FACTORS INFLUENCING REPAYMENT AMONG MICROFINANCE LOAN CONSUMERS IN MAKUENI COUNTY: A CASE OF NZAUI/KILILI/KALAMBA WARD, MAKUENI COUNTY, KENYA

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DECLARATION

This research report is my original work and has not been presented for an academic award in any other university.

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This research report has been submitted for examination with my approval as the University of Nairobi supervisor.

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DEDICATION

To my wife Rachel, My Children: Shem and Salem for their love and support during the entire period of my study.

ACKNOWLEDMENT

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ABSTRACT

The study is an enquiry on the factors that influence repayment among microfinance loan consumers in Makueni County, with special focus on Nzaui/Kilili/Kalamba ward. While Provision of Microcredit to the poor by Microfinance Institutions (MFIs) so perfectly fits in the Global Sustainable Development Goal narrative of poverty eradication and extreme hunger, its sustenance is increasingly under threat due to high default rates among its clients. In some cases, like the one under investigation in the study, loan default rate was found to be 61% as opposed to the ideal 3%. To correct this state of affair, the study was carried out with a view to assess the demographic factors that could be contributing to such poor levels of loan collection. Other factors investigated in the study include utilization of loan funds by borrowers, repayment plan, and supervision. The objective of the study was to assess how these factors influence loan repayment among microfinance loan consumers in Makueni County. The County covers an area of 8008.9km^2 and boasts of a population of approximately 900,000 people. Despite the fact that rainfall in the County is erratic, majority of the population continues to undertake agriculture under rain-fed conditions and worse still on soils with low fertility. The persons under study are therefore a population exposed to high production risks. From a population of 415 loan consumers in Nzaui/ Kilili/Kalamba ward, the survey employing simple random sampling method at 95% and 5% significance intervals and levels respectively picked 200 respondents. With up to 72.5 response rate, default rate was found to stand at 61%. Using Statistical Package for Social Science (SPSS, 22), and inferential statistics the findings indicated that in relation to loan repayment, at 5% significance level, respondents' literacy and off-farm income levels, together with loan repayment frequency each have a significant association of a P-Value 0.000. Other loan repayment influencing factors include visitation by loan officers, and number of loans with each of these posting a P-value of 0.002. The study submits that in view of the low functional literacy level of 39.3%, training must be trimmed to the specific needs of targeted groups, and ought to be designed to address real issues in real time. This becomes one of the recommendations of the study besides MFIs taking genuine interest in the economic activities in which loan borrowers invest their money. Otherwise profitability of such investments is easily jeopardized and so is loan repayment. It is perhaps due to continued lack of mindless advancement of credit to the poor, without concern of how they (the poor) utilize such credit, that MFIs have increasingly been under fire and the blame of contributing to duplication as opposed to poverty eradication. In view of the above mentioned, the study suggests further study in the area of whether MFIs really contribute to progressive development of the poor or otherwise. Another area for further research suggested in the study is the impact Information Technology (IT) has on loan repayment in MFIs in rural Kenya. This last suggestion is aimed at lowering the high interest rates, which in MFIs institutions are particularly excited by the pricing theory as highlighted in the study.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

One of the main functions of microfinance institutions is the uplift of the living standards of the poor. This has been made possible through various ways including provision of loans to persons who do not qualify for conventional loans provided by formal banks. The poor, as explained by Shariff and Norhaziah (2010) are excluded from credit facilities for many reasons including; insufficient collateral to support their loans, unstable incomes and low literacy. Usually, Shariff and Norhaziah continue to observe, that the poor survive through involvement in microbusiness activities, or informal activities that comprise of food processing and sales, small scale agriculture, crafts and petty trading. If the financial status of any group of people is as described by Shariff and Norhaziah here above, one does not need to look further to see the reasons why commercial banks disqualify such persons from accessing loan services. Following constant denial of vital funds for capital by banks, the poor have continued to languish in the vicious cycle of poverty.

It is for this purpose that microfinance institutions (hereafter otherwise identified as MFIs) came to being. Different definitions of microfinance have been provided by various organizations and authors among which include the World Bank. According to the above mentioned institution, as quoted by Robinson (2002), microfinance is "... small-scale financial services – primarily credit and savings-provided to people who farm or fish and who operate small enterprises or microenterprises where goods are produced, recycled, repaired or sold; who provide services; who work for wages or commissions; who gain income from renting small amounts of land, vehicles, draft animals, or machinery and tools; and to other individuals and groups at the local levels of developing countries, both rural and urban." As put by Nawai (2010) "microfinance institutions were established to fill the gap in the financial services sector by providing funds to the poor and lower income group [sic] and thus alleviating poverty and enhance their business activities." These institutions have gone through a period of evolution since the 1950s when they first came into existence. From their inception (1950s) through the 1970s, in conjunction with donors or governments they offered financial services mainly in the form of subsidized rural

credit (Trocaire, 2005).The sustainability of such credit programs proved impossible following high loan default rates. It is during this time (precisely 1973-1976) that the Shore Bank Corporation and Women's Economic Development were founded in Chicago (USA) and Montana (USA) respectively (Opportunity Fund, 2010). One central importance of these two institutions as explained by Opportunity Fund is that they proved that disadvantaged communities and small businesses are, in fact, creditworthy.

During the same time (early 1970s) ACCION International was established in Caracas, with a view to address poverty in Latin America's cities. At first, ACCION International started experimenting with micro-lending informal economy entrepreneurs (Global Envision, 2006). The industry redefined itself in the 1980s when institutions like Grameen Bank of Bangladesh (founded in 1983) came into existence. It is during this time that as observed by Trocaire (2005), MFIs started providing small loans and savings services to the poor profitably on a large scale.

In consideration that the story line about MFIs this far has been about provision of micro-credit to the poor, such a story cannot be complete without a close look at the case of Africa. The World Bank as quoted by Bajwa, Fritz, Jones, Lee, Mani, and Thomas (2011), estimates that in many countries in Africa more than 50% of the population lives on less than a dollar per day. In view of the above mentioned, the need for discussion on the services offered by MFIs and the problems there of cannot be overemphasized.

The earliest Micro-Credit institutions in Africa can be traced to Nigeria where local Rotating Savings and Credit Associations (RoSCA) called (*e)susu* (Seibel, n.d.) existed for decades. This model has been adapted in Liberia, (Seibel), and Ghana where the Barclays Bank in 2005 established a micro banking-scheme linking modern banking and the *susu* model (Bank of Ghana, 2007). The scheme as explained by Bank of Ghana aims at extending microfinance to some of the least affluent in Ghana, like the small trader at the market or the micro-entrepreneur selling from road-side stalls.

In East Africa, MFIs have from their inception to date continued to target such clients as described above by the Bank of Ghana. Kenya which sits at the pinnacle of the economic pyramid in the region owns roughly three-quarters of the microfinance institutions operating in

the three countries (ResponsAbility, 2013). Among leading players in the sector include Kenya Women Finance Trust and K-Rep (Now Sidian Bank) which is the mother organization of Kilimo SACCO, the institution on which the study was carried.

Kilimo SACCO operates in Eastern Kenya, particularly Makueni County. Most of the loan consumers in the County are smallholder farmers who utilize loan funds for buying agricultural light machinery, small micro-enterprises and payment of school fees as well as household goods. Contrary to best practice, a sizeable proportion of loan borrowers do not use borrowed funds for productive purposes and even when this is the case, earnings from some investments like planting of fruit plants (which is the main commercial crop) are not necessarily in the short term and at best adequate. Hostile weather conditions and subsequent crop failure have not helped in making loan repayment any easier particularly for clients who do not have another source of income.

While loan repayment has continued to pose such a challenge, clients still manage to go against all odds and repay their loans even though with difficulty. That said, in some cases clients have failed to repay their loans as and when they fall due leading to serious consequences including loss of their credit rating and confiscation of valuable assets by MFIs. In cases where members are organized in groups to provide loan security, default of one member has led to blanket condemnation of the entire group.

Considering the devastation and losses that clients and banks respectively face in the event of loan default, we are faced with the question of the measures that need to be put into place to minimize on loan repayment failure. For this question to be addressed, a careful look at the factors influencing loan repayment among microfinance loan consumers is required.

There are a myriad of factors likely to contribute to the successful or abortive repayment of loans. Among these include demographic characteristics, utilization of loan funds, repayment plan offered by MFIs and provision of supervision.

At the bottom line, the study analyzed how loan repayment and default rate are associated with various institutional as well as personal and social economic characteristics of loan consumers.

The investigation carried out cast light on how each of the above mentioned factors contributes to loan repayment. The findings provided vital information necessary to give various guidelines on measures that MFIs institutions should put into place to improve on loan repayment.

1.2 Statement of the Problem

For any lending institution to continue in provision of services, it must be able to sustain a defined loan collection threshold as is adequate to meet recurrent expenditure. Going by international standards, default rates that exceed 3% pose a threat to both profitability and capital of any lending institution. Of concern is that loan default rate in most Microfinance institutions goes way above the above indicated ideal. In a casual conversation with the manager of the MFI on which the study is based, he indicated that the default rate of the institution stood approximately at 30%. It is this situation, against the ideal that excited the researcher to dig into the factors contributing to this unacceptable state of affair.

The problem of loan delinquency/default is particularly of concern in developing countries. In a study carried out in Mogadishu, Somalia by Dahir (2015), it is indicated that systemic credit risk is one of the major challenges working against the profitability of microfinance institutions in Somalia. Attendant challenges that stand out in the study include lack of understanding of microfinance concepts by clients, communication gaps and lack of standardized reporting and performance monitoring systems. Dahir however, uses descriptive research, going only as far as giving tables showing frequencies and percentages as well as the mean of the above mentioned challenges. Due to his failure to employ inferential research, his findings fall short of determining the significance of these challenges on the continuity of microfinance institutions.

Findings similar to his however are in agreement with the narrative that there are numerous factors world over contributing to repayment challenges among microfinance loan consumers. In Ethiopia, respondents in a research carried in Harari by Haile (2015) found out that lack of supervision is one of the key contributors leading to repayment problems among micro-credit consumers. Respondents in the survey complained that several factors contributed to their high default/delinquency rate including lack of follow-up to see how they had utilized loan funds, absence of adequate visits by loan officers to see the problems they faced on the ground and

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lastly a failure on the part of lenders to offer most needed advice on ways of mitigating the above mentioned problems. Still on poor supervision, the research continues to report that some members felt that loan funds had been given as a free gift, hence loan repayment problems (Haile, 2015).

In Kenya, the situation has not been any better. Possibly it can be suggested that enough has not been done in the area of screening potential borrowers prior to loan disbursement. The expected outcome of the above mentioned problem would be poor loan collection rates. However according to Angaine and Ndari (2014), the problem is not just screening of clients for even with a well-developed lending criteria, borrowers still fail to pay their loans notwithstanding the fact of them having met the minimum criteria. In other words, screening of borrowers alone does not guarantee high loan performance rates.

Against the above stated backdrop, a keen scrutiny on the factors that influence loan repayment by loan consumers is not only desirable, but critical. This is more so the case when the characteristics of clients and their social economic circumstances are more inclined toward loan delinquency/default than otherwise. Among such characteristics and circumstances would include demographic characteristics, and utilization of loan funds. These combined with institutional factors as unfavorable repayment plans and lack of supervision by MFIs can be a cocktail for disaster both for the clients and lending institutions. The study sought to reveal association between loan repayment rate and the various factors here above outlined.

1.3 Purpose of the Study

The purpose of the study was to investigate the factors influencing loan repayment among microfinance loan consumers in Makueni County, with particular focus on Nzaui, Kilili, Kalamba Ward.

1.4 Objectives of the Study

The purpose of this study was to examine the factors that influence loan repayment among microfinance loan consumers in Makueni County. The study was guided by the following objectives;

1. To examine the influence of borrowers' demographic characteristics on loan repayment among microfinance loan consumers in Makueni County.
2. To assess the influence of utilization of loan funds on loan repayment among microfinance loan consumers in Makueni County.
3. To establish the influence of repayment plan on loan repayment among microfinance loan consumers in Makueni County.
4. To assess the influence of supervision on loan repayment among microfinance loan consumers in Makueni County.

1.5 Research Questions

The study seeks to answer the following questions;

1. To what extent do demographic characteristics influence loan repayment among microfinance loan consumers in Makueni County?
2. To what extent does utilization of loan funds influence loan repayment among microfinance loan consumers in Makueni County?
3. To what extent does repayment plan influence loan repayment among microfinance loan consumers in Makueni County?
4. To what extent does provision of supervision influence loan repayment among microfinance loan consumers in Makueni County?

1.6 Research Hypothesis

1. H_1: There is a relationship between demographic characteristics and loan repayment among microfinance loan consumers in Makueni County.
2. H_2: There is a relationship between utilization of loan funds and loan repayment among microfinance loan consumers in Makueni County.
3. H_3: There is a relationship between repayment plan and loan repayment among microfinance loan consumers in Makueni County.
4. H_4: There is a relationship between provision of supervision and loan repayment among microfinance loan consumers in Makueni County.

1.7 Significance of the Study

Microfinance institutions need their clients as much as the latter need the former. For microfinance institutions to flourish, they must be able to function in such manner as to meet their financial obligations. Poor loan collection has been one of the biggest challenges threatening the very existence of these institutions in Makueni County. This deficiency not only threatens the survival of MFIs but also hurts the otherwise would-be better living standards of clients. This is particularly the case when lending institutions impound collaterals which were the lifeline of clients.

Possibly this unacceptable state of affair has been contributed by either absence or poor observation of policy regarding borrowers' characteristics, unprofitable utilization of loan funds, hostile repayment plans and lack or poor supervision. The findings of the study will help policy makers improve policy and implementation of the same so that financial resources are diligently allocated to eligible clients only. Further it helps in identification and aiding follow-up measures put into place to minimize on loan default rate. Lastly, considering that very little research has been carried out on loan repayment in Makueni County, the study contributes a great deal in filling the gaping knowledge gap that exists in the said area of study.

1.8 Limitations of the Study

Among the limiting factors to this study include lack of prior studies on the topic in focus. Very little research if any has been done on the factors under investigation in Makueni County. Consequently, there wasn't any available reliable literature that could help clarify the problem at hand particularly in the County. To mitigate on this problem, the researcher paid close attention to literature written in other areas across the country, although the circumstances of the respondents in the various regions may be variant from those in Makueni County.

The second limitation was the capacity to administer the entire two hundred questionnaires single handedly considering the length of the questionnaire. Given the time schedule within which the data was collected, it was impossible to single handedly take each single respondent

through the questionnaire. To mitigate on this, research assistants were engaged to help with data collection in group meetings. Closely related to this limitation was the problem of getting enough members per group from which to sample. Many times, only a few members turned up for group meetings, and this left inadequate pool from which to randomly select the required number of respondents. To mitigate on this, sometimes only those present were taken to be homogenously representative, and as such the frame was taken from the few present. In the worst possible scenario where not even the minimal required number was available, loan officers provided the research team with group lists and contacts. With the use of systematic sampling, absent members would be selected, and asked to avail themselves at the nearest Kilimo office where the questionnaire would be administered.

1.9 Delimitations of the Study

Indeed there are other problem issues that are extremely relevant, and important in microfinance institutions. A case in point is an investigation into the possibility that Microfinance institutions are making the poor poorer particularly considering their interest rates, terms of loans service and the methods and aggression they employ in loan recovery. Since it is not possible to address all these problems in one piece of work, this study set this problem outside its boundaries, and focused particularly on the factors that influence loan repayment.

Further, it is critical to observe that due to time and resource restrictions the study could not pay attention to all the factors that influence loan repayment. There are many factors that could not be investigated into due to the above stated restrictions. To isolate but a few is the influence of Information Technology (IT) and group dynamics on loan repayment. In view of the above mentioned constraints, the research focused only on a few characteristics namely; demographics, loan utilization, repayment plan and supervision.

A further delimitation was the methodology selected for the study. Questionnaires were used for data collection and these had their own limitations. There were other methods like focus groups that if combined with the questionnaire would have provided necessary clarification. In view of time restrictions and limited resources, questionnaires were considered to provide the accuracy and depth required for the study, and as such chosen as the preferred method for data collection.

1.10 Assumptions of the Study

One assumption of the study is that respondents gave accurate and truthful information. This assumption was built on the premise that respondents participated in the study voluntarily and opportunity was offered for them to pull out of the survey at will. Further, confidentiality was assured at the on-set of the survey. On these grounds, it was assumed that respondents did not feel trapped or in any way incriminating themselves by giving information that otherwise would put them in bad light with the lender.

Another assumption made in the study was that the sample frame was representative of the entire population on which the inferences are made. This assumption is justified by the procedure and method used in selecting the frame.

1.11 Definition of Significant Terms

Microfinance Institution: An organization that offers a variety of financial services including, but not limited to savings and unsecured small loans to the poor.

Microfinance: Extremely small loans often not secured given to persons lacking collateral, steady employment or verifiable credit history to help them become self-employed or meet urgent financial obligation.

Loan repayment: Refers to the act of paying back of borrowed money (both principal and interest) to a lender usually broken into installments or occasionally paid in lump sum.

Demographic characteristics: Social economic and cultural characteristics of a population expressed statistically, examples of which would include Sex, age, family-size, level of education, occupation, and marital status among others.

Utilization of loan funds: Manner in which a loan consumer has put into use loan funds as well as the fraction of amount invested or otherwise, relative to total amount disbursed in form of a loan.

Source of income: An activity, multiple activities or welfare from which a borrower regularly or irregularly receives money in equal or unequal installments that in turn will be used for loan repayment.

Provision of supervision: Contact (whether direct or via other media like phone call) made by loan officers before and after loan disbursement for advisory and training reasons as well as assessment of utilization of loan funds and monitoring of borrowers' credit conduct.

Repayment plan: Repayment plan basically refers to entire time period within which both principal and interest will have been paid as well as the repayment schedule for the designated period.

Client: A loan consumer or borrower.

Delinquency/default: Delay in remitting loan funds when they fall due or failure to pay loan either in part or entirely as scheduled and signed by borrower on receipt of loan funds.

The Poor: Persons who live on or less than US$ 1.90 per day.

Bodaboda: Motorcycle taxi.

1.12 Organization of the Study

The study is organized into five chapters with chapter one covering introduction which comprises of the background of the study, a brief description of the problem, research objectives and questions, and importance of the study. Also covered in Chapter one is a declaration of the constraints and restrictions encountered in carrying out the research. Lastly are the assumptions made, and definition of key terms covered in the entire study.

Chapter two captures the contributions of other writers in the field of study. In the chapter, the literature of various academicians and experts is appreciated. Their views and perspectives are in this chapter put into careful scrutiny. Where the opinion of the researcher is different from those of other writers, argument has been put forth giving reasons why such perspectives have been found not accurate, misleading or otherwise.

In chapter three, the research design and methodology are identified. Among the specifics covered in this section include; target population, Sample and sampling procedures, research instruments, validity and reliability, data collection procedures, data analysis, and lastly operationalization of variables. Data analysis, presentation and interpretation are discussed in chapter four. Tables, and percentages as well as significance levels will be used on the various variables for summary purposes. After categorization, ordering and manipulation as well as summarization of the data collected, meaning will be drawn out thus making it possible to put forward various recommendations. The last chapter will give summary, and a discussion of the findings as well as a submission of conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

There has been significant study on MFIs and their contribution to development, as well as the factors that constrain or encourage loan repayment. Each of these studies has had remarkable strengths but not lacking in one way or the other. In this section, the researcher will discuss what other writers have written on the subject. Areas of agreement, disagreement as well as omissions will be pointed out. The bottom line of this conversation is the need to screen loan applicants to assess their credit worthiness, the importance of proper utilization of loan funds and the necessity for friendly repayment plan as well as significance of provision of supervision after loan funds have been disbursed. Such a perspective is supported by various studies including that of Korankye (2014) who opinions that gathering and clarification of information on clients is critical in determining credit worthiness of borrowers.

The conversation will be organized in the following order. To begin with, loan repayment as well as delinquency/default will be defined and their implications on disbursement of microcredit to the poor highlighted. Next, will be an interaction on how demographics and utilization of loan funds impact loan repayment. Lastly two institutional factors influencing loan repayment are discussed. These two include the influence of repayment plan and provision of supervision. What other statisticians have found and reported on these factors is critically analyzed in the study with a view to show how their findings fit in the problem, raise main issues of debate in already existent material, as well as trace intellectual progress of the problem.

2.1 Loan Repayment

A loan refers to money provided in form of debt by a lending institution to another institution, or person. The borrower in this case is expected to pay back the principal plus the interest periodically. Occasionally, the lending institution will agree with the borrower on lump sum payment of the principal and accrued interests. This pay back of the principal and interest, whether periodic or one-time act is what is referred to as repayment.

Delinquency/default is not a rare occurrence in the banking sector. While there might not be a standard way of defining a loan as delinquent or defaulted, it is largely agreed that a loan whose payment of both principal and interest are more than ninety (90) days past due, such a loan is delinquent/defaulted (Kosen, 2013). When this is more the case than the exception, any lending institution will find itself practically and effectively incapacitated to meet its running costs. Ultimately such an institution cannot continue providing credit services to its customers. In view of this, the need to identify risk indicators that point to poor loan or total failure to repay loans cannot be overemphasized. These indicators become even more critical when the composition of the client base is particularly poor.

It is to be underlined that, the very reason why formal institutions deny the poor loan services is because the latter neither have collateral nor reliable income that can serve as security for loans. Since MFIs particularly exist to serve the poor, a criterion of selecting viable loan beneficiaries must be put into place by such institutions so as to minimize on loan delinquency/default. Moreover, to ensure enough reserves are available for loan repayment, clients must invest loan funds in activities that generate funds. Further, institutional factors that could work against successful loan repayment by clients must be investigated and addressed so as to ensure a higher repayment index. These include loan repayment plan and supervision.

2.2 Demographic Characteristics and Loan Repayment

Demographic characteristics, as described by Kosen (2013) citing Cooper, Gardener, and Mills, 2002), include items such as age, gender, level of income, education, home ownership, employment status, household size, and location among others. Demographic profiling is important in MFIs because it informs the selection and tailoring of products so as to match the characteristics of target groups. Further, demographic characteristics may show the likely risk level of a particular individual since they determine how clients will make financial decisions as well as their ability to save.

Various studies committed to examining whether gender has a bearing on loan repayment have revealed mixed results. Women are generally held to repay loans better than men owing to a number of factors including their high responsiveness to coercive enforcement methods, and the

fact that they are more committed to spending time in credit groups as opposed to their male counterparts. Results from database covering three hundred and fifty (350) MFIs in seventy (70) countries reveal that at 1% significance level, there is a negative correlation of -0.02 between female borrowers and write off rates (D'Espallier, Guerin, and Mersland, 2011). In their conclusion, D'Epaller and others submit that MFIs with higher proportions of women borrowers have a lower write off risk. In view of the aforementioned, it follows that "developing individual products tailored to women's needs might significantly increase repayments" (D'Espallier, Guerin, and Mersland, 2011).

However other investigations have pointed in the opposite direction. Haile (2015), for instance, argues that being male or female does not have any significant relationship with loan repayment. In a study carried out in Northern Ethiopia, the findings of Gabremedhin (2010) reveal that though women posted a higher successful loan repayment index of 85.71% as opposed to men (82.56%) this discrepancy translates to a P-value of 0.164 implication of which is; the relationship between gender and loan repayment is not statistically significant. Similar results are recorded by Angaine and Ndari (2014).

This conflict of opinion on gender and loan repayment/default rate could suggest that there are inherent factors particular to individual contexts that could throw either sex ahead of the other in loan repayment. Among these could be cultural practices/attitudes of men and women as well as their economic activities relative to geographical locations from which they come.

On age Gebremedhin (2010) says that age contribution to successful loan repayment performance cannot be predetermined. While more of the young respondents may be educated and better informed on loan repayment plans and default implications, they may not be as well established or experienced in business or farming as the older folks. Thus age may or may not be a significant contributor to successful loan repayment.

The above conclusion however does not apply across board. The Microfinance Center for Central Asia (2011) in their findings as cited by Kosen (2013) discovered that the borrowers in the youngest (20-34 years) and oldest (55 years and above) age brackets had minimal rates of loan delayed beyond thirty (30) days. It can be deduced that most people in the middle age

bracket (35-55 years) possibly have many family responsibilities likely to compete with loan repayment obligation, hence higher loan default index. On the other hand, however, the middle age bracket is typically in its prime earning years, and therefore it would naturally be expected to perform much better in loan repayment.

Indeed there are studies that have posted results that are more or less in agreement with the assertion that older people should be in position to repay loans better than the very young. Among such studies include that of Pasha and Negese (2014). Having regressed age against successful loan repayment, their study posted a value of 0.055 at 1% significant. Their conclusion is that age significantly influences loan repayment. According to this finding, one would be right making the conclusion that the probability of successful loan repayment increases as borrowers' age increases.

This conclusion championed by Pasha and Negese (2014) is inconsistent with that of the Microfinance center for Central Asia (2011) which as earlier mentioned placed the youngest age bracket ahead of the middle age bracket in loan repayment performance. This discrepancy between findings of proponents on the same side of argument could suggest that possibly there might not be any significant relationship between loan repayment and age after all.

In a study carried out in Kenya, Kosen (2013) concludes that there is no significant relationship between age and loan repayment. In the research in which he tested age against loan repayment, his findings posted a P-value of 0.15. Based on this finding, it is in order to accept the null hypothesis that there is no relationship between age and loan repayment since P is greater than 0.05 (P>0.05).

Education has largely been assumed to influence loan repayment. In agreement with this proposition Gebrmedhin (2010), observes that "higher education level enables borrowers to comprehend more complex information, keep business records, conduct basic cash flow analysis, and make the right business decisions. Hence, borrowers with higher level of education may have higher repayment rates." Kohanzal (2009), reinforcing this perspective explains that level of education is one of the major factors that positively and significantly influence loan repayment in Iran.

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Korankye (2014) who in his study on how literacy affects loan repayment in Ghana widely discusses similar findings carried out in Uganda by Sheila in 2011. Both point out that the illiterate do not have enough knowledge about alternative marketable skills that can benefit them when their businesses do not function properly. Further, due to their ineptness, they cannot competently calculate their outstanding balances and even when lenders make errors on the same, they cannot know and in the long run they end up paying more.

In spite of the many and appealing arguments fronted on the relevance education has on loan repayment, there are some findings that have indicated that there is no relationship between education and loan repayment. Among such include that of Kosen (2013). In his research he examines repayment trends of borrowers who had primary, secondary diploma, degree, and post graduate levels of education. The results indicated a P-value of 0.83. Based on this index, therefore, it would be in order to make the conclusion that level of education does not significantly influence loan performance. Kosen however does not explain why a so obviously relevant factor as education did not have significant influence on loan repayment among his respondents.

Size of family is yet another factor influencing loan repayment. Gebremedhin (2010) observes that there is a correlation between size of family and loan repayment. In his argument he notes that larger household size which translates to higher household expenses impacts negatively on successful loan repayment. This perspective is shared by other writers including Angaine and Ndari (2014), who in their findings found out that default rate stood at 50.0%, 52.3% and 61.5% among respondents supporting 1-2, 3-5, and 6-10 persons respectively. An investigation carried out in Ghana among Yam farmers by Wognaa and Victor (2013) revealed that "there is a possibility of loans diverted to unintended purposes because of many responsibilities resulting from meeting the needs of many members of the family. Hence borrowers with large family sizes may have lower rates." Their assertions are supported by a r-value of -0.00099 at 1% significance level. Similar results are posted by Haile (2015) who carried a research among microfinance loan borrowers in Harari regional state, Ethiopia. The results of his study indicate a statistically significant mean difference (t =2.772) of family size between defaulters and non-defaulters at 10% significance level.

These findings, however, are inconsistent with those of Sileshi, Nyikal, and Wangia (2012) who explain that in their research they did not find any significant differences in family sizes of defaulters and those of non-defaulters. This is supported by a t-test index of 1.2, meaning overall the difference between the family sizes of defaulters and non-defaulters is one member.

The findings of the three however, just like those of Haile above only give us the t-values without indicating the P-value which would be a better significance index. Further Sileshi and others (2012) don't give the factors that would contribute to the size of family being insignificant in loan repayment performance. Possibly the communities of Kombolcha and Babile districts, in Ethiopia among which they carried their study have large tracts of fertile land, and the region is rich in minerals and as a consequence there are more than enough resources to support the population. Moreover, perhaps more family members could translate to a bigger financial base following diverse economic contributions of the various family members. These are possibilities the study leaves up to us to speculate on. For this reason I find their research incomplete.

Income diversity functions as a backup source of loan repayment funds during bad harvest seasons or low agricultural produce prices. This is captured by Sileshi, Nyikal, and Wangia (2012), who in their study in Ethiopia found out that "a larger proportion of non-defaulter households (75 percent) sent their members to off-farm activities as compared to the defaulter households (38 percent)." Such activities would include: formal or informal employment, selling of crafts, running retail kiosks, petty trading of animals, sawing workshops and carpentry shops as well as street vending.

The perspective that the engagement of even one member of the family in a different financially gainful activity can positively influence loan repayment is consistent with the findings of Haile (2015). In his study, he found out that the engagement of at least one family member in source of other income generating activity helps in earning additional income thus a bigger reserve for loan repayment. Further he correctly points out that such diversified economic activities might reduce family dependency ratio, which he defines as the ratio of economically dependent members to economically active members. Further, other source of income, outside project for which loan was taken, are likely to cover family expenses from that other income which is out of the project. Consequently such borrowers with other sources of income are able to remit higher deposits of

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money from projects financed by microfinance institution hence successful loan repayment performance.

This discussion suggests that, in view of the volatility of earnings especially in the agricultural sector which is characterised by frequency of crop failure and unstable prices of agricultural produce, it is only reasonable to have a backup income activity if loan borrowers will be able to successfully repay their loans. This is more the case in Arid and semi-arid lands (ASAL). Notably, many clients are exposed to the same external threats such as lack of demand for clients' produce, livestock disease outbreak, and bad weather among many others (Korankye, 2014). Consequently MFIs situated in such regions must investigate into the possibility of potential borrowers having another source of income before funds can be disbursed.

This conclusion, which is largely tenable with the findings of the above mentioned studies, must be applied with precaution however, considering fact that none of the studies investigated existing savings of the respondents at the time they were carried out. Arguably, there are farmers or microbusiness owners who have savings reserves that can serve as an adequate fall back in the event of irregular and insufficient farm or business earnings. Admittedly, however, this is rarely the case especially for microfinance loan consumers, majority of who are poor. While a lot of investigation has been done on accessibility of other source of income, little attention has been paid to the sufficiency of those sources from which loan funds can be paid. Shockingly a sizeable percentage of loan consumers take loans even when they know that their earnings even at their best can never be adequate to service these loans. The poor, as noted by Nguta and Huka (2013) quoting Bayang, are pre-occupied with pressing economic problems at the time of loan disbursal. This calls for a keen study on size as well as the profitability of farm or business enterprises of potential borrowers. This perspective finds backing in the findings of Korankye (2014) who in his investigation identifies poor appraisal of loan borrowers as a major contributor to poor loan repayment among loan consumers in Ghana.

The approach of having field officers visit the premises of potential borrowers initiated by Muhammad Yunus, founder of iconic Grameen Bank in Bangladesh (Nguta and Huka, 2013) has become one of the key appraisal strategies that have majorly contributed to a relatively more accurate evaluation on the worthiness of borrowers. Such gains however are eaten up by delays

in disbursement of loan funds and increased processing costs that are charged on borrowers. This state of affair has largely contributed to criticism of the entire machinery of MFIs. Among such critics include Bateman (2013), who points out that the microfinance model has proven to be an almost wholly destructive economic intervention globally. Although there are good reasons to be excited about the industry's promise on poverty alleviation, there are also good reasons for caution. In countries where programs of poverty alleviation through subsidized credit were adopted, the experiences were nearly all disasters. This perspective is presented by Nguta and Huka (2013) who point out that in these countries loan repayment rates often dropped well below 50%. It is only reasonable that in such turbulent waters governments should be more vigilant in implementing sensible regulatory measures. This however has not been the case. In most developing countries, governments lack the capacity to regulate MFIs operations. Consequently, as observed by Nguta and Huka, this has ". . . created a wild environment in which borrowers with limited financial experience may be exploited by incompetent or unscrupulous lenders." In view of the above mentioned areas of weakness such as disbursement of loan funds at prohibitively high costs to persons who obviously do not have evident capacity to repay the loans the work ethic of MFIs has been put under extensive criticism. Ascertaining borrowers' sufficiency of income is one of the ways through which MFIs must pay attention to, so that they do not make an already slippery slope of the poor more slippery.

2.3 Utilization of Loan Funds and Loan Repayment

Borrowers who employ funds for intended purposes are likely to repay loans on time and in full. This position is consistent with the findings of Pasha and Negese (2014). Their study carried out in Ethiopia indicates a P-value of 0.001 meaning of which is presence of a significant association between loan diversion and loan repayment. This conclusion is in agreement with that of Wongnaa (2013) who argues that proper utilization of agricultural loans and inputs could have a positive effect on the magnitude of farm profits hence enhancement of loan repayment ability.

Diversion of loan funds to unproductive purposes is however many times unintended and inevitable. Khaleque (2010) in his study on why borrowers divert loan funds found out that among circumstances that precipitate loan diversion include: acute poverty, illness of self or relatives, education needs of children, and unemployment of the borrower or spouse. This

perspective is given weight by Huka and Nguta (2013) who point out that although the main aim of microfinance provision of loans is investment in microbusinesses, most borrowers use microcredit finances for food, shelter and clothing all of which as observed by Bayang (2009) make micro finances repayment difficult. Worse still, as suggested by Angaine and Waari (2014), some clients borrow from one lender to repay other lenders. These studies taken together show just how proper utilization and diversion of loan funds are likely to sit on the opposite sides in the loan repayment continuum index.

The above mentioned discussion is inclined toward provision of loan funds only to clients who religiously employ such finances in productive activities. Such a view however, must be embraced with caution considering that as explained by Shariff and Norhaziah (2010), some MFIs provide funds for non-business activities such as education and emergencies. A rigid evaluation of worthiness of borrowers based on utilization of loan funds in productive activities will only lead to adverse selection of clients where the bulk of the poor, just like is the case in formal banks, miss out in the access of loan funds. Such a stringent criterion would effectively defeat the very purpose for which MFIs were started. Balance must therefore be maintained between rigid scrutiny of borrowers and reckless disbursement of loan funds to the extremely poor and destitute who to say the least appear to be more inclined toward loan default.

The bottom line here is that the extremely poor do not deserve credit for it only throws them deeper into poverty when they default on loan repayment. Any reputable MFI must therefore have a minimal income threshold below which they exclude potential borrowers. Even as efforts are made to preserve the basic distinctive attribute of MFIs, that is, helping the poor pull out of poverty, good banking practice must be upheld. Indeed, as correctly put by Okingo and Makanga (2014), only the ". . . microfinance institutions that follow the principles of good banking will also be the ones that alleviate the most poverty."

One downside aspects of screening potential borrowers is taking either too short or long time to process loans. There has been mixed revelations from various studies done on timing of funds disbursement. Some researchers advocate for a longer period of processing loans so that information given by borrowers can be verified. Such proponents as Bigambah (1997) as discussed by Korankye (2014) insist that longer loan processing period allows credit officers to

assess changes, threats and risks likely to affect economic activity for which money is being lent out. Bigambah's position however must be accepted with great precaution. Taking too long to disburse loans in the name of screening borrowers has adverse effects on investment of loan funds and loan repayment. This is according to the findings of Kohansal (2009). In a survey carried among farmers in Iran, Kohansal, using the logit model of data analysis found out that length of waiting time for loan reception had a significant negative effect of 0.001on loan repayment.

Delay in disbursement of loan funds leads to late purchase of inputs, and possible huge losses due to market dynamics or weather patterns. The most affected borrowers are farmers since their activities are usually in line with the prevailing weather conditions. If funds for instance, are not availed in time during planting season, the implication is that prime planting time will be missed and yields will in return be tremendously poor (Korankye, 2014). Similar results would apply in the event of a funds disbursement lag if funds were intended for purchase of pesticides. Therefore, if farmers are going to maximally utilize loan funds, such funds must be released timely since as agued here above, profitability of investment greatly hinges on timing.

2.4 Repayment Plan and Loan Repayment

Repayment plan basically refers to entire time period within which both principal and interest will have been paid as well as the repayment schedule for the designated period. Some loan periods are as short as six months or even less while others stretch well over a year or two. There has not been agreement across the Microfinance world, on whether short or long loan repayment periods have any relationship with successful loan repayment.

In a study carried out in Malaysia by Mokhtar, Nartea, and Gan (2012), the three professors reported that at 5% significance level, there was a positive coefficient correlation indication of -0.8177 on loan repayment problems for borrowers with loan repayment periods extending over a year. Their findings imply that borrowers who had a loan repayment period of over one year had lower probability of having a loan repayment problem. In their report they conclude that for the particular clients they studied, the longer the repayment period for the loan contract, the lower the probability of loan delinquency/default. Such studies have convincingly explained that longer

repayment periods allow investors time to break even in their businesses. The flip side of this argument however is that long repayment durations greatly contribute to loan repayment fatigue. Further investigation into this dimension is therefore required.

A section of researchers, among who include Gebremedhin (2010) suggest that repayment schedules must be made flexible and adjusted to borrowers' cash flow patterns. Field and Pande (n.d.) note that the typical repayment schedule offered by MFIs consists of weekly repayments starting 1-2 weeks after loan disbursement. This means that the principal and interest due is usually divided by the number of weeks in the repayment period to get the weekly repayable amount. Professor Muhammad Yunus as cited by Fischer and Ghatak (2010) argued that borrowers find this incremental process easier than having to accumulate money to pay a lump sum because their lives are always under strain. In the spirit of Yunus, in some cases, like in the business of *bodabada*, payments can even be remitted on daily basis.

It is to be noted that in citing Yunus, Fischer and Ghatak are merely stating his position, but in their argument, they disagree with the proposition that high frequency loan repayment is beneficial to loan borrowers. In their view, together with other opponents of weekly loan collections like Field and Pande (n.d.) they opinion that frequent repayment is not unambiguously good for repayment performance since they increase transaction costs incurred by both borrowers and lenders in the form of direct costs and opportunity costs (of weekly meetings). Since lenders' operating costs are in the long run passed down to borrowers, high frequency loan collections translate to high interest rates, and possible higher loan default due to overwhelming financial obligation on the part of the borrower. The already precarious state of affair is worsened by the fact that the revenues cycle for a sizeable fraction of borrowers is longer than a week. In view of such logistics, Hanim and others (2007) in their report cited by Lilay (2015) found out that the probability of a loan repayment problem was higher (according to the findings of Hanim et al) for borrowers who repaid their loan on a weekly basis.

In consideration of the above mentioned, it is only reasonable to make provision for lower frequency repayment of loans to lower operations costs, opportunity cost, and fatigue on group members. Indeed as suggested by Nguta and Huka (2013) there are those isolated cases, as is true for fruit farmers, where repayment for loan products will be made by one instalment. On the

same note Gabremedhin (2010) correctly observes that harvest time and repayment of loans should be linked. In support of this perspective, Kalarn and Mullainathan (n.d.) of Yale and Havard University respectively in their article titled *"Is Microfinance too Rigid?"* observe that if it is established that clients have repayment difficulties every wet season, it would only be reasonable to lower repayments frequency, and reduce visiting of delinquent clients by loan officers during the cited period.

Looking at the pros and cons of either side this far, neither long term nor short term loan repayment periods are healthy for small hold farmers and microenterprise owners. Short term loans fail to give clients time to break even or smooth out their losses when they occur. On the other hand long term loans subject borrowers to fatigue. Similarly high frequency loans lead to lethargy especially when collections are made weekly in groups. Further they cause operations costs to climb and hence skyrocketing of interests. Low frequency loans, in the other hand encourage clients' indiscipline.

A possible trade off would be a hybrid of both long/short term and high/low frequency loans. A flexible repayment schedule where loan collections are adapted to clients' cash flows over a minimum and maximum period of one and three years respectively would possibly cushion clients against eventualities and fatigue both of which increase loan delinquency/default. A similar opinion is echoed by Laureti (2012) in her article titled *"flexibility and payment discipline in microfinance."*

2.5 Provision of Supervision and Loan Repayment

Supervision includes communication whether by direct physical contact, or via written or phone media. This can be done prior to and after loan disbursement. In the latter case, supervision is carried out for various reasons including advisory, assessment of borrowers' utilization of funds, or follow-up persuaded by loan delinquency/default.

The submission of many scholars is that efficient and effective supervision impacts on loan repayment positively. Bachanga and Aseyo (2013), employing a survey design to investigate the relationship between loan repayment and provision of supervision in Trans-Nzoia, Kenya, found

supervision as an important factor since it compels borrowers to be committed. His conclusions however are merely based on frequencies and percentages as opposed to more dependable analysis tools like regression.

Nonetheless, his submission is in agreement with other findings as those of Lilay (2010) who in his application of Chi square found out that supervision played a significant role in successful loan repayment in Ethiopia. His results of P-value of 0.002 indicate that there is a significant association between loan supervision and loan performance.

Other studies with similar findings include those of Owusu (2015), and Sileshi, Nyikal and Wangia (2012). These studies, except that of Bachanga and Aseyo, which as observed above has its own deficiency, do not discuss the reasons as to why supervision is critical and the manner in which it ought to be carried out.

Korankye (2014) fills this gap by making the following plausible observation. He points out that provision of supervision is critical because it helps verify falsified or doctored information supplied by borrowers. Further, supervision aids in monitoring deposits made on investment projects relative to balances available. Supervision also is a show of active interest in the borrower and will aid in early identification of warning indicators of loan default. Korankye suggests that in such an event (that is indication of loan default), re-appraisal of borrower's financial position is essential. To this regard he recommends extension of repayment period where necessary. Further well-established supervision mechanisms by lenders, as put by Smith (2013), ". . . protect consumers from unfair, deceptive and abusive practices in the payday lending market through regulation. . . ." Among such predatory lenders include shylocks who lend money without regard of consumers' credit worth.

2.6 Theoretical Framework

In this section, the researcher will pay attention to three theories found relevant to this study. Among these include the signalling theory, adverse selection, and pricing theory.

The earliest forerunner of the signalling theory is Thorstein Veblen (Diekmann, n.d.). In his work dated 1899, Veblen using the biological evolutionary theory that animals within and across

species send communication signals to each other, established the signalling theory. In his theory he observed that individuals give honest or dishonest signals about themselves. When signals are dishonest, the signaller has the intention to deceive the receiver of such signals for self-gain even though such benefits may be short-lived.

This theory finds relevance in the study in that banks must appreciate the fact that potential borrowers will often send signals that the lender must put into sharp consideration in view of what lies at stake in the event of default. A client who accepts high premiums, for instance, offering high cost collateral while presenting a business plan indicating a minimal low return on investment is possibly signalling his cash flows and returns are much higher than declared.

When all is said and done, it must be underlined that there are informational constraints particularly on the part of the lender. Kamau (2012) points out that there is informational gap at two levels. First he says that there is lack of information regarding the use to which the borrower will put borrowed funds. The other information gap is on the payment decision that the borrower has made. There are no good enough signals that any lender can entirely bank on as assurance that disbursed loan funds will not be lost. Risk is pushed higher in the absence of collateral. In such an event, as put by Kamau (2012), the borrower and lender do not have the same objectives because the former does not fully internalize the cost of project failure. Moreover, the lender cannot stipulate perfectly how the borrower should run the project.

The second theory which is adverse selection is necessitated by the signalling theory. As discussed by Kosen (2013) the theory originated with a paper by Stigltz and Weiss written in 1981. The theory rests on two main assumptions namely; lenders cannot draw a cut line between borrowers' different degrees of risk and loan contracts are subject to limited liability. Lending institutions are at a higher risk of being faced with increased moral hazard of clients especially when collateral requirement is low, or where the legal system gives little power to financial institutions to enforce contracts (Kosen 2013). This perspective is also championed by Kamau (2012).

In view of the study, this theory has far reaching implications on loan repayment. Going by the doctrines of the theory lending institutions must demand provision of collateral by borrowers.

Unfortunately however, as argued in the study, excessive demand on provision of collateral by lending institutions would practically and effectively lock out the poor from access of microcredit. This proposition (of providing collateral) embraced by formal banks is at the core untenable with microfinance institutions since their main clientele are the poor.

To mitigate on the problem of adverse selection, Kosen (2013) suggests cheap ways of collecting demographic data from clients and adopting strict enforcement of contracts. Kosen however quickly runs into the trap of the third theory namely; pricing. The pricing theory indicates that costs of processing a loan are all transferred to the borrower. Such costs include regular search costs, background check and investigation into current financial status of borrower, establishment of authenticity of collateral, and all costs of filling out application forms among others. All these costs attract a fixed-up-front fee that is factored in the interest the borrower must pay (Kamau, 2012). It would appear that each of these theories ends in a dilemma so intricate to solve. The biggest concern that the pricing theory poses to the microfinance institutions industry is the high interests that are occasioned by very high operational costs. The paper tries to circumnavigate this problem by suggesting Information Technology as a means of keeping operations costs low.

2.7 Conceptual Framework

Conceptual framework is a graphical presentation of the factors under study in research, showing how each relates to the other. The study analyzed four independent variables namely demographics, loan utilization, repayment plan, and supervision with a view to find out how each of these influenced loan repayment which is the dependent variable. The moderating variables indicated heightened or diminished the above stated relationship between the independent and dependent variable.

Independent variables
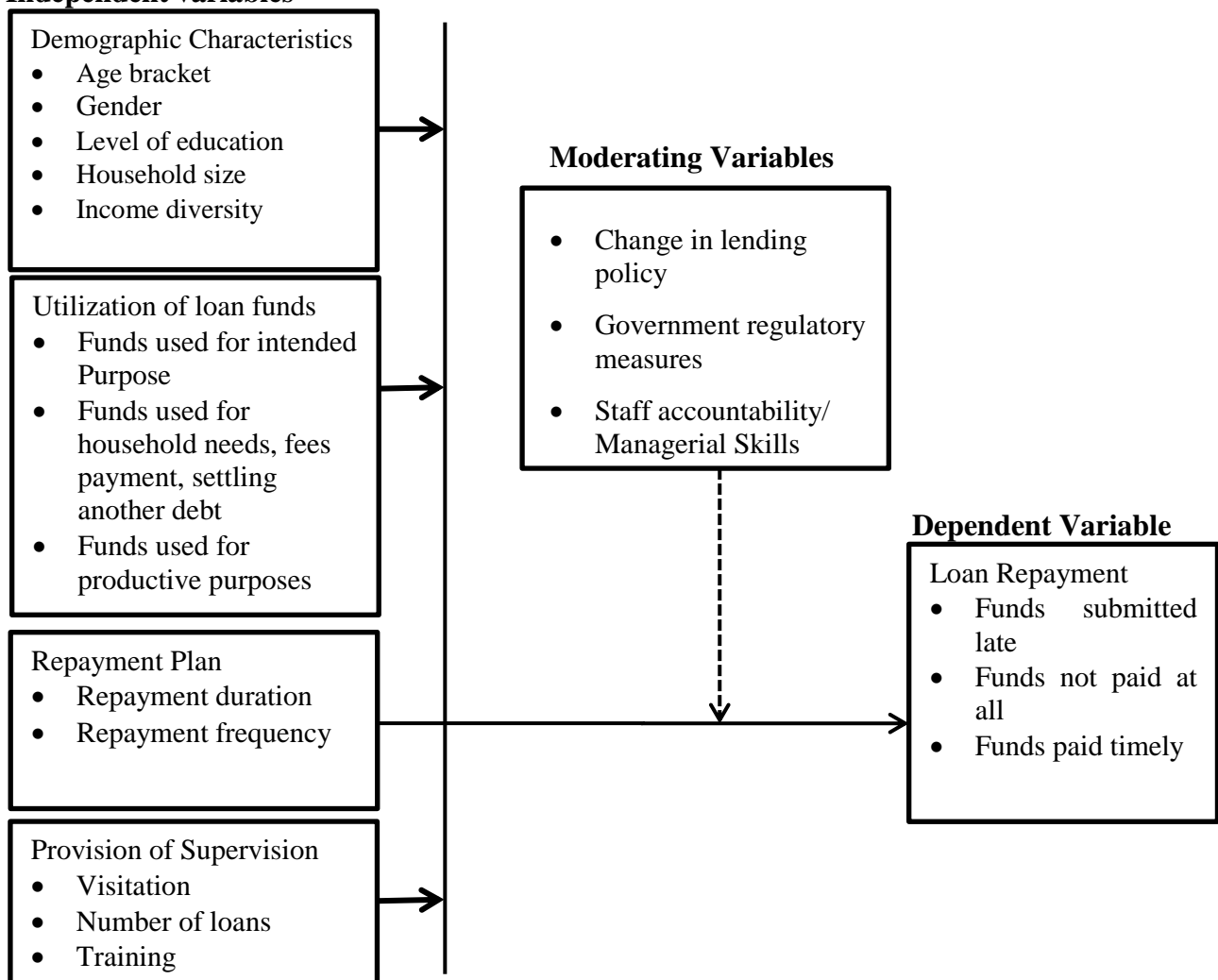
Figure 1: Conceptual Framework

2.8 Summary

Loan repayment has been defined as pay-back of both interest and principal by loan consumers. When this repayment is delayed by a period extending to or beyond ninety (90) days, a loan is defined as defaulted/delinquent. While there may be no agreement on how demographic characteristics, utilization of loan funds, repayment plan and supervision influence loan repayment, by and large it is proper to indicate that there is relative contribution of each of the above mentioned factors toward loan repayment in MFIs. Screening of loan borrowers based on their demographic characteristics and designing loan products that suit such traits has widely been argued for by a sizeable number of researchers. While safeguarding against adverse selection, it is critical that loan funds are advanced to clients who can clearly demonstrate that they will use such funds profitably bearing in mind that only Microfinance institutions that uphold good banking practice alleviate the most poverty. Loan repayment duration and frequency both have their share of influence on loan repayment. Key to this conversation is that loan repayment frequency for poor loan consumers should be tied to their earnings which is more daily than monthly. The down side of this position is that it tends to increase operations cost and ultimately interest rates. Lastly, supervision is suggested to be important in loan repayment in that it helps in verification of falsified or doctored information, compels borrowers to be committed, and aids in monitoring whether deposits were made on investment projects.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter delves into how the research was conducted in order to achieve the stated objectives. This will be done by presenting the research design as well as the methodology used in carrying out the research. Other items of concern highlighted in the chapter include a synopsis of population, and sample selection, sampling procedure, and research instruments, methods of data collection and analysis. Finally limitations that were encountered during the research process will be highlighted.

3.2 Research Design

A research design is primarily the plan by which a study is carried out. According to Mugenda and Mugenda, (2003), it refers to the method used to carry out the research. The research design as the outline plan or scheme that is used to generate answers to the research problems is basically the structure and plan of investigation. It is so conceived as to obtain answers of the research questions. The plan is the overall program of the research and includes an outline of what the investigator will do from writing the hypothesis and their operational implications for the final analysis of data. The essential of research design as an activity and time based plan, always based on the research questions, guides the selection of sources and types of information, a frame work for specifying the relationship among variables and outlines the procedure for every research activity (Muthee, 2010).

The researcher used the survey research design which as described by Abdulah (2001), "provides an opportunity for the investigator to collect data from a population in order to determine the current status of that population with respect to one or more variables." This was deemed appropriate because the study involved in-depth study of the factors that influence loan repayment among MFIs specifically in Makueni County. The survey helped the researcher to provide numeric representation of the independent variables relative to the dependent variable.

Descriptive and inferential statistics were used to measure the influence that demographics, loan utilization, repayment plan, and supervision have on loan repayment. The purpose of such analysis was to describe and ascertain the significance of the characteristics of the variables targeted in the study.

3.3 Target Population

Population as defined by Mugenda and Mugenda (2003) is the entire group of individuals, events or objects having common observable characteristics. Research seeks to generalize its findings only on such populations on which common characteristics apply.

The population of interest in this study was customers in MFIs in Makueni County, particularly loan consumers of Kilimo SACCO, which as of January, 2016 had a total of approximately 2300 loan consumers. Of this total (2300), 415 consumers are spread across the geographical location of interest (Nzaui, Kilili, Kalamba ward). This population (415 loan consumers), majority of whom are peasant farmers, was taken as representative of all microfinance loan consumers across the County. Makueni County is characterized by erratic rainfall whose start, end and duration remain highly unreliable. The persons under study are therefore a population exposed to high production risks especially considering that agriculture in the County is ". . . mainly undertaken under rain-fed conditions on soils with low fertility potential" (Amukono, 2016).

3.4 Sampling and Sampling Procedure

A sample is otherwise referred to as frame and in definition it is "a finite part of a statistical population whose properties are studied to gain information about the whole" (Mugo, 2002). In essence sample is a selected representation of the population from which conclusions about the entire population are made.

Closely related to sample is sampling, which as defined by Mugo (2002) ". . . is the act, process or technique of selecting a suitable sample or a representative part of a population for the purpose of determining parameters of the whole population."

In the event the population is small, sampling is unnecessary. However, when the population is large, in view of time and cost constraints; selecting a sample becomes indispensable. It is in regard to such constraints that sampling was applied as the method of systematic acquisition and recording information from the given population. The sample size (n) was calculated with the help of The Creative Research Systems online calculator.

Applied to the target population of the 415 Kilimo SACCO microcredit consumers, at 95% and 5% confidence level and confidence interval respectively, the calculator gave a sample frame of 200 respondents. Considering that the 415 loan consumers were spread over 34 groups each of approximately 12 members the representative number to be interviewed from each group was achieved by dividing the total sample frame (200) with the total groups (34) giving a representative number of 6 members per group. These six were picked by first isolating those that had loans from those that didn't. The simple random technique was then applied on those that had loans so that each individual member was given equal chance of being included in the sample. In the event the event a selected client was not servicing a loan, he or she was dropped and a suitable replacement picked at random.

3.5 Research Instruments

Data from the study was collected by the use of primary data. A structured questionnaire was administered to the respondents. Closed ended questions were used to ensure that the information supplied by the respondents is directed in such manner as to elicit uniform data for easy computation and analysis. A few open-ended questions were included for the purpose of capturing perceptions and parameters not listed in the provided options. The considered respondents were all active customers of the MFI. Where necessary credit officers were consulted for clarification reasons. The questionnaire was divided into sections one, two, three and four covering locational data, demographic characteristics, social networks, and loan repayment respectively.

3.5.1 Pilot Study

A small scale preliminary study was carried out before the launch of the full-scale research. Out of the sample frame, a few respondents were subjected to the research instrument for the purpose

of establishing just how well it works on the ground. Necessary adjustments were made in the event of ambiguity on items so as to sharpen accuracy and prevent waste of time, energy and finances. The pre-trial study was also able to "give advance warning of where the main research project can fail, indicate where research protocols might not be allowed, identify practical problems of research procedure and indicate whether proposed methods or instrument are appropriate or too complicated" (Calitz, 2009).

3.5.2 Validity and Research Instrument

Validity refers to the degree to which a test measures what it claims to measure. High validity is ensured by making sure that the tests carried out are measuring the intended items and not some other irrelevant or unrelated aspect of the subject being dealt with. Put differently, validity seeks to establish whether the measuring instrument is on target in measuring what it is expected to measure.

For this very reason, the researcher sought the hand of an expert to help in examining whether the instrument was indeed measuring what was being assessed in each variable. Alongside the expert, fellow students were engaged in scrutinizing the instrument. By and large, three different forms of validity were considered namely; face, construct and content validity.

3.5.3 Reliability of the Research Instrument

Reliability revolves around the subject of dependability, stability and consistency. When a test can yield similar results when carried out at different times or when different investigators use the same instruments on the same respondents, in such a case the research instrument is said to have high stability and consistency (equivalence) respectively. Joppe (2000) in concurrence observes that reliability is extent to which results are consistent over time and an accurate representation of the total population under study and if the results of a study can be reproduced under a similar methodology. During the pre-trial study, the same questionnaire was administered to a smaller section of respondents to see whether the results of the two findings correlated.

3.6 Data Collection Procedure

Permission to go ahead with the research was given by the Board of directors of Kilimo SACCO. The clients under study meet every three weeks. With the help of research assistants, the questionnaires were administered to the respondents in their group meetings. This approach was adopted due to the high likelihood that a large number of respondents may not be literate enough to handle the questionnaires on their own. Filled questionnaires were collected, inspected and edited in the field to avoid repeat of mistakes likely to interfere with the outcome of computer analysis.

3.7 Data Analysis Procedure

Data analysis aims at fulfilling the research objectives and provides answers to the research questions. For the collected data to be understood by the common man easily, it needs to be analyzed.

The research used quantitative techniques in analyzing the data. After receiving questionnaires from the respondents the responses were edited, classified, coded and tabulated to analyze quantitative data using statistical package for social science (SPSS 22). Tables demonstrating frequencies and percentages were used for easy understanding and analysis. Finally, conclusions were made based on Chi^2 test results.

3.8 Ethical Consideration

Ethics is about what is wrong against what is right or put differently what distinguishes between acceptable and unacceptable behavior. Of key importance in the domain of research includes set standards particularly relating to respondents' autonomy, confidentiality and honesty on the part of the researcher.

All respondents in the research were provided with full disclosure of the procedure of the study, publication of the same as well as anonymity and confidentiality. In view of the above mentioned respondents participated in the study voluntarily. If for any reason any participant felt uncomfortable to continue with the study, room was allowed to pull out mid-stream. Besides the

respondents, permission was sought and granted from all the relevant authorities including the Board of Directors, Kilimo SACCO, and the National Commission for Science Technology and Innovation, the County director of education, and the County Commissioner.

The researcher was committed to honesty at all levels of the study. At no given point did the researcher take a biased position, falsify, fabricate, or misrepresent data. Further, credit was given where due. Plagiarism was therefore highly guarded against in the study.

3.9 Operationalization of Variables

Table 3.1. Operationalization of variables

Objective	Variable	Indicator	Measure	Measurement scale	Data Collection Method	Data Analysis
To examine the influence of borrower demographic characteristics on loan repayment among microfinance loan consumers in Makueni County.	**Independent variable** Demographic characteristics	Age Education Gender Marital status Family Size Income level	Financial capacity, obligation, and comprehension	Nominal Nominal Nominal Nominal Ordinal Ordinal	Questionnaire	Chi-square Chi-square Chi-square Chi-square Chi-square Chi-square
To assess the influence of utilization of loan funds on loan repayment among microfinance loan consumers in Makueni County.	Utilization of loan funds	Diversion of loan funds	Investment Profitability	Nominal	Questionnaire	Chi-square
To establish the influence of repayment plan on loan repayment among microfinance loan consumers in Makueni County.	Repayment plan	Repayment duration Repayment frequency	Suitability	Nominal Ordinal	Questionnaire	Chi-square Chi-square
To assess the influence of supervision on loan repayment among microfinance loan consumers in Makueni County	Supervision	Visits by loan officer Number of Loans Training	Relevance	Nominal Ordinal Nominal	Questionnaire	Chi-square Chi-square Chi-square

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSION

4.1 Introduction

This Chapter describes the interpretation and explanation of the findings of the research that are in line with the research questions and objectives of the study. To achieve the above mentioned both descriptive and inferential statistics were used to respectively summarize and draw conclusions on the data.

4.2 questionnaire Response Rate

Of the 200 questionnaires distributed, 145 (72.5%) were returned duly filled, and 55 (27.5%) were returned incomplete. A section of respondents were uncomfortable with information that put them in bad light or in their view was private and confidential. This category of respondents for instance skipped questions on why they defaulted on loan repayment, or their other sources of income if any. Altogether the 72.5% response rate though low, still is within acceptable threshold, of course notwithstanding the fact that there seem to be a lack of consensus across disciplines on the question of acceptable response rate in research. The above indicated response rate (72.5%) according to Mundy (2002) lies within reasonable margins, although not inside the brackets of what would be considered as good (80%) or excellent (90%). However going by the acceptable thresholds provided by Mugenda and Mugenda (2003), the above given response rate of 72.5% lies within excellent margins (70% and above).

4.3 Results presentation and Discussion

Tables showing frequencies and percentages were employed to condense the data in a manner that displays overall patterns of the sampled respondents. Since these cannot help us draw conclusions on the various variables, Chi Square was employed as the standard measure of establishing whether there is a significant association between the two groups, that is, defaulters and non-defaulters as far as each of the independent variable is concerned.

4.3.1 Overall Loan Repayment Status

To know the loan repayment status of the respondents, they were to indicate in the questionnaire whether they have skipped scheduled loan repayment since they took the current loan. A binary outcome in which case 0 represents defaulters and 1non-default, indicated that out of the 145 respondents 88 (61%) defaulted, while the remaining 57 (39%) did not.

4:3:2 Demographic Characteristics Versus Loan Repayment

In this section respondents' demographic characteristics are displayed as shown in the table below and the statistical significance of each discussed. Among the characteristics discussed include age, education level, gender, marital status, number of children and income diversity. These are presented in table 4.1 below.

Table 4.1 Demographic Characteristics of Respondents

Category	Frequency	Percent
Age:		
21- 35 years	43	29.7
36-50 years	50	34.5
51-65 years	42	29.0
66-80 years	8	5.5
81-95 years	2	1.4
Total	145	100.0
Education level:		
none	2	1.4
primary	60	41.4
Post primary diploma/certificate	26	17.9
Form4/ 0-level	42	29.0
Post sec certificate/diploma	13	9.0
Degree	2	1.4
Total	145	100.0
Gender:		
male	68	46.9
female	77	53.1
Total	145	100.0

Marital Status:		
Single	8	5.5
Married	131	90.3
Divorced/separated	1	0.7
Widow/widower	5	3.4
Total	145	100.0
No. Of Children:		
none	8	5.5
1- 3 children	71	49.0
4 -6 children	57	39.3
7 - 9 children	9	6.2
Total	145	100.0
Income Level:		
5000 and below	51	35.2
5001 - 10000	84	57.9
10001-15000	4	2.8
20001 and above	6	4.1
Total	145	100.0

As tabulated in table 4.1 above, among the 145 respondents, majority (50[34.5%]) of loan borrowers lie in the 21-35 years age bracket, followed by 36-50 years 43[29.7%]), 51-65 years (42[29%]), 66-80 years (8[5.5%]), and 81-95 years (2[1.4%]) in that order. A further investigation into the repayment rate of each age bracket was carried out and the results are as tabulated in table 4.2 below.

Table 4.2 Age Versus Loan Repayment

Characteristics	non defaulter		defaulter		Chi^2	p-value	Total	Percent
	Freq.	Percentage (%)	Freq.	Percentage (%)				
Age								
21- 35 years	12	29.9	31	72.1	6.668	0.155	43	29.7
36-50 years	20	40.0	30	60.0			50	34.5
51-65 years	20	47.6	22	52.4			42	29.0
66-80 years	5	62.5	3	37.5			8	5.5
81-95 years	0	0.0	2	100			2	1.4
Total	57		88				145	100.0

The data above indicates that the loan borrowers of age group 81-95 years, 21-35 years and 36-50 each with a default rate of 100%, 72.1% and 60% respectively have the highest default rates compared to those in other age brackets that is 51-65 years (52.4%), and 66-80 years (37.5%). Since there were only two respondents in the 81-95 years age bracket, it can rightly be concluded that there wasn't a good enough sample in this age bracket from which to make a statistically accurate judgment. For the other age brackets, the following inferences can be drawn. There are a number of reasons why, put together persons within the age brackets 21-50 years may default more compared to their counterparts aged 51-80 years put together. Among these include possibility that the former (21-50 years) may have dependents who are still in school going age, while the latter (51-80 years), besides having fewer or no children in school possibly have working children likely to provide back-up income that can serve as a fall back for loan repayment. Notwithstanding this show of association between age and loan repayment, it is important to note that this association is not statistically significant. This judgment is based on chi^2 test posting a P-Value of 0.155, at 5% significance level. Interpreted further this means that there is 15% possibility that the above stated results could occur by chance or put differently as a result of random distribution. Similar results of a P-value of 0.15 are posted by Kosen who in his research carried out in 2013 concludes that there is indeed no association between age and loan repayment and as such banks in Kenya should not use the age criteria as an index of selecting loan borrowers. On the premise that P>0.05, we reject the alternative and accept the null hypothesis that there is no relationship between age and loan repayment.

With regard to education, table 4.1 above indicates that majority (60[41.4%]) of the sample respondents had primary level as their highest education level. The next largest group is those that had finished form four or O-level total of which was 42 (29.0%). Those that proceeded to pursue a certificate or diploma after primary school total of which is 26 (17.9%) constitute the third largest group. Put together, those who have attained a post-secondary certificate, diploma or degree are only 15 (10.4%). Two respondents (2[1.4%]) indicated not to have attended school at all.

Overall, the data indicates that majority of respondents (88[60.7%]) have never attended secondary school (no education at all, primary, and post primary certificate/diploma), revelation

which raises questions on the ability of such respondents to comprehend trainings on loan terms, loan obligations and calculation of remaining balances after each payment. Unless one is able to understand and perform the necessary calculations indicated above, doubt is cast on his literacy. Going by the definition of UNESCO (2006), "a person is literate when he can engage in all those activities in which literacy is required for effective functioning of his group and community and also for enabling him to continue to use reading, writing and calculation for his own and the community's development." In view of the above stated definition, in the research persons who did not attend secondary school education were treated as functionally illiterate particularly in the area of numeracy skill. On this basis the data was split into illiterate (those with no education at all, primary and post primary certificate/diploma) and literate (those with at least secondary education). The repayment rates of the two groups are as indicated in table 4.3 below.

Table 4.3 Literacy Level Versus Loan Repayment

Characteristics	non defaulter		defaulter		Chi^2	p-value	Total	Percent
	Freq.	Percentage (%)	Freq.	Percentage (%)				
Education								
Illiterate	16	18.2	72	81.8	41.888	0.000	88	60.7
Literate	41	71.9	16	28.1			57	39.3
total	57		88				145	100

The table immediately above shows that out of the 145 respondents 88 and 57 were functionally illiterate and literate respectively. Of the 88 illiterate, 72 (81.8%) defaulted while of the 57 literate, only 16 (28.1%) defaulted. Overall, the results posted a P-Value of 0.000 at 5% significance level, leading to the conclusion that there is a statistically significant association between education and loan repayment performance. This confirms the perspective of Kohanzal (2009), Korankye (2014) and particularly the opinion of Gebrmedhin (2010), that "higher education level enables borrowers to comprehend more complex information, keep business

records, conduct basic cash flow analysis, and make the right business decisions. Hence, borrowers with higher level of education may have higher repayment rates."

In the area of gender, most loan borrowers 77 (53.1%) were female with the remaining 68 (46.9%) being male. This finding compares with that of World Bank (1998) which in their article *"using microfinance to advance women"* point out that MFIs particularly in developing economies target women since in most cases they (women) lack physical collateral required by traditional financial institutions. Further, in such developing economies, women rarely find wage employment outside the home. Consequently as put by World Bank, small groups provide women with an alternative "economic security outside traditional household settings." Since most Microfinance programs thrive on social mechanisms such as group-based lending, it is no wonder that most consumers of such programs are women. This finding suggests that women borrow more than men due to situations particular to them that MFIs appear to directly address. However, on the front of loan repayment, although women are generally better loan payers than men, when gender is tested against loan repayment at 5% significance level the results show that despite the association, there is no significant association between the two (gender and loan repayment). These results are presented in table 4.4 below

Table 4.4 Gender Versus Loan Repayment

	non defaulter		defaulter		Chi^2	p-value	Total	Percent
Characteristics	Freq.	Percentage (%)	Freq.	Percentage (%)				
Gender								
Male	25	36.8	43	63.2	0.348	0.555	68	46.9
Female	32	41.6	45	58.4			77	53.1
Total	57		88				145	100

Taking each group separately, the results in table 4.4 above indicate that of the 68 male borrowers, 43 (63.2%) defaulted compared to non-defaulters who stood at 25 (36.8%). In consideration that of the total of 77 females 45 (58.4%) defaulted and 32 (41.6%) did not default, women are less likely to default loan repayment compared to men. Among reasons that could contribute to this state of affair is that compared to their counterparts, women are more involved

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in social groups that can possibly provide backup in the event of business losses, and/or crop failure. Further, women respond more positively to group pressure methods and consequentially they emerge as better loan payers. Another reason is that women are more sensitive to coercive enforcement methods traditional with MFIs. However According to the Chi^2 test results indicated on table 4.4 above, the P-Value indicator of 0.555 points in the direction that the association between gender and loan repayment is statistically insignificant. It is therefore hereby concluded that the hypothesis that there is a relationship between gender and loan repayment should be rejected and the null accepted.

On marital status, the survey indicated that majority of respondents 131 (90.3%) are married, while 8 (5.5%), 5 (3.4%), and 1 (0.7%) are single, widowed, and divorced respectively. The low number of single clients can be attributed to a myriad of reasons including minimal financial obligation, lack of physical collateral, not being a member in an organized group, or even possibility that they are denied loans due to their less predictable geographical mobility which increases loan collection risk. Table 4.5 below gives an overview of loan repayment and marital status.

Table 4.5 Marital Status Versus Loan Repayment

	non defaulter		defaulter		Chi^2	p-value	Total	Percent
Characteristics	Freq.	Percentage (%)	Freq.	Percentage (%)				
Marital Status								
Single	1	12.5	7	87.5	3.26	0.258	8	5.5
Married	54	41.2	77	57.8			131	90.4
Divorced/separated	0	0	1	100			1	0.7
Widow/widowed	2	40	3	60			5	3.4
Total	57		88				145	100

Evidently two groups namely the widowed and separated/divorced formed a very small proportion of the sample. This, though a good indicator of mortality and family stability rates, it leaves us with little to draw conclusions from. Comparing the married and single it is notable that while the 87.5% of singles defaulted, only 57.5% of the married defaulted. Possibly as

proposed by Haile (2015), the married have more access to information and resource, and hence higher loan repayment capacity. These findings present the single as a higher risk group in loan repayment compared to the married. Nonetheless, there is 26% possibility that the results of loan repayment versus marital status could be due to mere chance. This conclusion is informed by a Chi^2 test P-Value of 0.258 at 5% significance level. It is therefore right to submit that there is no statistically significant association between loan repayment and marital status.

Children are often viewed as consumers and not producers. As such, family size becomes an important demographic characteristic to weigh in that persons with bigger families are more likely to seek credit services due to the many financial demands of the individual members there of. Similarly, it would be expected that often than not such clients will default more considering that their earnings may not match the many demands of the large family. An added financial obligation will only makes an already bad situation worse. The findings indicated that most respondents 71 (49%) had 1-3 children followed by those with 4-6 children 57 (39.3%). Those with 7-9 children and none constituted only 6.2% and 5.5% respectively. Table 4.6 below tabulates the loan repayment rate of each individual category.

Table 4.6 Number of Children Versus Loan Repayment

	Non defaulter		Defaulter		Chi^2	P-value	Total	Percent
Characteristics	Freq.	Percentage (%)	Freq.	Percentage (%)				
No Of Children								
None	1	12.5	7	87.5	2.802	0.358	8	5.5
1-3 children	29	40.8	42	59.2			71	49.0
4-6 children	24	42.1	33	57.9			57	39.3
7-9 children	3	33.3	6	66.7			9	6.2
Total	57		88				145	100

From the table above considering each group separately, it is indicative that out of the eight (8) clients without children, 7 (87.5%) defaulted compared to non-defaulters 1 (12.5%). This group is majorly constituted of singles whose default rate as can be observed in the marital section in table 4.5 a little further above stands at the same percentage (87.5%). This default rate is accounted by possibly a lack of financial fall back in the event of financial difficulties. This is

occasioned by the fact that majority of the clients in this group are young, and are yet to establish themselves in business, or farming. Comparing the groups with children, those with 7-9 children are likely to default more than those with 4-6, and 1-3 as indicated by their comparative default percentages of 66.7%, 57.9% and 59.2% respectively. It is surprising that clients with 1-3 children defaulted more (59.2%) than those with 4-6 children (57.9%). Possibly there is chance that the latter (those with 4-6 children) have less dependents considering that some of the children may already be working and contributing toward loan settlement among other financial obligations. This perspective is consistent with the findings of Wongnaa and Victor (2013). However, considering the data without regard to specific instances, overall there is no pattern suggesting that successful loan performance dependents on number of children. It is no wonder that the goodness of fit statistic gave a P-Value of 0.358 at 5% significance level, indicating that there is no association between number of children and loan repayment.

Diversity of income outside farming boosts the capacity of clients to repay loans successfully. Nonetheless other such sources however many, may not be adequate to cushion farmers against crop failure, animal losses or poor markets. Table 4.7 below shows distribution of off-farm income of the sampled population.

Table 4.7 Other Income Sources Versus Loan Repayment

	Non defaulter		Defaulter		Chi^2	p-value	Total	Percent
Characteristics	Freq.	Percentage (%)	Freq.	Percentage (%)				
Income source								
None	15	50	15	50	5.818	0.167	30	20.7
Formal Employment	5	38.5	8	61.5			13	9.0
Small Business	24	32.9	49	67.1			73	50.3
Informal Employment	11	40.7	16	59.3			27	18.6
Pension	2	100	0	0			2	1.4
Total	57		88				145	100.0

As shown in table 4.7 above, of the 145 clients, 30 (20.7%) do not have an off-farm source of income, and of this group, the defaulters and non-defaulters number is identical 15 (50%).

Contrary to the expectation that default rate among persons with another source of income would be lower, those with other such sources scored almost equally poorly although relatively better. Leading in this category are clients with small business (67.1%), followed by formal and informal employees each scoring 61.5%, and 59.3% respectively. Pensioners emerged the best loan payers with 0% default rate, although notably this group is so small that it is unfeasible to make a concrete conclusion on its traits. Overall, the association between loan repayment and other sources of income was found to be statistically insignificant with a P-Value posting of 0.167 at 5% significance level.

Thus, although various studies including that of Haile (2015) indicate that there is association between loan repayment and income diversity, that can only apply on the condition that such other income sources are an adequate enough fall-back.

In view of the above mentioned, an investigation into the adequacy of the other sources of income was found to be necessary, results of which are posted in table 4.8 below.

Table 4.8 Off-farm Income Level Versus Loan Repayment

	Non defaulter		Defaulter		Chi^2	P-value	Total	Percent
Characteristics	Freq.	Percentage (%)	Freq.	Percentage (%)				
Income Level								
5000 & below	3	6.1	46	93.9	70.627	0.000	49	33.8
5001 -10000	12	25.5	35	74.5			47	32.4
10001 - 15000	13	86.7	2	13.3			15	10.3
15001 - 20000	19	86.4	3	13.6			22	15.2
20001 & above	10	83.3	2	16.7			12	8.3
Total	57		88				145	100.0

The table immediately above indicates that 33.8% of the respondents earn at most Kshs 5000 per day and at worst nil, which translates to Kshs 133 per day for the highest earner. In view of the global poverty line which in 2015 was set at US$ 1.90 (World Bank, 2016), we would be right concluding that at least one third of the respondents live below poverty line. This is particularly the case considering that as shown in table 4.9 below, 39.3% of the farmers did not make any

farm sales in the previous harvest season. Of the 49 respondents with income below Kshs 5000, 46 (93.9%) defaulted, while only 3 (6.1%) paid their loans successfully. Default rate for the other categories namely 5001-10000, 10001-15000, 15001-20000, and 20001, stood at 74.5%, 13.3%, 13.6 and 16.7% respectively. From a bird's eye view, default rates drop drastically for persons with off-farm incomes that are above ten thousand Kenya shillings (Kshs 10,000), although those earning more than Kshs. 20,000 default more than those earning Kshs. 10,000-20,000.

Overall, the findings indicate that there is a significant association between off-farm income level and loan repayment. This association is respectively demonstrated by Chi^2 and P-value results of 70.627 and P-value of 0.000 at 5% significance level. It is therefore, not good enough to consider whether farmers have a source of off-farm income or not. Unless this is taken hand in hand with the adequacy of such funds, on its own off-farm income as a factor was not found in the study to significantly have association with loan repayment.

Table 4.9 Distribution of Loan Borrowers by Crop Sales

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	57	39.3	39.3	39.3
	Yes	88	60.7	60.7	100.0
	Total	145	100.0	100.0	

4:3:3 Utilization of Loan Funds Versus Loan Repayment

This section outlines the results from the survey on how utilization of funds affects loan repayment performance. Table 4.10 below shows an overview of how borrowers utilized loan funds.

Table 4.10 Distribution of Borrowers by Utilization of Loan Funds

			Purpose for Loan Funds						
			Emergency	Farm inputs	Business investment	School fees	Settle another loan	Domestic consumption	Total
Loan used for intended purpose	No	Count	3	2	6	7	7	1	26
		% of Total	11.5%	7.7%	23.0%	27.0%	27.0%	3.8%	100.0%
	Yes	Count	9	20	54	25	5	6	119
		% of Total	7.6%	16.8%	45.4%	21.0%	4.2%	5.0%	100.0%
Total Count			12	22	60	32	12	7	145
Total percentage			8.3%	15.2%	41.4%	22.1%	8.3%	4.8%	100.0%

According to table 4.10 above, of the 145 respondents, 26 (17.9%) did not use funds for intended purpose, with the highest expenditures for diverted loan funds being payment of school fees and settling another loan each of them (fees payment and settling another loan) taking 27%. Clients often give an income generating activity as purpose for which loans will be used to increase their credit worth since most lenders rarely supply credit beyond income generating activity (Khaleque, 2010). Those who did not divert loan funds were 119 (82.1%) with most of them (54[45.4%]) putting their money in small business enterprises, and the least number (5[4.2%]) spending borrowed funds for settlement of another loan.

Traditionally, loan borrowers who employ loan funds for intended purposes default less (Pasha and Negese, 2014). This judgment is in agreement with the tabulation of utilization on funds and repayment presented in table 4.11 below.

Table 4.11 Utilization of Funds Versus Loan Repayment

	Non defaulter		Defaulter		Chi^2	P-value	Total	Percent
Characteristics	Freq.	Percentage (%)	Freq.	Percentage (%)				
Used loan for intended purpose					3.499	0.61		
No	6	23.1	20	76.9			26	17.9
Yes	51	42.9	68	57.1			119	82.1
Total	57		88				145	100.0

In agreement with the above findings of Pasha and Negese, loan borrowers who used funds for intended purpose defaulted less (57.1%), compared to 76.9% which stands for those who diverted loan funds to other purposes. Nonetheless, although the results show that there is some association between utilization of funds and successful loan repayment, that association cannot be pressed too far. As indicated by Chi^2 test results of 3.499 and P-value of 0.61 at 5% significance level, the association between loan repayment and utilization of loan funds is statistically insignificant.

The so championed association between the two (utilization of loan funds and loan repayment) only stands given that other factors like effectiveness of such utilizations hold constant. This perspective is shared with that of other researchers including Khaleque, (2010) who holds that, "the diversion of the received credit from the proposed productive activity to the other productive activity may not be a serious problem, but the goodness depends on the yield rate of the activities." Similarly, using funds for intended purpose, even for business investments, matters little as long as the management skills, experience or education of the borrower are inadequate for the effective employment of credit in such productive activities. Commenting on this relationship between effective investment of loan funds and literacy, Khaleque (2010) correctly observes that "literacy and low level of education hinder effective utilization of loan funds by borrowers/users." In view of the above argument, it is in order to make the conclusion that although majority (119 [82.1%]) of loan borrowers did not divert loan funds (see table 4.10 above), and that a sizeable number of these used loan funds for productive activity (that is, business investment and farm inputs which put together account up to 62.2%), in consideration of their low functional literacy level as demonstrated in the discussion on demographic characteristics further above (see table 4.3), the effectiveness of such activities is in doubt, and so is the probability of successful loan repayment. In support of this conversation, at 5% significance level, a Chi^2 test assessing association between use of loan for intended purpose and loan repayment posted results of a P-value of 0.61 showing that that there is no association between utilization of funds and loan repayment.

4.3.4 Repayment Plan Versus Loan Repayment

This section presents and discusses findings on the association between repayment plan options and loan repayment. Two repayment plan aspects were considered, one being the duration within which both principal and interest are payable. The second repayment plan aspect is repayment frequency. Table 4.12 below shows results on the association between loan repayment and duration of payment, in which case loans with repayment spread within a year are treated as short term, and otherwise (more than a year) considered long term.

Table 4.12 Repayment Duration Versus Loan Repayment

	Non defaulter		Defaulter		Chi^2	P-value	Total	Percent
Characteristics	Freq.	Percentage (%)	Freq.	Percentage (%)				
Loan Service period								
One year	34	41.5	48	58.5	0.367	0.545	82	56.6
More than a year	23	36.5	40	63.5			63	43.4
Total	57		88				145	100

Contrary to the findings of Mokhtar, Nartea, and Gan (2012) who found out that borrowers with repayment plans extending beyond one year faced less repayment problems, the findings presented here above in Table 4.12 suggest otherwise. 63.5% of clients with long term loans defaulted compared to their counterparts (58.5%). Possibly long term loans expose borrowers to the unpredictable forces of the marketplace. Further, when farmers and small business holders' earnings and debt ratio is held high for a long time, they develop debt fatigue. Long term loan payers often do not see their debt reduce dramatically as opposed to their counterparts. Consequently they feel defeated and ultimately stop loan repayment. Having said this, it is important to note that the association between repayment duration and loan repayment as shown in table 4.12 above is not statistically significant given the results of P-value of 0.545 produced by Chi^2 at 5% significance level. For this reason one may therefore conclude that performance of loans is not influenced by repayment duration. Though long term loans may be disadvantageous, sometimes they provide farmers and investors with a longer period within which to break even. On the other hand short term loans may be harmful in that monthly payments are often times too

high leaving the meagre resources of poor borrowers strained, hence high default rate. Inversely, however, short term loans save borrowers from languishing under the burden of loan repayment for years on end, and as such encourage faithful repayment of loan funds since there is an imminent end in sight. In a nutshell, how these pros and cons of each option (long and short term) come to play to influence loan repayment are dictated by other forces which are entirely variant from one individual to the other, and as such loan service period cannot rigidly be held as having influence on loan repayment.

Other than the aspect of loan duration, loan repayment frequency is believed to have a bearing on loan repayment. Table 4:13 below shows the distribution of loan repayment against income cycle.

4.13 Distribution of Loan Borrowers by Income Cycle

	Non defaulter		Defaulter		Total	Percent
Characteristics	Freq.	Percentage (%)	Freq.	Percentage (%)		
Income Cycle						
Daily	34	59.6	44	50	78	53.8
Weekly	1	1.8	6	6.8	7	4.7
Fortnightly	1	1.8	0	0	1	0.7
Every three weeks	0	0	1	1.1	1	0.7
Monthly	15	26.2	27	30.8	42	29
Two months	0	0	1	1.1	1	0.7
Four months	1	1.8	0	0	1	0.7
Occasionally	5	8.8	9	10.2	14	9.7
Total	57		88		145	100

As shown in table 4.13 above, most of the loan borrowers 78 (53.8%) receive income daily compared to the other cycles which share the remaining 46.2% in the following proportion; weekly (7[4.7%]), fortnightly and every three weeks each (1[0.7%]), monthly (42[29]), two and four months each (1[0.7%], and finally occasionally (14[9.7%]). These results are a fair reflection of table 4.7 above which shows that 73 (50.3%) of the respondents engage in small business enterprises. It is therefore unsurprising that most clients' income cycle is daily since ordinarily the businesses they operate generate income on a daily basis.

In view of the above revelation it is only reasonable to peg clients' loan repayment frequency to their income cycle. Unfortunately, however, this is not the practice with most lenders. Possibly for reasons of convenience in monitoring loan repayments, a large number of microfinance institutions adopt fixed monthly contracts as opposed to high frequency repayment options (for instance, daily or weekly) or more flexible plans (seasonal and elastic installments). The likely prospect here is that loan default rate is higher the further we move from a daily repayment plan. Table 4.14 below is a confirmation of this submission, that is, borrowers whose repayment schedules are not tethered to their income cycle are likely to default more.

Table 4.14 Repayment Frequency Versus Loan Repayment

	Non defaulter		Defaulter		Chi2	p-value	Total	Percent
Characteristics	Freq.	Percentage (%)	Freq.	Percentage (%)				
Repayment Frequency					16.811	0.000		
Weekly	6	75	2	25			8	5.5
Three weeks	14	73.7	5	26.3			19	13.1
Monthly	37	31.4	81	68.6			118	81.4
Total	57		88				145	100

The results posted in table 4.14 above show that out of the 145 respondents, only 8 (5.5%), and 19 (13.1%) had their repayment contracts fixed at weekly and every three weeks frequencies respectively. The rest (118[81.4%]) paid their loans on a monthly basis. Out of the 8, and 19 with weekly and every three weeks repayment contracts, 6 (75%) and 14 (73.7%) repaid their loans successfully. Only 37 (31.4%) respondents out of the 118 with monthly repayment contracts repaid their loans successfully. Considering the data from the default end, the default rates for the three repayment options, that is, weekly, every three weeks, and monthly are 25%, 26.3%, and 68.6% respectively. In a nutshell the default rates increase with lower repayment frequencies. At 5% significance level, the above results posted a Chi^2 test value of 16.811 and a P-value of 0.000 showing that there is a statistically significant association between repayment frequency and loan repayment.

In view of the fact that most clients' income cycle is daily, fixing contracts far spaced off from that cycle will increase default rates. This submission is shared with that of the key pioneers of Micro Finance including Muhammad Yunus. In one of his classic works titled *"Banker to the Poor"* (2016), Yunus rightly observes that delaying repayments until the end of the month is impractical because borrowers will enormously be tempted to use whatever little money they earn every day to meet immediate consumption needs. Advocacy for more frequent schedules has faced challengers including Fischer and Ghatak (2010) who opinion that such contracts increase operations costs which are passed down to clients. The cost challenge however can be circumnavigated by making provision for clients to pay their loans via Mpesa and developing monitoring systems best suited for the above indicated mode of loan repayment. A further observation here is that repayment contracts should not only be more frequent, but also flexible, with the option of paying less during difficult seasons, and vice versa. This includes lenders providing borrowers with the option of ". . . slightly higher payment each week in return for getting a few difficult weeks (of their own choosing) off" (Karlan and Mullainathan (2006). These repayment options have their own challenges, yet considering default rate as it stands with the popular rigid monthly contracts, alternative loan repayment schedules beg to be given the benefit of the doubt.

4.3.5 Supervision Versus Loan Repayment

The fourth objective of this study was to assess the influence of supervision on loan repayment among microfinance loan consumers. The study used visitation of respondents by loan officers, number of loans being serviced and training as supervision indicators. Table 4.15 below is a presentation of the responses of loan borrowers on the question of whether they have ever been visited by loan officers either at home or in their business premises.

Table 4.15 Visitation Versus Loan Repayment

Characteristics	Non defaulter Freq.	Percentage (%)	Defaulter Freq.	Percentage (%)	Chi^2	p-value	Total	Percent
Visitation								
Was not visited	30	32.3	63	67.7			93	64.1
Was visited	27	51.9	25	48.1	5.406	0.02	52	35.9
Total	57		88				145	100.0

As shown in table 4.15 above, 93 (64.1%) of loan borrowers have never been visited by loan officers compared to 52 (35.9%) who were visited. It is also evident from the results that of those who were not visited number of which is 93, 63 (67.7%) borrowers defaulted as opposed to those who were visited 25 (48.1%). Only 32.3% of loan borrowers who were not visited repaid their loans promptly, compared to those who were visited (51.9%). It is therefore in order making the conclusion that there exists an association between visitation and loan repayment, with visited borrowers standing better chances of successful loan repayment. This positive association is reflected by a chi^2 value of 5.406, and a P-value of 0.02 at 5% significance level. This result implies that visitation may assist borrowers get regular consultation and follow up to strengthen their income generating activities.

The study also considered number of loans under service at the time of the research as yet another indicator of provision of sufficient supervision. Table 4.16 below is indicative that more than half of the loan borrowers were servicing at least more than one loan.

Table 4.16 Number of Loans Versus Loan Repayment

	Non defaulter		Defaulter		Chi^2	P-value	Total	Percent
Characteristics	Freq.	Percentage (%)	Freq.	Percentage (%)				
No of Loans								
1	34	56.7	26	43.3	12.924	0.002	60	41.4
2	20	27%	54	73%			74	51.0
3	3	27.3	8	72.7			11	7.6
Total	57		88				145	100

It is suggested in the study that good enough supervision should have a system of gathering credit information of loan consumers so that number of loans per borrower is kept at a minimal low. As demonstrated in table 4.16 above, only 41.4% of the 145 respondents were servicing one loan at the time the data was collected. Of these 26 (43.3%) defaulted compared to those with two and three loans whose default rate closely compare as indicated by the figures 54 (73%) and 8 (72.7%) respectively. At 5% significance level, these results yield a Chi^2 and P-values of 12.924 and 0.002 respectively. There is therefore a significant association between number of loans concurrently serviced and loan repayment performance. Amassing loans among microfinance loan consumers remains a big problem, particularly because most microfinance institutions do not enjoy the services of credit bureaus. Further, since largely the clientele of such institutions are poor, their appetite for money to meet day to day immediate needs is hardly satisfied within the conventional lending practices. Consequently a sizeable number resort to acquiring credit from shylocks to service other loans and pay fees among other financial obligations. It is in this regard that as earlier presented in table 4:10 above, of the 26 borrowers who did not use loans for intended purpose, 7 (27%) used loan funds to settle another loan. Worse still, even among those who used loan funds for intended purpose (119), 5 (4.2%) used loan funds to settle another loan.

Possibly training consumers on credit management would help improve loan repayment. Going by the distribution of borrowers by training as shown in table 4.17 below, it is highly unlikely that any single member of the respondents never received training on financial management.

Table 4.17 Distribution of Respondents by Training

		Ever trained on financial management?		Total
		No	Yes	
Type of group	Savings	17	124	141
	Religious	74	6	80
	Self-help group	102	30	132
	Political	4	0	4
	Funeral	380	10	390
	Table banking	174	60	234
Total		751	230	981

The study however found out that training, which has been built into supervision programs of the institution including visitations in homes, business premises and small groups does not impact loan repayment. This judgment is based on the results posted in table 4.18 below.

Table 4.18 Training Versus Loan Repayment

	Non defaulter		Defaulter		Chi^2	p-value	Total	Percent
Characteristics	Freq.	Percentage (%)	Freq.	Percentage (%)				
Training					0.002	0.605		
Was not trained	4	40	6	60			10	6.9
Was Trained	53	39.3	82	60.7			135	93.1
Total	57		88				145	100.0

One would have expected the default rate between those who were trained and otherwise to be significantly different. However, as shown in table 4.18 above, the default and non-default rate between the two groups is more or less the same. Out of the 145 respondents, 135 were trained and 10 were not. Out of these that is, 135 and 10, 60.7% and 60% respectively defaulted.

Among those who were not trained 4 (40%) successfully repaid their loans while 53 (39.3%) of those trained repaid loans successfully. At 5% significance level, this narrow variation is reflected by a chi^2 test result of 0.002 and a P-value of 0.605, meaning that there is no probability that there is a statistically significant association between training and loan repayment.

This finding is perplexing and contrary to the findings of other researchers including Yunus (2016). Several factors however can explain away this state of affair. To begin with, in spite of provision of training, the poor are many times, especially during famine seasons, extremely pressed by immediate consumer needs that no training will persuade them not to borrow even when instinctive knowledge tells them that it is unwise to do so. Secondly, unless training is relevant, on target, addressing real issues in real time, it is less than helpful. Thirdly, earlier in the study, it was discovered that most (60.7%) of the respondents were functionally illiterate (See Table 4.4). This alarming illiteracy level raises questions on the comprehension abilities of the respondents. Therefore in as much as training materials may be relevant, loan consumers may not be able to make sense of the content, and even in the unlikely event such content is grasped, as discussed here above, more biting immediate needs predisposes them (loan consumers) to reckless borrowing.

CHAPTER FIVE

SUMMARY OF FINDINGS, COCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This section looks back through the findings presented and discussed in chapter four and draws summaries and conclusions from the same. The chapter will focus on the meaning of the findings, and what actions should be taken in light of the results. It will be presented here whether the findings in whole sale or in part confirmed the hypothesis and how they related to the objectives of the study which as indicted in chapter one were, establishing the influence of demographics, loan utilization, repayment plan and supervision on loan repayment. At the close of the chapter, recommendations for policy and suggestions for further research will be presented.

5.2 Summary

Microfinance institutions in Kenya are a potential alternative financial partner for micro businesses that cannot receive funding from traditional banks. In Spite of the key role that micro finance plays, its acquisition and repayment are fraught with a number of problems, the major being loan default. True to this assertion, the study found out that 61% of the respondents did not promptly repay their loans. At the beginning of the research four factors, demographics, utilization of loan funds, repayment plan, and supervision were hypothesized as contributing to this high rate of default. Under each of these four, explanatory indicators were considered and tested using chi^2.

In the investigation, a number of factors were found to have bearing on loan repayment. In agreement to the prediction that demographic characteristics influence loan repayment, the study found that not every demographic characteristic is significant in determining loan repayment. A few however were found to be significant including level of education, and level of income outside farming, both of which posted a P-value of 0.000. The study therefore concluded that there is a statistically significant association between these two (level of education and off-farm income level), and loan repayment. As much as there was some association between loan repayment and age, gender, marital status, number of children, and off-farm income, the

association was found to be statistically insignificant with each of these posting P-values of 0.155, 0.555, 0.258, 0.358, and 0.167 respectively.

The assumption that loan utilization influences loan repayment was found to be untrue. Although the study found out that borrowers who divert funds default more than their counterparts, the difference between the two was found to be statistically insignificant. Even when funds are used for intended purpose, as long as the yield rate of that defined purpose is low, faithful utilization of loan funds does not necessarily translate to successful loan repayment.

Duration over which both principal and interest are payable, as well as repayment frequency were predicted to be key repayment plan aspects that influence loan repayment. The former, was found to be statistically insignificant with Chi^2 and P-values of 0.367 and 0.545 respectively. What was found to be significant statistically is repayment frequency which posted results of a P-value 0.000, indicating that there exists a significant association between loan frequency and loan repayment. In view of the fact that most microfinance service consumers are not formerly employed, and that their earnings are low and customarily daily, weekly or otherwise, it is only reasonable to design loan repayment contracts that are in sync with such income cycles.

The last objective of the research was to establish the extent to which provision of supervision influences loan repayment among microfinance loan consumers in Makueni County. Several aspects considered to be key in supervision were investigated including visitations, number of loans, and training, with the last two aimed at measuring quality of supervision. The results indicated that borrowers who were visited defaulted less (48.1%), compared to those that were not (67.7%). This difference was found to be significant with Chi^2 test results of 5.406 and P-values of 0.002. Despite the visitations, more than half of the respondents were found to be servicing two or more loans and compared to those who were servicing one loan, those servicing more loans were found to default more. Chi^2 test results yielded a P-value of 0.002, meaning that the association between the two is statistically important. The results put supervision mechanisms of the MFI in doubt. Further, in view that training is done by credit officers and is built into supervision, the study sought to investigate whether the training offered tilts the scales of loan repayment significantly. Contrary to prediction, training was not found to have any statistical effect on loan repayment. Chi^2 and P-values for training against repayment yielded

values of 0.002 and 0.605 respectively, thus showing that there is no significant association between the training offered and loan repayment. Borrowers' comprehension capacity, relevance of training materials, timeliness of delivery of such training materials as well as borrowers' open disregard of training persuaded by dire need are some of the possible factors suggested in the study to be rendering training ineffective and hence unimportant in improving loan repayment.

5.3 Conclusion of the Study

Going by the findings of the study, it was shown that loan repayment in microfinance institutions remains a problem. Unless checked, two things remain at stake. First, due to poor loan collection, the institutions will not have any reserves left to continue providing their most needed credit services to the poor. Ultimately the future of both (MFI and clientele) remains bleak. Secondly unless the due attention is paid to the factors here discussed, MFIs can fittingly in the words of Bateman (2013) be described as constituting ". . . a very powerful 'anti-development' intervention that locally embeds poverty. . . ." The research has demonstrated that maintaining sustainability in MFIs takes paying keen attention to factors that influence loan repayment among these including demographic characteristics of clients, utilization of loan funds, repayment plan and supervision. Each of these contributes relatively to successful loan repayment. According to the findings, a failure to pay attention to outside factors including clients' literacy levels, as well as their off-farm income levels are a recipe for poor loan collection. Internal factors including developing favorable repayment plans and purposeful supervision and training that puts the education level of borrowers into focus were fronted as critical and urgent. The research further demands that MFIs create genuine interest in the profitability of the activities their clients engage in. It is the interplay of these factors that will guarantee the sustainability of microfinance institutions, and the economic uplift of the poor in rural areas.

While the findings in the study reflect a great deal of other works cited in the literature review, there are certain areas that the research deviated from common trends. Among these include the position that training and utilization of loan funds influence loan repayment. These were found to be statistically insignificant, owing to several other aspects pertinent to each of them. Training was found not to have practical advantage on loan repayment possibly because it is not

adequately purposeful, on target and tailored to suit clients' literacy levels. On utilization of funds for intended purpose, not diverting loan funds to other activities was presented in the study as important only when the yield rate of the intended activities is put into perspective. According to the research, of the respondents who utilized funds for intended purpose, 62.2% utilized funds for farm inputs and small businesses. Ironically however, the overall default rate stands at a similar percentage (61%). Thus the research shows that unless MFIs are more actively involved in evaluating and helping farmers and small business holders to break even in their investments, poor return on investment will persist and consequently perpetual poor loan repayment. On this item, the research concludes that extending credit services to borrowers on the basis that funds will be utilized for a gainful activity is frivolous.

5.4 Recommendations

In view of the findings discussed in the study, it is recommended that precaution must be applied when extending credit services to borrowers whose monthly off-farm income is below ten thousand Kenyan shillings (Kshs. 10,000) since most of these borrowers do not have adequate fall back in the event of crop failure, or loss of livestock. Further if training is to make an impact on loan repayment, it must be purposeful, targeting real issues in real time and adjusted to fit the borrowers' low literate levels. In addition it is recommended that MFIs take genuine interest in the profitability of the activities for which clients borrow money, considering that as put by Khaleque (2010) ". . . proposed income generating activity requires some level of experience or education . . . to make the usage of the received loan effective." In addition, repayment plans, particularly repayment frequency should be synchronized with borrowers' income cycles. Moreover, provision should be made for borrowers to pay larger installments during high income seasons so as to get a few installments off during more difficult seasons. Lastly, a better monitoring mechanism is required to ensure that borrowers service at least one loan at a time, since, as shown in the study, servicing more loans precipitates poor loan repayment. A suggestion here would be MFIs should join hands in identifying and contracting a credit bureau to provide them with credit profiles of their clientele. Further stringent measures must be taken by the government to curtail operation of unlicensed credit merchants otherwise known as shylocks.

5.5 Suggestions for Further Research

As indicated in the delimitations section of the study, the study chose a limited path of the factors influencing loan repayment in Makueni County. In the course of the study, it emerged that loan repayment is actually not the only problem surrounding microfinance as an entity. One of such other problem is the question whether microfinance really helps the poor or it only plunges them deeper into poverty. This therefore remains one of the areas where more considerable attention is required. Secondly, as pointed out in the research, one of the ways of facilitating high frequency repayments is by making provision for borrowers to pay their loans via Mpesa. More research is required to find out the impact information technology has made on loan repayment among microfinance loan consumers in rural areas. A key point here is whether such consumers, majority of whom are illiterate can competently take full advantage of such platforms without being exposed to the risks there of.

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Appendix I: Questionnaire

Factors Influencing Loan Repayment Among Microfinance Loan Consumers In Makueni County: A Case of Nzaui/Kilili/Kalamba ward, Makueni County, Kenya.

PREAMBLE

Thank you for accepting to take part in this survey. Approximately it should take twenty minutes to answer the few questions in the survey. The purpose for this questionnaire is purely academic. Your responses are voluntary and will be treated with uttermost confidentiality. Please be brief and as accurate as possible in all your answers.

SECTION ONE: LOCATIONAL DATA

1. County: <u>Makueni</u>
2. Sub-County: <u>Makueni</u>
3. Location _____
4. Sub-location _____
5. Village _____
6. Distance (in walking time) to nearest market center _____
7. Distance (in walking time) to KILIMO SACCO office _____

SECTION TWO: DEMORGRAPHIC CHARACTERISTICS

Part A: Social Characteristics

8. What is your name _____
9. When were you born _____
10. Gender
   i. Male ☐ =0
   ii. Female ☐ =1
11. In which system of education did you attend your studies.
   i. None ☐ =0
   ii. Old system (7-4-2-3) ☐ = 1
   iii. Current system (8-4-4) ☐ = 2
12. What is your highest education level_____.
   i. None ☐ =0
   ii. Primary school ☐ =1
   iii. Post primary sch. certificate/diploma ☐ =2 ☐
   iv. Form four/ O-Level =3
   v. A-level ☐ =4
   vi. Post-sec. sch. certificate/diploma ☐ =5

vii.   Degree ☐=6   viii.   Masters and above ☐ =7

13. Have you received any training on finance? If no proceed to question 15.

    i.   Yes ☐=1   ii.   No ☐ =0

14. Which institution, organization trained you on financial management? _____

15. What is your marital status

    i.   Single ☐ =1   iii.   Divorced/separated ☐ =3

    ii.   Married ☐=2   iv.   Widow/widower ☐ =4

16. How many children do you have _____. If none proceed to part B below

17. Kindly indicate the years each child was born

Index	Name	Year of birth	Age	Unit
i				
ii				
iii				
iv				
v				
vi				
vii				
vii				
ix				
x				

Part B: Economic Characteristics

18. What is the roofing material of the main house?

    i.   Grass ☐ =1   iii.   Tiles ☐ =3

    ii.   Iron sheets ☐=2   iv.   Other. Specify _____=4

19. Indicate the floor type of the main house

    i.   Earth ☐ =1   iv.   Wood ☐ =4

    ii.   Cement ☐ =2   v.   Other. Specify _____=5

    iii.   Tiles ☐ =3

20. What is the wall material of the main house?

    i.   Mud ☐ =1   iii.   Stone ☐=3

    ii.   Bricks ☐=2   iv.   Iron sheets ☐ = 4

v.   Other. Specify _____=5

21. What is the mode of ownership of the main house?

   i.   Owned ☐ =1   iii.   Owned by a relative ☐ =3

   ii. Rented ☐ =2   iv.   Other. Specify _____=4

22. What is the acreage of your land _____

23. Do you grow any crops? If no proceed to question 26 below.

   i.   Yes ☐   =1   ii.   No ☐ =0

24. In the table given below, indicate four main crops grown, and amount harvested in the last one year

Crop Code	Maize=1	Citrus=2		Mangoes=3	Beans=4	Peas=5
	water melon=6	Tomato=7		Cabbage=8	sukuma=9	
Code	Crop	Amount harvested		Units	Amount sold	Units

25. Of the crops harvested, did you sell any? If yes complete the table above by indicating the amount sold.

   Otherwise proceed to question 27 below.

   i.   Yes ☐   =1   ii.   No ☐   =0

26. Do you keep any livestock or poultry? If no proceed to question 28 below.

   i.   Yes ☐   =1   ii.   No ☐   =0

27. If yes indicate in the table provided below the number of each kept, and sold in the last one year.

Livestock/poultry code	Cattle=1	Donkey=2	Goats=3	Sheep=4	Chicken=5	Ducks=6
	Turkey=7					
Code	Livestock/poultry	Number kept	Number sold	Produce sold	Amount	Units
ANIMAL NAMES PROVIDED HERE	ANIMAL NAMES NOT PROVIDED					

28. Indicate other sources of income besides farming

    i.   None ☐ =1   iv.   Informal employment ☐ =4

    ii.   Formal employment ☐ =2   v.   Pension ☐ =6

    iii.   Small business enterprise ☐ =3   vi.   Other? Indicate _____ =8

29. If other sources of income, select from provided options the range (given in Kshs) of such earnings?

    i.   5000 & below ☐ =1   iii.   10001-15000 ☐ =3   v.   20001 & above ☐ = 5

    ii.   5001-10000 ☐ = 2   iv.   15001-20000 ☐ =4

SECTION THREE: SOCIAL NETWORKS

30. Are you in any social group? If yes fill in the table below. Otherwise proceed to section four

    i.   Yes ☐ =1   ii.   No ☐ =0

Code	Type-e.g. Savings=1 Religious=2, SHG=3 Political=4 Funeral=5 Table banking=6 etc.	Date formed 0-1yr=0 1-2yr=1 2-3yr=2 3-4yr=3 4-5yr=4 5+yr=5	Group self-constituted? Yes=1 No=0	No. of members	Ever trained on financial management? Yes=1 No=0	Name of trainer	Hold leadership position? Yes=1 No=o	Position held
1								
2								
3								
4								
5								
6								
7								

SECTION FOUR: LOAN REPAYMENT

31. What process does KILIMO SACCO follow before advancing loans to clients.

    i.   Screening in the office ☐ =1   iv.   Training on loan management ☐ =4

    ii.   Visit at home ☐ =2   v.   Require approval from group members ☐ =5

    iii.   Visit at business premises ☐ =3   vi.   Other. Specify _____ =6

32. Have you ever been denied a loan by KILIMO SACCO? If no proceed to question 34 below

i.   Yes ☐ =1   ii.   No ☐ =0

33. Why were you denied loan at that time?

   i.   Group didn't approve ☐ =1   iii.   Don't know ☐ =3

   ii.   Collateral inadequate ☐ =2   iv.   Other. Specify _____ =4

34. How many loans are you currently servicing?

   i.   1 ☐ =1   iv.   4 ☐ =4

   ii.   2 ☐ =2   v.   More than four ☐ =5

   iii.   3 ☐ =3

35. Do you currently have a loan with KILIMO? If no proceed to question 63 below.

   i.   Yes ☐ = 1

   ii.   No ☐ =0

36. When did you take the loan? (if more than one pick the latest) _____

37. Did you inform your spouse when you took this loan? If yes, proceed to question 38 below. Otherwise go to question 39.

   i.   Yes ☐ =1   iii.   N/A ☐ = 3

   ii.   No ☐ =2

38. Why didn't you tell your spouse when you took the loan?

_____

_____

39. How long (in months) is the loan to be serviced?

   i.   0-6 ☐ =1   v.   24-30 ☐ =5

   ii.   6-12 ☐ =2   vi.   30-36 ☐ =6

   iii.   12-18 ☐ =3   vii.   More than 36 =7

   iv.   18-24 ☐ =4

40. What grace period (in weeks) was given to you before you could start loan repayment?

   i.   1 ☐ =1   vi.   6 ☐ =6

   ii.   2 ☐ =2   vii.   7 ☐ =7

   iii.   3 ☐ =3   viii.   8 ☐ =8

   iv.   4 ☐ =4   ix.   More than 8 ☐ =9

   v.   5 ☐ =5

41. Please indicate your income cycle.

   i.   Daily ☐ =1   iii.   Fortnightly ☐ =3

   ii.   Weekly ☐ =2   iv.   Every three weeks ☐ =4

v.   Monthly ☐ =5   viii. Four months ☐ =8

vi.   Two months ☐ =6   ix.   Occasional ☐ =9

vii. Three months ☐ =7   x.   Other. Specify _____=10

42. Please indicate your loan repayment frequency

i.   Daily ☐=1   vi.   Two months ☐=6

ii.   Weekly ☐ =2   vii. Three months ☐=7

iii. Fortnightly ☐=3   viii. Four months ☐=8

iv.   Monthly ☐=4   ix.   Lump sum ☐=9

v.   Every three weeks ☐ =5   x.   Other. Specify _____ =10

43. Did you provide collateral for the loan given? If no proceed to question 45 below.

i.   Yes ☐ =1   ii.   No ☐ =0

44. If yes what collateral did you provide _____

45. If no what security did you provide _____

46. Complete the table below on installments, supervision, and group involvement in loan repayment management.

Size of loan in Kshs.	No of installments payable	Group discussed with me on how to pay loan Yes=1 No=0	Methods group uses to ensure members pay	Has any loan officer visited you at home or business premises Yes=1 No=0	Mode of remitting loan funds Mpesa=1 Across counter=2 Group meetings=3 Collection by loan officer=4

47. Indicate purpose for which loan was taken

i.   Emergency ☐ =1   v.   Settle another loan ☐ =5

ii.   Farm inputs ☐ =2   vi.   Domestic consumption ☐=6

iii. Business investment ☐=3   vii. Other. Specify _____=7

iv.   School fees ☐=4

48. Did you use loan funds for intended purpose?

   i. Yes ☐ =1   ii. No ☐ = 0

49. Indicate purpose for which loan funds were used

   i. Emergency ☐ =1   v. Settle another loan ☐ =5

   ii. Farm inputs ☐ =2   vi. Domestic consumption ☐ =6

   iii. Business investment ☐ =3   vii. Settle another loan ☐ = 7

   iv. School fees ☐ =4   viii. Other. Specify _____ =8

50. Since you took this loan, have you skipped paying any installment? If no proceed to question 63 below

   i. Yes ☐ =1   ii. No ☐ =0

51. If you have defaulted, about how many installments had you paid before you started experiencing repayment difficulties?_____

52. Kindly indicate the reasons that caused you skip loan repayment

   i. Crop failure ☐ =1   v. Fees ☐ =5

   ii. Business losses ☐ =2   vi. Sickness ☐ =6

   iii. Poor markets ☐ =3   vii. Death of supportive relative ☐ =7

   iv. Livestock loss ☐ =4   viii. Other. Specify _____ =8

53. From the above selected reasons, indicate which contributed most _____

   i. Crop failure ☐ =1   v. Fees ☐ =5

   ii. Business losses ☐ =2   vi. Sickness ☐ =6

   iii. Poor markets ☐ =3   vii. Death of supportive relative ☐ =7

   iv. Livestock loss ☐ =4   viii. Other. Specify _____ =8

54. Did you resume loan repayment? If no proceed to question 58

   i. Yes ☐ =1   ii. No ☐ =0

55. For how long did you skip loan repayment before resuming?

   i. One month ☐ =1   iv. Four months ☐ =4

   ii. Two moths ☐ =2   v. Other. Specify _____ =5

   iii. Three months ☐ =3

56. What motivated you to resume loan repayment?

   i. Fear to lose collateral ☐ =1   v. Moral obligation ☐ =5

   ii. Fear of being black listed ☐ =2   vi. Guard reputation ☐ =6

   iii. Pressure from group members ☐ =3   vii. Other. Specify _____ =7

   iv. Pressure from loan officer(s) ☐ =4

57. Of the above mentioned motivations, which would you rank highest in motivating you to resume loan repayment?

i. Fear to lose collateral ☐ =1   v. Moral obligation   =5

ii. Fear of being black listed ☐ =2   vi. Guard reputation ☐ =6

iii. Pressure from group members ☐ =3   vii. Other. Specify _____ =7

iv. Pressure from loan officer(s) ☐ =4

58. What happened when you defaulted?

i. I Lost collateral ☐ =1   iv. Group penalized me ☐ =4

ii. I Suffered monetary penalty ☐ =2   v. Other. Specify_____=5

iii. I have been black listed ☐ =3

59. When you had problems, did the bank or any loan officer call or come to discuss with you on the challenges faced. If no proceed to question 61

i. Yes ☐ =1   ii. No ☐ =0

60. What was the outcome of the discussion with bank or loan officer?

i. Disagreed ☐ =1   iii. Loan was waived ☐ =3

ii. Customized repayment plan ☐ =2   iv. Other. Specify_____=4

61. The other loans (if any) that you have taken in KILIMO SACCO, have you ever defaulted? If no proceed to question 63

i. Yes ☐ =1   ii. No ☐ =2

62. What happened upon default?

i. Lost collateral ☐=1   iv. Group punished ☐ =4

ii. Suffered monetary penalty ☐=2   v. Other. Specify_____=5

iii. No longer loan eligible ☐ =3

63. Are you on NHIF or any other medical insurance cover?

i. Yes ☐ =1

ii. No ☐ =0

64. Are you satisfied with the entire loan scheme of KILIMO SACCO? If no proceed to question 65.

i. Yes ☐=1   ii. No ☐ =0

65. Give two most important suggestions on what you would wish improved

i. _____

ii. _____