EFFECTS OF MICRO CREDIT ACCESSED ON WELFARE OFHOUSEHOLDS: THE CASE OF AINAMOI SUB COUNTY, KERICHO COUNTY, KENYA

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DECLARATION AND RECOMMENDATIONS

Declaration

This research project report is my original work and has not been presented for the award of a diploma or degree in this or any other University.

Signed …………………………………… **Date………………………………**

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Recommendation

This report is the candidate's original work and it has been prepared with our guidance and assistance, it has been presented for examination with our approval as University supervisors.

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DEDICATION

In this life everything happens for a reason,

Make everyday count, appreciate every moment,

And take from it everything you possibly can,

For you may never be able to experience it again.

ACKNOWLEDGEMENT

Let me register my gratitude to the almighty God who granted me good health, the resources to accomplish this study and the time to undertake it. May I also thank the Egerton University for granting me the opportunity to undertake this course. Along with my appreciation, there are few people, who really helped me to make this endeavor to be a successful one. First, I would like to pass my appreciation, gratitude and thanks to my supervisors, Professor J. K. Lagat, PhD, Associate Professor of Agricultural Economics, Egerton University, Njoro and Tom. R.Wambua, Senior Lecturer, Department of Agricultural Economics and Business Management, Egerton University, Njoro for their valuable suggestions and ideas in every step of my work, without the commitment and support of those persons, this study would never have taken shape. To the enumerators who collected data, I say a big thank you for your hard word, sacrifice and dedication. I cannot forget to thank the micro credit beneficiaries and non-beneficiaries who sacrificed their time to answer questions and fill questionnaire and also for the trust and the confidence they had in on me to entrust me with such sensitive information. Finally, a big thank you goes to Micro Finance Institutions and entrepreneurs who enabled me to access their clientele for the purposes of this study. I will forever be indebted to all the above persons and institutions. It was truly, a wonderful learning experience.

ABSTRACT

The coming into force of Microfinance Act 2006 in May 2008 enabled micro finance institutions to disburse funds as well as receive deposits. Prior to this renowned microfinance institutions had served residents of Ainamoi sub County in Kenya, for more than five years. The different portfolios into which the credit had been used suggest its ability to reach a wide section of all cadres of the population. However, the impact on the welfare across the beneficiaries had not been established. This study sought to fill this knowledge gap**.** The objective was to examine factors influencing access and levels of micro credit accessed and their effects on household's incomes and expenditures. To capture this, a sample of 98 households which had accessed micro credit from year 2008 to 2012 was compared with a similar number which had not accessed micro credit. Stratification of households was done according to their membership to microfinance institutions. Random sampling method was used to select loan beneficiary households. The data was collected by administration of a structured questionnaire and it was analyzed using the SPSS and other statistical techniques. Heckman selection model was applied to identify the factors and their effect on the level of participation of households in the micro credit. Difference in difference (DID) model was used to analyze the effects of micro credit on incomes of households. The results from the study showed improved levels of beneficiaries' incomes after accessing micro credit and since household income is one of the welfare indicators, it was concluded that accessing micro credit resulted in the improvement of the beneficiaries' quality of life. The findings are expected to assist the policy makers on improvement of the existing policies and pieces of legislation on microfinance cost, infrastructure and products suitable for the ever changing needs of the targeted beneficiaries.

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LIST OF ABBREVIATIONS AND ACRONYMS

ASCAS - Accumulating Savings and Credit Association

DTMs - Deposit Taking Microfinance Institutions

BASE - British Aid to Small Enterprises

CBK - Central Bank of Kenya.

DFIB - Department of International Development of United Kingdom

KNBS - Kenya National Bureau of Statistics

GOK - Government of Kenya.

KEMCAMP - Kenya microfinance capacity building programme

KIE - Kenya Industrial Estate

K-REP - Kenya Rural Enterprise Program

KWFT - Kenya Women Finance Trust

MFIs - Micro Finance Institutions

MOF - Ministry of Finance

NGO - Non Governmental Organization

ROSCAs - Rotating Savings and Credit associates

WEDCO - Women's Enterprise Development Project

WMS - Welfare Monitoring Survey

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study.

The purpose of this study was to establish factors affecting access, the amounts of credit accessed and the effects of the accessed credit on household income in Ainamoi Sub County, Kericho County, Kenya. This chapter presents the background of the study, statement of the problem, objectives of the study, the hypotheses, limitations, scope and the significance of the study.

In Kenya, micro finance has experienced considerable transformation, growing from a fledgling industry dominated by a few donor and church based nongovernmental organizations in 1970s to a vibrant sector increasingly driven by commercialization. Microfinance is now recognized as a legitimate provider of financial services and which is key to unlocking economic growth for entrepreneurs and poor families (Kenya National Bureau of Statistics, 2007).

During the last 15 years microfinance has gained a lot of support from both the Government of Kenya (GOK) and international donors to be considered an industry in itself. In 1990s, the GOK adopted a structural adjustment programme that liberalized the economy and supported the micro enterprises to counter any negative effects of this liberalization. The government was interested in supporting entrepreneurial development, hastening economic growth, and creating economic opportunities that were all considered to be hindered by lack of credit and limited access to financial services in rural areas (Central Bank of Kenya, 2005).

The coming into force of Micro Finance Act (2006) in May 2008 provided MFIs with a framework to take deposits; to be regulated and provide a wider range of financial products including savings and deposits, lending and money transfer. The Act further provided for savings in Deposit Protection Fund as the case with commercial banks hence promoting customers confidence in MFIs. (CBK, 2009)

The Central Bank of Kenya is optimistic that the financial inclusion gap will be significantly narrowed, through the usage of deposit taking microfinance institutions (DTMs).It is committed

to an all-inclusive financial system to serve a majority of the Kenyan populace and remains ardent in formulating policies that support innovation in the financial sector (CBK, 2011). The effect of this policy has been the establishment of a large number of microfinance institutions whose coverage includes rural areas.

In Ainamoi Sub County, a baseline survey carried out prior to this research established that there were five active micro finance institutions which have been operating for more than five years. These are: Small and Medium Enterprises Programme (SMEP) with 300 members, Kenya Women Finance Trust (KWFT),650 members, Women enterprise fund (WEF),450 members, Faulu Kenya,700 members, and Ecolof,350 members. These microfinance institutions mainly funded development projects like building of dairy units, poultry units, purchase of farm inputs, small scale business, individual enterprises, purchase of salon equipment, tailoring equipment, welding machines, motorbikes and plots. They also provided salary advances for the salaried customers in case of emergencies.

The results from the survey also, showed the presence and expansion of the operations of microfinance institutions' infrastructure such as opening of new branches, employment of new members of staff and increased disbursement of loans. While this might signify a positive development on the side of the microfinance institutions, its effects on beneficiaries especially on their incomes, expenditures, asset accumulation and savings had not been established. This research therefore sought to ascertain these effects of micro credit on the welfare of the individuals and households in the constituency.

1.2 Statement of the Problem

Literature on diverse micro credit activities report that it can be used as a means of reducing poverty in rural areas of Kenya. Many of the previous studies on its effect on household welfare done in Kenya and abroad have shown a positive impact. While studying the impact of microfinance on household income in Makueni District, Kenya, (Kiiru, 2007) observed that households should embrace microfinance as a poverty reducing tool. Mugambi, (2010) who conducted a study on micro credit utilization and its impact on household income, in Iganga District in Uganda, concluded that it had a positive impact women empowerment. However results from the study done by Zeller (2002) who conducted a research on micro credit and its'

impact on household welfare showed that it did not have a significant effect on household welfare. It is clear therefore that while there are numerous findings about what microfinance can do including increase on household income, women empowerment, improved consumption expenditures and asset accumulation, the research done so far is not sufficient nor conclusive, hence the need to conduct a research to establish exactly what micro credit accessed by individuals and households can do becomes necessary.

In Kenya the performance of microfinance institutions in raising rural household welfare is expected to increase with the expanded mandates and improved legal structures. Since Ainamoi Sub County has been served by major microfinance institutions for more than five years prior to the coming into force of the Micro Finances Act 2006, there is increased diversification of portfolios into which the credit by beneficiary households is used. Despite the large number of households facilitated and the varied projects funded, the impact on the welfare across the beneficiaries has not been established. It is against this realization that the study sought to fill this knowledge gap by evaluating the factors that influence micro credit access, the levels accessed and there effects on household income.

1.3 General Objective of the Study

The objective of this study was to provide insights on changes in welfare of households in Ainamoi sub County of Kericho County as a result of accessing micro credit.

1.4 Specific Objectives of the Study

i) To determine socioeconomic and institutional factors influencing access to microcredit in Ainamoi Sub County.

ii) To determine the socioeconomic and institutional factors affecting the levels of participation by beneficiaries in micro credit in Ainamoi Sub county.

iii) To establish the effects of micro credit on household incomes in Ainamoi Sub County.

1.5 Hypotheses of the Study

The study has the following hypotheses.

i) Social, economic and institutional factors do not influence household access in micro credit programmes.

ii) Levels of participation in micro-credit by households are not affected by socioeconomic and institutional factors.

iii) The levels of income have not improved with access to micro credit.

1.6 Significance of the Study

Understanding the changes in welfare of rural populations is significant for national development. The purpose of the national government in licensing microfinance institutions was to mobilize rural borrowing and savings so as to change the quality of life in rural areas. The results of the findings will help the micro finance institutions to understand the effect of their products and services on welfare of households and individuals and thus form the basis of improving them in order to maximize impact on social and economic development on the members.

The central bank as a regulator may need this information to further influence effectiveness of the right financial policies for rural areas, thereby improving their welfare. This will be an important step in policy formulations to aid in tackling the challenges of poverty by better directing and targeting credit services. This study was not only relevant but also necessary.

1.7 Scope of the Study

This study was carried out in Ainamoi Sub County of Kericho County on households and individuals who obtained micro credit from year 2008 to 2012. The control group was an equal number of households which had not taken microcredit.

1.8 Limitations and the delimitations of the study

The main challenge came during the interviews as it took long to explain questions due to low literacy levels of respondents. This was addressed by increasing the amount of time utilized to answer the questions. Secondly, since the data was restricted only to Ainamoi Sub County, it may not be sufficient representative of scenario in the whole country.

1.9 Operational definition of terms.

Beneficiaries.

For the purposes of this study this refer to persons or group of persons, household or micro and small enterprises who have managed to access micro credit and other financial services from microfinance institutions.

Households.

A person or group of persons usually but not always bound together by ties of kinship and who share a commonality of life, in that they share a common source of food and that they are answerable to the same household head. They may live in the same house or several houses within the same compound (K.N.B.S 2009).

Household welfare

Welfare of an individual or household is the provision of minimum level of wellbeing and social support given. According to (Estes, 2004) it is the whole set of specially designed programmes designed to meet financial security and related needs of persons who are unable to provide for their own basic social and material needs. In order to establish the improvement in household welfare as a result of microfinance access, variables such as yearly household income, women empowerment, improved education, access to healthcare are evaluated.

Levels of micro credit participation

For the purposes of this study levels of credit access and levels of participation are used interchangeably to mean the amounts of micro credit accessed by different households, individuals and small and medium enterprises from institutions offering micro credit.

Micro credit access

This refers to the making available of small loans to individuals, households and entrepreneurs who are too poor and lack the necessary collateral to qualify for conventional credits from bank through disbursements through specialized delivery mechanisms. They normally form solidarity groups for the purposes of guaranteeing one another and also enforce loan repayment.

Poverty

According to Mohammad (2007) “Poverty is a condition in which a person of a community is deprived of the basic essentials and necessities for minimum standards of living. Basic essentials may be material resources such as food, safe drinking water and shelter or social resources such as access to information, education, health care, social status, political power or the opportunity to develop meaning full connections with other people in the society. For the purposes of this study this definition shall apply.

CHAPTER TWO

LITERATURE REVIEW

This chapter presents a review of some of the existing literature on the effects of micro finance. Among the areas revived are the existing theories and empirical evidence that explain the existence and the growth of micro credit. The existing literatures on the effects of finance on household welfare are examined by reviewing its effect on household income, consumption expenditure, house assets, and women empowerment. The role of MFIs in the facilitation of micro credit, regulation and supervision of MFIs in Kenya and the challenges facing MFIs are also reviewed.

Microfinance is the provision of financial services to low income individuals and households, as well as micro, small and medium enterprises, using specially designed methodologies that will ensure sustainability for the lenders and lead to improvement in the living standards for the consumers as it facilitates large number of clients with relevant financial services at affordable prices (Muganga, 2010). It is therefore a specialized field that combines banking with social goals, skills and systems offering credit. Micro finance institutions focus on building this capacity, not just moving money. This is to enable them provide the poor with a wide range of financial services that are convenient, flexible and affordable. In addition the poor need financial advice on how to invest and manage income from investment made (World Bank, 2001).

Micro finance sector plays an important role in development by facilitating both the accumulation and mobilization of capital for investment and supply access to working capital. As development takes place, credit for instance helps poor entrepreneur to take advantage of the emergent entrepreneurial opportunities (Hossain, 1988)

This process enables the working poor to become self-reliant and in turn, improve the lives of family members, community and society. Over time the microfinance industry recognized that the poor who lacked access to traditional formal financial services required a variety of products to meet their needs, not just micro credit and therefore micro credit evolved into microfinance (Muganga, 2010).

2.1 Theoretical review.

A number of theories in finance have been advanced to try and explain the relationship between microfinance, household welfare and institutional sustainability. The debate on the application of these theories on the context of giving loans, service delivery to beneficiaries by micro finance institutions is still evolving.

2.1.1 Classical microfinance theory

According to the classical microfinance theory, a poor person can go to a microfinance provider and take a loan or saves the same amount to start or expand a microenterprise which yields enough net revenue to repay the loan with major interest and still have sufficient profit to increase personal or household income enough to raise the person's standard of living.There are therefore three key steps that a poor person must take to make this theory true (a)take a loan from (or save with) a microfinance institution (or similar entity) (b) then,invest the money in a viable business and (c) then manage the business to yield major returns on the investment.

2.1.2 Institutional theory

This theory hinges on the creation of sustainable financial institutions and tries to address issues of institutional self sufficiency. It focuses on enhancing the profitability of the microfinance institutions through the financial performance of those institutions rather than the benefits derived to the clients. Hence it proposes that the environment in which this institutions operate should determine their sustainability in the market. The institutionalists believe that the profits made from operations should lead to long term viability. Hence they favour group lending as opposed to individual lending Kodongo and Kendi (2013). According to Elsa and Stina, (2006) when the operating costs are high the interest rates charged should also be high to ensure viability of those institutions and vice versa.

2.1.3 Uniting theory

It advocates for joint liability in the repayment of the credit loans advanced to the clients. According to this theory the members of the group are contractually joined to repay the loans in cases of default in loan repayment in addition to the risk of being denied future loans. Due to this

fact there is constant and consistent pressure from group members this ensures prompt repayment of loans. This ensures high repayment rates and good bonding between the members.

2.1.4 Welfarist theory.

Proponents of Welfare theory believe that due to demand from the intended beneficiaries, institutions tries to reach out to clients who are poorer and hence more riskier and therefore have less access to credit from conventional banks. The theory seeks to measure the performance of the MFIs on the improvement of the living standard of the poor people as a result of assessing credit (Omoro & Omwange, 2013).

According to (Narayan,2002), the improvement in the welfare of the poor people can be witnessed through the expansion of household assets and the increase in their capacities to participate in, negotiate with, influence, control and hold accountable institutions that affect their lives. Arguing that poor people are unlikely to take control without being empowered and that actions, activities, or structures should be empowering, resulting in the outcomes of such processes to an increase in the welfare levels of those being empowered.

2.2 Evolution of micro credit.

The ideas and aspirations behind micro finance are not new. Small informal savings and credit groups have operated for centuries around the world. Formal credit and savings institutions for the poor have also been around for generations offering credit services for customers who were traditionally neglected by commercial banks (Muganga, 2010).

The earlier versions of micro lending were the Irish Fund System, introduced in the earlier 1700s' by writer and nationalist Jonathan Swift. Its earlier success helped the Irish when they were living in improvised conditions. The original work was standardized in 1937, when hundreds of loan funds were brought under the control of Loan Fund Board. By law no loan could be more than £10, or run for more than 20week term, repayments were to be done weekly, interest rates was as low as 8% (Brigit, 2006).

The concept of micro loans took a big leap in 1960s' and 1970s' when groups such as Yunnus of the Grameen bank in Bangladesh began to institutionalize the process. By formalizing and expanding the basic concept of sharing programmes, those microfinance institutions helped to

build a capital for small businesses rather than just loaning for basic necessities such as food, water and clothing. (Yunnus, 1999)

In 1980s' and 1990s' microfinance had an integrated approach in their service delivery models. Besides offering credit, they trained their customers on how to develop business plans, bookkeeping, and marketing among other non-financial services. This is because they were funded by donors to carry out this important activity. (Yunnus, 1999)

From year 2000 onwards, the providers of micro finance services in Kenya can be clustered into 3 broad categories notably; formal, semi-formal and informal institutions with the level of formality being defined by the degree of regulation. Under the formal category are commercial banks and Post Office Savings Bank. The semi-formal category includes savings and credit cooperative organizations (SACCOs) and micro finance institutions (MFIs), while accumulating savings and credit associations (ASCAS) and rotating savings and credit associations (ROSCAs) dominate the informal sector (Kenya microfinance capacity building programme, 2008).

2.3 Microfinance and household welfare.

Article 43, sections *a* to *f* of the constitution of Kenya (2010), makes it a right for every citizen to access good education, health, adequate housing, food and clean water. Kenya is still a developing country and it will take time before the above rights as guaranteed by the constitution is actually realized. Microfinance can contribute immensely towards the realization of the social pillar of the vision 2030 by increasing financial deepening through availing the necessary funds needed for the economic development.

Poverty reduction is the main goal of micro financing, hence changes in income level of individuals and households are often used as a measure of impact of microfinance, (Makina and Malobola, 2004). Increase in household's income often leaves it with a number of possibilities including increasing consumption and savings. Increase in income is the most desirable household welfare outcome regardless of the current level of income. Analysis on the effects of microcredit is not conclusive therefore without looking at its impact of microfinance on household income.

High levels of household expenditures are considered to be associated with high consumption and better standards of living. Haroon J. (2008) found out that there was a significant and positive impact coefficients associated with household expenditures. This indicated a relatively better off position of micro finance on beneficiaries over non beneficiaries. However Banerjee et al (2013) using randomized control evaluation method in Hyderabad India, observed that access to microfinance did not have any effect on average monthly expenditure per capita on the beneficiaries of micro credit.

Households purchase assets when incomes are better and sell them during lean periods, therefore it acts as a form of saving. Coleman (1999) in his research on the effect of village bank credit in northern Thailand noted that access to micro loans did not have a significant impact on household asset accumulation. On the contrary Salia P.J (2014) while doing a research to establish the effect of micro credit on household welfare on women entrepreneurs in Tanzania, observed that household asst indices revealed that borrowers owned more assets than those of non borrowers.

Micro credit in third world countries empowers women, this is done in three ways, first it provides independent source of income outside home and reduces economic dependency of women on their husbands, thus enabling autonomy. Second, the same independent source of income together with women's exposure to new set of ideas, values and social support should make them more assertive in their rights and finally provides control over material resources, therefore raising woman's prestige and status in the eyes of their husbands thus promoting inter-spouse consultations on household affairs, (Mayoux,1998). On health issues access to financial services allows clients to seek health care services when needed, rather than wait until the illness has reached crisis proportions. Studies show that financial services have strong positive impact on health of women and children especially in those programmes that combine credit with training on health issues. (Hulme and Mosley, 1996).

From the above literature it is clear that there are no conclusive findings on the effect of micro credit on household welfare. In order to establish whether there was a statistically significant relationship between micro credit assessed and household welfare attribute of income the data

collected were analyzed and the results presented in chapter four while the conclusions the study are presented in chapter five.

2.4 Role of micro finance institutions in facilitating micro credit access

For any economic undertaking, whether on individual, household or institutional level it will need credit at some time. It is important for the credit provision to be sufficient and efficient as much as possible (Ndeti, 2005). On the strength of this the beneficiaries of credit should be able to rank the financial institutions by comparing them against each other on the basis of their cost with the objective of coming up with the cheapest option. Unlike the conventional banks, micro finance institutions offer credit without any collateral and due this the risk involved are high, to mitigate against this risks, they have to increase the cost of credit (Kamau 2009).

Since there is no collateral to be offered by individuals and households in order to secure loans, and the only security offered is guaranteeing one another cost of credit offered by MFIs is normally high, this is to cover for the risks involved (Kamau, 2009). In light of the above, different financial institutions have been successful in delivering credit services to the poor, their effectiveness has had much to do with the design of the credit delivery system and how it is managed and implemented by the programme staff. Some of the key elements in the design, management and implementation of an effective programme will be the targeting employed, beneficiary organization, incentives and penalty structure, roles of beneficiaries' leadership and institutional support.

As (Owour, 2001) observed micro credit programmes around the world have shown that poor people achieve prompt repayment records, often higher than those of conventional borrowers. Repayment rates are high because through peer support systems and group's pressure used in many micro credit models, borrowers are responsible for each other's success and ensure that every member of the group is able to pay back the loans borrowed in time.

Upon the coming into force of Micro Finance Act 2006 a number of non-governmental organizations (NGOs) have been involved in financing micro enterprises. The onset of NGOs in the form MFIs has improved access of micro and small enterprises (MSEs) to credit. Most of them operate tailor made credit programmes targeting specific activities. In most cases they have targeted small-scale enterprises operated by women as groups. Those MFIs include K-Rep,

KWFT, Faulu Kenya, Jamii Bora, Faidika group and Wedco Enterprise Development among others, according to (CBK, 2007)by 2008, 8% of Kenyans get their finances from MFIs.

In addition to traditional forms of microfinance, mobile baking has rapidly expanded access to financial services in Kenya. Since *Safaricom*, the affiliate of global mobile telecommunications provider Vodaphone, launched its *Mpesa* service in March 2007.Customers can access an electronic payment and store of value through their mobile phones and have cash deposits and withdrawals at more than 1700 *Safaricom* outlets countrywide. Nearly half of the outlets are located in the rural areas. After achieving extraordinary since its inception, by January 2010 *Mpesa* had 9 million active customers which are about 40 percent of Kenyan population (Muganga, 2010).

2.5 Regulation and supervision of micro finance institutions in Kenya.

A well-functioning sector offering micro credit is important in the process of industrialization by facilitating investment in real capital smoothening of expenses and income flows, as well as financing working capital. Financial sector development is an integral part of economic growth. Where unstable macroeconomic environment and institutional factors like imperfect information and inefficient legal system hinder efficient financial intermediation, industrial sector growth and overall economic development may be compromised.

Prior to the passage of comprehensive legislation concerning the micro finance sector no fewer than 8 statutes (as listed in appendix III) governed MFIs operations in Kenya, many of which failed to address issues of governance, ownership and accountability critical to the performance of financial institutions. Critics blamed the lack of regulatory oversight for the poor performance and the failure of many Kenyan MFIs and view it as a constraint on the ability of the sector as a whole to access private capital (Rockefeller, 2011). It was therefore imperative that MFIs be provided with an enabling regulatory environment to reach their full potential. This is in tandem with the economic pillar of vision 2030 objective of enhancing deposit mobilization, increasing savings level and improving general quality of life for all citizens (MOF, 2008).

A tiered approach adopted in Kenya recognizes the existing banking legislation of specialized activities of micro finance and diversity of the institutions engaged in a less regulated sector. MFIs operating as banking institutions, savings and cooperative societies and Post Office

Savings Bank are already regulated by Acts of Parliament that specify different supervisory authorities (CBK, 2007)

The Microfinance Act 2006 empowers the Central Bank of Kenya license, supervise and regulate formally constituted micro finance institutions taking deposits from the public. The Act puts in place the necessary laws and regulatory framework for establishment, licensing and supervision of deposit-taking microfinance institution focused on providing services and products targeting low income households and enterprises. These groups of MFIs are also members of the Deposit Protection Fund Board hence they have a deposit insurance scheme that protects depositors fund up to Kshs 100,000.00 (Omino, 2005)

The overriding rationale for microfinance regulation and supervision is to create an enabling environment that will promote the performance and sustainability of deposit-taking microfinance institutions, while at the same time protecting depositors' interest. The act envisages two ties of microfinance institutions, national wide microfinance institution whose minimum core capital is prescribed at Kshs 60million and community microfinance institution with a minimum core capital of Kshs 20 million (CBK, 2007)

Formally constituted MFIs that do not take deposits from the public but accept cash collateral tied to loan contracts are regulated and supervised by Ministry of Finance. Section 3(2) of the act, empowers the minister of finance to make regulations specifying the non-deposit taking microfinance business and prescribe measures for the conduct of the specified business (Microfinance Act, 2006)

Informally constituted MFIs like rotating savings cooperative associations, club pools, and financial services associations are not supervised by an external agency of government. Donors, commercial banks and government agencies from which they obtain funds or that support them carry out due diligence and make an informed decision on them.

2.6 Challenges facing micro finance institutions.

Most Micro Finance Institutions do not have the necessary checks and balance to contain fraud. They lack the capacity to put in place a strong internal system in areas of financing, investing, and dividend decisions and on the hiring of staff. Hence cases of teaming and lading occur in

cases where proper procedures are flouted when the above financial functions are being performed. (Madura, 2001)

The wave of pyramid schemes witnessed in recent years caused poor people to lose funds. It spread panic and mistrust on Rotating Savings and Credit Associations. The Microfinance Act (2006) came to regulate the micro finance sector and hence remove such practices. As Madura, (2001) points out, if a rumor that a particular bank might fail begins to circulate, depositors might withdraw funds from the bank, even though the bank is insured. The panic can even occur when the rumor is not justified. Under these conditions, the bank may be unable to attract a sufficient amount of new deposits, and its existing deposit accounts will subside. Once deposit withdrawals begin, it is difficult to stop the momentum.

This came more evident after the post-election violence when customers, failed their obligations of payment. The main reason for this as (Madura, 2001) observes, is because those loans was given with a specific emphasis to a particular industry, such as sugar industry, Dairy Farming, Bee Keeping, that makes them vulnerable when there is a slowdown in that industry as a result of calamities, lack of markets or diseases.

There are no incentives for the staff assigned to implement the credit for the poor programmes to compensate for the more difficult nature of their work. Often this work is added on or mixed with the regular work with non-poor borrowers, who are difficult to service. This explains the poor performance in the servicing of the poor borrowers (Noponen,1987).

Microfinance institutions may not be able to control all actions of borrowers due to imperfect and costly information and will formulate the terms of the loan contract to induce borrowers to take action in the interest of the bank and to attract low risk borrowers. The result is an equilibrium rate of interest at which the demand for credit exceeds the supply thereby forcing banks to ration out borrowers. (Bigsten, et al. 2000).

The lack of appropriate credit delivery mechanism that clearly specifies the procedures and requirements for personnel and support services and provision for effective enforcement mechanism also contributes to the in effectiveness of the credit for the poor programs (McGregor, 1998).

2.7 Empirical review

While exploring the impacts of microfinance in Pakistan, Haroon (2008) found that there was significant and positive relationship between micro credit assessed and household expenditures, incomes, assets. However their impact on education and health were not statistically significant relationships, while there was no significant impact of the interventions on women empowerment.

An evaluation of the impacts of microfinance programmes with special focus on KWFT in Kenya by Otto (2002) concluded that at the enterprise level both quantitative and qualitative assessment showed that the provision of loans by KWFT has helped women going through most difficult times by contributing to providing employment to them and their families in Kenya. On the household level the impacts were even more impressive as improved living conditions were reported evidenced by increased access to health facilities, clean water and payment of school fees. On individual level it boosted self-confidence and the image of women in the eyes of the community and their husbands as women progressed to the level of gaining assets, owning land and housing.

The impact assessment done by (Maalu, 1999) in collaboration with department of international development of United Kingdom (DFIB) and british aid to small enterprises support (BASE) for women's enterprise development project (WEDCO) contributed to the realization of increased household incomes and self-employment. Profiling of different generation of borrowers showed that clients who had not received a loan and were on the waiting list were more educated than those who had received the loans twice or more. Further it was found out that those who had not received the loans spent more on housing than those who had received one or more loans. On the assessment of impact, clients was of the opinion that the loans they had received had enabled them to increase stock and be in business, but a quantitative regression analysis provided a weak evidence of a link between recipients of the first loan and increase in business profits and employment growth.

A study by Pederson, (1997) on KREP clients concluded that access to micro credit resulted in improved incomes, increased output and growth in their businesses either in size or the number

of employees; further smaller businesses reported greater impact while borrowers who operated large business complained that the loans they had received were too small.

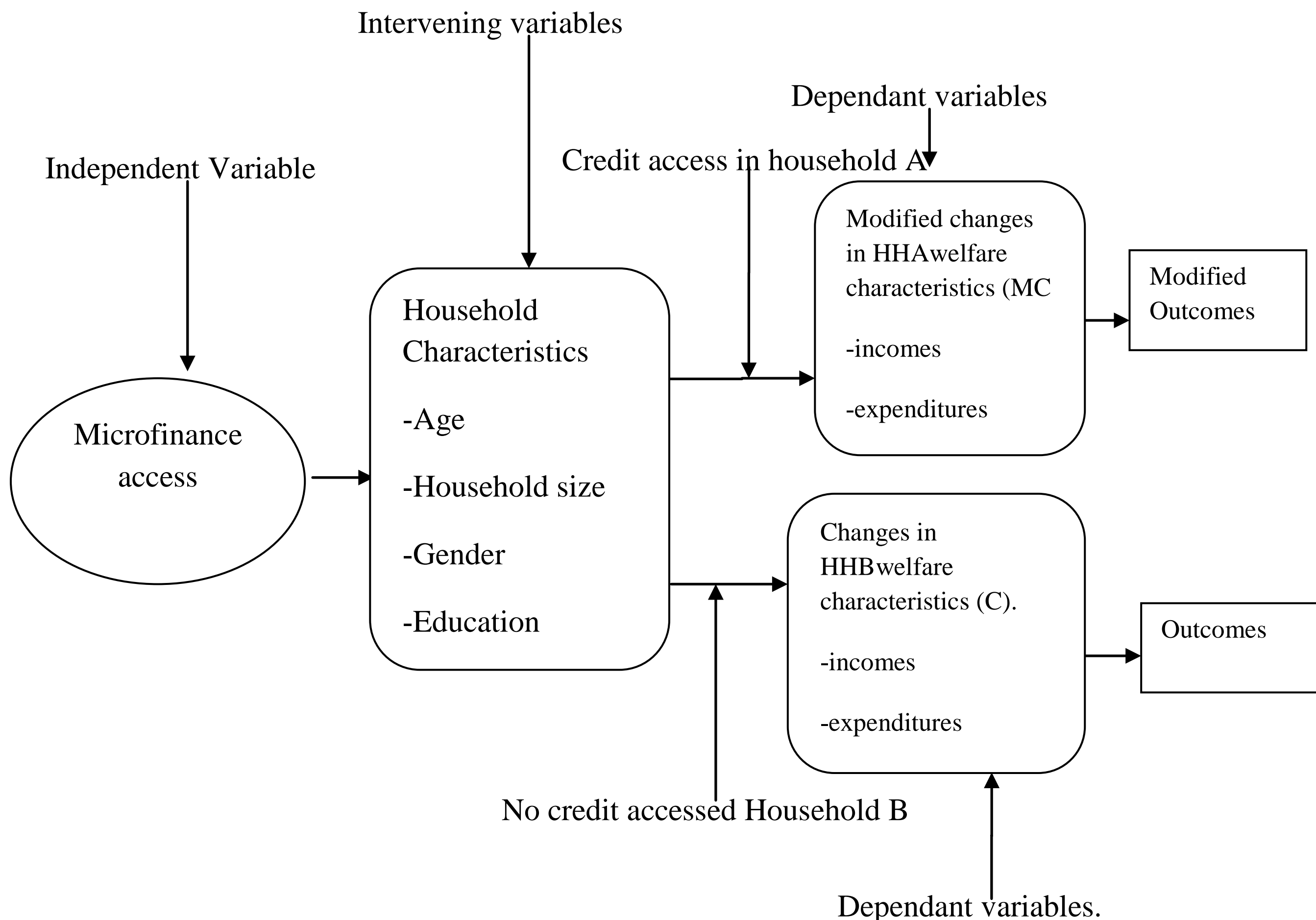
Coleman's (1999) highly regarded study on the impact of group lending in North Eastern Thailand controlled self-selection and non-random programme placement bias by using observable village characteristics and randomization software. The innovation was to get MFIs to identify the households that would participate in those areas where the micro finance institutions were already active by classifying those that had received loans and those that were yet to but were qualified to receive them. The study concluded that many borrowers joined the microfinance programme mainly for social reasons due to peer pressure. They had no projects to invest and solely borrowed for consumption purposes and at the end of every loan cycle they did not have funds to repay the microfinance institutions and had to reapply for funds again. This cycle continued until it ended up in a downward spiral of bad debt (Coleman, 1999).

As such, microfinance programme in Northeastern Thailand had little impact although other studies which were ignorant of the selection bias provided evidence to the contrary. More importantly Coleman,(1999) study found that microfinance had positive impacts on increased money lending activities.

2.8 Conceptual framework.

The overriding hypothesis is that access to microfinance will lead to increases in expenditures, household assets, income, savings, and income generating activities. The greatest challenge in the evaluation of this impact is to separate and capture the assumed causal role. Through such analysis question as to whether the improvements were caused by intervention and whether they are significant can be answered.

The issue of pre-existing attributes such as good entrepreneurship skills, managerial capacities, better education associated with participants must also be addressed. This is because they give them some advantage even without microfinance programmes. The greatest challenge therefore is to separate and capture the assumed causal role. This section addresses these concerns in the figure below through elaborate explanations that follow.



Differences between the two outcomes that is modified and unmodified outcomes (Difference in Difference) could be as a result of accessing microfinance.

Figure 1:Effects of microcredit on the welfare of households.

Source: Own conceptualization, (2014).

Households are categorized into two, borrowers and non-borrowers. In figure 1 above, household A (HHA) are the borrowers while household B (HHB) are the non-borrowers. The effects of moderating variables of age, household size, gender, education, farm size and the cost of credit were considered for both categories in the utilization of the accessed credit in order to generate outcomes. To capture the overall impact of microfinance, variations in incomes, expenditures, savings, and asset accumulation were compared for the two categories of participants using the difference-in-difference (DD) (Amendariz, and Morduch (2005).

CHAPTER THREE

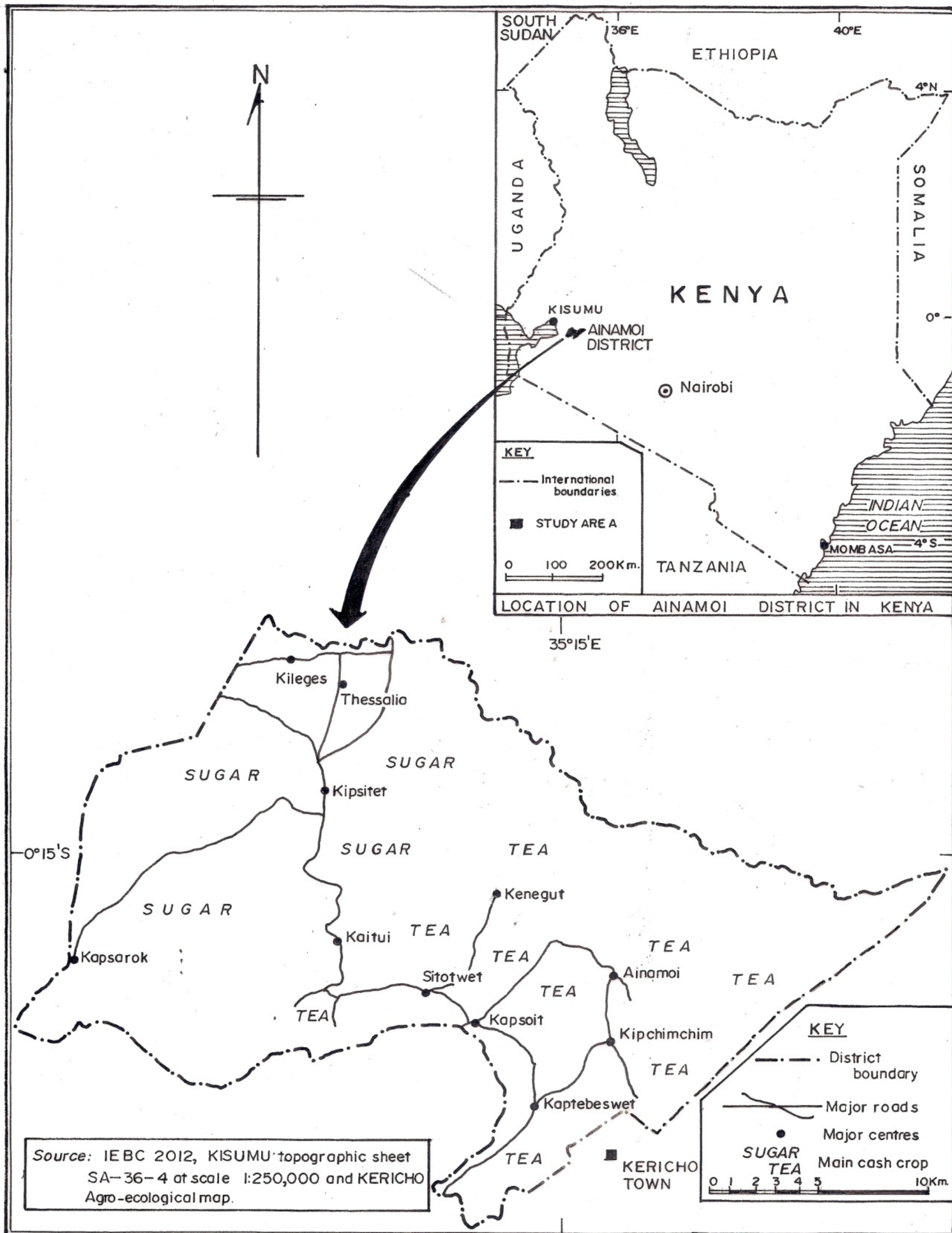
RESEARCH METHODOLOGY

3.1 Study area.

The study was done in Ainamoi Sub County located south west of Kenya, (Figure 2) which covers an area of 258.5 square kilometers. It lies between 0 degrees 30’ and 1 degree 02’ south, and 35 degrees 04’ and 0 degrees 15’ east. It borders Kisumu County to the north, Kipkelion Sub County to the east, Belgut Sub County to the west and Bomet County to the south. The sub county is the seat of Kericho County Government and hence both the executive and the legislative arms of government have their headquarters located here.

Farming is the dominant economic activity where large scale tea estates have been established by multinational companies such as Unilever and James Finlay. Sugarcane and coffee are grown on the lower parts of Ainamoi Sub County. Dairy farming is a major activity especially in the higher altitude areas of Metabo, Kapsoit, Ainamoi, Kapsuser, Kapsaos and Kapkugerwet Wards. The population of AinamoiSub County was147,741 persons (KNBS, 2009).

Figure 2:The map and location of Ainamoi Sub County.



Source: Independent Electoral Commission, (2012)

3.2Research design

This study used a survey research design to obtain the relevant data

3.2.1 Sampling design

Stratified random sampling was used to collect data. The first stage was to stratify the beneficiaries of credit according to the MFIs they belonged. There were five microfinance institutions namely Faulu Kenya, KWFT, Ecolof, WEF and SMEP.

At the second stage a list of regular borrowers was made from a record of active borrowers (this were borrowers who obtained loans from the MFIs and were paying their loans in installments actively) a proportionate number of borrowers from each of the strata were selected using random sampling.

The third stage was to get the control group. A group closely identical to borrowers was identified as the control group within the vicinity of borrowers. These were persons who had formed solidarity groups for the purpose of taking the loans but had not yet received. For comparison purposes, an equal number of non-borrowers were selected. This gave a total sample of 196 borrowers (98 micro-credit group participants and 98 non participants)

3.3 Sample size.

The required sample size was determined by proportionate to size sampling methodology (Anderson *et al*., 2007).

$$n = \frac{pqZ^2}{E^2}$$

Where n = sample size, p = proportion of the population containing the major interest, q = 1-p, z= confidence level (α = 0.05), E = acceptable/allowable error. Since the proportion of the population was not known, p=0.5, q = 1-0.5= 0.5, Z = 1.96 and E = 0.07. This results to a sample population of 196 respondents.

A sample size of 98 respondents was obtained. The sample was proportionately distributed among the beneficiaries of MFIs as shown in Table 1.

Table 1: Distributions of the respondents

MFI	Membership	Sample size
Faulu Kenya	700	28
SMEP	300	12
Ecolof	350	14
KWFT	650	26
WEF	450	18
Total	**2450**	**98**

3.4 Data collection procedures.

To capture the differences in household's incomes, expenditures and other variables of interest of borrower and non-borrowers, a structured questionnaire was administered to both groups. The information was collected on both social and economic factors. The primary data was collected using semi-structured questionnaires. The respondents were allowed a period of 1 week to fill the questionnaire then, the questionnaires were collected promptly and examined to ensure completeness.

3.5 Validity and reliability of the instruments.

Validity is the degree to which an instrument measures what it purports to measure (Kothari, 2009). The content and the validity of the questionnaires were determined by experts and the necessary adjustments made in accordance with the recommendations. In particular the questionnaire was tailored to capture and comprehensively cover the objectives.

Reliability is the level of internal consistency of the research instruments (Kothari, 2009). The reliability of the questionnaires was determined using test retest method in which same respondents were requested to provide information for the second time. The results from pilot study were used to calculate the Cronbach's (α) Alpha Coefficient, which measures the internal consistency by establishing if certain items measures the same construct. The Alpha was established for each of the three objectives, this was to determine if the research would produce

the same results if it as to be done later on. The findings from a pilot study showed that questions on the first objective had an alpha of 0.86, those on the second objective 0.78 and on the third objective 0.75. This confirmed that all the tests done on all the objectives produced reliable results as they exceeded the threshold of 0.6 (Mugenda, 2003).

Table 2: Reliability of the research instruments

Variables	Cronbach's Alpha(α)	Number of items
Factors affecting credit access	0.86	8
Factors affecting the level of credit access	0.78	8
Effects of credit on household income	0.75	7

3.6 Data analysis.

Analytical framework

Objective one and two: **Analysis of factors influencing household participation and levels of participation in micro credit**

In the first and the second objectives, Heckman two-step stage model as proposed by (Heckman, 1979) was used to determine factors affecting access to micro credit and the levels of the access. The decision to either participate in micro-credit group or not is independent variable and therefore will be estimated independently. The level of participation is in turn influenced by a number of factors which have to be analyzed. Heckman two-step procedure was identified as an appropriate model for such independent estimation. Heckman two-step model involves estimation of two equations: Selection equation in the first step and outcome equation in form of a simple ordinary least square in the second step (Heckman, 1979).First was to determine whether a household participates in micro-credit groups or not then second was the level of participation (done through determining the number of loans obtained). The number loans were obtained only after the households had made a decision to participate in micro-credit group. Therefore the results obtained in the second procedure only applied to participating Households. The two-steps include; first a Probit model for participation where selection equation is

estimated. This step estimates the probability of group participation as shown in the equation below,

$$L_i = \delta N_i + \varepsilon_i, \quad E\left(\varepsilon_i / N\right) = 0 \quad \text{.......... (1)}$$

Where, L_i is a dummy for participation in micro-credit group while N_i is a vector of variables that affect participation decision. Household characteristics are assumed to influence the size of the loan the household takes up. Next equation explains the level measured by the number of loans taken.

$$Y_i = \beta M_i + \mu_i, \ E\left(\mu_i / M\right) = 0 \quad \text{.......... (2)}$$

Y_i Indicates the level of participation measured in terms of number of loans by a borrower

M_i is a vector of variables that explain the levels of participation,

ε_i and μ_i are the error terms and have a bivariate normal distribution with zero means and standard deviation δ_u and δ_v andtheyare correlated with correlation coefficient ρ.

The model assumes that N and Mare observable exogenous variables and M is a subset of N.

If the correlation between ε_i and μ_i is not zero it brings about the selection bias problem.

After estimating the selection equation a non selection bias is computed using equation (3) below,

$$E\left(\varepsilon_i / L_i, N_i\right) \quad \text{.......... (3)}$$

Which is called Inverse Mills Ratio (IMR) $\lambda(\delta N_i)$ when L_i=1.

Then the new lambda is used in the selection equation (4) as an explanatory variable. The new equation for the second stage regression is therefore:

$$E(Y_i = N_i, L_i = 1) = \beta M_i + \rho\lambda(\delta N_i) \quad \text{.......... (4)}$$

This equation gives the expected number of loans Y_i, given vectors of observable factors N_i and given that the household has already made the decision to participate in micro-credit group. This

can be explained by vector of observable characteristics M_i and the Inverse Mills Ratio measured as, $\lambda(\delta N_i)$

3.6.1Model specification

Heckman Two Stage Model Specification

Step 1 (Selection equation)

The probit model identifies the probability of group participation and consequently identifies the factors which influences participation specified as shown below,

$$\boldsymbol{P_i}(0, 1) = \beta_0+\beta_1X_1+\beta_2X_2+ \dots\dots\dots. +\beta_nX_n+\varepsilon$$

$$\boldsymbol{P_i}(0,1)=\beta_0+\beta_1 age+\beta_2 gender+\beta_3 edulevel+ \beta_4 descmaking+\beta_5 hsize+\beta_6 occup+ \beta_7 Creditaccs+\beta_8 dstbtwnmbrs+\beta_{10} grpcomp+\beta_{11} mbrshpreqmnt+\varepsilon \quad (5)$$

Step 2. (Outcome equation, which is a simple ordinary least square)

$$\boldsymbol{Y_i}=\beta_0+\beta_1X_1 +\beta_2X_2+\dots\dots\dots\dots\dots\dots\dots.+\beta_nX_n+ \beta_n\lambda_n+\varepsilon$$

$$\text{Total amount of loan}(\boldsymbol{Y_i}) = \beta_0+\beta_1 age+\beta_2 gender+\beta_3 Educ+\beta_4 Hsize+\beta_5 Occup+\beta 6Creditaccs+\beta_7 Fqcyloanss+\beta_8 Mbrcntrbn+ \beta_9 Grpdcs+ \beta_{10} Grpsiz +\beta_{11} Lansiz+ \beta_{12} ImpAss + \varepsilon \quad (6)$$

Table 3: Description of Variables and Signs used in Heckman Two Stage Model

Variable Code	Variable	Measurement of the variables	Expected
Dep variable			
TYPHSHOL	Type of household	Dependent variable for selection equation	+/-
LVLOFPART	Level of participation	Dependent variable for outcome equation	+/-
AGE	Age in years	Age of the borrower (continuous)	+/-
GENDER	Gender	Gender of the borrower (Dummy 1 =Male,	+/-
EDUC	Education	Education level of the borrower (highest	+/-
H/SIZE	Household size	Size of the household (continuous)	+
FARMSIZE	Farm size	Size of the farm continuous.	+
OCCUP	Occupation	Formal/informal	+/-
CREDTACC	Credit access	Credit access by household (Dummy	+/-
FQCYLOAN	Frequency of repaying loans	Number of loans repaid per month	+/-
CREDCOST	Cost of credit	Amount charged as interest for loans taken	+/-
IMPAASS	Impact Assessment	Impact attributable to accessing microcredit	+/-

Objective three: To establish the effect of micro finance credit on household incomes.

The third objective was analyzed using single difference model advanced by (Coleman, 1999) which was slightly modified and used to analyze data. In this model, differences in incomes (or other variables of interest) of the beneficiaries was obtained by comparing before they accessed the credit and after five years of assessing credit. As (Coleman, 1999) observed there exist a relationship between the demand for loans and their impact on beneficiaries' income. This demand is manifested in the number of loans the group agrees to guarantee the household over a given time period; therefore it will be logically correct to draw a relationship between the

number of loans as a proxy to the impact of microfinance and not the amounts of loans that had been accessed.

Those differences were analyzed using the model stated below.

$Y_{ijt} = X_{ijt}\alpha + Z_{ij}\beta + M_{ij}\gamma + T_{ijt}\delta + e_{ijt}$………………………………………………….…. (7)

Where;

Yij is an outcome on which impact is measured for household i in location j is the dependent variable used as a proxy for household welfare.

Xij is a vector individual characteristics of the respondents (age, education levels, occupation)

Zij is a vector of household characteristics (household size, assets value, land size)

Mij is the microfinance dummy (1-Beneficiaries, 0- Non Beneficiaries.)

Tijδ is a variable to capture the treatment effects on households that self-selected into the program and are already accessing loans. If program placement is random, then the above equation should yield efficient and unbiased estimates.

α, β,γ, δ, e= Vector of parameters

Data that had been collected at the beginning of the process was again collected after intervals of one year each. This was done forY_{ijt+1} which a dependent variable which captures household income, the household characteristics remained largely the same as the beginning of the process, so microfinance dummy. The number of times loans were accessed during the period $_{t+1}$ was captured by $T_{ij}\delta_{t+1.}$ Rearranging the above equation (7) the equation below was obtained

$Y_{ijt+1}= X_i\alpha_{jt+1}+ Z_{ij}\beta + M_{ij}\gamma+T_{ij}\delta_{t+1} +e_{ijt+1}$……………………………………………… (8)

Subtracting equation (7) from equation (8) the equation below is obtained

$\Delta Y_{ij} = \Delta X_{ij}\alpha + \Delta T_{ij}\delta + \Delta e_{ij}$…………………………………………………………….. (9)

Where Δ indicates the changes in variables between time t and t+1. The dummies drop out so do the specific fixed household and village characteristics. The above equation (10) therefore measures the changes in household income due to impact of microfinance and individual characteristics. The coefficient δ on Tij is the main parameter of interest and measures the average impact of the program. A positive and significant δ would indicate that microfinance is having a beneficial effect on borrowers.

There arose the missing data problem, reason being the data cannot be obtained from the same household for participation and non participation in the credit programme. Therefore it arose the need to have the control group. This constituted equal number of households as loan beneficiaries from the same vicinity who had similar characteristics as participating households and had already registered as solidarity groups for the purposes of obtaining micro credit. The same process above from equation 7 to 9 was repeated for this household group. The final results obtained were subtracted from equation 9 to obtain the equation below.

$\Delta_i = \Delta Y_{ij} - \Delta Y_{i0}$……………………………………………………………………….. 10

Where Δ_i represents the true programme impact, ΔY_{i1} denotes the potential value of interest when household participates in the programme and ΔY_{i0}denotes the potential value of non participation in the programme.

CHAPTER FOUR

RESULTS AND DISSCUSSIONS

This chapter presents the results and discussion through descriptive and inferential statistics.

There are three sections corresponding to the three objectives of the study. In all these sections hypothesis generated in the first chapter of this study is first tested, helping to understand the quantitative results that are presented.

In the first section, discussions on socio economic and institutional factors affecting access to micro credit are dealt with. Factors affecting the levels of credit assessed are dealt in section two while section three measures the impact of microfinance on household income. In all the sections, the explanatory power of the models used were first tested to ascertain their usefulness, this was to help in forming an opinion on the integrity of the results that had been obtained. The results of the tests carried to determine the explanatory power of the model from all the three sections were found to be satisfactory.

4.1 Socioeconomic and institutional factors affecting household access to micro credit.

The results of a two stage Heckman selection model are presented in Table 3. It shows both the socioeconomic and institutional factors that influence participation in microcredit.

A total of 8 explanatory variables were considered and the results of the analysis are presented in Table 4.The overall power of the model used was found to be satisfactory at 8.497 this confirms that the data obtained could fit into the model well. The significant variables were: age, household size, gender, education, occupation, and farming experience.

The influence of age on access to microcredit was positive and significant at 5%. The beneficiaries of microcredit were in most cases households already established whose focus was to expand their operations or start off farm business. Such a group was associated with older persons. They had assets which were used as collateral to acquire loans. These results were however not consistent with those of Karami (2008) who did a research on factors affecting credit access in rural Iran and found out that by increasing age, the risk aversion increases and therefore the probability of accessing credit decreases.

Table 4: Heckman selection equation results

Variables	Coeff.	Std. Err.	Z	P>|z|
Age	0.018	0.007	2.38	0.017**
Household size	-0.110	0.058	-1.88	0.061*
Marriage	-0.057	0.112	-0.52	0.605
Gender	-1.632	0.269	-6.06	0.000***
Education	0.193	0.108	1.79	0.073*
Farmsize	0.057	0.075	0.76	0.449
Occupation	-1.565	0.405	-3.86	0.000***
Credit cost.	0.050	0.026	1.92	0.055*
mills lambda |	8.497	4.058	2.09	0.036**

*, **, *** significant at 10%, 5% and 1%

Effect of household size on access to microcredit was negatively significant at 10%. This result points out that large households are likely to have problems in servicing the loans because repayment is expected to run concurrently with other financial commitments of bringing up the larger family. There was a tendency for a majority of MFI beneficiaries to be women and since most of them lacked access to suitable collateral, the effect of gender on access to credit was negative and significant at 1%. Literature on effects of education on access to micro credit such as Baklouti (2013)pointed a positive influence. These are consistent with the findings of this study which are positive and significant at 10%. However, Muturi (2014) revealed that the level of education of the beneficiaries was negatively related to access to micro credit.

The alternative occupations a beneficiary might have been engaged other than farming as a source of income, significantly and negatively influenced at 1 %.Beneficiaries who engaged themselves on off-farm activities such as schooling, businesses and formal employment had less time to pursue on-farm diversification. The findings concur with that of Rana *et al.*(2000) who

found that households who received off-farm income were less likely to pursue on-farm diversification as a method of reducing financial risk. The effects of farming experience on access to micro credit were statistically significant at 10%. Beneficiaries were actively engaging in farming activities and investing significant amount of funds from micro credit accessed on farming activities. Borrowers with farming experience readily sought credit based on the past experience with MFIs.

From the above findings it was concluded that social, economic and institutional factors affected and influenced household participation in micro credit programmes and therefore the null hypothesis was rejected.

4.2 Analysis of factors determining the levels of micro credit assessed by households.

The second objective was to evaluate the factors that determine the levels of micro credit assessed and the results are presented in Table 5.

Table 5:Determinants influencing the level of participation in micro credit.

Variables	Coeff.	Std. Err.	Z	P>|z|
Age	0.124	0.051	2.42	0.016**
Household size	-0.390	0.425	-0.92	0.359
Marriage	0.019	0.669	0.03	0.977
Gender	-7.447	3.877	-1.92	0.055*
Education	1.304	0.736	1.77	0.076*
Farm size	0.273	0.426	0.64	0.522
Occupation	-6.654	4.987	-1.33	0.182
Credit cost	0.207	0.167	1.24	0.009***

*, **, ***significant at 10%, 5% and 1%

The cost of credit positively and significantly affected the amounts of credit accessed. This is justifiably so because most borrowers are poor people who cannot afford the high interest rates charged by microfinance institutions, which unlike other banks, offer credit without any collateral and due the risks involved which are high, to mitigate against those risks, they have to charge higher cost. These findings are consistent to those of Kamau (2009) who found out that the cost of credit was a single determinant of the amounts of loans accessed by dairy farmers from micro finance institutions in Gatundu South.

Age (AGE) positively influenced the level of micro credit significant at 5%, because of increased number of activities; older farmers would likely engage microcredit. To sustain the increased activities more resources are needed hence resulting in increased borrowing. This observation concurs with those made by Swain (2001).

Education level was positively significant at 10%. Educated beneficiaries took more credit than their less educated counterparts. This was attributed to the reason that the attitude towards risk changes with increase in the level of information through education.

The influence of gender was negatively significant at 10%. This was attributed to the fact that there was beneficiary's gender imbalance being that the majority were women. Women invested in new opportunities which promised higher and consistent incomes. They serviced their loans promptly and were able to access more loans. The male receivers of loan, on the other hand, used the money to expand their existing enterprises which often had failed in the past to generate consistent income resulting in many cases of default. This resulted in limited access to new loans. These findings are consistent with those of Taj*et al*., (2008) who found out that the majority of women who obtained loans utilized them properly and repaid them fully or near last installment. Based on these findings, it was concluded that the levels of participation in micro credit programmes was affected by the social, economic and institutional factors. With this justification the null hypothesis was rejected.

4.3 Effect of credit on household income.

The effects of micro credit on household incomes are presented in Tables 6 and 7.

Table 6 shows the results of the estimated model which is a logarithmic function where the dependent variable is natural logarithm of income which is welfare indicator. The standard DiD (difference in difference) results, indicate that the household welfare measured by household annual income has substantially improved for the borrowing group between 2008 and 2012. The average household annual income for the borrowing households in Ainamoisub county, had increased by roughly 30.32 % over 5 years and is statistically significant at the 10% level. This is consistent with the results of Abadie, (2005a).However; the significant improvement (of 30.32%) in household annual income for the borrowing group could be a combined result of time influence and microcredit programme impact. To isolate the true programme impact on the borrowing households, the potential time trend must be controlled for Li, *et al.* (2011).

Table 6: Standard DD estimates of mean logs of household income.

Outcome variable	Borrowing households(96)			Non- borrowing households(96)			DD
	Year	Year	Differences	Year	Year	Differences	DD=D1-
INCOME	10.85	11.15*	0.30*	10.93*	10.97*	0.04*	0.26*
	(0.733)	(0.0558)	(0.0573)	(0.0605)	(0.0580)	(0.0966)	(0.0864)

( ) numbers in parentheses are standard errors.*, shows significance at 10%,

The average household annual income for the non-borrowing households had risen by roughly 4.08 % over 5 years, while borrowers' income had increased by 30.32% over the same period and is statistically significant at the 10% level. The average outcome changes for the non-borrowing group between 2008 and 2012 are used to approximate the time trend suffered by the borrowing group. The standard difference in difference estimation suggests that the average household annual income for the borrowing households rose by 26.24 % (the difference between the mean gains for the two groups) as a direct result of programme participation and this positive impact is statistically significant at the 10% level.

The standard DD estimation assumes that no variables other than treatment variables would affect the trend of outcome investigated (y_{it}) between the borrowing and non-borrowinggroups. This assumption can be violated if the two groups of households are different and unbalanced in

the household characteristics that are probably associated with (y_{it}). Therefore, the standard DD method without controlling for other variables is likely to yield biased impact estimation (Li, *et al.,* 2011).

To address the potential deficiencies of standard difference in difference method, welfare impact was evaluated using the adjusted difference in difference based on fixed effect regression suggested in equations 7, 8, 9 and 10.

Table 7: Adjusted DD estimation of the impact of microcredit on household income

LNHAI	Coef.	Std. Err.	T	P>|t|
Control variables				
Age	.0031	.0056	0.55	0.585
Householdsize	-.0297	.0295	-1.01	0.316
HDFarm size	-.024	.0335	-0.72	0.471
Farmingexp	.016	.012	1.27	0.209
Maritalstatus	-.133	.050	-2.67	0.009***
Gender	.289	.147	1.96	0.054*
Education	-.009	.070	-0.14	0.889
Treatment variable				
LNTOTALLOAN	.125	.032	3.90	0.000***
F-statistics	53.91			0.000***
R^2	0.830			

*, **, ***Represents 10%, 5% and 1% significant level for the t-test respectively

Table 6 shows that the overall power of the model was satisfactory at 0.8305. The F-statistics is statistically significant at the 1% level and therefore strongly reject the null hypothesis in favour of the fixed effects model in correcting for selection bias in the impact estimation.

From the findings it was concluded that participating in the microcredit programme on average increased the households' annual income. Other than micro credit, gender had a positive and significant impact while marital status variable had a negative and significant impact on household income. Thus, the households will benefit more as they become more involved in the programme. The empirical findings of the impact of borrowings are consistent with the findings of Nguyen *et al.* (2007) whose results showed a positive and significant relationship between the loan borrowing and a set of household outcomes including income.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

This study evaluated the impact of micro credit accessed on welfare of beneficiary individuals and households in Ainamoi Sub County, Kenya. This was done by examining the factors that influenced both individual and household access of micro credit, the levels of the access and analyzing the resultant changes in income and consumption brought by accessing the credit.

It was established that age, education, farm experience of the participants positively and significantly affected household and individual access to micro credit while household size, gender and occupation negatively affected the access. These results are consistent with those of (Kangogo, 2013) who concluded that age and education level affected credit access positively, its' also consistent with those of (Mwongera,2012) who concluded that education level have a positive and significant influence on credit access. On the level of the micro credit access, the results revealed that cost of credit positively and significantly affected the amounts of credit accessed this findings are consistent with those of (Kamau, 2009). Education level and age of the participants also positively and significantly influenced the amounts of credit assessed while on the other hand the gender of the participants negatively and significantly influenced it.

The results established that participating in micro credit programmes helped to improve households' welfare by raising household income by 12.5 %. The results further confirms that the total amount of loans obtained had a positive and significant impact on welfare outcomes investigated suggesting that households' benefits increased when they access more and bigger loans.These findings are consistent with the conclusions of (Nangila, 2013) who while establishing the effects of unsecured loan on household welfare of school teachers in Bungoma County, Kenya, found out that credit access led to improvement in household welfare, and in particular the access of loans led to improved healthcare, poverty level reduction, female teachers empowerment and improved consumption levels. These conclusions are also consistent to those of (Nadeem, 2014) who found out that micro credit accessed had a positive and significant effect on both the incomes and consumption levels of beneficiaries.

Recommendations

With the findings of positive effects of micro finance on beneficiaries' income, which in this study was used as a proxy of welfare, this study recommends that more individuals and households should be enrolled in microfinance programmes through creating more public awareness on the potential benefits of micro credit. To ensure this wider access, it is important that the government formulate policies related to easing microfinance access; in particular the regulatory framework of microfinance institutions should be responsive to the changing individual and household portfolios for financial services of the population and the existing infrastructure used to disburse microcredit should also be improved.

Other than regulation the government should not leave all the work micro credit to MFIs alone; she should be an active participant and this should be done with the objectives of reducing cost, improving the access and increasing the amounts of loans available to the lower cadres of the population. Recent initiatives like uwezo fund, youth enterprise fund, women enterprise fund are a pointer in this direction as they come with full package of incentives like low cost of credit, trainings on investments, savings and fund utilization among others given to encourage investments like giving tax holidays.

Suggestions for Further Research

There is need for research to be done on these areas:

i) The impact of the new regulations in Micro Finance Amendment Act 2014on operational efficiency and profitability of micro finance institutions in Kenya.

ii) The effects of micro credit on the sustainability and profitability of small scale farming undertaken by households in Kericho County, Kenya.

iii) The effects of micro credit accessed on the social, economic and political set up of Kericho County.

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APPENDIX 1

PROJECT WORK PLAN

	ACTIVITY	MONTH	DURATION
1.	Pilot study	June	2 Weeks
2.	Data collection	July-August	2 Months
3.	Data cleaning	September	1 Week
4.	Data coding	September	2 Weeks
5.	Capturing of data in the computers	October	2Weeks
6.	Data Analysis	October	2Weeks
7.	Report Writing	November	3 Weeks
8.	Presentation of the Report	December	1 Week
9.	Submission of the Report	January	1 Week

APPENDIX II

BUDGET SCHEDULE

Item	Cost (Kshs)
Proposal Writing :	
Travel Cost	20,000.00
Typing and Printing	6,000.00
Photocopying	2,000.00
Binding	1,000.00
Questionnaires development	2,000.00
Production of final document :	
Data collection	50,000.00
Books and other reference materials	6,000.00
Data analysis	35,000.00
Research assistants	20,000.00
Printing	6,300.00
Binding	4,000.00
Miscellaneous	5,000.00
Total cost	**157,300.00**

APPENDIX III

ACTS OF PARLIAMENT RELATED TO MICRO FINANCE

Banking Act……………………………………………………………...... Cap 488.

Building Societies Act………………………………………………...... Cap 489.

Capital Market Act……………………………………………………… Cap 485.

Co-operative Societies Act……………………………………………… Cap 490.

Hire Purchase Act……………………………………………………….. Cap 507.

Insurance Act……………………………………………………………. Cap 487.

Microfinance Act……………………………………………………….... No I9/2006.

Retirement Benefits Act………………………………………………… Cap 197.

Sacco Societies Act…………………………………………….……..No 14/2008

APPENDIX IV

(LETTER OF INTRODUCTION)

Egerton University,

Department of Business Studies,

Nakuru Town Campus,

P.O Box 13357,

Nakuru.

TO WHOM IT MAY CONCERN

Dear Respondent,

RE: RESEARCH PROJECT

I am a student at Egerton University pursuing a Master of Business Administration (MBA) Degree, specializing in finance. I am carrying out a research on the "EFFECTS OF MICRO CREDIT ON HOUSEHOLDS IN AINAMOI SUB COUNTY, KERICHO COUNTY."

The purpose of this questionnaire is to gather information on households before and after they have received micro credit. You have been selected as one of the respondents who will assist the researcher in providing the necessary data for the study. The information will be treated confidentially and will be strictly used for academic purposes only.

Thanks for your Co-operation.

Yours Faithfully,

Richard Langat

RESEARCHER

APPENDIX V

QUESTIONNAIRE

The respondent's information will be strictly used for research purposes only and will not be presented to any other organization or institution.

Part A: Personal profile

Please tick in the relevant boxes corresponding to your answer

1. Name of the respondent………….. (Optional)……………………………………

2. Age

Below 18years ☐

18 – 30 years ☐

30 – 50years ☐

Above 50 years ☐

3. Which economic activity are you currently engaged in?

Farming ☐

Trade ☐

Employed ☐

None employed ☐

4. Marital status

Single ☐

Divorced ☐

Widower

Married

Widow

5. Gender

Male

Female

6. Which is your location? ……………………………………….

7. Which level of education have you attained?

None

Secondary

Primary

University

Others

8. Number of children you have

None

1 – 4

5 – 9

Above 9

9. Who makes the final decision with regard to the use of your households' financial resources?

Self

Spouse

Another member of the household (specify)

Others (specify)

Part B: Financial information of the enterprise

10. Name of the business you are currently operating………………………………………..

11. How long have you operated the business?

12. Which industry does your business serve?

Farming

Trade

Tourism

13. How many employees have you employed in the following years?

Year	No of Employees	Total
2008		
2009		
2010		
2011		
2012		

14 What is the ownership of your business premise?

Lease

Own

Rental

Others (specify) ☐

15. Where is your business located? ……………………………….

16. State the total sales in the years as indicated

2008

2009

2010

2011

2012

17. What was your total business expenditure categorized as below

Year	Recurrent	Capital	Total
2008			
2009			
2010			
2011			
2012			

18. Degree of separation of enterprise from household

a) Do you keep business money separately from personal/household expenses?

Yes….

No…..

b) Are you able to calculate the profit of your enterprise?

Yes….

No…..

c) If yes how often?

Weekly…………..

Monthly….

Others…..

d) Do you pay yourself wages/salary for your work in business?

Yes….

No…..

e) Do you keep business records?

Yes….

No…..

Part C: Profile of the borrower.

19. What is the name of the financial institution you have soured loans from?

20. How long have related with the financial institution? ....

21. Has access to credit helped to nature good relationships in the family between the husband and the wife? ....

22. How much amount of loans did you borrow? ....

Please fill the following details:-

Loans	Year accessed	Loan amount	Amount invested
1st Loan			
2nd Loan			
3rd Loan			
4th Loan			

23. How did you know the existence of the MFI?

Friend ☐

Media ☐

Others ☐

24. How would you describe the time it took you to apply and get the loans:-

Too short ☐

Moderate ☐

Too long ☐

25. What is your opinion about the interest?

Low ☐

High ☐

Fair ☐

26. How often do you repay the loans?

Weekly

After two weeks

Monthly

Others (specify)

27. Have you been able to repay the loan promptly? Specify ___________________

28. How would you rate your financial institution?

Excellent

Good

Poor

29. How much of the profits have you re-invested? ___________________

30. State the challenges you face in operating your account

31. How much did the household/enterprise spend? Please state in the following order.

Year	Education	Health	Food	Clothing	Entertainment	Shelter	Totals
2008							
2009							
2010							
2011							
2012							

32. Do you have any other sources of household income? If so state the amount____________________

Year	Employment	Retirement P	Rent	Gifts	Others	Total
2008						
2009						
2010						
2011						
2012						

33. Routine savings with micro finance institutions.

a) Please fill the following table;

Year	Amounts saved	Institution	Remarks
2008			
2009			
2010			
2011			
2012			

Part D: Household profile

34 Housing:

(a) What is the total number of people living in your house/home? --------------------

(b) What is the ownership status of the house you live in? ------------------------------

I=Owned; 2=Rented; 3=Accommodated by someone else (Inc. employer); 4=other

(c) Number of separate house units ---

(d) Number of rooms in main unit ---

(e) Structure of main unit:

- Wall (I=Mud; 2=Wood; 3=Bricks; 4=Stone; 5=Other
- Roof (I=Grass; 2=Corrugated iron sheets; 3=Concrete; 4=Tiles; 5 other
- Floor (I=Mud; 2=Wood; 3=Concrete; 4=Other)

35 Household Assets, what are the three majorhousehold assets you own?

Name value.

1…………………………………………… ……………………….

2…………………………………………… ……………………….

3……………………………………………. ………………………..

36Land:

(a) What is the size of agricultural land you own? (in acres)_____

(b) What number of urban plots do you own? ________________

37 What number of livestock do you own?

- Cattle Goats/Sheep
- Chicken Others (Specify

38. Summary of assets acquired.

Year	Household	Land	Livestock	MV	B Stock	Buildings	Totals
2008							
2009							
2010							
2011							
2012							

Part E: Self-assessment of impact

42 Is there any changed aspect of your life (including business & household?)

You could attribute to the services you have received from micro finance organization?

43 IF YES, please list the main changes that have occurred since you joined it?

(a) Positive changes ______________________________

Negative changes ______________________________

44 In your view, what is the overall (net) of these changes in your life?

____

I=Positive; 2=Negative; 3=Neutral *Your participation in this study is greatly appreciated.*

Once again, I assure you that your identity will remain ***STRICTLY CONFIDENTIAL.***

Thank you for your time.