

**FACTORS INFLUENCING IMPLEMENTATION OF
AGRICULTURAL PROJECTS FUNDED BY
MICROFINANCE INSTITUTIONS IN CENTRAL
DIVISION, MACHAKOS COUNTY, KENYA**

BY

PETER MUSEMBI MUTUA

**A Research Project Report Submitted In Partial Fulfillment of the Requirements
for The Award of The Degree of Master of Arts In Project Planning And
Management at The University of Nairobi**

2014

DECLARATION

This Research Project Report is my original work and has not been submitted in any other University for the award of a degree.

Signature.....

Date.....

Peter Musembi Mutua
L50/61983/2011

This Research Project Report has been submitted for examination with my approval as University Supervisor.

Signature.....

Date.....

Mr Samuel Njuguna
Lecturer
Department of Extra Mural Studies
University of Nairobi

DEDICATION

I dedicate this research work to my parents, Mrs Joyce Mutua and the late Mr Joseph Mutua and without whose contribution I would not have made it this far. To my wife, Mrs Annastacia K. Musembi whose support was instrumental throughout the study; and our daughters Ilga and Megan for their patience and understanding while I was away during studies.

ACKNOWLEDGEMENT

I wish to express my gratitude to my supervisor Mr. Samuel Njuguna who tirelessly provided me with invaluable, insightful opinions on the way to go about my study on this research work. Further I would also wish to appreciate the tireless effort made by my lecturers during all the stages of this postgraduate degree programme. Their contributions are highly recognized and treasured.

I wish to thank the University of Nairobi administration for granting me an opportunity to pursue my Masters programme in the world class institution. More gratitude goes to my wife, Mrs Annastacia Musembi whose invaluable ideas helped me stay on focus on all phases of this research report development. I am greatly indebted to my employer the Ministry of Agriculture, Livestock and Fisheries Development through the State Department of Livestock Production for making it possible for me to undertake this study.

More thanks to Mr James Tendwa, the Project Co-ordinator of Arid and Semi Arid Livestock Based Livestock Project (ALLPRO) for fully financing my postgraduate training at the University of Nairobi. I would also like to recognize my immediate Supervisor and Chief of Training and Staff Development, Mrs. Caroline Ngunjiri, Deputy Director, Department of Livestock Production for facilitating my training during the entire period of the training.

Fellow classmates, I thank you all for the time we shared together not forgetting your cooperation in all areas during coursework.

TABLE OF CONTENT

CONTENT	PAGE
DECLARATION.....	ii
DEDICATION.....	iii
ACKNOWLEDGEMENT.....	iv
TABLE OF CONTENTS.....	v
LIST OF TABLES.....	vi
LIST OF FIGURES.....	vii
ABBREVIATIONS AND ACRONYNS.....	viii
ABSTRACT.....	ix
CHAPTER ONE: INTRODUCTION.....	1
1.1 Background of the Study.....	1
1.2 Statement of the Problem.....	2
1.3 Purpose of the Study.....	3
1.4 Objectives of the Study.....	4
1.5 Research Questions/Hypothesis.....	4
1.6 Significance of the Study.....	5
1.7 Delimitation of the Study.....	6
1.8 Limitations of the Study.....	6
1.9 Assumptions of the Study.....	6
1.10 Definitions of Significant Terms in the Study.....	7
1.11 Organization of the Study.....	8
CHAPTER TWO: LITERATURE REVIEW.....	10
2.1 Introduction.....	10
2.2 General Overview of Agricultural Micro Finance.....	10
2.3 Poverty and Food Security Situation in Africa.....	12
2.4 Grameen Bank Micro – Finance Concept of Bangladesh.....	14
2.5 Micro-Financing of Agricultural Projects in Kenya.....	15
2.6 Factors Influencing Implementation of MFI funded Agricultural Projects.....	17

2.6.1	Government Policy.....	18
2.6.2	Educational Factors.....	18
2.6.3	Technological Factors	21
2.6.4	Socio Economic Factors	23
2.7	Theoretical Framework.....	26
2.8	Conceptual Framework.....	27
2.9	Summary of Research Gaps.....	30
CHAPTER THREE: RESEARCH METHODOLOGY.....		31
3.1	Introduction.....	31
3.2	Research Design.....	31
3.3	Target Population.....	31
3.4	Sampling Procedure and Sample Size.....	33
3.5	Research Instruments.....	34
3.6	Validity of Instruments.....	34
3.7	Reliability of Instruments.....	35
3.8	Data Collection Methods.....	35
3.9	Data Analysis Techniques	36
3.10	Operational Definition of Variables.....	37
3.11	Ethical Considerations in the Study.....	38
CHAPTER FOUR: DATA ANALYSIS, PRESENTATION INTERPRETATION AND DISCUSSIONS.....		39
4.1	Introduction.....	39
4.2	Response Rate.....	39
4.3	Demographic Information.....	40
4.4	Government Policy.....	42
4.4.1	Discussion of Findings: Government Policy.....	44
4.5	Educational Factors.....	45
4.5.1	Discussion of Findings: Educational Factors.....	47
4.6	Technological Factors.....	48

4.61	Discussion of Findings: Technological Factors.....	50
4.7	Socio Economic Factors.....	51
4.71	Discussion of Findings: Socio Economic Factors.....	56
4.8	Regression Analysis.....	58
4.9	Summary of the Chapter.....	60
CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSIONS		
RECOMMENDATIONS.....		
		61
5.1	Introduction	61
5.2	Summary of Findings.....	61
5.2.1	Effect of Government Policy on MFI Funded Projects.....	61
5.2.2	Effect of Educational Factors on MFI Funded Projects.....	61
5.2.1	Effect of Technological Factors on MFI Funded Projects.....	62
5.2.3	Effect of Socio Economic Factors on MFI Funded Projects.....	62
5.3	Conclusions.....	63
5.4	Recommendations of the Study.....	65
5.5	Suggestions for Further Studies.....	66
REFERENCES.....		67
APPENDICES.....		76
Appendix 1	Letter of Transmittal.....	76
Appendix 2	Survey Questionnaires.....	77

LIST OF TABLES

Table	Page
Table 3.1: Target Population by Gender and group allocation.....	32
Table 3.2: Determination of Sample Size.....	33
Table 3.3: Reliability Test Analysis for the questionnaire.....	35
Table 4.1: Location of the Farmers.....	40
Table 4.2: Gender of Respondents.....	41
Table 4.3: Age of Respondents.....	41
Table 4.4: Level of Education of Respondents.....	42
Table 4.5: Government involvement in access of credit facilities.....	42
Table 4.6: Government presence in farmer project activities.....	43
Table 4.7: Government involvement on time on MFI loan processing.....	44
Table 4.8: Effect of education level in Project management.....	45
Table 4.9: Education versus high income to farmers	46
Table 4.10: Education versus effective management of group projects.....	46
Table 4.11: Ownership of Mobile Phones by respondents.....	48
Table 4.12: Electronic Money Transfer and Convenience to Project Managers.....	49
Table 4.13: Advantages of Electronic Money Transfers in Project Management.....	49
Table 4.14: Proportion of farmers who received loans by phone	50
Table 4.15: More preferred type of agricultural projects in the location.....	51
Table 4.16: Age at which one should own land.....	52
Table 4.17: Types of houses prevalent in the area.....	52

Table 4.18: Level of access to credit facilities by women.....	53
Table 4.19: Level of access to credit facilities by women.....	53
Table 4.20: Factors about type of agricultural project chosen by farmers.....	54
Table 4.21: Factors about type of houses prevalent in the area.....	55
Table 4.22: Factors on effective implementation of MFI funded projects.....	56
Table 4.23: Coefficient of determination.....	58
Table 4.24: Correlation Factor Table.....	59

LIST OF FIGURES

Figure 1: Conceptual Framework.....	28
--	----

ABBREVIATIONS AND ACRONYMS

AFC	Agricultural Finance Corporation
ASAL	Arid and Semi Arid Lands
ASDSP	Agriculture Sector Development Support Programme
ATM	Automated Teller Machine
CBK	Central Bank of Kenya
CDF	Cooperative Development Foundation
COOPEC	Cooperatives d'epargne et de credit
DFZ	Disease Free Zones
DTM	Deposit Taking Micro – Finance
ERS	Economic Recovery Strategy
FAO	Food and Agriculture Organization
GBA	Grameen Bank Approach
GDP	Gross Domestic Product
GOK	Government of Kenya
ICT	Information Communication Technology
IFAD	International Fund for Agricultural Development
IGA	Income Generating Activity
IRD	Integrated Rural Development Programme
KIDP	Kitui Integrated Development Programme

KIPPRA	Kenya Institute of Public Policy Research and Analysis
KNBS	Kenya National Bureau of Statistics
KREP	Kenya Rural Enterprise Programme
KWFT	Kenya Women Finance Trust
MDG	Millennium Development Goals
MFI	Micro – Finance Institution
MOA	Ministry of Agriculture
MOEST	Ministry of Education Science of Technology
NABARD	National Bank for Agriculture and Rural Development
NALEP	National Agriculture & Livestock Extension Programme
NASEP	National Agriculture Sector Extension Policy
NEMA	National Environment Management Authority
NGO	Non Government Organization
SACCO	Savings &Credit Cooperative Society
SIDA	Swedish International Development Agency
SHG	Self Help Group
SPSS	Statistical Package for Social Scientists
UNDP	United Nations Development Programme
UNICEF	United Nations International Children Emergency Fund
USAID	US Agency for International Development
WEDF	Women Enterprise Development Fund
YEDF	Youth Enterprise Development Fund

ABSTRACT

Over the last 20 years MFIs have provided financial services to people dealing with small and micro businesses or farmers who did not have access to loans from commercial banks. This research study focused on the role of Micro Finance Institutions in alleviating poverty and attaining food security among small scale farmers in Central Division, Machakos County. The research study emphasis as on Faulu Kenya and Kenya Women Finance Trust MFIs which have enabled small scale farmers get empowered through provision of unsecured loans. These MFIs have mutated from small scale NGOs to fully fledged banking institutions. Farmers have accessed agricultural credit from these MFIs and have financed investments successfully and have improved their food security status and increased household incomes in a significant way. The study hinged on Maslow's theory of basic or physiological needs that emphasizes on attaining the minimum requirements that are essential for a decent standard living. These needs are critical and their presence leads to satisfaction, self confidence and valuable. The study used descriptive survey to collect primary data. The main tool for data collection was the questionnaire which was administered to the MFI funded agricultural project leaders together with the beneficiaries of these projects. The questionnaire focused on operations of MFIs in small holder farming, MFI project financing, accessibility of the loans and the extent to which the respondents have alleviated poverty and attained food security using the MFI loans. Qualitative data involved looking for themes and contents in the qualitative data generated from the sets of questionnaires used in the study. The study focused on the following factors; Government policies, Educational factors, Socio economic factors and Technological factors. These formed the basis of examining the impact of effective implementation of the MFI funded agricultural projects. The quantitative method involved deriving statistical descriptions and interpretation of data using descriptive statistics. The quantitative data and the findings were presented using description, frequency tables and subsequent discussions. Interm of data analysis the researcher used both qualitative and quantitative methods. The sample population was a group of 140 respondents chosen through stratified random and purposive sampling. The researcher got back 90 completed questionnaires which were analyzed using the SPSS (v17). Research findings were derived through regression and correlation analysis and from the study; technological factors were ranked the highest with a Pearson's Correlation factor value of 0.793 making it an extremely important independent variable. Socio economic factors ranked next with a Correlation value of 0.765 making it the second important independent variable. The effect of Government policies recorded a correlation value of 0.712 making it a fairly important independent variable. Education factors had the least effect in relation to effective implementation of the MFI funded agricultural projects with a correlation value of 0.554. In conclusion, effective implementation of MFI funded agricultural projects in Central Division; Machakos County has been as a result of interplay between technology and Socio Economics with Government involvement and education aspects contributing minimally though important. The researcher recommends that more studies relating to MFI funding should be done in Machakos County. Other factors especially ICT that influence the implementation of MFI funded projects in the county should also be investigated with a view to achieving sustainable food production and increased household incomes.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Agriculture is the mainstay of the Kenyan Economy and contributes 23.9 percent of the Kenyan Gross Domestic Product (GDP) and 60 percent of the total export earnings. According to KIPPRA, (2010) sustainable poverty reduction can only be possible through economic growth and development strategies. This will have to be done through agriculture which has been a major source of the country's food security and a stimulant to off-farm employment. Thus, industrial development is unlikely to be sustainable unless there sufficient domestic demand, which essentially calls for raising incomes of the rural population. Furthermore, the highest potential for industrialization also lies in the area agricultural based industries Mbwabu & Evenson, (1998). The colonial government in Kenya encouraged the provision of farming subsidies to farmers and this trend created a dependency syndrome. After independence the same policies were entrenched and through the Agricultural Financial Corporation (AFC) agricultural credit was extended to farmers for twenty years but corruption coupled with mismanagement made lending to farmers unsustainable hence its collapse Macharia, (2005).

Non Governmental Organizations (NGOs) involved with agricultural Micro-financing came in to intervene but most of them demanded for loan security or collateral before granting credit. The entry of Micro Finance Institutions (MFIs) in the money lending business introduced the Grameen Bank Strategy which involves borrowing without necessarily providing collateral to access credit (KREP Annual Report 2000). Farmers are therefore able to borrow funds easily from institutions like Faulu Kenya and Kenya Women Finance Trust (KWFT) and invest in agricultural activities and re-borrow more and more thereby improving their income levels at the same time alleviating poverty and increasing food production at house hold level Kibaara, (2005). The importance of agricultural finance in Kenya cannot be overemphasized since lack of working capital and low liquidity limits the farmer's ability to purchase productivity enhancing inputs like seeds, fertilizers and pesticides Nyoro, (2002).

The need for microfinance entails filling the gap for the provision of financial services to micro-entrepreneurs and small businesses, which lack access to banking and related services due to the high transaction costs associated with serving these client categories (National Livestock Policy 2008). In this spirit, Kenya Rural Enterprise Fund, (K-REP), Faulu Kenya and the KWFT managed to penetrate Machakos County to reach “small” borrowers. According to the Central Bank Annual Report, 2011, we have 56 licensed MFIs in the country. In the case of the Women Enterprise Fund (WEF), the funds are channeled through the Ministry of Gender and Youth as well as through MFIs; women groups are able to borrow up to Ksh 500,000, Machakos Development Plan (2007).

The Government of Kenya is keen to develop the microfinance industry and its poverty reduction strategy (Economic Recovery Strategy for Wealth and Employment Creation – ERS) identifies access to financial services as one of the means of creating employment, promoting growth and reducing poverty in the country Llanto (1999). The ERS prioritises the development of the microfinance industry in order to deepen access to financial services, especially for the rural and urban poor. The microfinance industry in Kenya has as a result experienced rapid growth over the years, (Bindlish & Evenson 1993). According to NASEP Report (2005) the demand for micro finance services in Kenya is high, yet the industry is only able to meet about 20% of this demand because of a lack of financial resources and the capacity to assess risk, process and monitor loans to the smaller borrowers. According to the YEDF Annual Report (2012) Machakos County received 16.9 million to disburse to 352 groups and 1.95 million for 95 individual groups.

1.2 Statement of the Problem

According to KNBS Report 2011, in Machakos County, 59.6% of the population lives below the poverty line. The number of poor people in the 2005/2006 period was 660,220 against a per capita income of 28.92 in the 2008/2009 period. This population is represented by 60% of the population in Central division which confirms that there is a strong correlation between poverty and food insecurity.

Food security studies undertaken in Machakos County by Tegemeo institute of Egerton University and Kenya Institute of Public Policy Research and Analysis (KIPPRA) indicate that there is a deficit in terms of food production and interventions are necessary to achieve sustainable food production and reduced poverty. Nyoro (2002) points out in one of his studies that 54% of the people living in this division are poor peasant farmers. Due to economic problems in the county nearly 85% of these families suffer financial and social problems and are unable to access credit from banks and other major financiers, (Machakos Development Plan 2007).

Government financing through the AFC requires that farmers provide collateral and this has made it difficult for them to buy farm inputs and finance their agricultural projects. Muya (1997) strongly illustrates that strategies to contain poverty and food insecurity have not been sustainable despite the fact that about 12% of the farmers in Central division have shallow wells from which they can tap water for small scale irrigation. According to Kibaara (2005), Non Governmental Organizations and other Micro Finance Institutions involved in the money lending business have been able to successfully and effectively finance agricultural projects for the farmers in Central Division of Machakos County. The farmers have been offered collateral free credit products and more focused agricultural extension advice. As a result the farmer lives have been greatly transformed in terms of food security, increased household income, and food production. The study therefore seeks to investigate the factors that have made it possible for other credit lenders other than Government and especially MFIs to implement agricultural projects in Central Division, Machakos County.

1.3 Purpose of the study

The purpose of this study is to examine the factors influencing implementation of agricultural projects funded by micro-finance institutions in Central Division, Machakos County.

1.4 Objectives of the Study

The study was guided by the following four objectives:

- i. To determine whether Government policies influence implementation of Micro Finance Institution funded agricultural projects.
- ii. To assess the extent to which Educational factors influence implementation of Micro Finance Institution funded agricultural projects.
- iii. To examine how social economic factors influence implementation of Micro Finance Institution funded agricultural projects.
- iv. To establish the extent to which technological factors influence implementation of Micro Finance Institution funded agricultural projects.

1.5 Research Questions

The study sought to address the following four research questions;

- i. How do Government Policies influence the implementation of Micro Finance Institution funded agricultural projects?
- ii. To what extent do Educational factors influence the implementation of Micro Finance Institution funded agricultural projects?
- iii. How technological factors influence implementation of Micro Finance Institution does funded agricultural projects?
- iv. To what extent do Socio Economic factors influence implementation of Micro Finance Institution funded agricultural projects?

1.6 Significance of the study

The study, it is hoped will go a long way in the provision of useful knowledge to stakeholders involved in food security matters. The findings will inform policy makers the necessity of credit availability to farmers to empower them so that they can produce more food in a sustainable manner. They will also be in a better position to design appropriate responses and micro-economic policy intervention strategies regarding food security in Machakos County. The share of income or consumption by the poorest 10 per cent is 2.5 per cent. The recommendations of the study will also help in achieving Vision 2030, in which the government has identified increasing access to general credit and training of women and youth entrepreneurs as a flagship project. These flagships involve agricultural policy reform, improving value gained in the production of Kenyan products and creation of livestock Disease Free Zones (DFZs). The overall goal is to achieve sustainable food security for the nation. Accordingly, through government policy it will be possible to develop a framework to extend affordable credit facilities to both small and large scale livestock farmers through the revitalization of the existing public institutions including the Agricultural Finance Corporation. The information will also be available to planners in Government circles to enable them focus on the achievement of the United Nations Millennium Development Goals (MDGs) and more particularly the goal touching on eradication of extreme hunger and poverty.

Existing micro-finance institutions, registered non-governmental organizations involved in micro financing, and savings and credit co-operative organizations will benefit greatly in terms of accessing information related to financing women and youth enterprises. The main aspect here will touch mainly on food security by promoting social and economic development through a devolved system of government as enshrined in Article 174 (f) of the Kenyan Constitution where activities involved with agriculture, livestock and fisheries development have been devolved to the county governments. In line with the Constitution of Kenya the Chapter on Bill of Rights advocates that every person is entitled to basic nutrition, shelter and healthcare (Constitution of Kenya, 2010).

1.7 Delimitations of the study

The study focused on agricultural projects funded by Faulu Kenya and Kenya Women Finance Trust (KWFT) in Central Division, Machakos County. The respondents were derived from locations that represent a high penetration area where the two MFIs command a lot of presence in terms of agricultural project financing. Other projects in these areas are non agricultural and are funded by other organizations.

1.8 Limitations of the study

During the study certain limitations were anticipated; movement of the researcher within the area of study was a challenge. This was addressed by engaging two motorcycle riders to reach all the respondents with ease. There may not be sufficient time to collect as much data as possible but hiring an extra two research assistants and adjusting the interviewing program eased this problem to a reasonable extent.

The researcher sourced more funds from his employer (Ministry of Agriculture, Livestock and Fisheries) to enable him boost his financial base in case the research fell short of financial resources.

1.9 Assumptions of the study

The study was based on the following assumptions; that the data collection instruments were reliable and would be reliable and had validity to measure the desired constructs. Another assumption is that the targeted group had reasonable level of literacy to make it easier to interact well during the study. The respondents, it was assumed would be available, honest and objective when answering the questions. The researcher assumed the weather would be clear without rains to allow for data collection without much inconvenience.

1.10 Definition of Significant Terms Used in the Study.

Dependent Variable:	is a variable whose outcome depends on the manipulation of the independent variable. In the study it is the effective implementation of MFI funded agricultural projects.
Educational Factors:	These are the independent variables on education that have an effect on achieving the dependent variable in the study. Literacy levels and training & extension support this variable in this study.
Extraneous Variable:	these are those variables (both dependent and independent) which have the capacity to affect a given relationship and in this study insecurity is the extraneous variable.
Government Policy:	policy in Government responsible for guiding decisions and achievement of rational outcomes. In this study the constructs for this independent variable are agriculture and livestock policy and regulatory framework.
Implementation:	Carrying out activities aimed at achieving a proposal or a directive.
Independent Variable:	A variable that causes changes in the dependable variable. In the study the researcher had Government Policy, Education, Technological and Socio economic factors as the independent variables.

Moderating Variable:	is a variable that behaves like a independent variable in that it has a significantly contributory or contingent effect on the relationship between in independent and a dependent variable. In this study, Environmental issues are the moderating variable.
Socio Economic Factors:	these are factors responsible for the analysis of social processes, how societies progress, stagnate, or regress because of their local or regional economy, or the global economy. The constructs for this study are income levels, land ownership, poverty levels and credit facilities for women.
Technological Factors:	These are the technologically independent variables that have a bearing towards the dependent variable in the study. In this study, money transfer technology, Innovations in MFI lending, internet and computer use and use of ATM/VISA cards are the constructs behind this independent variable.

1.11 Organization of the Study

The research report is organized into five chapters.

Chapter One entailed the background of the study, statement of the problem, study objectives, research questions and assumptions considered during the research.

Chapter Two comprised of the literature review and conceptual framework. In the literature review section, literature oriented to the study problem was reviewed to allow for the development of a conceptual framework that reflects the study area and constructs.

In Chapter Three Research methodologies, target population, sampling and sample determination, data collection and analysis was discussed in great detail. The tools used in data collection were also discussed here.

Chapter Four presented the survey findings, analysis and implications based on the four objectives of the study. The chapter analyzed the findings from the study in relation to the stated objectives. This section also analyzed qualitative data obtained through observation.

Chapter Five summarized the findings of the study and provided an in-depth discussion of the major findings. The chapter also provided recommendations based on the study that helped towards implementation of MFI funded projects. Areas of study that required further study are also included in this chapter.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This Chapter involves the search for literature to find out what has been done by other researchers concerning the factors surrounding successful financing of Agricultural Projects by Micro Finance Institutions.

2.2 General Overview of Agricultural Micro Financing Situation

According to Goodman, (2002) the rise of microfinance has unlocked the puzzle of how to profitably lend to the poor and microenterprises in densely populated urban and rural areas in Africa and South East Asia. By the end of 2003, about 80 million clients across the world were being serviced by approximately 2,900 MFIs. In India, micro finance has evolved over the last quarter of a century into various operating forms and to varying degree of success. The post rationalization period in the banking sector, circa 1969, witnessed a substantial amount of resources being earmarked towards meeting the credit needs of the poor. In the 1980s, the Government of India (GoI) launched the Integrated Rural Development Program (IRDP), a large poverty alleviation credit program which provided government subsidized credit through banks to the poor. It was aimed that the poor would be able to use the inexpensive credit to finance themselves over the poverty line, IFAD, (2003).

According to Singh, (2005) about 70% of the farmers in India financed their agricultural projects fully by borrowing from the National Bank for Agriculture and Rural Development (NABARD). There were several objectives for the bank rationalization strategy including expanding financial services outreach to neglected sectors such as agriculture. As a result of this strategy, the banking network underwent an expansion phase without comparables in the world. Credit through micro financing institutions (MFI) came to be recognized as a remedy for rural poverty alleviation. There spawned several pro-poor financial services, supported by both the state and central governments which included credit packages and programmes customized to the perceived needs of

the poor. To answer the need for microfinance from the poor, the past 25 years has seen a variety of micro finance programmes promoted by the Indian Government and NGOs. The programs vary from regional rural banks with a social mandate to rural MFIs, Singh (2005). According to Kropp, (2002), the Indian MFI experience shows that banks can operate a viable window to reach the poor through savings and credit services. In 1999 the GoI merged various credit programmes and started a new programme Swarnajayanti Gram Swaragar Yojana whose mandate was to continue providing credit to the poor through the banking sector to generate self employment through the Self Help Group (SHG) approach and the program has grown to enormous size. Micro Finance Institutions have become popular throughout India as one of the financial intermediary to the poor. For instance, access in terms of rural MFI branches increased from 1,833 in 1969 to 32,200 at present, (Reddy 2006).

Srivastava, (2005) points out that the proportion of borrowings of rural households from institutional sources increased from 7% in 1951 to more than 60% at present. The MFIs exist in many forms including cooperatives, Grameen like initiatives and private sector MFIs. Thrift cooperatives have been formed organically and have also been promoted by regional state organizations like the Cooperative Development Foundation (CDF) in Andhra Pradesh. The Grameen-like initiatives following a business model like the Grameen bank. Private sector MFIs include NGOs that act as financial services providers for the poor and include other support services but are not technically a bank as they do not take deposits, Shah et al (1998). The rise of SHGs in India and Sri Lanka made this a dominant form of micro finance in addition to mainstream MFIs. In Sri Lanka government policy has really supported rural MFIs with financial allocation being at 45% of the total GDP going to the rural population. In 2005 the Government of Sri Lanka set up the SHG Bank Linkage and involved the National Reserve Bank and NABARD to increase the capital base for the MFI industry and as a result we now have over 2 million SHGs in Sri Lanka most of these involved rice or paddy farming in the lowlands, NABARD, (2005).

According to Stiglitz, (1993), cumulatively 1.6 million SHGs have been bank linked with a cumulative loan portfolio of Rs 60 billion. In 2004-05 alone almost 800,000 SHGs were bank-linked. The linking of the SHGs was good because banks were able to tap into the large market and the SHGs were able to scale up operations and reduce poverty and increase incomes for the members. In rural areas the SGHs have transformed livelihoods through agriculture farming, animal husbandry, dairy and poultry production activities, Sarkar, (1996).

Hoff et al, (2005) agree that Tanzanian, Ugandan and Rwandese governments can help market-based microfinance by eliminating unfair competition from public institutions: undertaking overall regulatory reform; and improving the overall business environment. In East Africa and particularly Tanzania the impact of policy analysis and regulatory issues has been emphasized greatly with more energies being directed to rural famers, Pagano, (1993). The financial viability of village banking projects has been a priority to the East African Governments. In Rwanda for example, the potential for agricultural financing is enormous and a lot of resources have been allocated to ensure that rural development and food security is obtained. Kibaara, (2005) agrees that NGOs have also penetrated the Rwandese MFI market empowering the vulnerable farming communities especially those involved in small holder subsistence agriculture. In Tanzania, the demand for rural financial services in rural areas is largely unmet. Recent reforms and market liberalization have led to the withdrawal of banks from rural areas where they were making losses and financial NGO have limited outreach, King & Levine, (1993).

2.3 Poverty and Food Security Situation in Africa

According to Dunne et al, (1993) poverty in Africa is predominantly rural and more than 70 per cent of the continent's poor people live in rural areas and depend on agriculture for food and livelihood, yet development assistance to agriculture is decreasing. In Sub-Saharan Africa, more than 218 million people live in extreme poverty. Among them are rural poor people in Eastern and Southern Africa, an area that has one of the world's highest concentrations of poor people. The incidence of poverty in Sub-Saharan Africa is increasing faster than the population Angelson et al, (2001).

Overall, the pace of poverty reduction in most of Africa has slowed since the 1970s. Rural poverty in many areas of Africa has its roots in the colonial system and the policy and institutional restraints that it imposed on poor people. In recent decades, economic policies and institutional structures have been modified to close the income gap. Structural adjustments have dismantled existing rural systems, but have not always built new ones. Hartungi, (2007) agrees that in many transitional economies, the rural situation is marked by continuing stagnation, poor production, low incomes and the rising vulnerability of poor people.

According to Smith & Aduayom, (2006), Africa is the only region in the world where per capita food production has declined. Subsequent evidence on food production in this region continues to paint a gloomy picture. Indeed, it has been reported that while hundreds of millions in the industrialized countries often suffer from diet-related diseases owing to excessive intake of food, a large number in the developing countries are, ironically, faced with hunger owing to lack of food, Angura & Atikoro, (2004). Of the 800 million people globally suffering from inadequate food intake, over 700 million are in the Third World among whom over 100 million can be found in the African continent. Ananda et,al, (2003) agrees that perceptions of food security have changed over time and definitions have also changed with them. In recent years, more attention has been focused on household access to available food rather than food production. UNDP Annual Report (1994) stresses that emphasis on food access or food “entitlement” is due to the recognition that increased national food production in the past has not necessarily translated into improved food security at the local level. It is now, therefore, generally agreed that food security is a term which encompasses food supply and food demand issues. Nyoro, (2005) defines Food Security as “access by all people at all times to adequate food for an active life”. Although food is the defining concept, it is implied that food is not all that matters; it also addresses issues related to abilities or inabilities to secure food, World Bank, (1991).

Nyariki & Wiggins, (1997) agree that the definition of food security comprises of two major elements. First, the availability of food, through production, storage or imports; and second, access of people to food through their purchasing power to obtain it from a market, or financial outlays and other resources to grow it. Thus, since there is a time dimension to food security, the lack of food (i.e. food insecurity) can be either short-term (transitory) or long-term (chronic). At the individual level, a person is considered food-secure if he/she can afford and has access at all times to a diet that is adequate to sustain an active and healthy working life, Sloane, (2001). This is the micro-level or household (or local level) food security and we can therefore argue that the primary cause of food insecurity is poverty or lack of a secure source of income. Thus, the concept of micro-level food security addresses the risk of individuals and households not being able to secure sufficient food. A similar definition of food security holds true at the macro- or national level.

2.4 Grameen Bank Micro- finance Concept of Bangladesh

Hartungi, (2008) agrees that there is a growing recognition that institutional credit plays an important role in the modernization of agriculture through technological change. The pioneering effort of Muhammad Yunus, a University Professor in approving micro loans to groups of Bangladeshi women without the requirement of collateral and heavy documentation confirms this. His micro-lending technique, the Grameen Bank Approach (GBA) soon became the mainstream technique used by hundreds of NGOs and even small banks to reach small borrowers, typically, micro entrepreneurs and poor rural households Hassan et al, (2002). Bangladesh has been implementing its rural credit program for the extreme poor that is known as the Grameen Bank which is target group oriented credit institution set up to provide loans to rural households that own less than 0.5 acre of land. According to Bornstein, (2005) the bank organizes the poor in groups and associations and provides credit without collateral at the same rate of interest (16 percent a year) as other commercial banks. It supervises utilization of the loans and guides borrowers in all around socio economic development.

The bank has succeeded in recovering over 98% of the loans and in substantially improving the economic condition of member households. According to Grameen Bank Report, (2009) the Grameen Bank concept of generating self employment for the poor through credit without collateral is applicable in other countries with widespread poverty and underemployment. Some elements of the Grameen Bank approach to delivery of credit, such as formation of small homogeneous groups for group guarantee of loans and supervision of loan utilization, recovery of loans in small regular installments, and development of institutions of collective savings for mutual benefit of members, may also work in other environments. One of the commendable features of the Grameen Bank is its desire to have its experience intensely analyzed for the benefit of others who are considering such an effort as well as for its own improvement Wahid, (1994).

2.5 Micro-Financing of Agricultural Projects in Kenya

Macharia, (2005) views Kenya to have a relatively well-developed microfinance sector that comprises organizations which can be categorized into the informal financial system which caters for the economically active people who rely on a variety of traditional and informal financial systems. According to Kimenyi, (2001), the active participation of KWFT and Faulu Kenya in the MFI industry has contributed greatly to increased incomes in farming communities. In Machakos County, concentration has been in Central Division where the two MFIs have reported increased penetration. These institutions have devised collateral free products that have enabled them attract clients from as far as Makueni and Kitui counties, According to KIDP Report, (2007) the two MFIs have supported Mango and Passion projects through short term financing with farmers contributing 30% of the total loan sought.

Wanjala, (2002) points out that the formal subsidized system comprises of organizations or institutions, which provide financial services and receive subsidies in different forms. The origins of formal subsidized microfinance institutions in Kenya can be traced to the mid 1950s with the establishment of the Joint Loan Board Scheme by the then colonial government. Since then the Government has established many targeted and subsidized rural credit programs to help the development process, AFC Strategic Plan, (2005).

According to Lobel, (2005), the main institutional actors today are Microfinance NGOs with credit programs for Micro and Small Enterprises (MSEs) who benefit from foreign aid agencies. They receive grants from donors to meet operational costs. As institutions they are formal and their financial operations are not regulated. These organizations normally target their services at people with low incomes. In the 1980s a number of NGOs introduced alternative credit delivery mechanisms for the poor that consisted of small amounts of loans without the requirement of tangible collateral, (Hospes et.al 2002). The role played by the agriculture sector in Kenya's economy has contributed greatly to the livelihood for most of the rural population; it supplies the manufacturing sector with raw materials and generates tax revenue that helps to support the rest of the economy. The sector also accounts for 65% of Kenya's total exports, it employs over 40% of the total population and over 70% of the rural population depends on agriculture for their livelihood (Macharia 2008).

Sustained and equitable agricultural growth is critical for uplifting the living standards of the people as well as generating rapid economic growth for the country. Hartungi, (2007) argues that the demand for agricultural microfinance in Kenya is large and the type of services the poor and low income client's demand vary across the board. Poor and low income people need and want a range of financial products and services to build income and wealth. Currently, over 10 million people in Kenya suffer from chronic food insecurity and poor nutrition, and between 2 and 4 million people require emergency food assistance at any given time nearly 30 % of Kenya's children are classified as undernourished, and micronutrient deficiencies are widespread . It is the policy of the government that all Kenyans throughout their life cycle enjoy at all times safe food in sufficient quantity and quantity to satisfy their nutritional needs for optimal health, Republic of Kenya, (2004). Investing in agriculture is one of the highest impact cost strategies available for reducing poverty and improving livelihoods.

2.6 Factors Influencing Implementation of MFI funded Agricultural Projects.

The factors under review are Government Policy, Educational, Socio – Economic and Technological factors.

2.6.1 Government Policy and implementation of Micro Finance Institution Funded Agricultural Projects.

According to Christen & Pearce, (2005) bureaucracy in Government has affected implementation of policies related to food security issues. Sometimes these policies are inappropriate or unrealistic and may become vulnerable to economic and political dynamic shifts. This effect may cascade down and affect funding of agricultural activities especially those that are funded by donors and other providers involved with Micro financing of agricultural activities. Sachs, (2005) agrees that red tape may increase the cost of credit thereby discouraging borrowers from financial institutions thereby hampering smooth project implementation. Dondo, (1999) agrees that a delay in the process of availing loans to farmers will contribute to 50% failure interms of execution of the ventures. This will eventually lead to reduced food production and high poverty rates. Regulation of the sector will enable authorities to define procedures for their operations, exit and entrance and ultimately create an environment for fair competition and efficiency in the sector Leonard, (1991).

According to the Central Bank Report, (2011), the Micro Finance Act (2006) has made it possible for the government to have order in the sector thereby ensuring that the players involved in the financing of agriculture projects are legally protected. The MFIs to be regulated under this act shall provide savings, credit, and other financial services to low income households in both rural and urban areas. According to Richardson, (1997), the microfinance industry plays a pivotal role in ensuring that farmers borrow loans at competitive rates to ensure that they are able to implement their agricultural projects. Such regulation will also contribute to the expansion of financial markets and will also enhance access to financial services and products by majority of the Kenyans. Agriculture Policy in Kenya revolves around the main goals of increasing productivity and income growth, especially for smallholders: enhanced food security and

equity, emphasis on irrigation to introduce stability in agricultural output; Commercialization and intensification of production especially among small scale farmers; appropriate and participatory policy formulation and environmental sustainability, Republic of Kenya, (2005).

According to the National Livestock Policy, (2008) the funding of the livestock sub-sector in general has been going down. In the past, a number of livestock development projects financed in partnership with development partners have been initiated but for some reasons, they have not been successful in achieving their set objectives. This was partly because of poor project planning and lack of adequate financial support to sustain the project after the end of the implementation period. Towards this end, the government will make the necessary efforts to mobilize adequate local financial resources for enhanced livestock development in the country, Njiraini & Anyanzwa, (2008). Currently, the small scale livestock farmers are resource poor with no collateral to offer. The government will develop mechanisms of extending affordable credit facilities to both small and large scale livestock farmers through the revitalization of the existing public institutions including the AFC. In addition, the government will establish other institutional frameworks which may be necessary for facilitating credit provision to farmers to enable them manage their agricultural ventures with a commercial focus Nyoro, (2002).

2.6.2 Educational Factors and implementation of Micro Finance Institution Funded Agricultural Projects.

Education is another factor that has a remarkable influence implementation of project since challenges in literacy skills hampers the management of the ventures. According to Najafi, (2003) education attainment of the household head, could lead to the awareness of the possible advantages of modernizing food production by means of technology utilization hence enhancing food supply. Policies designed to reduce income inequality, such as hunger, and malnutrition have had mixed results but income inequality and household food insecurity remain. Analysis of food security has been at the centre of

research to study the complex concepts of adequacy, stability and access to food especially in low income countries Kibaara, (2005). According to Manuh, (1998), education is critical in empowering rural communities to overcome the barriers to equality; uneducated rural girls are more likely to marry too young, to have too many children and to resign themselves to unpaid work. In Africa for example, female illiteracy rates were over 60% in 1996, compared to 41% for men.

Nyariki & Wiggins, (1997) concur that for project management to achieve results, literacy levels of the implementers should be satisfactory to ensure minimal penetration in terms of growth and advancement in society. Lack of access to formal education and training has contributed greatly to low employment and understanding of issues that contribute to project implementation. The Millennium Development Goals (MDGs) include the important objective of full parity of enrolment of boys and girls at all levels of education. Education could and would inevitably have a positive effect behaviour and performance, Arnot et al, (1999). It has been established that educated populations are able to internalize concepts and processes related to project management easily especially in agricultural setups rural areas where women dominate. Dynamism in project activities requires fairly skilled manpower that can interact objectively to achieve project outputs and outcomes. Data exists which points to the fact in the market-place males can succeed with fewer years of schooling than can their female counterparts, Figueroa & Handa (1996). In India, there has been progress in improving educational attainment for both sexes over the last several decades. In 1971, only 22% of women and 46% men were literate. By 1991, 39% of women and 64% of men were literate.

According to Sloane, (2001), in India as a whole many states have large rural – urban differences in female literacy. In 6 out of 24 states, 25% or less of the rural areas are literate. The Indian government started non – formal Education in 1970-80 to reach children that were not in the formal education system, particularly girls and working children, World Bank, (1997b). Women form the majority of the rural population involved with agricultural activities.

Men represent 30% of the active agricultural populace. The lack of access to formal education and training has been identified as a key barrier to women's employment and advancement in society. This has therefore impacted greatly interms practising commercial agriculture given that most projects implemented by farmers require a reasonable level of literacy, Angura & Atikoro (1998). In Africa, female illiteracy rates were over 60% in 1996, compared to 41% for men. In other countries, for example Sierra Leone is at 88.7%, Chad at 82.1% and Guinea at 86.6%. In many African countries, implementation of projects has been hampered greatly by an imbalance in gender literacy, UNDP Human Development Report, (2004).

Manuh, (1998) agrees further that in Africa parents still prefer to send boys to school, seeing little need for education for girls. While most girls do not go beyond primary education, school curriculums have not been guided by this reality and their content is not geared to helping girls acquire basic life skills. The curriculum is full of gender biases and leads girls to stereotypical 'feminine' jobs in farming, teaching, nursing and clerical work. According to Kimenyi, (2001), the literacy levels in the rural population have a correlation with how the rural people will appreciate strategies aimed at development and integration of ideas. Penetration in terms technology advancement will also depend on educational exposure since MFIs and other stakeholders will employ technology in one way or another. Generally, Kenya has achieved tremendous growth with a Gender Equality Ratio of 105.8% for boys and 103.7% for girls, MOES&T (2004). Interms of rural development which is achieved through project related initiatives either driven by the government, private sector or donors the approach to extension changed from supply driven approach to demand driven approach in the year 2001 Lianto, (2001). The project design was such that farmers were expected to identify their problem(s) and then look for an extension agent to provide the technical knowhow. Micro finance Institutions through their institutional networks have also participated in the extension meetings to advertise their credit products and the farmers have learnt about these products. Acquisition of credit to farmers by Faulu Kenya and KWFT has been achieved this way and the farmers have made well informed choices concerning the relationship between farmers and

lenders. Kibaara, (2005) agrees that financial literacy among the farming community is an important aspect of agricultural credit and enlightens the farmers on how to invest the loans borrowed and the need for repayments of the funds. Above all they also learn about farming as a business venture as well as utilizing the funds for the stated agricultural activity. This way wealth is created and jobs realized.

2.6.3 Technological Factors and implementation of Micro Finance Institution funded Agricultural Projects.

Laurent, (2003) notes that modern information and communication technologies have the potential to increase agricultural productivity through communicating knowledge and information to rural agricultural communities, providing capacity building, accessing markets and credit. Micro Finance Institutions have used ICT advance their strategies in several ways. Over the last few years, several banks have embraced mobile banking technologies, enabling customers to access their bank via their mobile phones. Leading microfinance institutions in Kenya, including Jamii Bora, K-Rep and Faulu Kenya have also introduced services based on SMS that let their clients view their balances, request account statements and transfer of money ASDSP Quarterly Report, (2012). According to (Jack et al 2011), technology and innovation are a major component of project design and implementation. M-PESA's growth is a classic example and its contribution in social activities. Through this platform salaries were paid to workers involved with projects, information concerning important decisions was conveyed through mobile phones. Project managers also passed important extension message ideas through phone technology. Within the first eight months after its launch in March 2007, M-PESA announced a subscription base of 900,000 users and 1,200 agents operating nationwide. In April 2009, Safaricom Limited the owner of M-PESA technology through Vodafone reported that MPESA had over 2 million active subscribers, transmitting over Ksh 100 million daily, Morawczynski, (2009). Laurent, (2003) further concurs that over 80% of Kenyans were aware of MPESA and 66% had actually used it.

As of early 2007, 38% of Kenyans had no access to any form of financial services and only 19% had access to regulated financial institutions such as banks. The challenges of funds transfer were pronounced and this had negative effects on doing business in terms of convenience and cost of doing business for the MFI industry and the potential borrowers. This therefore threatened sustainable farming in a big way Nyoro, (2002). In the entire country there were only 400 bank branches and over 600 Automated Teller Machines (ATMs) and over 10million mobile subscribers. Ministry of Finance in Kenya in its 2009 audit report documents that the MPESA system has been used by microfinance institutions to allow their members repay their loans on time and conveniently Central Bank Annual Report, (2002).

Faulu Kenya and KWFT have transacted with their members via M-PESA using their mobile phones to receive and repay their loans and this has proved reliable. This way the farmers have been able to receive funds on time and execute their projects on time. Other MFIs KREP have made use of it in a similar way especially for single and group formations. Morawczynski, (2009) agrees that micro – finance is intrinsically a transaction cost intensive business and MFIs must constantly strive to develop more efficient solutions and methodologies through innovations. Solutions may lie in leveraging new technologies like smart cards, biometrics, Point of Sale (POS) Terminals or ATMs. Njiraini & Anyanzwa, (2008), point out Action research for the development of such innovations must be supported to increase the efficiency of Micro-finance operations – reducing costs and increasing profitability. Learning from the commercial retail industry may also be helpful for MFIs in improving their efficiency. Faulu Kenya and the KWFT have developed capable and detailed Information systems maintaining portfolio history for their clients for a number of years. Kimenyi, (2001) concurs that extension services are an important prerequisite for promoting technology uptake and eventual utilization by end-users for increased productivity. Over the years, low funding and low staffing levels have hampered the production and dissemination of information on agriculture and livestock production management technologies to farmers, resulting in poor performance of the agriculture sector generally. Awudu et al. (2000)

Provision of public education in agriculture for improved productivity and food security is mandatory, Nyoro, et al, (2001). Currently, both the Ministries of Livestock Development and Agriculture have introduced internet based platforms for farmers to share information: Information on sources of credit and agricultural expertise is hosted on the ASDSP website for the public to access. This has contributed about 65% to understanding what farming as a business and project sustainability entails. Donor sponsored projects have portals where stakeholders can share information and acquire new ideas. According to Njiraini & Anyanzwa (2008), KWFT and Faulu Kenya have partnered with local internet service providers to communicate their products through such platforms. Most SACCOs have also introduced plastic cards VISA/ATM cards for bank transactions which enable farmers to access loans from banks. Some of the interactive platforms even have prerecorded voice prompts that give the platform an audio or visual advantage, Macharia,

2.6.4 Socio Economic Factors and implementation of Micro Finance Institution Funded Agricultural Projects

These are social and economic experiences and realities that help shape the community's personality, attitudes and lifestyle. According to Njiraini & Anyanzwa (2008) they include aspects on income, land tenure, land use, poverty and education matters. For instance, the level of education can shape how the community's views and can contribute to social growth in terms of participation in agricultural and other income generating activities (IGAs). A well educated community is also able to secure loans easily and invest in the agricultural sector and at the same time adopt new technologies faster. Financial literacy is easier when dealing with literate people. Christen & Pearce (2005) appreciate that access to financial services is critical for economic empowerment of any population and it varies across gender. Many rural and urban folk belong to women-only mutual-aid societies, benevolent groups in churches, cooperatives and market women's groups. Some of these groups allow women to pool resources to reduce their workload and to invest in savings societies or cooperative ventures.

In Benin only 8 per cent of rural women belong to formal cooperatives, but an estimated 90 per cent participate in traditional women's savings and credit groups. Informal rotating credit associations in Ghana, Tanzania, Gambia and Zimbabwe have been used by the estimated 25 per cent of economically active women in the non-agricultural informal sector to invest in businesses and farms, home improvements and school costs for their children, Manuh,(1998). Hospes & Milka, (2002) in a recent study on Kenya indicates that more women (51.1%) tend to save compared to their male counterparts (48.9%). Loosening economic constraints imposed on women can have immense consequences on development. For example Grameen bank was set up to provide small loans for women to start businesses on their own, (Murdoch 1999). Great success has also been reported by the Graham bank which increased the share of women from 44% to 75% in recognition of the role of women in development.

According to Pitt & Khandker, (1998) micro credit taken by the woman rather than the man of the household increases non-land assets and children's education and doubled women's expenditure,. The Equity bank of Kenya has adopted a similar model to that of Grameen and Graham banks. In June 2007, the bank launched a credit line specifically for women in small and medium enterprise (SME) sector. This line targeted legally constituted community groups with a good history. Such groups, mainly composed of women receive loans without security. The group members act as guarantors for such loans. Equity bank also undertakes six week business trainings for new community groups composed of women entrepreneurs most of whom are farmers. Other related facilities are provided by the Kenya Women Finance Trust (KWFT) and the Kenya Rural Enterprise Program (KReP). According to World Bank Report (2004), the proportion of the population currently accessing credit facilities reflects an equal gender split. In 2005/2006 about 50.1% of the population that had access to credit services were male and 49.9% were female. The low access to land and lack of collateral constrain access to business credit. Edgar & Geare, (2004) points out that demographics include such factors as gender, age, ethnicity, occupation, seniority, salary levels, marital and family status.

Studies indicate demographic factors, especially gender, ethnicity and employment status influence decision-making in terms of access and control of agricultural undertakings. Agriculture remains the mainstay of Kenya's economy. Currently the sector has suffered a big drawback as a result of prolonged droughts, increased poverty and to some extent the 2007 post election violence. In addition to increased poverty, food sufficiency and security has remained a dream. Any policies that seek to give the agriculture sector a big push would result in rapid economic growth thereby helping in poverty alleviation, Leonard, (1991). Women perform most the work in agriculture and their experience with food production and processing should be acknowledged and deliberate efforts made to tap their performance by deliberately targeting them as recipients for new technologies and innovations in agriculture. According to Haggblade (2004), the proportion of the rural population currently accessing credit facilities reflects the level of project outputs funded by NGOs and MFIs in the rural areas.

Anne, (1998) agrees that in 2005/2006 alone in Kenya, about 50.1% of the population that had access to credit services were female and 49.9% were male. The low access to land and lack of collateral constrained access to business credit. Only 1% of land titles are held by women while 5-6% is jointly held. About 50.1% and 49.9% of those who had used insurance facilities were male and female respectively World Bank, (2004). Most of the farming takes place in the rural areas where majority of the workers are women, they neither have full access to and control of neither land nor do they have access to capital or agricultural credit, Republic of Kenya, (1999b). To access credit in credible financial institutions in Kenya, one needs to have collateral or other securities such as land title deeds which most Kenyan culture does not allow women to have, (Hospes and Milka 2002). It is for this reason that MFIs intervened to enable for the empowerment of women and the government has come up with initiatives like the Women Enterprise Development Fund. This is to ensure that credit is availed for startups and agricultural projects in the rural areas. According to (KWFT Annual Report 2004), in 1996, Forty six percent of the loans were taken for livestock and poultry production.

These loans helped generate new employment through agricultural activity in the form of MFI funded projects especially for the poor rural women. The fact that credit is given without collateral and that the model uses focal group approach enables members to repay the loans in small installments makes it appealing to the rural clientele, Macharia, (2005).

2.7 Theoretical Framework

This study is based on Abraham Maslow's Basic Needs proponent authority according to which there are certain minimum requirements that are essential to decent standard of living. These are known as physiological needs and include food, shelter health and clothing. They are primary needs and they have to be catered for before other needs such as security and shelter, sense of belonging and affection, love, esteem and finally self-actualization are pursued. Maslow has set up a hierarchic theory of needs. Humans start with a very weak disposition that is then fashioned fully as the person grows. If the environment is right, people will grow straight and beautiful, actualizing the potentials they have inherited. If the environment is not "right" (and mostly it is not) they will not grow tall and straight and beautiful, Sulo, (2005). Maslow has set up a hierarchy of five levels of basic needs. Beyond these needs, higher levels of needs exist. These include needs for understanding, esthetic appreciation and purely spiritual needs. In the levels of the five basic needs, the person does not feel the second need until the demands of the first have been satisfied or the third until the second has been satisfied, and so on. Maslow's basic needs are physiological needs, safety needs, needs of love, affection and belongingness and need for self esteem. Physiological needs consist of needs for oxygen, food, water, and a relatively constant body temperature. They are the strongest needs because if a person were deprived of all needs, the physiological ones would come first in the person's search for satisfaction. When all physiological needs are satisfied and are no longer controlling thoughts and behaviors, the needs for security can become active. Adults have little awareness of their security needs except in times of emergency or periods of disorganization in the social structure. When the needs for safety and for physiological well-being are satisfied, the next class of needs for love, affection and belongingness can emerge.

Maslow states that people seek to overcome feelings of loneliness and alienation. When the first three classes of needs are satisfied, the needs for esteem can become dominant. These involve needs for both self-esteem and for the esteem a person gets from others. Humans have a need for a stable, firmly based, high level of self-respect, and respect from others, Sutherland (1999).

2.8 Conceptual Framework.

Figure 1 represents the research structure of independent variable factors and their interplay with the dependent variable.

Independent Variables

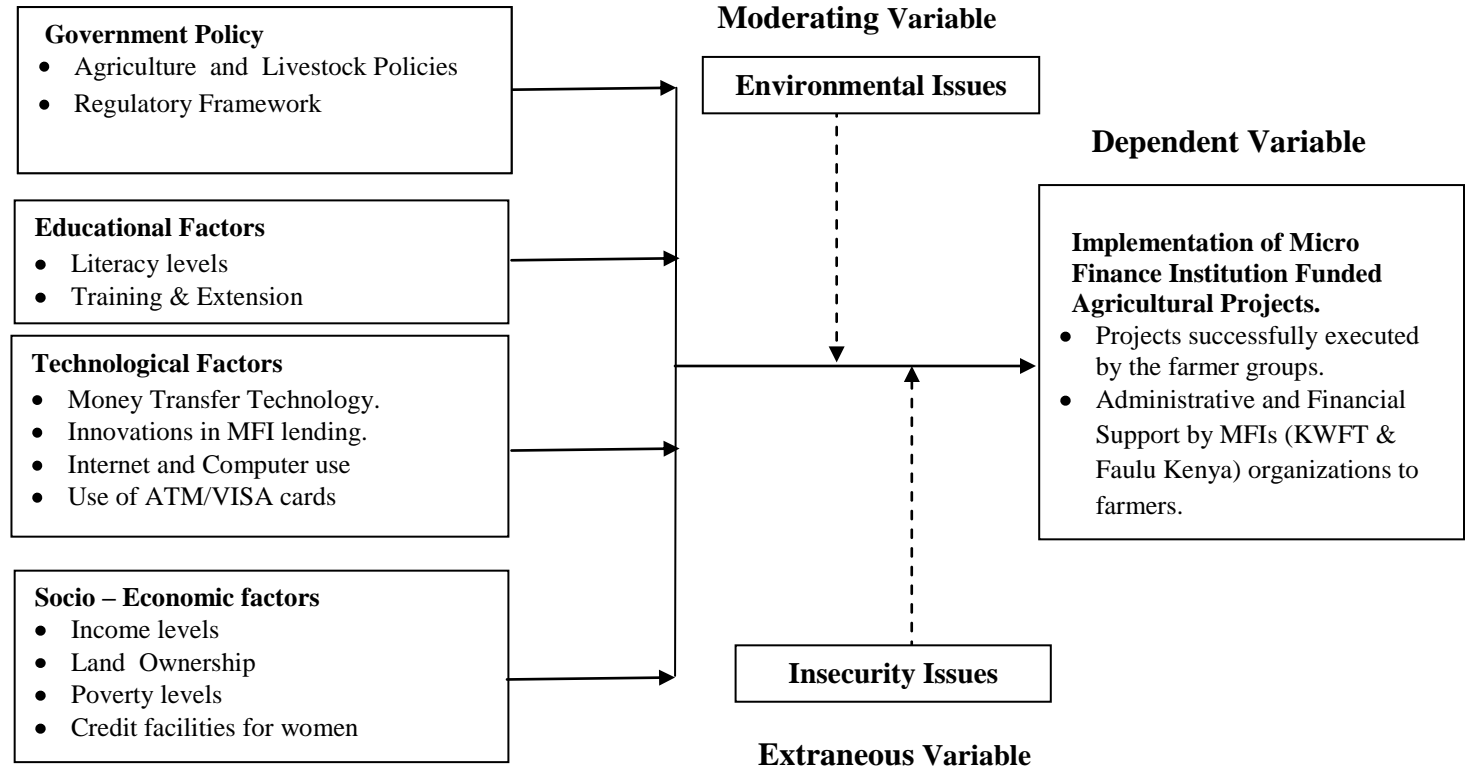


Figure 1 - Conceptual Framework

Government Policy, Socio-economic factors, Educational and technological factors have a direct influence on the implementation of agricultural projects in Central Division, Machakos County. Government policies and legislation are necessary to engineer change, address challenges and create an enabling environment for investment, growth and development and is therefore an independent variable necessary for the implementation of agricultural projects in Machakos County. According to Smith et al, (2006), education in the society enables people to understand and internalize issues making it easy to discuss loan borrowing, repayment and project planning and management. The MFIs make educated farmers or beneficiaries to understand the procedure of borrowing loans and concepts to do with interest rates and entrepreneurship. Repayment and marketing of produce is easily understood by a society which is literate. Poverty is lower in fairly educated societies for instance; a study in four counties of Central Province of Kenya revealed that agricultural technologies were adopted faster in households where family members were educated to form four levels and above, Mwangore, (2002).

Richardson, (1997) agrees that the use of technology in agricultural projects is critical because the outcomes have contributed greatly towards achieving food security, increased family incomes and sustainable food production. Faulu Kenya and KWFT have an organized system of mobile interaction which facilitates the flow of money among rural and poor families at much lower transaction costs enabling farming to be efficient and profitable. The FAO, (2000) asserts that “information and knowledge play a key role in ensuring food security and sustainable development”. Social and economic experiences and realities that help shape the community’s personality, attitudes and lifestyle. They include aspects on education, income, land tenure, and land use, poverty issues. Land use and land tenure on the other hand determines the extent to which agricultural activities are undertaken; insecurity of land tenure is one of the biggest constraints to land utilization. The main source of family income is very important in relation to initiation and management of agricultural activities, Kibaara, (2005).

According to Muya, (1997), Agriculture is labour intensive and therefore if a farmer has other better sources of family income he/she may not be keen on agriculture, Gender issues, population growth and age structure have direct influence on agricultural production; the disparity between the access and control, by men and women of resources frustrates individuals, slows down development. Only 3% of Kenyan women own title deeds thereby minimizing their opportunities to access credit, (GOK 2008).

2.9 Summary of Research Gaps

Despite elaborate structures on ways to address food security, Government through the Ministry of Agriculture has not been able to address the issue of food security adequately. As a result we have food shortages which have had negative economic and social implications. This has prompted other players in the agriculture sector for example MFIs and NGOs to intervene to achieve this objective. In most cultures ownership of land which is a critical factor of production is patriarchal and this is responsible for women not accessing credit necessary to develop the land for economic gain. In most cases collateral is required and since women do not have title deeds, it becomes impossible to access loans for development. Interaction with technology is critical if development is to be realized. This is quite important when it comes to communication and acquisition of knowledge. Government has invested heavily in terms of provision of extension services but has not tapped the huge potential in the ICT sector. Implementing of agricultural projects through ICT has been a challenge but the advent of use of computer technology to do business, use of plastic money cards and other forms technology has simplified things a great deal. Decision making in Government has been too bureaucratic and therefore a big problem due to the way decision making is done without involving farmers. Involving stakeholders all the way to the end is important because it will be possible for them to own the programmes being implemented. Provision of agricultural credit and inputs and markets to farmers is no longer a priority for Government and there is need to address this issue if we are to achieve MDG number one that touches on hunger and poverty. Necessary interventions are imperative whether by NGOs or MFIs.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This Chapter will discuss the methodology that will be used in acquiring and synthesizing the study data. The elements of focus will be research design, target population, sample and sampling technique, research instruments, validity, reliability and data collections procedures.

3.2 Research design

The researcher used descriptive survey study design. This employed both qualitative and quantitative methods. The quantitative methodology employed helped in providing and analyzing raw data on survey questionnaires. In this case the project leaders were judgmentally sampled because they are directly involved in project implementation in the study area. Self administered questionnaires were given to 140 respondents which included beneficiaries and the project leaders in charge of the agricultural projects funded by Faulu Kenya and KWFT. This formed the source of the primary data.

3.3 Target population

Central division of Machakos County comprises of two locations namely Kalama and Central. This target population of the study was composed of two categories namely the project implementers and beneficiaries whose total number was 220; there were 20 group projects each with a project leader and 10 project members or beneficiaries (KWFT Annual Report, 2011) see Table 3.1. The numbers of these beneficiaries were spread out in the following twelve areas that were involved in the study. They were involved in diverse agricultural activities including crop growing and livestock rearing activities.

Table 3.1 Target Population by Gender and group allocation

Cluster Area	No of all group Members	Gender		Status of MFI group	Amount Disbursed 2009/2010 groups of 10 active members in (Ksh)
		Male	Female		
Kithini	18	6	12	Active (paying)	350,000
Kathome	18	7	11	Active (paying)	267,500
Kimua	19	6	13	Active (paying)	176,456
Katelembo	21	8	13	Active (paying)	322,600
Tumba	17	8	9	Active (paying)	580,000
Kaseve,	23	8	15	Active (paying)	315,000
Iveti	17	5	12	Active (paying)	543,200
Kalama	18	9	9	Active (paying)	280,099
Kiima Kimwe	19	6	13	Active (paying)	159,900
Kimutw'a	18	5	13	Active (paying)	321,000
Mumbuni	16	11	5	Active (paying)	117,600
Kwa Musyoka	16	8	8	Active (paying)	217,000
Total	220	87	133		3,328,078

Source: KWFT, Annual Report 2011.

Table 3.3 shows the spread in Central division at Kathome, Katelembo, Kithini, Kimua, Kwa Musyoka, Tumba, Kalama Iveti, Kiima Kimwe, Kimutw'a, Kaseve, and Mumbuni locations.

3.4 Sampling Procedures and Sample Size

During this study the researcher employed stratified random sampling technique in generating the sample. The target population was divided into subgroups; the beneficiaries (youth, men, and women) and the leaders of the agriculture projects. In order to achieve this, the population was divided into two sub populations that were individually homogeneous than the total population each sub-population was called a strata. Items from each stratum constituted a sample. According to Mugenda and Mugenda, (1999), for descriptive studies, 10% of the accessible population is adequate for a sample. This will therefore sample all the 20 project managers and 200 farmers benefitting directly from financial support from both MFIs. According to Patton, (2002), a sample size represents 40% of the Target population and is acceptable for use in an explanatory descriptive survey design.

**Table 3.2: Determination of Sample Size
Sample Procedure Matrix**

Respondents	Category/Participant	Target Population
Category 1	Project/Managers Implementers	20 (Each group 1 manager)
Category 2	Project Beneficiaries/Farmers	200 (20 groups*10 members)
Total		220 members

The researcher in this study used the model of Krejcie & Morgan (1970) to determine the sample size as shown below:

$$S = \frac{X^2NP(1-P)}{d^2(N-1) + X^2(1-P)}$$

- Where
- S = Required Sample Size
 - X² = the table value of Chi-square for 1 degree of freedom at The desired confidence level (3.841)
 - N = Population size.
 - P = the population proportion (assumed to be 0.50 since this would provide the maximum sample size)
 - d = the degree of accuracy expressed as a proportion (0.05)

Therefore to get the desired sample the researcher referred to the Krejcie & Morgan table for determining a sample when the population is known. The corresponding sample size of a target population of 220 is 140. Therefore for the survey, the researcher will target 140 respondents.

3.5 Research Instruments

The researcher collected information from project managers and beneficiaries of agricultural projects funded by KWFT and Faulu Kenya MFIs. According to Kothari, (2004) structured a questionnaire is best suited for descriptive study as it is easily applied and requires less skill. The research was conducted by collecting Primary and Secondary data. Primary data was collected with the help of project leaders in the target area and other members of projects in the area. A questionnaire designed specifically for each of the two groups was issued to the two categories of project stakeholders to get the information required. The researcher also used documentary analysis to summary key findings concerning the subject of the study.

3.6 Validity of Instruments

During design of the questionnaires, the researcher ensured that questions in the tool were in line with the objectives of the study to avoid data errors. In this study the questionnaire and documentary analysis were given to my University of Nairobi supervisor in the field for expert advice to ascertain content validity. The data was collected by way of both structured and unstructured questionnaires. The questionnaires were in two sets. One set was administered to the beneficiaries who captured the data to help in finding out the factors that influence implementation of MFI funded agricultural projects in Central Division, Machakos County. Socio-economic status of the sampled households was also captured using this set of questionnaires. The second set of questionnaires was administered on those in charge of the MFI funded agriculture projects in the target area to get information on their perception on the research objectives. This information was used to validate the data collected using questionnaires from households. Sampling by the researcher was done appropriately to achieve statistically significant and reliable results.

3.7 Reliability of Instruments

A reliability test is a method of making the test reliable by pre-testing the instrument. Mugenda (2008) noted that pretesting is essential in a research study. This identifies errors found in the study instrument which can later be corrected before the actual study is undertaken. Moreover, pretesting of instruments helps to estimate the time needed to administer the instrument.

The researcher used split half reliability. In this case, the researcher split the dataset into two. A score for each participant was then calculated based on each half of the scale. If a scale is very reliable a person's score on one half of the scale should be the same (or similar) to their score on the other half: therefore, across several participants scores from the two halves of the questionnaire. The researcher then used the scores to calculate the Cronbach α alpha co-efficient between the scores. The value of the alpha coefficient ranges from 0 to 1 and is used to describe the reliability of factors extracted from questions with two possible answers, a higher value greater than 0.7 shows that the questionnaire is more reliable.

Table 3.3: Reliability Test Analysis for the questionnaire

Independent Variable	Cronbach α alpha	No of items/Objective
Government Policy	0.811	4
Educational Factors	0.745	3
Technological Factors	0.824	6
Socio Economics Factors	0.798	8

3.8 Data Collection Methods

Different questionnaires were issued to the two categories of respondents. One set went to 20 Project Managers and another set to 120 beneficiaries. The total number of complete questionnaires that came back were 90; 48 of them being from female respondents and the other 42 being from male respondents.

3.9 Data Analysis Techniques

The data was collected using questionnaires having both closed and open ended questions. Ordinal, nominal and interval scale was used in data measuring to make coding and categorizing easier during data analysis. Descriptive statistics in the form of tables, frequencies and percentages was used to establish the general characteristics of the study sample. Inferential statistics was also applied to generalize the results obtained from the sample on the whole population. In particular, correlation and regression were used to analyze the degree of relationship between the independent variables and the dependent variable. Statistical Package for Social Scientists (SPSS) method (Version 17) of data analysis was used to analyze the data collected.

3.10 Operational definition of Variables

Objective	Type of variable	Indicators	Measure	Scale of measurement	Tools of Analysis
Determine how Government policies have influenced the success in implementing MFI funded agricultural projects.	Independent Variable	The number of relevant or related policies and legal frameworks in place.	Number of Government Policies relating to the objective	Ratio Scale	Descriptive
Assess the extent to which Educational factors have contributed to the implementation of MFI funded agricultural projects.	Independent Variable	Level of education	Primary Secondary College University other	Ordinal	Descriptive
Establish the extent to which Technological factors have enabled implementation of MFI sponsored projects.	Independent Variable	Training and Extension	Frequency of visits and new extension messages conveyed.	Ratio Scale	Descriptive
		Money Transfer Services	Number of Transactions done	Nominal	Descriptive
Analyze the effect Social Economic factors have had as far as implementing of MFI funded agricultural projects is concerned.	Independent Variable	Poverty	Type of Houses	Nominal	Descriptive
		Access to Credit facilities	How many have access	Nominal	Descriptive
		Land Use and Tenure	land size and ownership	Acreage	Nominal/interval
Implementation of Micro Finance Institution Funded Agricultural Projects.	Dependent Variable	The participation of the community in agricultural project implementation	How many people are directly involved with the target agricultural projects	Ordinal	Descriptive
		Administrative and financial support to the agricultural projects implementation team	The number of the projects successfully financed by KWFT and Faulu Kenya team	Ordinal	Descriptive

3.11 Ethical Considerations in the Research Study

Ethics in research refers to a code of conduct or expected societal norm of behavior while conducting research. The researcher observed ethical considerations at every stage of the research process. The respondents were informed about the purpose of the research without coercion or exaggeration, and only those consenting were interviewed. The researcher made sure that no one will be offended or harmed in the process of the research exercise. The information provided was treated with utmost confidentiality and the respondents assured accordingly. They were told how the information they gave would be used.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSIONS

4.1 Introduction

This chapter presented analysis and findings of the study as set out in the research methodology. The study findings were presented to establish the challenges of implementation of Agricultural Projects funded by Micro Finance Institutions in Machakos County. The data was gathered exclusively from the questionnaire as the main research instrument.

4.2 Response Rate

The study targeted 140 respondents in collecting data with regard to the challenges of implementation of MFI funded agricultural projects. From the study, 90 out of 140 respondents filled in and returned the questionnaires making a response rate of 64.3%. According to Patton (2002) any response of 50% and above is adequate for analysis. This was made possible by community leaders who are both project members and beneficiaries of the MFI funded agriculture projects. They were first trained and questionnaires administered to them. The questionnaires to be filled by the beneficiaries were then divided among them.

4.3 Demographic Information

Table 4.1: Distribution of farmers by Location

Location	Frequency		Percent
	Male	Female	
Kwa Musyoka	2	3	6.11
Kathome	3	4	7.80
Kithini	3	5	8.90
Kimua	3	7	11.1
Katelembo	5	7	15.6
Tumba,	2	3	6.11
Kiima Kimwe	2	5	7.80
Kalama	2	5	7.80
Iveti	4	6	11.1
Kimutw'a	2	3	6.11
Kaseve	2	5	7.80
Mumbuni	2	5	6.11
	42	48	100

The study sought to find out the location of the farmers. From the findings, the 90 (42+48) respondents were from twelve locations. 15.6% of the farmers were from Katelembo location and 6.11% of the farmers were from Mumbuni location. This is illustrated in Table 4.1. Katelembo location had vibrant and a more active group

compared to others. Mumbuni and Kwa Musyoka had lowly endured groups which required more support from KWFT and Faulu Kenya.

Table 4.2: Distribution of Respondents by Gender.

Gender	Frequency	Percent
Male	42	46.70
Female	48	53.30
Total	90	100.00

Interms of gender distribution, the study revealed that majority 53.3% population of farmers were women and 46.7% of the farmers were male as shown in Table 4.2. This distribution means the respondents are well distributed according to the Constitutional requirements. Majority of the farmers are women in the rural areas and both MFIs are inclined towards empowering women.

Table 4.3: Distribution of respondents by Age

Age in Years	Frequency	Percent
15-25	4	4.44
26-35	12	13.33
36-45	22	24.40
46-55	37	41.10
Over 56	15	16.73
Total	90	100.00

The study went further to establish the age disaggregation of the farmers and the findings revealed that 4.44% of the farmers were aged 15-25 years, 13.33% represented the 26-35 age category, 24.40% the 36-45 age group,

whereas 41.10% represented 46-55 year category and the over 56 year category was represented by 16.73% of the respondents. This is illustrated in Table 4.3 meaning that the most productive age bracket is 36-55 and majority of the respondents are creditworthy by being the owners of the land on which MFI funded projects are carried.

Table 4.4: Distribution of Respondents interms of Education Level

Education Level	Frequency	Percent
Primary	27	28.80
Secondary	14	16.70
College	24	26.78
University	15	16.70
Other	10	11.03
Total	90	100.00

Table 4.4 shows that 27.80% of the respondents are of primary level of schooling, whereas 16.7% had secondary school education. 27.78% of the results represent College graduates whereas 16.7% had university education. About 11.03% could not be placed in either category. Despite the majority being primary graduates they have been able to carry out their projects with ease because of support from other categories and the MFIs.

4.4 Government Policy

The researcher sought to find out whether government policies have had a role as far as accessibility of credit easily by farmers from Faulu Kenya or KWFT to finance their agricultural projects.

Table 4.5: Distribution of respondents' interms of Government involvement interms of Access to Credit facilities

Attribute	Frequency	Percent
Neutral	12	13.33
Agree	35	38.90
Strongly Agree	42	46.70
Total	90	100.00

From the study, 13.33% of the respondents had a neutral view about 38.90% of farmers agreed whereas majority of respondents at 46.70% strongly agreed about the effect of government policies on easy access of credit by farmers. Table 4.5 illustrates this clearly.

Table 4.6: Distribution of Respondents interms of Government Presence in Farmer Project Activities

	Frequency	Percent
Neutral	10	11.11
Agree	33	36.70
Strongly Agree	40	44.44
Disagree	5	5.75
Strongly Disagree	2	2.00
Total	90	100.00

The study went further to understand whether government involvement in the project activities had contributed indirectly to increased food production and marketing opportunities. As depicted in Table 4.6, the findings from the study revealed that 11.11% of the respondents had a neutral view, 36.70% agreed, the majority of the respondents at 44.44% strongly agreed, 5.75% disagreed and those who strongly disagreed were 2.00%.

Table 4.7: Distribution of Government Presence interms of time taken to process project Loans by MFIs

	Frequency	Percent
Neutral	6	6.70
Agree	34	37.80
Strongly Agree	39	43.29
Disagree	4	4.44
Strongly Disagree	7	7.77
Total	90	100.00

The research sought to find out if the government’s involvement has shortened the time taken to process loans by KWFT and Faulu Kenya to the advantage of the farmers or beneficiaries. 6.70% of the respondents assumed a neutral stand, 37.80% agreed whereas 43.29% strongly agreed, 4.44% disagreed and 7.77% strongly disagreed as shown in Table 4.7. The interpretation here is that Government Policy has created a business environment where the process of lending has been shortened and made manageable for the farming community.

4.41 Discussion of the Findings; Government Policy

The study found that Government Policies have a positive effect on sound implementation of MFI funded projects in Machakos County. From the study 46.70% (N=42) of farmers agreed that sound government policies contributed greatly in MFI operations and had a positive role in making accessibility of credit easy. These findings are in concurrence with Macharia (2005), who points out that the Government of Kenya recognizes the greater access to, and sustainable flow of financial services, particularly credit, to the low income households and MSEs is critical to poverty alleviation. The findings also agree with Leonard (1991) who points out that regulation of the sector will enable authorities to define procedures for their operations, exit and entrance and ultimately create an environment for fair competition and efficiency in the MFI lending sector. From the study 43.29% (N=39) of the respondents strongly agree that sound

policies have shortened the period of processing loans enhancing project efficiency. Results from the findings also concur with the Central Bank Report (2011), and the Micro Finance Act (2006), which brings out the pivotal role played by the microfinance industry in deepening financial markets and enhancing access to financial services and products by majority of the Kenyans.

4.5 Educational Factors

The study sought to find out the extent to which educational factors such as literacy levels influence implementation of the MFI funded projects.

Table 4.8: Effect of education level on implementation of project activities

	Frequency	Percent
Neutral	9	10.00
Agree	26	28.90
Strongly Agree	38	42.22
Disagree	8	8.90
Strongly Disagree	9	10.00
Total	90	100.00

The findings indicated that 10.00% of the respondents were neutral and 28.90% agreed. As shown in Table 4.8 the majority 42.22% of the respondents strongly agreed whereas those who disagreed were represented by 8.90% of the respondents sampled. The interpretation shows that Educated farmers are in a better position to implement projects and adopt new ideas with ease.

Table 4.9: Distribution of Respondent's interms of Education versus high income

	Frequency	Percent
Neutral	11	12.22
Agree	30	33.33
Strongly Agree	39	43.33
Disagree	11	12.22
Strongly Disagree	9	10.00
Total	90	100.00

Interms of education, the study further sought to find out if education contributed to better management of projects thereby increasing incomes to farmers. The findings in Table 4.9 indicate that 12.22% of the respondents were neutral and 33.33% agreed. A majority 43.33% of the respondents strongly agreed whereas those who strongly disagreed were represented by 10.00% of the respondents. This shows that farmers who have implemented projects have been able to project to the future and educated their children after attaining reasonable incomes from selling proceeds from the MFI funded agricultural projects.

Table 4.10: Distribution of Respondent's regarding if education has an effect on Management of group projects

	Frequency	Percent
Neutral	17	18.90
High Regard	25	30.00
Very high Regard	34	37.80
Low Regard	14	15.60
Total	90	100.00

The study sought to understand if education has contributed to better participation in implementation of projects. The findings indicated that 18.90% of the respondents had a neutral view, 30.00% of the respondents regarded education highly, and 37.80% of the respondents had very high regard and 15.60% had the lowest regard pertaining to education contributing to implementation of projects. This information is shown in Table 4.10 and the implications are that majority of the farmers approve of the positive role of education in the management of group projects.

4.51 Discussion of the Findings; Education Factors

The study established that educational factors are very critical as far as sound implementation of

MFI funded projects in Machakos County. This result agrees to a very large extent with findings of Manuh (1998) that female illiteracy rates were over 60% in 1996, compared to 41% for men. This is because in many African Countries, parents still prefer to send boys to school seeing little need to educate girls. From the study, it is evident that 42.22% (N=38) strongly agreed that there was a strong positive effect of literacy on the project implementation. The majority of the farmers in the agricultural projects are women and for project implementation education is an essential factor. Another 37.80% (N=34) of the farmers felt that education contributed to better participation in the implementation of projects and hence increased food production. Najafi (2003) concurs with these findings and points out further that education attainment of the household head, could lead to the awareness of the possible advantages of modernizing food production by means of technology utilization hence enhancing food supply.

4.6 Technological Factors

The study sought to establish the extent to which technological factors influence implementation of Micro Finance Institution funded agricultural projects.

Table 4.11: Distribution of Respondents regarding Status of ownership of Mobile Phone

	Frequency	Percent
Own Mobile Phones	85	94.44
Don't Own Mobile Phones	5	5.56
Total	90	100.00

From the findings the respondents who own mobile phones were the majority at 94.44% with only a few 5.56% not owning phones. Table 4.11 illustrates this clearly. This kind of distribution implies that communication is a critical factor as far project management is concerned and majority would like to engage the MFIs directly. The issue of privacy is also depicted here since issues touching on finances boarder on confidentiality. It also implies that they are affordable interms of cost and majority are in a position to acquire and use them efficiently and effectively.

Table 4.12: Distribution of Respondents interms of convenience of Electronic Money Transfer to Project Managers

	Frequency	Percent
Neutral	7.00	7.80
Agree	27.00	30.00
Strongly Agree	38.80	42.22
Disagree	11.00	12.22
Strongly Agree	7.00	7.80
Total	90	100.00

Electronic money transfer is an important technological aspect that the research investigated interms of making project management convenient hence contributing to the implementation of MFI funded projects. Results from the research findings in Table 4.12 indicated that 7.80% of the respondents had a neutral feeling about the electronic money transfer aspect, 42% strongly agreed and 7.80% strongly disagreed. Majority of the farmers strongly concur that it is convenient to use EMT in project management in order to achieve project outcomes.

Table 4.13: Distribution of Respondents and advantages of Electronic Money Transfer in Project Management

Attribute	Frequency	Percent
Quick Service	30	33.33
Convenient Service	22	24.40
Efficiency	18	20.00
Effectiveness	20	22.22
Total	90	100.00

The study went further to establish the advantages of MFIs using electronic money transfer to interact with farmers hence sound implementation of MFI funded projects. Results from the findings indicated that 33.33% of the respondents felt there was quick service, 24.40% felt it was convenient, 20.00% believe EMT was efficiency whereas 22.22% believed it was effective as shown in Table 4.13

Table 4.14: Distribution of Respondents interms of Proportion of farmers who received loans from MFIs by phone

Category of farmers	Frequency	Percent
Farmers who have received loans	67	74.40
Farmers who have not received Loans	23	25.60
Total	90	100.00

The study sought to establish if the farmers had received financial loans from Faulu Kenya or KWFT. Results from the findings as shown on Table 4.14 indicated that 74.40% of the respondents confirmed receipt of the loans through mobile phone whereas 25.60% did not ever receive loans by phone. The interpretation here is that there is a significant trust level between the farmers and the MFIs and the repayment rate of the loans by borrowers is good. It is also valid to say that the loan terms and conditions by the MFIs are favourable thus there are many farmers interested in borrowing the funds.

4.61 Discussion of the Findings; Technological Factors

The study found out that 94.44% (N=85) of the farmers owned mobile phones and this made it possible to transact easily and conveniently. Through mobile communication platforms it is possible for the MFIs to disburse loans and also affect mobile updates to the farmers. The farmers can repay the loans easily, get agricultural extension advice and make any other queries and consultations when necessary.

Another 42.00% (N=37) of the farming community believes that electronic money transfer technology has had a positive effect in the project implementation of MFI funded projects. Laurent (2003) agrees with the above findings by indicating that modern information and communication technologies have the potential to increase agricultural productivity through communicating knowledge and information to rural agricultural communities, providing capacity building, accessing markets and credit. Another 74.40% (N=67) of the respondents confirmed receipt of the agricultural funds from Faulu and KWFT by mobile phone corroborating findings of Laurent (2003) and therefore emphasizing the crucial role played by technology in implementation of MFI funded agricultural projects.

4.7 Social Economic Factors

This section sought to collect data on the fourth objective which established how social economic factors influence sound implementation of Micro Finance Institution funded agricultural projects.

Table 4.15: Distribution of Respondents showing the more preferred type of agricultural Projects in the location

Project Type	Frequency	Percent
Livestock Projects	42	46.90
Crop Projects	33	36.70
Mixed farming projects	15	16.70
Total	90	100.00

The researcher sought to establish from the study which agricultural projects are more preferred. From the findings, 46.90% of the respondent's preferred Livestock projects, 36.70% supported crop projects and 16.70% chose mixed farming projects as indicated in Table 4.15. The liking for Livestock projects can be attributed to multiple benefits from the enterprises, say an animal can provide both milk and meat or eggs and meat.

The longevity of the benefits is guaranteed unlike crop related projects that are weather dependent and unpredictable.

Table 4.16: Distribution of Respondents showing Age at which one should own land

Age Category	Frequency	Percent
35 and Above	49	54.44
26-35	30	33.33
16-25	11	12.22
Total	90	100.00

The study also sought to establish at what age should one land within the location as shown in Table 4.16 and from the findings it was clear that 54.44% of respondents believe that land ownership should be for those who are 35 years and above. 33.33% of the people sampled thought that 26-35 age bracket should own the land and 12.220% support land ownership going to the 16-25 age category. The interpretation is that land ownership is entrusted with more mature people due to the nature of documents required and the bureaucracy involved. The category of 35 and above is more likely to tackle contentious issues arising from land related matters.

Table 4.17: Distribution of Respondents showing Type of houses prevalent in the area

Type of house	Frequency	Percent
Stone Houses	35	38.90
Brick houses	44	48.90
Mud Houses	8	8.90
Grass Thatched Houses	3	3.33
Total	90	100.00

The study also sought to establish the types of houses owned by the farmers in the area. According to Table 4.17, the majority at 48.90% owned brick houses whereas from the research 38.90% owned stone houses. Respondents reported that only 8.90% had mud houses and a paltry 3.33% owned grass thatched houses. The interpretation here shows that most of the farmers are average economically and using the type of house as a wealth indicator, the MFI institutions are able to assess if the applicants qualify for the loans.

Table 4.18: Distribution of Respondents showing type of houses prevalent in the Project Area

Type of House	Frequency	Percent
Stone Houses	35	38.90
Brick houses	44	48.90
Mud Houses	8	8.90
Grass Thatched Houses	3	3.33
Total	90	100.00

The study also sought to establish the types of houses owned by the farmers in the area. As shown in Table 4.18, the majority at 48.90% owned brick houses whereas from the research 38.90% owned stone houses. Respondents reported that only 8.90% had mud houses and a paltry 3.33% owned grass thatched houses.

Table 4.19; Distribution Showing Level of access to credit facilities by women

Attribute	Frequency	Percent
Very High	25	27.80
High	40	44.40
Moderate	8	8.90
Low	6	3.33
Very Low	11	12.22
Total	90	100.00

The researcher went further understand the level of access to credit facilities by women farmers in the area. As shown on Table 4.19, the majority of the respondents at 44.40% rated access to credit highly whereas on the researcher recorded 27.80% with very high ratings for the access to credit. Only 3.33% reported low rating and 12.22% scored very low responses concerning the level of access to credit. The interpretation here is that despite majority of the members being women and being at primary school level in education, the MFIs still have confidence in them hence the high level of access to credit. This trust between the two parties is also based on good repayment by the borrower.

Table 4.20: Factors that influence the type of Agricultural Project chosen by farmers

Influencing factor	Very great extent	Large Extent	Small Extent	Very Small Extent	
Community Beliefs	26.67	27.8	14.44	33.33	100%
Ease of Sale Produce from Project	25.60	52.22	12.22	10.00	100%
Type of Security required by MFI	45.60	25.60	23.33	5.56	100%
Size of land	15.60	36.67	28.90	18.90	100%
Group member preference and Influence	12.22	33.33	41.11	13.33	100%

****Values are in percentages -**

N=90

The study required respondents to indicate the factors that influence their choice of agricultural projects. According to Table 4.20, the responses given majority of the respondents indicated that ease of sale of produce at 52.22% contributed greatly towards the choice of agricultural project by farmers to a large extent. The type of security for loan required by the MFI also had effect to a very large extent at 45.60% whereas size of land at 36.67% to a large extent has influence in the choice of project chosen by famers.

The interpretation here is that the farmers prefer projects whose products are easier to dispose and have better returns in both the long and short run.

Table 4.21: Factors that influence the type of houses most prevalent in the area

Influencing factor	Very great extent	Large Extent	Small Extent	Very Small Extent	
Availability of Land	27.8	41.1	11.1	20.0	100%
Cost of Construction	35.6	38.9	8.80	16.70	100%
Availability of Construction Materials	12.22	50.0	18.9	30.0	100%
Poverty	43.33	11.11	27.78	17.8	100%
Community norms	4.44	4.44	41.10	50.00	100%

****Values are in percentages-**

N=90

The study went further to establish the factors that influence the type of houses owned by the farmers. According to Table 4.21, respondents believe that to a large extent at 50% availability of construction materials is a major influence when it comes to the choice of houses. From the study respondents stated that poverty at 43.33% is a major reason for the type of houses prevalent in the area. Despite having a huge response at 50%, community norms influence the type of housing to a very small extent. The interpretation here is that poverty is a key factor to consider when choosing the type of type of house to construct. This is related to low household incomes that constraint the farmers when it comes to attaining shelter as a basic need according to Maslow’s theory of needs.

Table 4.22; Factors that have influence on Implementation of MFI funded projects

Influencing factor	Very great extent	Large Extent	Small Extent	Very Small Extent	
Illiteracy	55.6	24.4	14.4	5.44	100%
Lack credit facilities	36.7	30.0	11.11	22.22	100%
Family constraints	6.70	46.7	18.9	16.7	100%
Maternal Commitments	18.9	38.9	22.2	20.0	100%
Lack of land to farm	12.2	48.9	13.3	14.4	100%
HIV/AIDS	16.7	38.9	17.8	15.6	100%
Lack of food	16.7	26.7	27.7	17.8	100%

****Values are in percentages-**

N=90

The researcher sought to establish from the farmers which factors affect the sound implementation of MFI funded projects. According to Table 4.22 the findings indicate that 55.60% of the study respondents felt that illiteracy played a big role to a very great extent. Family constraints were also important and to a large extent at 46.7% also had a negative influence towards project management same as maternal commitments and lack of land to farm. The interpretation implies that illiteracy is a major factor since dealing with a group of farmers who lack education may result to difficulty in implementing a project. Introducing new ideas can be a challenge and also the length of time taken during training. The MFI organizations would also find it to do business with such a category of farmers. The ultimate goal is slow and poor delivery of projects outputs and wastage of project resources.

4.71 Discussion of Findings: Socio Economic Factors

Findings from the research study also established that 54.44% (N=49), the majority of farmers believe the farmers aged 35years and above in age should own land. Land is a critical factor of production and its ownership is important when it comes to getting loans from MFIs.

This seems to concur with (Ogolla and Mugabe1996) who point out that land tenure provides the legal and normative framework within which all agricultural as well other economics activities are conducted. The study also revealed that socio economically, farmers had preference to agricultural projects with 46.90% (N=42) preferring livestock Projects. These take a shorter time compared to crops and returns are promising to farmers. At 52.22% (N=56) the respondents felt that ease of sale of produce realized from the farming projects contributed greatly towards the choice of agricultural project by farmers to a large extent. The type of security for loan required by the MFI was another reason to a very large extent at 45.60% (N=43). From the study, housing is socio economic wealth indicator since during appraisals; the MFIs consider it as part of their assessment. The majority at 48.90% (N=43) owned brick houses which are cheaper to put up whereas from the research findings 38.90% (N=37) owned stone houses which are high end. Findings indicate that to a large extent 50.00% (N=45) of the respondents felt that availability of construction materials was a major influence when it comes to the choice of houses.

From the study also 43.33% (N=42) of the respondents indicated that poverty was a major justification for their choice of type of houses. This finding from the study seems to concur with Hartungi (2007), who points out that many rural situations are marked by poverty, poor production, low incomes and the rising vulnerability of poor people. It was also necessary to establish from the farmers which factors had an effect on implementation of their projects. Respondents felt that to a very great extent 55.60% (N=56) illiteracy played a big role. Lack of land to farm was also important at 46.7% (N=46) since without it no project could take off. The researcher established from the study that the implementation of a project is a function of many components and a concerted effort is necessary to demonstrate success in such ventures.

4.8 Regression Analysis

Using SPSS software, the researcher determined the Coefficient of determination which explains the relationship in variation between the dependent variable and the independent variables. In other words, the percentage of variation in the dependent variable (Implementation of MFI funded projects) that is explained by all the four independent variables (Government factors, Educational factors, Technological factors and Socio Economic Factors). Table 4.23 shows this clearly.

Table 4.23: Co-efficient of determination

Model	Un-standardized	Standardized		t	Sig.
	Coefficients	Std. Error	Beta		
	B				
(Constant)	1.164	1.334		0.917	367
Government Policies	0.236	0.038	0.157	6.654	0.0665
Educational Factors	0.440	0.075	0.554	5.654	0.0581
Technological Factors	0.372	0.211	0.793	8.530	0.0707
Socio Economic factors	0.305	0.245	0.765	8.302	0.0690

The analyzed data in Table 4.23 shows that a unit change in Government policy factors will lead to a 0.236 positive increase in sound implementation of MFI funded projects in Central Division Machakos County. A unit increase in educational factors leads to a 0.440 increase in implementation of MFI funded projects in Machakos County. In the same way a unit change upwards technologically will lead to a 0.372 increase in the sound implementation of MFI funded projects in Machakos County. Interms of Socio Economic factors a unit increase will lead to a 0.305 increase in sound implementation of MFI funded projects in Machakos County.

The t-value and significant (p) values give a rough perspective of the indication of the impact of each independent variable on the dependent variable. A big t-value and a small p-value suggest that an independent variable is having a large impact on a dependent variable. A t-value of 6.654 for government policy factors indicates that the government factors have a reasonable impact on the implementation of MFI funded agricultural projects in Central Division, Machakos County. Furthermore, a t-value of 5.654 for educational factors implies a moderate or average impact on the sound implementation of MFI funded agricultural projects. The t-value for technological factors at 8.530 is a clear indication that this factor has a very large impact on implementation of these projects. Socio economic factors are equally significant since a t-value of 8.302 reflects its importance in the implementation of these MFI funded agricultural projects in Machakos County.

At 5% level of significance and 95% level of confidence, technological factors had a factor of (p=0.0707) level of significance followed by Socio Economic factors (p= 0.0690), then factors related to Government policies (p=0.0665) while education factors had the least significant factor (p= 0.0581).

Table 4.24: Correlation Factor Table

Factor	Pearson Correlation – Significant (1-Tail)
Technological	+0.793
Socio Economic	+0.765
Government Policy	+0.712
Educational	+0.554

** Correlation Significant at the 0.01 level or 99% - Confidence interval (1 tailed) N=90*

A Pearson product-moment correlation coefficient was computed to assess the relationship between Government Policy factors and implementation of MFI funded agricultural projects in Machakos County.

According to Table 4.24 a correlation of +0.712 was obtained and this is an indication that there is a positive correlation between the two variables. Calculations relating Education factors with project implementation revealed a correlation value of +0.554 which denotes a fairly strong positive relationship between the two variables. Technological factors against project implementation in Machakos County revealed a Correlation value of +0.793 which is an extremely strong positive relationship between the two variables. Pearson product-moment correlation coefficient calculations between Socio – Economic factors and implementation of MFI projects in Machakos County yielded a correlation value of +0.765 which implies that there is a very strong positive relationship between the two variables.

4.9 Summary of the Chapter

Chapter Four analyzed and presented the detailed results and findings of the study. The analysis was done in terms of descriptive statistics, the use of frequency tables and percentages. Tables have been used to present the results for ease of understanding. The effect of Government Policy, Education, Technological and Socio economic factors on the implementation of MFI funded agricultural projects in Machakos County and their relationship with food security was explained in this chapter.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the discussion of key data findings, conclusions drawn from the findings highlighted and recommendations made.

5.2 Summary of the Findings

From the findings, the study established that the majority of respondents were females at 53.3% (N=48) against males at 46.7% (N=42). Majority of the respondents had primary level education at 53.3% (N=27).

5.2.1 Effect of Government Policy on implementation of MFI funded Projects

The study realized that Government participation had a large impact recording a correlation value of 0.712 and a t-value of 6.654 in relation to sound implementation of the MFI funded agricultural projects. The policies of government through regulation made it possible for farmers to access credit easily thereby financing the project promptly. Through Government involvement with a least significant factor ($p= 0.0665$), other players' especially agricultural extension service providers gained confidence and were able to work with the MFIs and farmers to boost food security and attain increased household incomes. The time taken from application to disbursement of loans to farmers by KWFT and Faulu Kenya has shortened reasonably because of favourable government policies on the farmers' side.

5.2.2 Effect of Educational factors on implementation of MFI funded Agricultural Projects

The study revealed that educational factors have a reasonable impact on the sound implementation of MFI funded projects posting a correlation value of 0.554 and a t-value of 5.654.

From the study, it was found that educated project leaders and beneficiaries were easy to work with and infusion and uptake of new technologies was easier compared to situations where we had illiterate respondents. Although education factors had a least significant factor ($p= 0.0581$), educated women farmers were able to access MFI loans easily because they are able to understand the dynamics of borrowing and repayment of loans hence high penetration and adoption rate of project implementation. Agricultural extension providers also find it easier to penetrate a literate community where these MFI funded projects are in existence. Given that we have College graduates in the study area has also helped a great deal. Generally education contributes greatly towards implementation of MFI funded agricultural projects in Machakos County.

5.2.2 Effect of Technological factors on implementation of MFI funded Agricultural Projects

The study established that technology with a correlation value of 0.793 and a t-value of 8.530 is indispensable when managing projects and the role of the mobile phone is so critical that the MFIs actually disbursed loans to farmers by electronic money transfer. Micro Finance Institutions repayment systems have been designed to accommodate electronic money transfer platforms. The ATM, VISA and other cashless systems have been very popular with the farmers involved in the research study because it felt safe, convenient, safe and efficient. Technology factors with a least significant value ($p=0.0707$) denotes confidently application of technology such as the use of computers in Micro Financing has made the MFIs more organized than before in terms of decision making and operations at organization level. Interaction between project leaders, MFIs, other farmers has been made possible through use of platforms such as the internet. Extension training and sourcing of markets for produce from the project ventures has also been made possible through technological development.

5.2.3 Effect of Socio Economic factors on implementation of MFI funded Agricultural Projects.

The study established that Socio economic factors with a correlation value of 0.765 and a t-value of 8.302 largely impact on the sound implementation of MFI funded agricultural projects. The study revealed that land ownership is mainly a male affair and it's only those who are over 35 years should own land.

The study also revealed that most farmers preferred livestock related projects because the returns from these ventures were higher in the long term. The least significant value of Socio economic factors ($p=0.0690$) supported the feelings of most respondents who felt that lack of credit was a major constraint as far as implementation of projects is concerned. The type of housing denotes economically ability and from the research it was clear that majority of farmers own brick houses and another category of the population owned stone houses. The level of access to credit facilities by women also came out clearly with a reasonably high rating meaning more women have had an opportunity to access loans for financing viable projects in Machakos County. Rosegrant and Hazell (1999), support this fact by concurring that in-accessibility to credit especially for small scale farmers and particularly women has limited a wide range of activities, the type of technology used and the scale of operations that farmers can adopt on their farms.

5.3 Conclusions

Several conclusions are drawn from this research study. This study concludes that most farmers were aware of Government policies touching on agricultural production. Through sound MFI policies, farmers and especially women farmers have also been able to access affordable credit resulting to sustainable agricultural project financing and ultimately attainment of food security and increased incomes at household level. Through regulation, efficiency in the processing of the loans has also increased and this has motivated the farmers in a big way. Furthermore the creation of an enabling environment has enabled farmers to borrow loans at affordable rates and without necessarily giving security or collateral.

Collateral free loans and expert agricultural extension advice from KWFT and Faulu Kenya have contributed immensely towards financing projects and improved food security. Government regulation of the industry has made agricultural NGOs and MFIs to transact business in a competitive environment avoiding oligopolistic and monopolistic tendencies. Education has a reasonably direct relationship with successful project management with most literate farmers making informed contributions and encouraging penetration of new ideas within the project implementation framework.

This has made the farmers to participate better thereby achieving the food security objectives of the MFI funded projects. By virtue of seeing the benefits of education in project management the farmers have taken up interest in educating their children. On the extent to which technological factors affect food security the study concludes that most farmers are reasonably exposed to technology with majority of them 94.44% owning mobile phones. These gadgets have been responsible for efficient, timely and convenient outputs towards project management activities. Implementation of agricultural projects is largely technologically driven and from the study, combinations of several pieces of technology including use of ATM and internet have had major impact on successful project management outcomes. Socio economically, livestock projects were preferred by most of the farmers due to higher returns in the short term as well as low risk compared to crop related enterprises. The farmers aged 35 years old and above are eligible for land ownership with the belief that they are more responsible and focused. Micro Finance Institutions' regulations and legal reasons also form the basis for the mature age since all would like to deal with mature farmers.

From the study we can also deduce that women still face discrimination in project development and management given that landownership is a male affair. Women are still sidelined when it comes to the holding of title deeds, transfer of matrimonial property and say in the sale of family property.

Majority of the women farmers have borrowed unsecured loans from KWFT and Faulu Kenya and are able to service them with ease due to the sound management of the projects and economic cushioning by the lending MFIs they are involved with. In general, this study concludes that for sound implementation of MFI funded projects in Machakos County, interplay between technology and Socio economics factors were critical although government policy and education factors also had an important role to play though minimal.

5.4 Recommendations of the Study.

This study recommends the following;

- i. The Government should formulate policies that will make it easier for farmers to access credit from MFIs and other NGOs in the lending sector. Such policies should also create favourable environments to enable the farmers borrow funds from KWFT and Faulu Kenya and repay with ease.
- ii. The Government through policies should make the MFI industry playing field level such that all other players have equal stakes in the MFI industry.
- iii. More policies are formulated to ensure that farmers are supported and also protected from exploitation by both the MFIs and other interested industry players like NGOs.
- iv. Micro Finance Institutions design loan products that encourage borrowing by the farmers. Repayment modalities should be friendly to the farmers to encourage production at farm level with the objective of reducing poverty and attaining food security.
- v. Government through the devolved system of governance should educate farmers on the best practices of agricultural production to enable them carryout agricultural projects within a business framework.
- vi. That the MFIs and the Government sensitize farmers on the need to educate their children to ensure there is continuity and sustainability in future projects. Apart from formal basic education, it is recommended that they are exposed to tailor made agricultural courses, certificate or diploma training.

This will ensure that they acquire valuable entrepreneurial skills necessary for project succession management as well as keeping future projects alive.

- vii. The study recommends that more technological innovations and especially software are designed by MFIs to expose farmers to new ideas given that project implementation is a dynamic area. Training on how to use the technology should also be done properly to achieve maximum results. Emphasis should be on the use of the internet and money transfer products so that planning of the projects is timely and efficient.
- viii. Socio economically the study recommends that more farmers and especially women are accorded land ownership certificates (Title deeds) to create confidence within the lending MFI industry even if the application is for unsecured loans. These documents signify ownership of this vital factor of production and increase the credit worthiness of the farmers. Another recommendation touches on Government and the MFIs increasing the level of access to credit by creating more credit institutions while encouraging private sector investment in the business of financing agricultural projects. This way the farmers will have more funds at their disposal and ensure a reliable capital resource base to borrow from.

5.5 Suggestions for Further Studies

From the study and related conclusions, I suggest:

- i. Further research in the area of food security and coming up with sustainable innovative methods of availing more affordable credit to farmers to empower them so that they are able to increase household incomes and generally have a higher quality of life.
- ii. Further research in the area of ICT in project management to study how ICT as a factor can be integrated in the implementation of agricultural projects in Machakos County. This way we shall be able to understand and appreciate broader role of technology in project management.

- iii. Studying other factors other than Government Policy, Education, Technology and Socio Economics affecting sound implementation of agricultural projects are also suggested to get an in depth understanding of their role in project management.

REFERENCES

- Abdulai, A & Auberta D (2004).** *A Cross-Section Analysis of Household Demand for food and Nutrients in Tanzania.*
- Ananda W, Nyange D, & Tsuji H, (2003).** *Food Demand Patterns in Tanzania: A Censored Regression Analysis of Micro data, Sri Lankan Journal of Agricultural Economics. Vol.5, No. 1, 2003.*
- Angelsen, A & Wunder, S. (2001).** *“Exploring the Poverty-Forest Link: Key Concepts, Issues and Research Implications”* Paper in preparation, CIFOR, Bogor, Indonesia
- Angura A, & Atikoro N. (2004).** *Factors influencing household food security in semi arid area of Andwari County in Uganda.*
- Anne T & Metz M. (1998).** *Implications of Economic Policy for Food Security: A Training Manual, (1998)*
- Awudu, Abdulai & Wallace, Huffman, (2000).** *”Structure, Adjustment and Economic Reform in Nicaragua: Evidence from Farm Household Survey Data”* Economic Systems, Pg 25:113-125
- Barrows R. & Roth, M. (1990).** *“Land Tenure and Investment in African Agriculture: Theory and Evidence”*, Journal of Modern African Studies 28(2): 265-275
- Bebbington, A. (1999).** *“Capitals and Capabilities: A Framework for Analyzing Peasant Viability, Rural Livelihoods and Poverty”*, World Development 27: 2021-2044
- Bebe O. B & G.J, Thorpe, W. (2003).** 117-127. *Smallholder Dairy systems in the Kenya highlands: breed preferences and breeding practices.* Livestock Production Science Page 82
- Bindlish & Evenson (1993).** *“African studies”* and Swanson & Claar.
- Blench, R (2000).** *” Extensive Pastoral Livestock Systems: Issues and Options for the Future”*, FAO – Japan Co-operative Project. Collection of Information on Animal Production and Health.
- Bornstein, D (2005).** *The Price of a Dream: The Story of the Grameen Bank*, Oxford University Press, Oxford.

- Central Bureau Statistics, (1998/1999).** *Integrated labour survey, 1998/1999* CBS
- Central Bureau Statistics (2003a).** *Geographical division of well being in Kenya, where are the poor? From districts to locations*
- Christen, R.P & Douglas Pearce, (2005).** *Managing Risks and Designing Products for Agricultural Microfinance.* Rome: International Fund for Agricultural Development.
- District Survey Annual Report, (2001, Machakos District.**
- Dondo, A. (1999).** *Micro-finance in Kenya: An overview, Nairobi: Kenya Rural Enterprise Program, 1999.*
- Dunne P & Edkins B. (2005).** *The Demand of Food in South Africa*
- FAO, Food & Agriculture Organization. (1997).** *Improving agricultural extension: a reference manual.* Edited by Burton E. Swanson, Robert P. Bentz, and Andrew J. Sofranco.
- FAO, Food & Agriculture Organization, (2000).** *The role of ICT technologies in rural development and food security.* Rome: FAO
- Goodman, Patrick, (2002).** *“International Investment Funds: Mobilizing Investors towards Micro – finance”,* May 2002
- Government of Kenya (2004).** *Strategies for revitalizing agriculture Government of Kenya and IFAD, (2005).* MKEPP for Natural Resources Management Implementation Manual (76, 98,105).
- Grameen Bank (2009).** *Grameen Bank Monthly Report,* Source; Grameen Bank, July 2009,
- Haggblade S. (2004).** *Building on Successes in African Agriculture,* International Food Policy Research Institute (IFPRI)
- Haralamboo (2009).** *Sociology; Themes and perspectives,* Oxford University Press
- Hartungi, R (2007).** *‘Understanding the success factors of micro-finance institution in a developing country’,* International journal of Economics, Vol.34, No.6.pp 1-3.

- Hassan, M.K & Renteria-Guerrero, L (1997).** *“The experience of Grameen Banking of Bangladesh in community development”*, International Journal of Socio Economics, Vol.24, No.12
- Hospes, O.M.Muli & Milcah (2002).** *An Evaluation on Micro Finance Programmes in Kenya as supported through the Dutch Co-Financing Programme.* Institute of Agricultural Policy and Development”
- IFAD (2003).** *IFAD Microfinance Project – India Chapter*, September 2003.
- Institute of Economic Affairs (IEA), July, (2008).** *Profile of Women’s Socio-Economic Status in Kenya:* Institute of Economic Affairs
- Jack, William & Tavneet Suri (2011).** *“Mobile Money: The Economics of M-PESA”* NBER Working Paper 16721.
- Kenya National Bureau of Statistics (2011).** *Profile of women’s socio-economic status in Kenya.*
- Kenya National Bureau of Statistics (KNBS),** Report 2011
- Kenya Vision 2030.** *The Popular Version – GOK 2007*
- Kibaara, B.W. (2005).** *“Technical Efficiency in Kenya’s Maize Production: An Application of the Stochastic Frontier Approach”.* Masters Thesis, Colorado State University,USA.
- Kimenyi Mwangi S, (2001).** *Agriculture, Economic Growth and Poverty Reduction.* A paper presented to a seminar organized by ICPS in Nairobi, November 2001.
- King, R, & Levine, R. (1993),** *‘Finance, Entrepreneurship and Growth: Theory and Evidence’*, Journal and Monetary Economics, Vol 32, Issue 3, pp 513-542.
- KIPPRA Annual Report, 2010.** *Government Printer Version*
- Kombo D.K & Tromp (2006).** *Proposal and Thesis Writing; An Introduction;* Paulines Publications Africa, Nairobi Kenya.

- Kropp, Dr Erhard W. & Suran, Dr B.S (2002).** *Linking Banks and (Financial) Self Help Groups in India – An assessment*, November 2002.
- Kenya Women Finance Trust**, Annual Report, 2011
- Laurent, Robert D. (2003).** "Currency Transfers by Denomination." PhD dissertation, University of Chicago
- Leonard, D, (1991).** *African Successes: four public managers of Kenyan Rural Development.* University of California Press.
- Llanto, GM (2001).** *Sustainable Rural Finance: Policy and Design Issues.* Policy Notes, No 4/2001. Manila: Phillipines Institute for Development Studies.
- Lobel, T, (2005).** *African Countries Focus on Microfinance: Twelve African Nations Engaged in the International Year of microcredit to Date: Microfinance matters: Building Inclusive Financial Sectors;*
- Machakos District Development Plan, (2007).** Government Press
- Macharia F. (2005).** *Land laws and Land use in Kenya: Implications for Agricultural Development,* Kenya Institute for Public policy Research and Analysis (pp 26)
- Manuh.T. (1998).** *Africa recovery briefing paper No.11; Women in development Overcoming obstacles pushing for progress,* April 1998
- Mbwabu G. & R. Evenson (1998).** *The effects of agricultural extension on farm yields in Kenya Economic Growth Centre,* Discussion paper No. 798. Yale University New Haven
- Ministry of Agriculture.** Annual Report 2008.
- Ministry of Finance of Kenya.** "Ministry of Finance Audit Findings on M-PESA, money transfer services". 26th January, 2009
- Ministry of Livestock Development,(2006).** *Livestock Production Annual Report.* Machakos District

- Ministry of Livestock Development**, Annual Report. (2009)
- Morawczynski, Olga (2009)**. *“Exploring the usage and impact of “transformational” mob financial: the case of M-PESA in Kenya* “Journal of East African Studies.3 (3):50510
- Morduch J (1999)**.*“The micro finance promise”*. Journal of economic literature, 37(44)
- Mugenda O.M & Mugenda A.M (1999)**. *Research Methods: Quantitative and Qualitative approaches*
- Muya F. S. (1997)**. *Soil and Water Conservation Manual, Soil and Water Conservation Branch (9-15)*.
- Mwangore, Dali (ed) (2002)**. *Land Use in Kenya- the case of a National land policy*. Print-fast Kenya Limited, Nairobi.
- Mwenda K. K. & Muuka, G.N (2004)**. *“Towards best practices for micro finance institutional engagement in African Rural Areas: Selected cases and agenda for action*, International Journal of Socio Economics, Vol.31, No 1/2 pp. 143-158.
- NABARD, (2001)**. *Self Help Group Bank Linkage Model (2005) –Wise Cumulative Position up to 31st March 2005*.
- Najafi B. (2003)**. *An Overview of Current Land Utilization Systems and Their Contribution to Agricultural Productivity. Report of the APO Seminar on Impact on Land Utilization Systems on Agricultural Productivity*. Productivity Organization, Islamic Republic of Iran, 2003
- National Agriculture & Livestock Extension Project, NALEP**, Ministry of Agriculture, Annual Report, (2009).
- NEMA, (National Environmental Management Authority, (2006)**. *Environment Action Plan: Machakos District (pp38-41)*
- National Livestock Policy, Ministry of Livestock Development (2008)**. *Sessional Paper No. 2 of May 2008*

- Njiraini, John & James Anyanzwa, (2008).** *“Unmasking the storm behind M-PESA*
“East African Standard, December 2008.
- Nyariki, D.M & Wiggins, S (1997).** *‘Household food Insecurity in Sub Saharan Africa:*
Lessons from Kenya, ‘British Food Journal, Vol. 99.
- Nyoro J. K, Maria Wanjala & Tom Owuor, (2001).** *Increasing Kenya’s Agricultural*
Competitiveness: Farm level.
- Nyoro, J.K. (2002).** *“Agriculture & Rural Growth in Kenya’,* Working Paper,
 Tegemeo Institute, Egerton University
- Ogolla B D and Mugabe J. (1996).** *Land Tenure Systems, In Land We Trust;* Initiative
 Publishers, Nairobi, Kenya.
- Pagano, M (1993).** *‘Financial Markets and Growth: An overview’,* European Economic
 Review, Vol. 37, Issue 2, pp. 613-622
- Patton, M.Q. (2002):** *Qualitative Research and Evaluation Methods.* Thousand Oaks,
 CA: Sage Publications
- Reddy, Y.V. (2006).** *Rural Banking: Review and Prospects,* Centre for Economic and
 Social Studies, Hyderabad.
- Republic of Kenya (1999b).** *National Poverty Eradication Plan 1999-2015.* Nairobi:
 Office of the President, Department of Development
 Coordination.
- Republic of Kenya, (2004).** *Strategy to Revitalize Agriculture, Ministry of Agriculture;*
 Ministry of Livestock and Fisheries Development: Ministry of
 Cooperative Development, Nairobi.
- Republic of Kenya, (2005).** *Draft National Agriculture Sector Extension Policy*
 (NASEP). Ministry of Agriculture and Rural Development.
 Nairobi. July 2005
- Richardson, D (1997).** *The internet and rural and agricultural development – an*
integrated approach

- Sachs J.D (2005).** *The end of Poverty: Economic Possibilities of our time*, New York: Penguins Press.
- Sarkar, J and P Agarwal. (1996):** '*Banking: The Challenges of Deregulation*', Sri Lanka Development Report, IGDIR
- Shah, M., D. Bernaji. P.S. Vijay Shankar and P. Ambasta (1998).** *India's Drylands: Tribal Societies and Development through Environmental Regeneration*, Oxford University Press, New Delhi
- Shenghverzy, N.J. (2003).** *Statistics for People in Statistics (2nd edn)*. Sage publication
- Shively, G. (2001).** *Poverty, consumption risk, and soil conservation* Journal of Development Economics 65:267–290
- Singh, Kavaljit (2005).** *Banking Sector Liberalization in India. Some Distributing Trends*, ASED, August 29, 2005.
- Sloane, P. (2001).** '*Food Security for Afghanistan*', Revised Version, International Conference on Analytical Foundations for Assistance to Afghanistan, UNDP/The World Bank, Islamabad, 5–6 June 2001, 33 pp
- Smith L, Alderman H & Aduayom D. (2006).** *Food insecurity in Sub-Saharan Africa – New estimates from households' expenditure surveys.*
- Stiglitz, J. (1993).** "*The Role of the state in Financial Markets*", World Bank Economic Review
- Srivastava, P (2005).** '*Microfinance in India: Odysseus or Interloper*', *Economic and Political Weekly*, 13 August.
- Sulo T, (2005).** *An economic analysis of food security in West Pokot, Uasin Gichu & Baringo District*. Magraf, Publishers GmbH.
- Sutherland et al (1999).** *Food Security analysis in semi arid and arid areas in Kenya*, Using adaptive research.

- UNDP, (2003).** *'Rehabilitation Strategy – Action Plan for Immediate Rehabilitation'*, Vol. IV, Agriculture and Irrigation, Kabul: United Nations Development Programme.
- United Nations Development Programme (UNDP) (2006),** *Human Development Report 2006, Beyond Scarcity, Power poverty and Global Water Crisis*, New York: UNDP
- Wahid, A.N.M (1994).** *'Grameen Bank and Poverty alleviation in Bangladesh: theory, evidence and limitation.'**The American Journal of Economics and Sociology*, Vol.53 No1.pp 1-5.
- Wool-Cock, J.V.M. (1999).** *'Learning from Failures in Microfinance: What Unsuccessful Cases Tell Us about How Group-Based Programmes Work'*, *American Journal of Economics and Sociology* Vol 58, (1): 17-22
- WEDF, (2011).** *Women Enterprise Development Fund, Annual Report, 2011.*
- World Bank, (2002).** *Poverty and Hunger: Issues and options for Food Security in Developing Countries*, Washington DC: World Bank.
- YEDF, (2012).** *Youth Enterprise Development Fund, Annual Report, 2012*
- Yunus, M. (1999).** *Banker to the Poor: Micro-Lending and the Battle against World Poverty*, New York: Public Affairs.

APPENDICES

**Appendix 1: LETTER OF TRANSMITTAL OF DATA
COLLECTION INSTRUMENTS**

**Peter Musembi Mutua,
P.O Box 187-90100
MACHAKOS
Mobile - 0722463751**

To

.....
.....
.....
.....

Re: Letter of Transmittal of Data Collection

My name is Peter Musembi Mutua. I am currently pursuing a Master of Arts Degree at the University of Nairobi and I am undertaking a research on the Factors influencing the Implementation of Agricultural Projects funded by Micro Finance Institutions in Machakos County. I kindly request you to provide the required information by filling the gaps and ticking as appropriate. The information you provide will be strictly for academic purposes and be treated with utmost confidentiality.

Yours Faithfully,

**Peter Musembi Mutua
L50/61983/2011**

Appendix 2:

SURVEY QUESTIONNAIRE FOR PROJECT IMPLEMENTERS (those in charge of the Agricultural Projects)

Section A: Respondent's Information

(Tick appropriate box)

1. Gender: Male [] Female []

2. Age group

15-25 years []

26-35 years []

36-45 years []

46-55 years []

Over 56 years []

3. What is your job as a project leader?

.....
.....
.....
.....

4. How long have you been in charge of the Agriculture Project?

Below 3 years []

Between 3 and 6 years []

Between 6 and 10 years []

Over 10 years []

5. Do you have women project leaders in your organization or group?

Yes [] No []

6. How many women are involved in decision-making in the projects?

.....

7. To what extent do women face the following forms of discrimination in their decision making positions?

	Very large extent	Large extent	Small extent	Very small extent
Lack of support by men				
Men's lack of confidence in their abilities				
Assumptions that their place is in the kitchen				
Assumptions that they are there to be seen not heard				
Expression of discomfort by men when women contribute e.g clearing throats, fidgeting				
Hostility disguised as teasing, making belittling remarks				
Sexual innuendos				

SECTION B: Government Policy and Implementation

8. Are you aware of any government policies that promote activities relating to food security and poverty alleviation?

Yes [] No []

If yes list them

- 1.....
- 2.....
- 3.....
- 4.....
- 5.....

9. Do you know of any government policies inclined towards MFIs that make it easier to borrow money from this lending organization?
 Yes [] No []
 If yes list them
 1.....
 2.....
 3.....
 4.....
10. Are you aware of any government policies on inheritance and property ownership e.g Land?
 Yes [] No []
 If yes list them
 1.....
 2.....
 3.....
 4.....
11. Do know of any government policies or framework designed to enhance agricultural extension services?
 Yes [] No []
 If yes list them
 1.....
 2.....
 3.....
 4.....

SECTION C: Educational Factors

12. What is your level of education (Tick as appropriate?)
 Primary [] Secondary [] College [] University [] Others (Specify) []

13. Education level at the group level has a positive effect on project activities?
 Please select one
Strongly disagree *Disagree* *Neutral* *Agree* *Strongly Agree*

14. What is the representation of project members’ interms of education? (Insert the numbers that you may have)

University	college	secondary	primary

15. To what extent do you think education has contributed to the management of the group projects? (High regard – 5; Lowest regard –1)

1	2	3	4	5

16. Rate the literacy levels of group members towards better participation in your project activities

Very high [] High [] Moderate [] Low [] Very low []

Section D: Technological Factors

17. Please indicate if you own a mobile phone?
 Yes [] No []

18. Have you ever received a financial loan from Faulu Kenya or KWFT through M-PESA mobile money transfer?
 Yes [] No []

19. What are the advantages of repaying your loan through electronic Money transfer?
 1.....
 2.....
 3.....
 4.....

20 Have you ever received agricultural extension advice from Faulu Kenya or KWFT?
 If Yes, how did the information help you in project management?

1.....
 2.....
 3.....
 4.....

21 Automated Teller Machine (ATM) technology has made it easier for you to access funds for investment in agricultural projects?
Strongly disagree Disagree Neutral Agree Strongly Agree

23 Electronic mobile money transfer from KWFT and Faulu Kenya has made it convenient for you as project manager?
Strongly disagree Disagree Neutral Agree Strongly Agree

SECTION E: Socio Economic Factors

24. Which agricultural enterprises are more preferred in this region? *Tick appropriately*

- Livestock Projects []
- Crop Projects []
- Mixed farming projects []

25. According to your assessment at what age should one own land around here?

- Above 35 years []
- 26-35 years []
- 16-25 years []
- 9-15 years []

26. What factors do you think influence land ownership? List them on a scale of 1-5 with 1 being the most affecting and 5 the least affecting.

- 1.....
- 2.....
- 3.....
- 4.....

27. To what extent do women face discrimination in land ownership in the following areas?

	Very large extent	Large extent	Small extent	Very small extent
Land ownership i.e. holding title deed				
Transfer of matrimonial property				
Representation in land bodies				
Say in sale of matrimonial properties				

26. List other forms of discrimination that women face in their quest to share in the family property, on a scale of 1-5 with 1 being the most common and 5 the least common.

- 1.....
- 2.....
- 3.....
- 4.....

27. To what extent do you think the following factors affect implementation of agricultural projects in Machakos Central Division?

	Very large extent	Large extent	Small extent	Very small extent
Illiteracy				
Lack of credit facilities				
Family constraints				
Maternal commitments				
Lack of land to farm				
HIV/AIDS				
lack of food				

28. What type of houses are prevalent in this region?

- 1. Stone houses []
- 2. Brick houses []
- 3. Mud houses []
- Grass thatched houses []

29. What factors do you think influence the type of houses that are most prevalent in the region? Please list on a scale of 1-5 with 1 being the strongest reason and 5 the weakest reason.

- 1.....
- 2.....
- 3.....
- 4.....
- 5.....

30. What do you think is the level of access to credit facilities by women in the region (Tick the appropriate box)

- Very high []
- High []
- Moderate []
- Low []
- Very low []

31. What factors do you think influence the access to credit facilities in this region? List them on a scale of 1-5 with 1 being the strongest reason and 5 the weakest.

- 1.....
- 2.....
- 3.....
- 4.....
- 5.....

32. What type of agricultural projects enterprises are common here?

- Large scale []
- Medium []
- Small []

33. What factors do you think influence the type of agricultural projects owned by women? List them on a scale of 1-5 with 1 being the strongest reason and 5 the weakest reason.

- 1.....
- 2.....
- 3.....
- 4.....
- 5.....

34. To what extent do you think women borrow loans from Micro finance institutions in this region?

Very large extent []

Large extent []

Small extent []

Very small extent []

35. What factors do you think influence the borrowing of loans by women to finance agricultural projects? List them on a scale of 1-5 with 1 being the most affecting and 5 the least affecting.

.....

.....

.....

.....

.....

Appendix 3:

SURVEY QUESTIONNAIRE FOR PROJECT BENEFICIARIES (Farmers who own the farms where the Agricultural Projects are carried out)

Section A: Respondent's Information

(Tick appropriate box)

1. Gender: Male [] Female []
2. Age group
 - 15-25 years []
 - 26-35 years []
 - 36-45 years []
 - 46-55 years []
 - Over 56 years []
3. Level of education
 - Primary []
 - Secondary []
 - College []
 - University []
 - Other []

SECTION B: Government Policy and Implementation

4. The Government has made it possible for farmers to access credit easily from Micro Finance Institutions to finance your agricultural projects.

<i>Strongly disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. Collateral free loans and expert agricultural advice from Faulu Kenya and KWFT have contributed to increased household incomes and improved food security in a big way?

Strongly disagree Disagree Neutral Agree Strongly Agree

6. Government presence in your project activities has attracted other agricultural extension service providers thereby increasing food production and creating market opportunities for your produce.

Strongly disagree Disagree Neutral Agree Strongly Agree

7. The time taken to process and repay loans for beneficiaries by Faulu Kenya and KWFT has been shortened because the Government has provided a favourable operating environment.

Strongly disagree Disagree Neutral Agree Strongly Agree

SECTION C: Educational Factors

8. Education level at the group level has a positive effect on project activities?
Please select one

Strongly disagree Disagree Neutral Agree Strongly Agree

9. There have been considerable benefits to farmers from well managed projects that have contributed to them educating their children.

Strongly disagree Disagree Neutral Agree Strongly Agree

10. To what extent do you think education has contributed to the management of the group projects? (High regard – 5; Lowest regard –1)

1	2	3	4	5

11. Rate the literacy levels of group members towards better participation in your project activities

Very high [] High [] Moderate [] Low [] Very low []

SECTION D: Technological Factors

12. Please indicate if you own a mobile phone?

Yes [] No []

13. Have you ever received a financial loan from Faulu Kenya or KWFT through M-PESA mobile money transfer?

Yes [] No []

14. What are the advantages of repaying your loan through electronic Money transfer?

- 1.....
- 2.....
- 3.....
- 4.....
- 5.....

15. Have you ever received agricultural extension advice from Faulu Kenya or KWFT?

If Yes, how did the information help you in project management?

- 1.....
- 2.....
- 3.....
- 4.....

16. Automated Teller Machine (ATM) technology has made it easier for you to access funds for investment in agricultural projects?

Strongly disagree *Disagree* *Neutral* *Agree* *Strongly Agree*

17 Electronic mobile money transfer from KWFT and Faulu Kenya has made it convenient for you as project manager?
Strongly disagree Disagree Neutral Agree Strongly Agree

SECTION E: Socio Economic Factors

18. Which agricultural enterprises are more preferred in this region? *Tick appropriately*

- Livestock Projects []
- Crop Projects []
- Mixed farming projects []

19. According to your assessment at what age should one own land around here?

- Above 35 years []
- 26-35 years []
- 16-25 years []
- 9-15 years []

20. What factors do you think influence land ownership? List them on a scale of 1-5 with 1 being the most affecting and 5 the least affecting.

1.....
2.....
3.....
4.....

21. To what extent do women face discrimination in land ownership in the following areas?

	Very large extent	Large extent	Small extent	Very small extent
Land ownership i.e. holding title deed				
Transfer of matrimonial property				
Representation in land bodies				
Say in sale of matrimonial properties				

25. What do you think is the level of access to credit facilities by women in the region (Tick the appropriate box)

Very high

High

Moderate

Low

Very low

26. What factors do you think influence the access to credit facilities in this region? List them on a scale of 1-5 with 1 being the strongest reason and 5 the weakest.

1.....

2.....

3.....

4.....

27. What type of agricultural projects enterprises are common here?

Large scale

Medium

Small

28. What factors do you think influence the type of agricultural projects owned by women? List them on a scale of 1-5 with 1 being the strongest reason and 5 the weakest reason.
- 1.....
- 2.....
- 3.....
- 4.....
29. To what extent do you think women borrow loans from Micro finance institutions in this region?
- Very large extent []
- Large extent []
- Small extent []
- Very small extent []
30. What factors do you think influence the borrowing of loans by women to finance agricultural projects? List them on a scale of 1-5 with 1 being the most affecting and 5 the least affecting.
- 1.....
- 2.....
- 3.....
- 4.....
23. What type of houses are prevalent in this region?
1. Stone houses []
2. Brick houses []
3. Mud houses []
4. Grass thatched houses []

24. What factors do you think influence the type of houses that are most prevalent in the region? Please list on a scale of 1-5 with 1 being the strongest reason and 5 the weakest reason.

1.....

2.....

3.....

4.....