Mugenda & Mugenda, 2016). Content validity test was used through theguidance of the supervisor. The questionnaire'sreliability was tested using Cronbach's alphacoefficient which refers to a measure of internal consistency which measures how closely related a set of items are as a group with the aid of SPSS software.Data processing and analysis was completedthrough the use of Statistical Package for Social Sciences (SPSS) in which data preparation was important to be done before processing and the data preparation was done first.According to Hall (2010) data preparation involves cleaning, editing, coding

and storing before analyzing. The study incorporated the use of both descriptive statistics and inferential statisticsin the process of data analysis. Descriptive statistics including mean, frequencies, percentages and standard deviationwere used. Inferential statistics used included correlation analysis, hypothesis testing and multiple linear regression analysis in order to establish the relationship that existed betweenthe variables under study that is independent variables and the dependent variable.

R-square(R^2) was used in order to determine how various predictors fitted well into the regression model (Tabachnick & Fidell, 2011). R^2shows the proportion of variations in dependent variable. The correlation that existed between the independent variables and dependent variable became anoriginator of the regression analysis. For the assessmentof the effectiveness of the independent variables on dependent variable, Pearson's product moment correlation wasdone and the correlation coefficients used in determining the degree and path of theirassociations (Cohen & Cohen, 2013). Hypotheses testingwasperformed to test the implication of relationships that existed between the study variables.

Regression Analysis

The multiple regression equation used in the study was as follows;

$Y=\alpha+ \beta_4X_4+\varepsilon$……………………………………………………….Equation 3.1

Where:

Yrepresents dependent variable(FinancialSustainability).

α represents the constant.

β_4 represents change in Y with respect to a unit change in X_4.

X_4 represents service innovations.

ε represents error term.

IV. Results

The study examined the respondent's views concerning service innovations and financial sustainability of MFIs in Eldoret town, Kenya. The respondents were required by the researcher to indicate their views on a category scale of 1-5. 1 representing Strongly Disagree (SD), 2 representing Disagree (D), 3 representing Neutral (N), 4 representing Agree and 5 representing Strongly Agree (SA). Frequencies (F) and Percentages (P) for each response were recorded.

Descriptive Statistics for Service Innovations on Financial Sustainability of MFIs

One of the objectivesof the study involvedassessingthe effect of service innovation onfinancial sustainability of microfinance institutions in Eldoret town, Kenya. The study incorporatedmobile baking, agency banking, automated teller machines and internet banking as the mainindicators of service innovation. The researcher wantedto have a clear understanding of the respondent's views on the effect of the service innovations indicators on MFIs financial sustainability. The results of the findings obtained in the study were as illustrated in Table 4.1.

Table 4.1: Descriptive Statistics Results for Service Innovations

	Statement		SD	D	N	A	SA	Total	Mean	Std. dev.
i.	MFIs provide mobile banking services to their customers.	F	1	3	4	47	40	95	4.28	.781
		%	1.1	3.2	4.2	49.5	42.1	100.0		
ii.	MFIs provide agency banking services to their customers.	F	5	2	10	42	36	95	4.07	1.024
		%	5.3	2.1	10.5	44.2	37.9	100.0		
iii.	MFIs offer automated teller machine services to their customers.	F	1	1	9	40	44	95	4.32	.775
		%	1.1	1.1	9.5	42.1	46.3	100.0		
iv.	MFIs provide internet banking services to their clients.	F	1	4	6	44	40	95	4.24	.834
		%	1.1	4.2	6.3	46.3	42.1	100.0		

The respondents were requested to respond to the statement that MFIs provide mobile banking services to their customers. Table 4.10 presents the study results whereby87(91.6%)of the respondents positively agreed on the statement that MFIs provide services of mobile banking to their customers and 4(4.3%) of the respondents disagreed on the statement. It was further established that MFIsproviding mobile banking services to their customers affect their financial sustainability with (mean=4.28, std.dev. =0.781). These findings are in

agreement with Robert and Maria (2015) who found out that mobile banking services and mobile payments cutting through complexity, atomizes the business model, making it sounder and more resilient to external shocks. The results of descriptive statistics reveals that majority of the respondents positively rated the statement that MFIs provide mobile banking services to their customers which has enhanced their financial sustainability.

The respondents were requested to respond to the statement that MFIs provide agency banking services to their customers. The results in Table 4.10 points out that majority 78(82.1%) of the respondents who were involved in the study agreed that agency banking services are being offered by MFIs to their customers and 7(7.4%) of the respondents involved in the study disagreed on the statement. It was further established that MFIsproviding agency banking services to their customers affect their financial sustainability with (mean=4.07, std.dev. =1.024). These findings concur with the findings of Mwangi (2013)that throughthe use ofagencybankingfinancial sustainability in most of financial institutions is boost greatly. The findings generally indicated that the respondents who positively rated the statement that MFIs provide agency banking services to their customers which greatly affects their financial sustainability were many as compared to those who disagreed on the statement.

The respondents were requested to respond to the statement that MFIs offerautomated teller machine services to their customers. Table 4.10illustrates that84(88.4%) of the respondentspositively supported the statement that MFIs provide services of automated teller machine to their customers while 2(2.2%) of the respondents were not of the ideain relation to the asked statement. It was further established that MFIsoffering automated teller machine services to their customersaffects their financial sustainability with (mean=4.32, std.dev. =0.775). The findings agrees with the findings of Noyer (2017) whose study findings showed that ATM services have not onlyopened up new ways of getting an access to finances by sector participants instead italso increasesplayers of the sector arising from the major services that are being offered in financial institutions.The respondents who positively rated the statement that MFIs offer automated teller machine services to their customerbasing on the descriptive statistics results were the majority which in turn positively affects their financial sustainability.

The respondents were requested to respond to the statement that MFIs provide internet services to their customers. Table 4.10presents the results obtained in the study in which 84(88.4%) of the respondents agreed to the statement that MFIs provide internet services to their customers while 5(5.3%) of the respondents disagreed on the statement. The results further showed that MFIsprovide internet services to their customers which affects their financial sustainability with (mean=4.24, std.dev. =0.834). These findings are in agreement with the findings of Kagan *et al*.,(2010)whose study findings revealed that internet banking helps community financial institutions improve their ability to measure their earning capacity by improved asset by reducing the proportion of overdue and assets that are not performing effectively. The descriptive statistics of the studyimplied that out of the respondentspositively rated the statement that MFIs provide internet services to their customers which in turn positively affects the financial sustainability of MFIs.

Descriptive Statistics on Financial Sustainability of MFIs

The study involved the dependent variablewhich is financial sustainability of MFIs and particularly addressed on income diversification, financial planning, own income generation and operational efficiency as the main financial sustainability measures.The interest of the researcher involved the respondents opinions on the extent in which such mentioned indicatorshave a relation with the financial sustainability of MFIs. The study results that were obtained by the researcher were as presented in Table 4.2.

Table 4.2: Descriptive Statistics Results for Financial Sustainability of MFIs

Statement		SD	D	N	A	SA	Total	Mean	Std. dev.
i. Income diversification increases financial sustainability of MFIs.	F	3	6	11	42	33	95	4.01	1.005
	%	3.2	6.3	11.6	44.2	34.7	100.0		
ii. MFIs have a good financial planning system.	F	4	4	24	39	24	95	3.79	1.009
	%	4.2	4.2	25.3	41.1	25.3	100.0		
iii. Own income generation enables MFIs to be financially sustainable.	F	4	5	20	40	26	95	3.83	1.028
	%	4.2	5.3	21.1	42.1	27.4	100.0		
iv. MFIs operate efficiently to ensure that they are financially sustainable.	F	5	5	8	39	38	95	4.05	1.085
	%	5.3	5.3	8.4	41.1	40.0	100.0		

The respondents were asked to respond to the statement that income diversification increases financial sustainability of MFIs. The studyresults in Table 4.11 indicates that 75(78.9%) of the respondent'sview to the statement that income diversification increases financial sustainability of MFIs agreed and 9(9.5%) of the respondents disagreed had a negative view on the statement that is they disagreed. Pertaining the statement the researcher further found out that income diversification increases financial sustainability of MFIs with (mean=4.01, std.dev. =1.005). Thefindings of the study as shown by the results agrees with the findings that were found out byCainelli*et al.,* (2014) that with addition of significant income diversification costs,financial institutions have become able to realizerevenue enhancement.The descriptive statistics results shows with clarity that majority of the respondents positively rated the statement in other words the respondents agreed that income diversification increases financial sustainability of MFIs.

The researcher asked the respondents to respond to the statement thatMFIshave a good financial planning system. Table 4.11 shows the results in which majority of them63(66.4%) agreed to the statement whereas 8(8.4%) of the respondents disagreed on the statement. It was further established thatMFIs have good financial planning systemwith (mean=3.07, std.dev. =1.009). These findings goes hand in hand with the findings of Addai and Pu (2015) who found out that effective financial planning enables majority of institutions that offer financial services and as with this place such institutions will source more funds through investments the make and at the same time there will be cost reduction that follows good use of finances and eliminating unnecessary expenses which in turn boosts how an organization is financially sustainable. The findings therefore points out clearly that the respondents who agreed that income diversification increases financial sustainability of MFIs were majority.

The researcher required the response of the respondents to the statement thatown income generation enables MFIsto be financially sustainable. The findings as illustrated in Table 4.11 shows 66(69.5%) of the respondentswere in agreement to the statement that financial sustainability of MFIs is greatly dependent on theirown income generation while 9(9.5%) of the respondents were against the statement as they disagreed. It was further established thatown income generation enables MFIsto be financially sustainablewith (mean=3.83, std.dev. =1.028). The results of the findings coincides with those of Githikwa (2011) that MFIspositown income generation as a major way which profit performance creation is impacted effectively. Such study resultsimplies that majority of the respondents agreed that own income generation is majorly one of the mechanism that enables MFIsto be financially sustainable.

The respondents were requested by the researcherto give their response pertaining thestatement that MFIs operate efficientlyto ensure that they are financially sustainable. The study findings as shown in Table 4.11 shows77(81.1%) were of the idea that MFIs operate efficiencyto ensurethat they are financially sustainable that is they agreed to the statement and 10(10.6%) disagreed on the statement meaning that they had a different view which is negative on the statement. It was further noted from the study that MFIs operate efficiently with (mean=4.05, std.dev. =1.085). The results of this study in this case corresponds with the findings of Dokulilova (2009)that the poor, having no or very little income, cannot offer any collateral which banks require, have no credit history, banks are too far away to verify and observe their behavior (there is little information) and the loans are generally far too small compared to transaction costs. The descriptive statistics thus reveals that the respondents who were the majority agreed to the statement.

4.7 Inferential Analysis

Inferential analysis was conducted in order to determine ifthere exists some relationships between the study variables that is the dependent variables and the independent variables.

Table 4.3: Multiple Regression Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.738[a]	.545	.524	.43499

The results of the model summary of multiple regression indicates a positive effect of financial innovations and financial sustainability of MFIswhich is seen by a positive correlation of r=0.738. The value of the coefficient of determination of 0.545has an implication that 54.5% of financial sustainability variation is accounted for by financial innovations in the study whereas the remaining portion of 45.5% is accounted for by other factors out of the study.

Analysis of variance (ANOVA)

Analysis of variance (ANOVA) was used to determine if the multiple regression analysis model was fit for the data. Table 4.19 presents the results that were obtained in the study.

Table 4.4: ANOVA Test Results

	Sum of Squares	df	Mean Square	F	Sig.
Regression	20.376	4	5.094	26.921	.000[b]
Residual	17.030	90	.189		
Total	37.405	94			

The results reveals the effect of independent variables on the dependent variable which was statistically significantwith (F=26.921; $p<0.05$). The results in this case shows clearly that the multiple regression model was fit for the data and thus institutional, process, product and service innovations have a great effect onMFIs financial sustainability.

Regression Coefficients

T-test of statistical significance of each regression coefficient was conducted in order to determine the beta (β)which shows how strongly each independent variable affect dependent variable.

Table 4.5: Regression Analysis

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.670	.329		2.036	.045
Service Innovations	.235	.108	.246	2.181	.032

a. Dependent Variable: Financial Sustainability of MFIs

The results indicates theregression coefficientsin which service innovations has a positive and significant effect on financial sustainability of MFIswith (β=0.235, $p<0.05$).

The multiple regression equation for service innovations was as shown below:

$Y=0.670++0.235X_4$…..Equation 4.1

The constant value of 0.670 implies that whenservice innovations is at zero unitsthe financial sustainability of MFIs is at 0.670units. The value of 0.235 specifies that if service innovations have an enlargement by one unit it results to an increasein the financial sustainability of MFIs by 0.235units.

Hypotheses Testing

Hypothesis testing was done at an anticipated 0.05 level of significance.The acceptance/rejection principleswas established at a point in which the p-values obtained in the study were compared with the anticipated significance level of 0.05.

Table 4.21: Hypotheses Testing Summary Results

Hypothesis	Statements	Sig.	Decision Rule
H_{01}:	Institutional innovations has no significant effect on financial sustainability of MFIs in Eldoret town.	0.021	Null hypothesis rejected
H_{02}:	Process innovations has no significant effect on financial sustainability of MFIs in Eldoret town.	0.029	Null hypothesis rejected
H_{03}:	Product innovations has no significant effect on financial sustainability of MFIs in Eldoret town.	0.034	Null hypothesis rejected
H_{04}:	Service innovations has no significant effect on financial sustainability of MFIs in Eldoret town.	0.032	Null hypothesis rejected

V. Summary, Conclusions and Recommendations

Summary of Study Findings

The findings of the study indicated that MFIs have adopted service innovations in their day to day activitiesin which it has boosted their financial sustainability. MFIs in their operationprovide services including mobile banking, agency banking, internet banking and automated teller machine to their customers which has enabled such institutions to expand and assist their customers in serving them with a lot of ease and in turn such services has made the number of customers increase. The results therefore reveals well that with service innovations in MFIs theirfinancial sustainability has been positivelyaffected.

Conclusions

The study concludes basing on the study findings thatfinancial sustainability of MFIs is affected positively by financial innovations that are adopted by the institutions.MFIs in Eldoret town thus have adopted financial innovations in their operations which this has enabled them to improve on their sustainability and

boost their performance. It was further concluded that with the adoption of financial innovations by MFIs it has enabled them to compete favorably with other financial institutions including banks and SACCOs. Finally, it was concluded that MFIs having adopted the different types of innovations in their day to day activities it has increased the number of their customers making them to be financially sustainable.

Recommendations

In regard to policy and practice the study recommends that the management of MFIs needs to be updated in relation to recent financial innovations and adopt them in their institutions in order to compete favorably with other institutions which offer financial services. MFIs should also adopt recent financial innovations for instance embracing recent technologies, differentiating their products, doing advertisements and maintaining good relations with their customers all through in order to attract more customers and to also maintain the existing ones. The study also recommends that the government should put in place measures and policies that governs MFIs operations concerning credit risk such that whoever defaults loans the government come into existence in order to assist such MFIs to mitigate on the same. The government also should consider the interest rates in which CBK and commercial banks gives loans to MFIs by reducing such interest rates which will in turn make MFIs offer their loans at a lower interest rate to avoid the incidence of credit default by customers due to higher rate of interest.

Suggestion for Further Studies

The study suggests that in future researchers undertakes a research on mediating effect and moderating effect on the relationship between financial innovations and performance/financial sustainability of MFIs in order to determine the effect of financial innovations and performance independently and other innovations not involved in the current study. This study further suggests a further detailed research to be researched on the same area but focusing on other financial institutions including SMEs, commercial banks and SACCOs. Further research need to be conducted on thisparticular area but in a different perspective for the researcher to determine the existence of other factors that affects financial sustainability of MFIs in Kenya.

References

[1]. Berry, L.L., Shankar, V., Parish, J.T., Cadwallader, S. andDotzel, T. (2016):Creating New Markets through ServiceInnovation. *Sloan Management Review Journal47*(2), 56-63.

[2]. Berry, W. D., & Feldman, S. (2010). *Multiple Regression in Practice*. Sage University Paper Series on Quantitative Applications in the Social Sciences, series no. 07-050). Newbury Park, CA: Sage.

[3]. Blach, J. (2011). Financial Innovations and Their Role in the Modern Financial System Identification and Systematization of the Problem. *Financial Internet Quarterly-Finance Journal 7*(3), 13-26.

[4]. Frame, W., & Lawrence, J. (2011). The Diffusion of Financial Innovation. *An Examination of the Adoption of Small Business Credit Scoring by Large Banking Journal13*(6), 1187-1240.

[5]. Furst, K., Lang, W. & Nolle, D. (2012). Internet Banking.*Journal of Financial Services Research*, *22*(2), 95-117.

[6]. Finance Approach. (5th Ed.) (35-37). Cheltenham, UK: Edward Elgar Publishing.

[7]. Garson, G.D., (2012). Testing Statistical Assumptions.*Business Management Journal,* 5(4), 54-57.

[8]. Gibson, C. (2012). *Financial Reporting and Analysis* (13thEd.). Mason, Ohio: Cengage Learning Publishers.

[9]. Gomez, R. & Santor, E. (2018). Does the Microfinance Lending Model Actually Work? *Canadian Journal of Economics,34*(4), 943 – 966.

[10]. Kagan, A., Acharya, R. N., Rao, L. S., & Kodepaka, V. (2010). Does Internet Banking affect the Performance of Community Banks? *Working Paper Prepared for Presentation at the American Agricultural Economics Association Annual Meeting*. Providence, Rhode Island.

[11]. Kiiza, B., M. Omeke and J. Mugisha (2014). Microfinance Self Sustainability and Outreach in Uganda: A Case of Teso Rural Development Trust Limited. *Eastern Africa Journal of Rural Development 20* (1), 34-44.

[12]. Kinde, B. A. (2012). Financial Sustainability of Microfinance Institutions in Ethiopia. *European Journal of Business and Management*, *4*(15), 1–10.

[13]. Mabrouk, A., & Mamoghli, C. (2010). Dynamic of Financial Innovation and Performance ofBanking Firms: Context of an Emerging Banking Industry. *International ResearchJournal of Finance and Economics, 5*(3), 65-69.

[14]. Microfinance Regulatory Council (MFRC), *Quarterly Report*, May 2017.

[15]. Misati, N.M., Lucas, L., Anne, K., & Shem, O. (2010).Financial Innovation and Monetary Policy Transmission in Kenya. *International Research Journal ofFinance and Economics, 50*(6),23-136.

[16]. Mitchell, M., & Jolley, J. (2012). *Research Design Explained.*(8thEd.). New York, NY: Cengage Learning Publishers.

[17]. Monteiro, E., & Hanseth, 0. (1995). Social Shaping of Information Infrastructure: OnBeing Specific about the Technology. *In Proceedings of the JFIP WG 8.2 working Conference on Information Technology and Changes in Organizational Journal, 31*(6), 325-343.

[18]. Mugenda, O. M., & Mugenda, A. G. (2016). *Research Methods:* (8th Ed.) (79-82). Quantitative and Qualitative Approaches. Nairobi: Acts Press.

[19]. .Muriuki, C., Maru, L., & Namusonge, M. (2015). Sustainability Dilemmas: Mission Driftand Performance of Microfinance Institutions in Kenya.*International Journal ofDevelopment and Economic Sustainability*, *3*(5), 47-60.

[20]. Naceur S. & Kandil M (2009). The Impact of Capital Requirements on Banks' Cost of

[21]. Intermediation and Performance: the Case of Egypt.*Journal of Economics and Business, 61*(3)*,* 70-89.

[22]. Nader, A. (2011). The Effect of Banking Expansion on Profit Efficiency of Saudi Banks. *International Conference on Business and Economic Research Journal 53*(9), 111-115.

[23]. Nugroho, Y., & Miles, I. (2009). A Project for Enterprise and Industry. *Global Review of Innovation Intelligence and PolicyStudies Journal, 9*(2), 56-63.
[24]. Rahman, M. & Mazlan, A. (2014). Determinants of Financial Sustainability of Microfinance Institutions in Bangladesh. *International Journal of Economics and Finance, 6*(9), 107-115.
[25]. Roberts, P.W., & Amit, R. (2015). The Dynamics of Innovative Activity and Competitive Advantage: *Australian retail banking Journal 63*(7), 53-57.
[26]. Robinson Marguerite,(2012). *The Microfinance RevolutionJournal,56*(4), 127-128.
[27]. Rogers, E. M. (1995). *Diffusion of Innovations*. (4thEd.). New York, USA: The Free Press.
[28]. Serekan, U. &Bougie R. (2011). *Research Methodology for Business*: A Skill Building Approach. (5th Ed.). New Delphi,USA: Aggarwal Printing Press.
[29]. Tabachnick, B. G., Fidell, L. S. (2011). *Using Multivariate Statistics* (4th Ed.). Needham Heights, MA: Allyn and Bacon Publishers.
[30]. Upagade, V. & Shende, A.(2012). *Research Methodology*. (2nd Ed.). New Delphi, India: S.Chad and Company Ltd Publishers.
[31]. World Bank, (2010). *Finance for All? Policies and Pitfalls in Expanding Access*. Washington, D.C.: World Bank.
[32]. Yaron, J.(2014).What Makes Rural Finance Institutions Successful?" *The World Bank Research ObserverJournal,9*(3), 49-70.
[33]. Yunus, M. (2008). *Banker to the Poor: Micro-Lending and the Battle against World Poverty*. (9th Ed.)(97-100). New York, NY: The Free Press.

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