EFFECTS OF MICRO FINANCE CREDIT ON THE GROWTH OF SMALL HOLDER FARMERS IN AGRICULTURAL FINANCE CORPORATION: A CASE STUDY OF KIAMBU COUNTY

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DECLARATION

This management research proposal is my original work and has never been presented for the award of a degree in any other university.

Signed..... Date.....

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This management research proposal has been submitted for examination with my approval as the university supervisor:

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They have always been the source of inspiration for advancement of my studies.

DEDICATION

This project is dedicated to my dear mum, Rosemary Atieno Odongo and my late dad, Fredrick Odongo for the gift of education, and virtues of hard work that they instilled in me at an early age. I also would like to dedicate this work to Agricultural Finance Corporation whose vision is to develop farmers.

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ABSTRACT

The study interrogates the effects of microfinance credit on the growth of smallholder farmers in Kenya. Growth of smallholder farmers cannot be overemphasized as they contribute a considerable amount in the Kenyan gross domestic product (GDP). The study determined how increase in finance has led to increase in rural income, food security and improved nutritional status. The study started by considering the main variables which include microfinance credit and small holder farmers. The main objective was to determine the effects of microfinance credit on the growth of smallholder farmers in Kenya. This was coupled by specific objectives that include determination of the level of savings, risk mitigation measures and training of the farmers. A case study research design was anchored on descriptive in tandem with correlation research design. The study targeted a population of 327 smallholder clients in AFC with a sample size of 64 clients established in their respective locations. In data collection, questionnaires were solely as the main data collection instrument. Finally, the data was analyzed by using various descriptive statistics and regression analysis model that will eventually be presented using frequency tables, charts and graphs.

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LIST OF ABBREVIATIONS

AFC	Agricultural Finance Corporation
ANOVA	Analysis of Variance
DFI	Development Financial Institution
GDP	Gross Domestic Product
MFI	Micro finance Institutions
NGO	Non Governmental Organization

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The concept of Micro finance is very important; by and large, micro finance is done through provision of small loans and technical assistant, training on after harvest requirements, improved risk management and proper market accessibility in the agricultural practices as witnessed in Hartungi (2007). Holden (2002), noted that access to credit by small holder farmers has posed a significant challenge as vast majority of farmers in Kenya consist of small subsistence farmers. In some instance micro finance providers have tried to access this niche market through financial assistance by purchasing of inputs with seeds for farmers, coupled with transport of crops, market process, harvest and livestock. Besley (1995) stated that loans and savings contributes in improving economic status of people living in poverty, this reflects majority of small holder farmers in Kenya.

The theories used established how farmers improve their lives using the information they have on financial matters. The most commonly used theory in this study has been: information asymmetry theory, growth theory and social capital theory. Micro finance theories and institutions started around 1970s and 1980s pioneered by Muhammad Yunus in Bangladesh. These concepts in micro finance were done through a special bank called Grameen bank whose efforts were directed at breaking the vicious cycle of poverty (Stoner & Wankel, 2007). In addition, Rhyne (2001) identified that since its birth in the 1970s, enthusiasm and innovation has enhanced the practice of micro finance credit which has been replicated from country to country.

The environment within the Country's agricultural sector has changed; this has necessitated a review of the AFC's lending operations and policies with emphasis being to target the large numbers of smallholder farmers and other disadvantaged rural based people according to AFC group policy (2010). The major objective has been in policy production and rural incomes, thereby alleviating poverty. Smallholder farmers are considered un-bankable because of client small transactions. In cognizance of the above,

the provision of micro credit through use of rural based intermediaries seems to be a viable option.

1.1.1 Micro Finance Credit

The Micro finance Act, (2006) defines micro finance as deposit taking where a individual person agrees to get deposits everyday on different activities financed by the business either partly or completely through giving credit facilities by the deposit taker and providing micro credit loans to small enterprises or individuals characterized by use of collateral substitutes. On the other hand, Morduch in 1999 stated for instance that institutions in microfinance are meant to give micro level services in finance to people living in poverty that are "excluded from the formal banking sector" and standard financial systems. Finally, Zohir and Martin (2004) explained that institutions that give microcredit serves small enterprises significantly therefore playing an important function to projects that will eradicate poverty and establish chances in countries across the globe.

Remelo (2013) established that there is a fundamental significance in microfinance growth between micro and small businesses when it comes to Singapore for instance. He emphasized that financial accessibility by people living in poverty had an impact to the growth as a country, more especially to its gross domestic product (GDP). In addition to his contribution, he insisted that financial services entails facilities in micro finance, collateral perfection, awareness drive to users of micro finance and emphasis on culture to personal development and growth. Small enterprises use credit facilities to grow in asset base and earnings. This culture has enabled most vulnerable smallholder groups to increase their savings and be able to access more credit.

Micro finance providers in countries that are developing are very important. They anchor as credit providers for small enterprises credit takers hence significantly providing poverty alleviation programs and enhance variety of opportunities which give economic importance across the globe, Morduch (1999). Zohir and Martin (2004) enhanced that such bodies give credit to enterprises that ask for micro loans that are potentially very

risky. It has been discussed that many a times, providers of microfinance obtain government subsidies, Caudill (2009).

Finally, micro finance concept also can be trailed thirty years to Bangladesh by Yunus the founder of Grameen Bank. The concept has moved to all parts of the world hence helping people living in poverty and small businesses as depicted by Dichter (2006). Karmani (2007) added that micro finance is the emerging concept in poverty alleviation therefore enhancing growth of small businesses. Aubuchon and Gupta (2008) & Greer (2008) establish that such concepts boost small enterprise growth and improve lives of the poor.

1.1.2 Growth of Small Holder Farmers

Katacolo (2011), study reflects products in micro finance that should be interrogated to help people living in poverty to participate in activities that bring development in the economy through small agricultural ventures. This must be anchored on addressing opportunities through employment that has been affected by the exponential increase in population. He insisted that smallholder farmers should be helped in getting credit at lower cost that eases pressure on collateral dependence, capacity building through resource mobilization and outreach that are skewed to the poor cadre.

Atieno (2001) established that the main stimulant to growth of smallholder farmers and how to realize its profound effects on the economy is by improving credit services availability on agricultural sector. Smallholder farmers are very significant in entrepreneurship; they raise capital through many sources. The objective of ensuring financial inclusion enables in outreach especially to vulnerable groups that include smallholder farmers. These concepts have propelled new technologies hence the emergence of low cost electronic banking that has improved service delivery Cracknell (2004).

Asman and Diaymette (2006), study indicates that micro finance institutions have participated in a larger extend in improving economic well being of the poor people. This is quite significant in expanding the understanding of financial awareness that can be

provided best to the poor. The extent to which growth is perceived by financial institutions is quite important to smallholder farmers. Significantly, success factors for small farmers have a great impact to the development of many economies in Africa. Naude et al, (2011) explained that productivity increase in small farms will significantly create jobs through better wages and affordable food prices. Smallholders are important in supplying food due to flexibility compared to large actors in developing countries.

1.1.3 Micro Finance Credit and Growth of Smallholder Farmers

Based on studies carried out, Hulme and Mosley (1996) noted that proper investment of micro finance credit can help smallholder farmers to shelve out of "poverty vicious circle". They emphasized credit which had the ability of improving users' earnings and saving, enhancing outlay and reinforcing good earnings. This can be seconded by Kashuliza et al., in 1998 observed people who take loans tend to have a higher income to those who do not take credit. Wright (1999) concentrated on the significant increase in income to establish the impact of micro credit services to poverty. He however, contradicted that increase in income of the poor by micro finance providers will not always reduce poverty. Reducing poverty will always be dependent on how the smallholder farmers do with the extra money.

Brockhaus (2001), established that micro finance had the ability to safeguard the poor against challenges in life hence smoothing their income unpredictability and fluctuations and improve the standards of living during slant periods. According to Hossain (1998), credit is important in acquisition of modern agricultural technologies, seed that have a variety that produces well synthetic manure, pesticides, modern irrigation with farm implements. Golait (2007) analyzed credit adequacy in agriculture.

Qorinilwan (2005) assessed the productivity growth of members from Grameen Bank and established that marginalized farmers have improved their productivity after involvement in activities from Grameen Bank through allocation of bigger chunk of land in cultivating varieties that yield high produce. Fazul (2013) Government normally assist in employing the youth by giving them credit with low or no interest to establish businesses that will help them to grow and improve their living standards. He observed that banks set

conditions that are unfavorable to smallholder farmers. There have been tremendous changes in the last decade on how micro finance institutions operate.

Luknow (2004) overall transformation to a profit oriented institutions with emphasis on efficiency and productivity. Exponential growth has made micro finance to be recognized worldwide .On the other hand, there is a lost in focus on why the poor are not included in the expansion and growth of micro finance. More so, challenges in savings capacity building, social reporting, over indebtedness and unfavorable regulatory environment. Anand (2006) studies indicated that by using the logit model to ascertain the effects of self-help groups on four villages in South India and Cuddalore district of Tamil Nadu. His purposive sampling of 232 households indicated a relationship between health service accessibility and asset index having a positive and five percent level of significant for the average asset holding. The analysis has also been mired by limitations such as crudity of some indicators. The income change and selection of group participants simply ignored factors like genders and education through biasness in self-selection.

1.1.4 Agricultural Finance Corporation in Kenya

The Agricultural Finance Corporation is a development Financial Institution (DFI) that is fully committed to apply acceptable good practice in providing its smallholder clientele with financial inclusivity. Those activities are agricultural in nature. In this respect, it is integrating small holder farmers by providing micro finance service to them. AFC has and still provides mostly retail and supervised credit to its rural based clientele and against land titles as the principle securities. This essentially is an expensive mode of credit delivery that tends to have low outreach and not appropriate for provision of very small credits.

In the 2016/2017 financial statement review, AFC customer outreach increased from 13,500 as at 30th June, 2016 to 14,770 as at 30th June, 2017 loan portfolio review. This outreach is expected to increase due to incentive program established to handle smallholder farmers. Such a segmented category will be expected borrow with or without tangible securities as long as they are properly linked to markets. This can be done by the success witnessed in the Bura and Hola piloted project albeit market challenges, AFC

2016-2017 paper review. The environment within the Country's agricultural sector has changed; this has necessitated a review of the AFC's lending operations and policies with emphasis being to target the large numbers of smallholder farmers and other disadvantaged rural based people according to AFC group policy (2010). The major objective will be in policy production and rural incomes, thereby alleviating poverty. Smallholder farmers are considered un-bankable because of client small transactions. In cognizance of the above, the provision of micro credit through use of rural based intermediaries seems to be a viable option.

AFC has also de-risked its portfolio by participating in a risk sharing arrangement with strategic partners to cushion smallholder farmers against various inherent risks. The Corporation has participated in a capacity building component which aims at building capacity of target farmers and SMEs as well as credit staff. The capacity building component commenced activities in the final quarter of the 2016/2017 financial year and is anticipated to generate higher volumes in terms of entities qualifying for loans especially financially excluded youth and women. In AFC strategic plan, the corporation has planned to work through rural based intermediaries that share the same vision with itself of "increase access to financial services to rural areas". In this regard, AFC will seek to complement them in their services provision to the rural sector and not to replace. Emphasis will be placed on the provision for service that fills the existing financing gaps especially to those underserved and population which is sparse and hard to reach. AFC will therefore provide financial services such as credit and outsourcing credit operations (Agency) to such target groups.

1.2 Research Problem

Most smallholder farmers in AFC do not understand that diminishing farm sizes is very uneconomical for both lenders and borrowers. Most financial institutions hesitate to give smallholder farmers financial services due to information that is incomplete concerning the viability of the project being undertaken by the farmer, (Stilglitz & Weiss, 1981). Alwang (2008) indicated that farmers practice agriculture as a form of business venture that will improve living standards and earnings. Such activities entail: investments, purchase of inputs, consumption and cost in marketing. Masters (2008) emphasized the

importance of AFC in capital formation for farmers who borrow. This enables farmers to lease and buy land, enhance marketing activities and how to manage their resources and various risks. In smallholder financing, being such difficult proposition on the previous decade in Kenya entirely. Most clients don't have information on additional securities that AFC accepts in place of land titles as the principle securities. With such asymmetrical information most small holder farmers understand that credit delivery is very expensive in AFC, more especially the young generation who mostly don't own land.

Bond and Rai (2009) noted that good loan repayment gives a good credit score hence a basis to qualify for a bigger loan. On the other hand, the major reduction of credit has been contributing to an increase in default by famers of AFC. This affects future good borrowers hence making agricultural credit to have high default rate. The environment within the Country's agricultural sector has changed substantially; this has necessitated a review of the lending operations and policies within micro finance providers. Golait (2007) analyzed adequacy for loans in agriculture. There is hesitation by banking systems in Indian giving loans to marginalized enterprises. Smallholder farmers are considered un-bankable because of client small transactions. Agricultural Finance Corporation has been providing mostly retail and supervised credit to its rural based clientele and against land titles as the principle securities. In the long run this portends to be an expensive mode of credit delivery that tend to have low outreach and not appropriate for provision of very small credits.

Chirwa (1997) noted problems in agricultural financing that included doubtful project management capacity, inexperienced farmers, mono cropping and inadequate diversification, poor record keeping and natural calamities. Such salient observations make it hard to recover loans as they provide low incentive to small holder farmers. Most farmers in Kenya are old as they practice agriculture in retirement or after they have lost their jobs. This makes them to lack passion in farming activities. Farming in Kenya is viewed as an activity for the poor hence lacking the agribusiness sense in management. On the other hand, Wright (1999) differed that increase in income of the poor by micro finance providers will not always reduce poverty. It was apparent that reducing poverty

will always be dependent on how the smallholder farmers do with the extra money. The study therefore aims to interrogate; is resultant impact to micro finance credit on welfare improvement of small holder farmers among Agricultural Finance Corporation clientele favorable?

1.3 Research Objectives

1.3.1 Main Objective

The main objective of the study was to determine the effects of micro finance credit on growth of small holder farmers in Agricultural Finance Corporation.

1.4 Value of the study

Based on the contribution of small holder farmers to country's gross domestic product (GDP), it is very important for the findings to be used to educate and train various stakeholders about the significance of micro finance.

The findings will also enable micro finance providers to lend prudently to small holder farmers and ensure customer outreach gap is filled with relevant financial services and products

In addition, the study findings will be of help to other researchers who would wish to do further research on the same line of study.

Finally, the study will be of most use to policy formulators both at the microeconomic and macroeconomic level. Micro finance awareness will provide impetus to proactively solve the question of rural poverty in Kenya.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter entailed a theoretical review framework in the area being studied coupled with research gaps. Equally, the chapter gave a dimension on the effects of micro finance credit on small holder farmers in AFC. Empirical review that relates with study objectives and summary studies.

2.2 Theoretical Review

The theories used established how farmers improve their lives using the information they have on financial matters. The most common ones are; information asymmetry theory, growth theory and social capital theory.

2.2.1 Information Asymmetry Theory

Asymmetric information pioneered by George A. Akerlof in 1970. The theory refers to situations where in a trade environment some agents possess information that other agents do not have. Financial institutions have different perception in lending to small holder farmers due to their inability to obtain the right information and access good borrowers. As a result of information asymmetry, smallholder peer character and project assessment can be mired by poor project proposal being accepted while viable venture being rejected all together, (Harper & Mwangi, 2005).

Easterly (2007) study indicated that inequality can bring poverty due to inadequate or lack of information. Poor people will feel oppressed due to information asymmetry. Collins et al. (2009) patters in project management have brought up a variety of formal and formal accessibility to services in finance brought by different distortion of information. Most theories have indicated that there is a wide disparity between growth in the welfare of smallholder farmers and gaps in savings. Chenery and Strout (1966) established the main obstacle to growth of smallholder farmers are as a result of asymmetrical information in financing. Adams and Von Pischke (1992) study indicates

there is a broad perception that smallholder farmers are very poor hence they cannot save. Rationalization of credit by banks partly is about information distortion thereby making smallholder farmers not to get credit for their enterprises.

The narrative that viable projects by smallholder applicants might be rejected unfairly due to stringent appraisal processes has led to low uptake of financial facilities, (Lean & Tucker, 2001). It is important that small holder farmers understand where to obtain technical assistant, training on post harvest practices, market variability, climate change and better management of agricultural risks.

2.2.2 Growth Theory

Robert Solow (1956) established the growth theory originated in post-neoclassical era, stated that growth depends on new technology and that research and knowledge are public goods. According to John Stuart Mill exploitation of capital, labor and land are the main contributors of wealth. Cobb and Douglas (1928) established that efficient utilization of factors of production will be modulated by profits as a rate of return on capital, wages from income of labor and agricultural rents as return on land. Smallholder farmers on the other hand contribute to agriculture by combining labour and capital to add flesh on Cobb and Douglas argument.

The problem with Robert Solow's residual contribution apparently was that technology that was exogenous came out of nowhere Robert Solow (1956). Penrose (2006) established that the product of an internal process was growth, hence a recipe during increasing quality and expansion during development of an enterprise. Dobbs & Hamilton (2007) quoted that "growth is the resultant change in the size of an enterprise during a determined timeframe". Davidsson et al. (2010) stated that there could be a relationship between growth and new markets; diversification seems to favor technologically oriented firms. In addition, they emphasized that integration in a value chain may also be stimulated by growth of an enterprise as vertical growth. On the flip side, by introduction to market that is not technologically conscious.

It is very essential for smallholder farmers to grow in Kenya. With 25% of Kenya's gross domestic product (GDP) depending on agriculture, a decrease in growth can facilitate the closure of small entrepreneurs (Rauch & Rijskik, 2013). With the existence of gaps that theories on growth to explain massive expansion of big farmers' enterprise are not adopted to reflect the same occurrence in smallholder farmers (Davidsson et al., 2010).

2.2.3 Social Capital Theory

Bourdieu (1985) came up with social capital theory and defined the concept as aggregated potential or actual resources that connect to establishment of long lasting relationship recognizing mutual interdependence. Putnam (2000) defined communal capital theory as the social relationship among individual or groups that develop mutual trust and forms network so as to achieve economic prosperity. Gaps in the definition exist as assumption has been pointed on individual or group presumed to have equal accessibility in their formation.

Christen & Pearce (2005) emphasized that smallholder farmers are often driven by the strong bonding they possess; this supports the emergence of elite groups. This marks an important paradigm shift to approach on poverty eradication. The encouragement of credit accessibility to subsistence farmers and universal uptake of state subsidized inputs in farming. Impact on such financial services should be more profound with the poor, youth and women.

Kabeer (1994) pointed out that women in most rural agrarian societies do not have freedom of movement necessary to compete for credit from conventional financial institutions due to limited collateral for loans, financial literacy and numeracy. In addition, women allocate their spending to household welfare as compared to men, with a high repayment probability and a low default rate. Morduch (2000) also stated that by granting women credit as smallholder farmers the resultant growth for all household members, poor communities and lenders themselves will be higher.

2.3 Determinant of growth of smallholder farmers

Some of the factors that affected growth of small holder farmers include; Levels of Savings, Mitigating Agricultural Risks, and Training of Farmers.

2.3.1 Levels of Savings

Hulme and Mosley (1996) established that proper savings and investment of micro finance credit can help smallholder farmers eradicate poverty. They noted that credit had the ability of improving users' saving and earning, investment enhancement with high incomes reinforcement.

Kashuliza et al. (1998) study indicated that savings can help people who take credit, who seemed to have higher income than those who did not take credit. Wright (1999) stated the significant increase in savings and income that is established by micro finance services on poverty. He emphasized that increase in income of the poor by micro finance providers will not always reduce poverty. Reducing poverty will always be dependent on how the smallholder farmers do with the extra money.

2.3.2 Mitigating Agricultural Risks

The logical and judicious smallholder financing in agriculture, establishes a tricky proposition on the progressive mileage previously attained. Agriculture is mired with unpredictable exposure coupled with a badly capitalized investment exposed with a variety of risks. It is therefore very important for smallholder farmers to come up with innovative ways of mitigating all these risks. This can be done through a considerable approach on a thoroughly analyzed method based on returns that are high and risks that are low for every opportunity that smallholder farmers have.

2.3.3 Training of Farmers

Smallholder farmers' financial knowledge is very important; with such a gap it means they can struggle to manage their farms profitably. Recognizing the importance for farmers to develop good business skills, capacity building and improvement modules for

smallholder farmers in AFC, so that in addition to cultivating quality agricultural products, they can also grow financially successful agro-businesses.

(Hartungi, 2007) noted that micro finance providers are significant in many developing countries. Provision of business development technical assistant to smallholder farmers in third world countries can help in this endeavor.

2.4 Empirical Review

2.4.1 Global Empirical Studies

The study by Robinson (2001) on sixteen different MFIs across the world indicates that ability to access micro finance services has contributed to better lives of their clients, livelihood security strategies diversification, and self confidence that led to growth in income. The findings show a positive outcome on social, livelihoods, medical accessibility at home and the community at large. This reflected a growth in assets ownership that include but not limited to livestock, land and machinery. Hulme and Mosley (1996) pointed out that in order to break out the "vicious cycle of poverty" credit should be given to the poor. He noted that the ability to improve people's saving and income, investment enhancement and high income reinforcement credit is the contributing factor.

Meyer (2002) established that agricultural sector production capacity accumulation is usually low; this implies that there is a low probability of self financing due to fluctuations in rural economy, especially in agriculture that introduces significant lender risks.

Qorinilwan (2005) in Bangladesh studied the productivity increase of the Grameen Bank beneficiary. He established that marginal and small farmers who participated in programs from Grameen Bank have increased their allocation of land for producing high yield varieties coupled with improving agricultural productivity. The study also pointed out members of micro finance services brought 81.5% of high varieties on productive land while 76% of the unused land. In summary, the study indicated that by being a member of Grameen Bank programs, agricultural productivity and income augment in terms of

per acre yield. Golait (2007) analysis established that delivery of credit to agriculture continues to be inadequate. There was hesitation by banks in India to provide loans to marginalized farmers. It was recommended, efforts are essential in increasing credit flow in agricultural sector, in addition to exploring new innovations designing product and delivery methods, better use of technology and related processes.

Golait (2007) indicated that diversification through cropping patterns, land sizes, regional variations and productivity makes it hard for establishment of effective credit on agricultural and rural area with data. Lastly, he suggested that growth in supply of credit was not going to solve the issue of productivity until it was included by investment in support services. Nonetheless, granting credit through input dealers, processors and Non governmental bodies among others, through integration with farmers, farmers contracting, provision of critical inputs and processing facilities for their produce can augment the credit flow in agriculture. In conclusion therefore, direct agriculture credit amount positively correlate and had a statistically significant on agricultural output and its effects are immediate.

Sununtar (2008) study shows using data survey from clients of micro finance bank in Khushhali bank in Pakistan in 2005, used propensity score matching methods to establish selectivity bias. Findings were that the credit program added significantly to activities that generate income, that is agriculture production for reduction of poverty. This can be mirrored by impact estimates by Montgomery on equal data set using logit estimation and OLS. However, the propensity scores matching yielding results that are different. Even though similarities in micro finance impact indexing on poverty, the impact was reduced by resolving selectivity in biasness.

2.4.2 Local Empirical Studies

Lariviere & Martin (1998) pointed that agriculture is a production area with low accumulation capacity; this implies that possibility of self financing is very negligible in a changing rural economy more especially in agriculture which introduces significant lender risks. This can be attributed by allocation of resources for agriculture in other

development activities as well as lower labour productivity, therefore, leading to lower rate of surplus value.

Vincent (2004) noted in his study of Innovations by micro finance institution, touching on analysis of self help SMEs in the society. He used purposive sampling of 232 households. The findings indicated that the correlation between the asset index and access to medical care services was positive and statistically at 5% level of significant for the mean average asset holding members. Nonetheless, the demerits of the analysis included crudity of some indicators for instance income change, and selection of a group of non participants. This has left out the issues of selection bias and does not affects factor like education and gander.

Harper and Mwangi, (2005) noted that modern agricultural farming technology dictate a high intensive capital inclusion from modern agricultural inputs including high yielding variety seed, pesticides fertilizers, modern irrigation facilities and farm implements. As a result credit is important to facilitate the use of such technologies. Kashuliza et al. (1998) supported this argument in the southern highlands of Tanzania. That income from users of credit are quite higher that those who do not consume credit. Harper and Mwangi, (2005) insisted that growth in earnings to measure effects on poverty for micro finance services. He added that by increasing more money to the poor, micro finance providers are not equally reducing poverty. His argument was that it depends on what the poor do with the extra money.

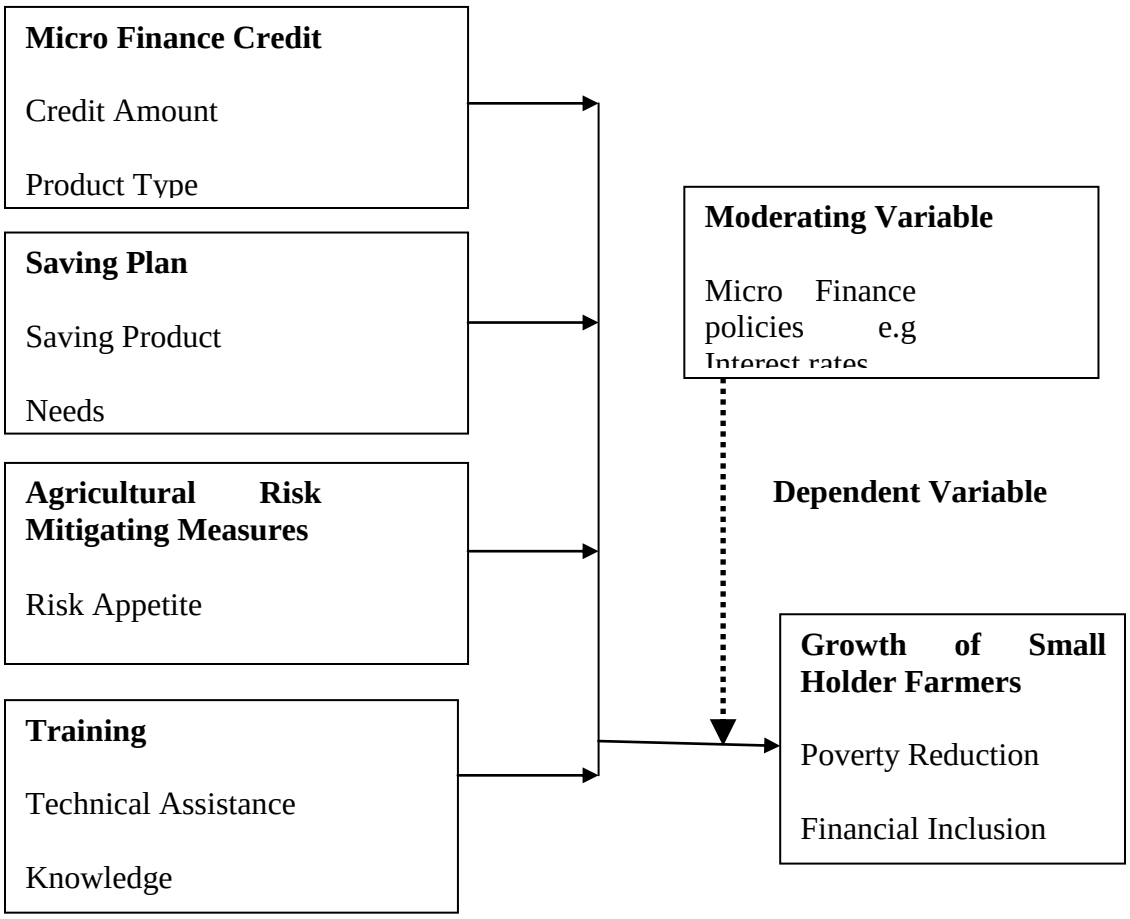
Muema (2015) studies indicated the importance of capacity building on the growth of smallholder farmers to increase their appetite in loan taking. The probability sampling techniques and a linear regression model established that smallholder farmers require capacity building from equity branch from Makueni County. With a 97.4% loan uptake, this was scattered in different financial institutions which has helped them to grow. The overall finding established the importance of good credit ratings and score hence project management is very significant for the success of smallholder farmers

Hussein (2016) study shows two groups that used a growth theoretical methodology. He compared risky borrowers in a group to individual borrowers and what gives them incentive to pay. Contradiction in hypotheses in both scenarios where a strategy used after separating those clients will be considered risky. It was established that there was a gain when higher probability success of a project will increase with higher income of smallholder farmers. There was however an assumption that throughout project assessment between the two clients when the one client succeeds through investing a certain amount whiles the other one fails.

2.5 Conceptual Framework

The conceptual framework to be used in the study brought together the structural presentation on the relationship between the dependent variable and independent variable.

Independent Variable



2.6 Summary of Literature Review

In summary therefore, the literature review seem to show that poverty mirrored to inequality, power struggles and oppression at the macro and micro level as stated by Easterly (2007). Collins et al. (2009) explained the overall conceptual framework as financial management patterns that reveal a mixture of different types of informal and formal financial services undertaken by the poor. In a nutshell, financial management consists of consumption smoothing, taking advantage of opportunities and coping with risk.

The theories used have established that besides the savings gap by smallholder farmers, growth in their wellbeing is still possible. Chenery and Strout (1966) described financing gaps as the main hindrance of growth. The only remedy of the financial gap is credit and that the "working poor" but not the "poorest of the poor" is the perfect group to target as seen by Robinson (2001). Adams and Von Pischke (1992) noted that micro finance clients were perceived to be too poor to save. Hence it was difficult for them to establish their business devoid of additional external financing. Most credit for the target group is usually rationed by commercial banks hence starving the poor with the loans they need.

Finally, empirical research findings focused on the drivers of micro finance services locally and internationally, hence understanding the needs of the poor better. This was done by linking theories to relevant findings from empirical research done by different scholars. Development of commercial micro finance industry that insist regular bank to serve smallholder farmers is the next frontier. Application of conventional collateral based lending by regular bank is unsustainable. It is evident from Christen & Pearce (2005) that agricultural earning usually adds less than 50 % to the household earning for farmers in developing countries. Maurer (2010) emphasized that commercial micro finance approach seems appropriate option in addressing financial needs of small farmers in developing countries.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter highlights the research methodology that was followed in undertaking the proposed research. Methodology involved research design, population of the study, sample and sampling design, data collection techniques and eventually how the data was analyzed.

3.2 Research Design

The study had anchored on descriptive in tandem with correlation research design. To achieve a more formalized with clearly stated hypotheses, the proposal portends to use structured descriptive statistics as cited by Cooper and Schindler (2006). With a reflection from Oso and Onen (2008) they defined survey design as a recent methodological orientation used to ascertain populations through selection of samples for analysis and establish occurrences. This has facilitated the determination of the level of micro finance given by AFC that has impacted on smallholder farmers to enable their well being.

3.3 Population of the Study

Cooper and Schindler (2006) stated population of the study as the total collection of elements that the researcher intends to draw conclusions. Moreover, Mugenda and Mugenda (2003) established population as that 'universe' the researcher studies. The population of the study will comprise of all AFC's clients in Kiambu County. The target population was drawn from AFC customer database by the as at 31st December 2017. The random sampling of 95% confidence level will be drawn from AFC's branch in Kiambu County with a total of 327 clients in the year ending 2016. A sample size of 64 clients will be established as a representative of the whole county.

3.4 Sample and Sampling Design

The study used stratified random sampling technique, drawn from the clients in Kiambu branch evenly distributed in the county. The total number of smallholder clients in the branch is 327 in the year under review. Using Z score of 95% confidence level normal distribution sampling, each stratum will have an equal representation of the target population of 327 smallholder clients who are all included in the study. Using Fisher's formula to determine a sample size, a sample size of 64 clients was established in respective branches.

3.5 Data Collection Techniques

The proposal used primary data that was collected from the selected respondents. The respective data is expected to be collected from various AFC branches using structured questionnaire mostly on closed ended questions. The questionnaires were distributed through AFC's mail bag system to various branches. In the cases of head office and branches close to Nairobi, the questionnaires will be personally administered. The data will cover a five years duration which the clients have been with AFC. The questionnaire will contain questions revolving around microcredit on smallholder farmers and how they have been able to improve their economic status.

3.5.1 Validity of research instruments

Saunders & Lewis (2000) defined validity as established if the research findings are real. They described the scenario where two or more variables relate without undue discrepancies. Validity was measured using opinions from experts. Being guided by my supervisor and other lecturer to view the information provided and provide necessary direction. The expert opinion was the basis of validity of the content this proposal.

3.5.2 Reliability of research instruments

Babbie (2004) defined reliability as the quality in measurement of the same data if it is repeatedly observed each time during collection. It is based on stability, consistency and dependability as a measurement of instruments used through test and retest methodology. Cronbach (1951) established reliability as close relationship on elements in a group and the measurement of consistency internally.

Table: Reliability Co-efficient

Cronbach's alpha	Internal
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

Source: Cronbach (2015)

3.6 Data Analysis

Data analysis by use of various descriptive statistics and regression model analysis that will be eventually presented using frequency tables, charts and graphs. Data collection was subjected to editing for completeness, correctness and biasness reduction in order for it to be consistent.

3.6.1 Descriptive Statistics

The relationship between micro finance credit and growth of small holder farmers was measured by a multiple regression analysis model. Growth of small holder farmers were treated as a dependent variable, whereas micro finance credit, savings/deposit taking, technical assistance, training/capacity building, market accessibility and risk management practices were independent variables. There were five questions scaled in relation to micro finance usage and accessibility. Finally, the response was measured by establishing the mean average score based on the responses based on the scale of questionnaires used.

Below was the regression model that was used.

$y=\alpha +\beta 1x1+ \beta 2x2+ \beta 3x3+ \beta 4x4 +\beta 5x5+\varepsilon$

Where:

Y = This was the dependent variable used to establish growth of smallholder farmers. It will be measured through a questionnaire of 64 sample clients from the summation of the intercept, independent variables with their coefficients.

α = Was the estimated intercept used the regression model

$\beta 1$ to $\beta 5$= Was the estimated slope coefficients used to measure the variations in the independent variables

X1= This was one of the independent variable that will be measured by index of items in micro finance services scale in the questionnaire which will be the average of the individual scores of the sample used.

X2= This was one of the independent variable that will be measured by index of items in savings and deposit scale in the questionnaire which will be the average of individual scores of the sample used.

X3= This was one of the independent variable that will be measured by index of items in risk management practices scale in the questionnaire which will be the average of the individual scores of the sample used.

X4= Clients' market accessibility score will be measured as the index of items in market accessibility assessment scale which will be the average of the individual scores of the sample.

X5= Clients' training and capacity building score will be measured as the index of items in capacity building and training scale which will be the score of the sample.

ε = Error term

3.6.2 Test of Significance

The model test of significance will be established by analysis of the variance (ANOVA), t-tests, z-tests and f-tests at 95% confidence.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

The scope of this chapter was analysis of data and discussion of results as per the earlier discussed research objectives and methodology. The main objective of the study was to determine the effects of micro finance credit on growth of small holder farmers in Agricultural Finance Corporation. The use of a questionnaire established the primary data based on the clients in AFC's database.

4.2 Response Rate

Based on the study objectives on a population of 327 clients from AFC database, a sample size of 64 questionnaires issued, 58 were completely filled making a 90.6% response rate. Mugenda and Mugenda (2003) established that a response rate of fifty percent is more than adequate for analysis and subsequent reporting. Such a response rate indicates that microfinance is a very important topic that every client wants to participate.

4.3 Data Validity

The focus of the structured questionnaire was consistent to ensure accuracy of the instrument in the course of study. Pilot study experiment was used by employees of head office to determine the research instrument's viability.

4.4 Descriptive Statistics

The use of a descriptive statistics brought salient features on the data in the study. Providing case summaries on the sample used and analyzed data of its measurement, aimed at summarizing the data represented.

Table 4.4 Descriptive Statistics

Descriptive Statistics									
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Microfinance Credit Aspects	12	2.96	3.86	3.5267	.26527	-.917	.637	.642	1.232
Saving Plan	5	3.09	3.74	3.3740	.25046	.599	.913	.023	2.000
Agricultural Risk Mitigating Measures	5	2.84	3.81	3.3000	.39516	.223	.913	-1.649	2.000
Training/Capacity Building	4	3.03	3.71	3.3150	.28525	1.092	1.014	2.095	2.619
Growth of Smallholder Farmers	6	3.54	4.00	3.7050	.16979	1.274	.845	.965	1.741

Microfinance credit statistical analytical representation showed above, considered two distinct variable that included microfinance credit and growth of small holder farmers in AFC. The analysis indicated a maximum value of 3.86 for microfinance credit against a minimum of 2.96. In the growth of smallholder variable, portends a maximum value of 4 with a minimum value of 3.54. The standard deviation was 0.26527 and 0.16979 respectively.

4.4.1 Extent of Respondent on Microfinance Credit

Respondents were expected to establish the degree of microfinance on the growth of smallholder farmers in Kenya. The scale ranged from “never” (1) to “very often”. Those that had a small impact scored either “never” or “rarely commensurate to a mean score of 0 to 2.4. Those with a moderate range were between 2.5 to 3.4 on the like scale.

Lastly, those with 3.5 to 5 agreed on a larger extent. Attached on appendix II were the findings.

4.4.2 Microfinance Credit Aspects

The study sought to investigate effect of financial literacy on agricultural credit management among AFC clients. The researcher sought to find out the aspects of financial literacy of the respondents. They were asked to provide their views on financial literacy as provided above. Most of the respondents noted that financial literacy highly impacted on agricultural credit management of AFC clients in Kenya.

The findings indicated that microfinance credit accesses were being obtained by various farmers. All these is reflected from a standard deviation and mean as ensued: (M=3.54, S.D=1.144), microfinance credit has helped me improve my livings standards; (M=3.50, S.D=1.128), I have an idea of the different microfinance products in the market other than agricultural credit; (M=3.60, S.D=1.091), I have adequate knowledge on how to manage agricultural credit; (M=3.74, S.D=1.044), I can determine the amount of cost I incur in farming; (M=3.84, S.D=1.023), I can determine how much I get from farming; (M=3.16, S.D=1.086), I receive financial advice from financial providers; (M=3.57, S.D=1.011), microfinance credit has helped me reduce poverty; (M=2.96, S.D=1.195), I know the cost of getting microfinance credit is low; (M=3.67, S.D=0.998), market intermediaries are important in farming; (M=3.34, S.D=1.035), AFC has designed microfinance services; (M=3.54, S.D=0.927), farmers organization are important during credit; (M=3.86, S.D=1.099), I understand basic record keeping. As per the findings above there is a clear indication that microfinance credit has an impact on the growth of smallholder farmers.

4.4.3 Saving Plan

The study was to establish whether savings of smallholder farmers have an impact on the growth of smallholder farmers. The results in appendix II established the following:

(M=3.47, S.D=1.188), on how often has the client been saving; (M=3.09, S.D=1.37), on how often do they set aside money for emergencies; (M=3.21, S.D=1.33), on how to set aside money for future needs; (M=3.74, S.D=1.00), on how often do they save on something specific. As per the findings, there is a clear establishment that savings has an impact on the growth of smallholder farmers.

4.4.4 Agricultural Risk Mitigating Measures

The study confirmed that agricultural risk mitigating measures on the respondents had a direct bearing on the growth of smallholder farmers. As per the results there was a direct link between risks and growth of farmers. That is (M=3.81, S.D=1.025), this was an indication of agreement to a greater extent on risk measures to the growth of farmers in Kenya.

4.4.5 Training/Capacity Building

The findings established that capacity building was paramount on the growth of smallholder farmers. (M=3.71, S.D=1.12), on how technical assistance is important in farm management; (M=3.24, S.D=1.014), training on personal investment; (M=3.03, S.D=1.139), training on financial planning; lastly, (M=3.28, S.D=1.11), on how training can improve smallholder welfare. As per the result findings, training seems to be very important on the growth of smallholder farmers. Agricultural extension officers play a crucial role in the growth of farmers in Kenya.

4.4.6 Growth of Smallholder Farmers

The research was to determine the effects of micro finance credit on growth of small holder farmers in Agricultural Finance Corporation, a case study of Kiambu County. The findings have been pegged on the attached appendix II. That is, (M=3.81, S.D=0.97), on how microfinance has affected the growth; (M=3.64, S.D=0.98), on numerous investment opportunities in Kenya; (M=3.54, S.D=1.175), on importance of

diversification in agriculture; (M=3.63, S.D=1.32), on food shortage that has motivated agricultural production; (M=4.00, S.D=1.16), on global demand that led to growth in agriculture output; Lastly, (M=3.61, S.D=1.17), on technological contribution to agriculture. The findings indicated above clearly establish the ingredients to growth in agriculture through a direct great extent to which the results have established.

4.5 Correlation Analysis

This established a relationship between the dependent variable which was growth of smallholder farmers and independent variable that is microfinance credit.

Table 4.5 Correlation Analysis between the Study Variables

Correlations						
		Microfinance Credit Aspects	Saving Plan	Agricultural Risk Mitigating Measures	Training/Capacity Building	Growth of Smallholder Farmers
Microfinance Credit Aspects	Pearson Correlation	1	0.494	-0.321	-0.235	0.513
	Sig. (2-tailed)		0.397	0.599	0.765	0.298
	N	12	5	5	4	6
Saving Plan	Pearson Correlation	0.494	1	-0.847	0.377	0.131
	Sig. (2-tailed)	0.397		0.070	0.623	0.833
	N	5	5	5	4	5
Agricultural Risk Mitigating Measures	Pearson Correlation	-0.321	-0.847	1	-0.736	-0.405
	Sig. (2-tailed)	0.599	0.070		0.264	0.499
	N	5	5	5	4	5
Training/Capacity Building	Pearson Correlation	-0.235	0.377	-0.736	1	0.995
	Sig. (2-tailed)	0.765	0.623	0.264		0.005
	N	4	4	4	4	4
Growth of Smallholder Farmers	Pearson Correlation	0.513	0.131	-0.405	0.995	1
	Sig. (2-tailed)	0.298	0.833	0.499	0.005	
	N	6	5	5	4	6

The above findings in table 4.5 above indicate that there is a strong relationship between microfinance credit and growth of smallholder farmers in AFC. The relationship was explained by the following independent variable as follows: microfinance credit score, saving plan score, agricultural risk mitigating measure score and training/capacity

building score. The finding establish a positive score of 1 hence a strong positive relationship between the variables.

4.6 Regression Analysis and Hypotheses Testing

The summary results of the model used will be discussed in this section, model coefficients and analysis of variance (ANOVA).

4.6.1 Regression Analysis

The model is used to determine the relationships between two or more variables. The model was used to establish a relationship between dependent variable and independent variables. The study was to examine the effects of microfinance credit on the growth of smallholder farmers in Kenya, as per the summary model in table 4.6.2.

4.6.2 Model Summary

The ability of the regression model to account and provide adequate information on the variations of the dependent variable is provided in the summary table below. The model indicated a correlation coefficient of 0.949 on microfinance, saving plan, agricultural risk mitigation measures, and training/capacity building score is considered. There is a unit increase in the correlation coefficient in every growth in the variable that is dependent.

Table 4.6.2 Summary of the Model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.949	0.821	0.901	0.20917

Constant: (Predictors), Microfinance aspects, Saving Score, Agricultural Risk Mitigation Score and Capacity Building.

4.6.3 Analysis of Variance

The research was to obtain the impact of the independent variable to dependent variable by use of ANOVA to establish a statistical significance test as to the equality of more than one group. In addition, the generalization of t-test to more than a group was evidence from the table findings. Hence findings can be seen in table 4.6.3

Table 4.6.3 ANOVA Significance of the Regression Model for Microfinance Credit Aspect

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.61	4	3.15	1.274	.003
	Residual	1.83	7	0.12		
	Total	6.44	11			

a. Dependent Variable: Growth of Smallholder Farmers

b. Constant: (Predictor), Microfinance Credit Score, Savings Score, Agricultural Risk Mitigation Score, Training.

Source: Research Findings.

The research established a summary regression model in table 4.6.3 with a less than 0.05 significant P- value. This clearly shows that the variable in the independent section which includes: Microfinance credit score, saving score, agriculture risk mitigating measure and training together fundamentally explained the degree of growth of smallholder farmers as stipulated by microfinance credit, savings, risk mitigation measure and capacity building. This is clearly indicated in table 4.6.3 where as the P-value was 0.003.

4.6.4Test of Coefficients

The test of coefficients established by unit change in variable gave a mean change in predictor variable while holding others constant represented by the regression

coefficients. The importance of these was to isolate the role of a particular variable from the others in the regression model.

Table 4.6.4 Coefficients

Coefficients													
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	4.848	4.712		1.029	0.338	-6.294	15.99					
	Microfinance Credit Aspects	0.149	0.127	0.345	1.174	0.279	-0.151	0.449	0.306	0.406	0.338	0.955	1.047
	Saving Plan	-0.422	0.561	-0.557	-0.753	0.476	-1.748	0.904	0.126	-0.274	-0.217	0.151	6.617
	Agricultural Risk Mitigating Measures	-0.295	0.487	-0.614	-0.606	0.564	-1.447	0.857	-0.389	-0.223	-0.174	0.08	12.433
	Training/ Capacity Building	0.22	0.45	0.286	0.489	0.64	-0.844	1.284	0.512	0.182	0.141	0.241	4.144

Source: Research Findings

GROWTH=4.848-0.0.345X1-0.557X2-0.614X3+0.286X4

Based on the regression model, we can establish the effects of microfinance credit on the growth of smallholder farmers in AFC by use of savings, agricultural risk mitigating measure and capacity building. Microfinance credit and capacity building was seen to be significant while savings and risk measures were seen to be insignificant.

4.7 Discussion of Research Findings

The study brings out very fundamental issues, credit limitations for many smallholder farmers is still rampant. There is need to establish innovative ways to overcome these limitations. The notion that poor people are too poor to have any savings and the devastating effects that informal financial institution bring should be cubed with favorable environment. In microfinance, smallholder farmers can be successful in farming even without credit. Location of AFC branches also posed to be a challenge in terms of microfinance accessibility.

The findings further establish that smallholder farmers are poor at savings. The success of their successful farming ventures is not as a result of savings in AFC. It is characterized by a multitude of financial discipline served by different financial institutions. Even though other smallholder farmers do save, they don't do that through Agricultural Finance Corporation.

Similarly, it was also evident in the finding that microfinance is a very risky portfolio to run. Most of it is low and unstable through unreliable cash flows hence more credit to smallholder farmers does not necessarily mean their growth. Smallholder farmers have now realized the importance of insurance to curb on the risks that agricultural production seems to be bringing.

The research findings clearly bring out the importance of capacity building in order for smallholder farmers to succeed. Requisite knowledge in farming, skills and competencies seems to be very significant in growing farmers out of poverty.

In summary, the regression analysis brought out fundamental relationships through a correlation coefficient of 0.949 when microfinance variable, saving plan variable, agricultural risk mitigation measure variable and capacity building variable were considered. The independent variable therefore had a fundamental influence on the growth of smallholder farmers in AFC. Therefore it was statistically significant to say

that a change in independent variable had a corresponding change in the dependent variable.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter covered the summary of the findings, conclusions, recommendations, limitations of the study and suggestions for further research.

5.2 Summary of Findings

The research objective was to find the effects of microfinance credit on the growth of small holder farmers in Agricultural Finance Corporation, a case study of Kiambu County. It was evident that microfinance credit is important to farmers in AFC and there is a great appetite for its uptake. However, most smallholder farmers did not agree that savings will lead to growth in their farming ventures. In the study it was also evident that smallholder farmers did not consider various agricultural mitigation measures therein as majority of them were doing faring for subsistent not for commercial purposes. As for training and capacity building, most respondents did not agree that it was being administered by the relevant bodies. In a nutshell therefore, most respondents tend to agree on the importance of microfinance products offered as per the regression statistical analysis. There was statistical relationship significance between microfinance credit and growth of smallholder farmers in AFC. The above findings can be confirmed in table 4.5 herein.

5.3 Conclusion

Based on the findings herein, the research concluded that most smallholder farmers in AFC have grown through microfinance credit in Kiambu County. With a reflection of the findings, the research concluded that most smallholder farmers moderately grew significantly as a result of credit. Table 4.5 in chapter four above indicated a positive statistical relationship that was positive between the dependent variable and independent

variable. Saving plan, agricultural risk mitigation measures and training respondents to a moderate extent as a result of AFC putting more emphasis to smallholder farmers.

Agricultural risks seem to increase indebtedness of the smallholder farmers in AFC. Delivery of financial services to smallholders through innovation can increase the impact of financial services in agriculture. Different financial institutions should be encouraged to finance smallholder farmers who do agriculture. Group based approach in disseminating information is also significant.

In conclusion therefore, findings in this research portends that AFC does not foresee various flexible instruments in microfinance to change smallholder farmers lives. Efficient management of agricultural enterprises is also significant in growth of farmers in general.

5.4 Recommendations

This research study recommends that microfinance policies and regulations should be tailored to benefits smallholder farmers to increase loan uptake. AFC can design favorable financial instruments that will encourage financial inclusion. More learning on smallholder farmers should also be encouraged in financial institutions, universities, government institutions and agencies.

The study further recommends that organizations that work and partner with financial providers to extend synergy that will provide microfinance services to agricultural sub-sectors. On the other hand smallholder farmers should be encouraged to understand the market demand and how to strategically deal with market brokers that exploit farmers for their personal benefits.

The study recommended that financial institutions should be encouraged to partner and be on the fore front in ensuring that their clients were enlightened in matters of

financial literacy and technology. This would ensure that each party gains from existence of such platforms through reduced transaction costs and improved financial management.

Risk reduction products in agriculture are significant in enabling smallholder farmers to grow through understanding the actors in the market and risk mitigation systems. Low cost solutions through encouraging new technological products for clients that are not included in credit accessibility should also be enhanced.

5.5 Limitations of the Study

There were great challenges in administering the questionnaires as smallholder farmers are widely disperse across a wide geographical area. In other instance some questions were not filled as most respondents were not conversant with most areas in microfinance.

Financial costs was also a great challenge as unavoidable expenses in the cause of coordinating various research activities through printing, typing and transportation that will be difficult in case of financial constraints.

It was also evident that government institutions that provide microfinance credit were seems to incur more cost as AFC is mandated to do supervised credit. Such an undertaking is unsustainable as it mired with beauracracy and too many government red tapes.

Agricultural production is bedeviled with eminent risks as it is different from other sectors. Smallholder farmers are usually isolated in a wide geographical area, overdependence of rain fed agriculture, poor technology and price instability seems to be a big challenge for smallholder farmers. Therefore, challenges that good recommendations from this project that are supposed to be implemented can be assumed by some quotas are also expected.

5.6 Suggestions for Further Research

Replication of the findings herein on how to ensure that microfinance credit is encouraged in lead firms that will encourage holistic implementation of different agricultural projects. Viability of different ventures in agriculture is encouraged by entrepreneur to various financial providers.

Proper facilitation of financial providers that give will de-risk various agricultural sectors hence encouraging more studies on this area. This will help in supporting more farmers who have incurred huge losses in the venture.

More research is encouraged on university graduates who can be self employed by accessing various microfinance products and establish good agricultural ventures.

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APPENDIX I: QUESTIONNAIRE

I am a student carrying out a research on effects of micro finance credit on the growth of farmers in Kenya. A cases study of Agricultural Finance Corporation; your cooperation will be highly appreciated.

Confidential:

Respondent's number:

Please tick appropriately among the choices provided

Do not write your name on the questionnaire.

SECTION A: MICRO FINANCE CREDIT

Kindly indicate the impact of micro finance credit in the following aspects of growth in your life.

Use a scale of 1 to 5 where:

1 = never, 2= rarely, 3= sometimes, 4=often and 5 = Very often

Micro finance Credit Aspects	**1**	**2**	**3**	**4**	**5**
Micro finance credit has helped me improve my living standards					
I have an idea of the different micro finance products in the market other than agricultural credit					
I have adequate knowledge on how to manage agricultural credit					
I can determined the amount of costs I incur in farming					
I can determine how much income I get from farming.					
I receive financial advice from financial providers					
Micro finance credit has helped me reduce poverty					
I know the cost of getting microcredit is low					
Market intermediaries are important in farming					
AFC has a designed micro finance services					
Farmers organizations are important during credit					
I understand basic record keeping					

Savings Plan					
How often have you been actively saving?					
How often do you set aside money for emergencies?					
How often do you set aside money for your future needs?					
How often do you save when there is something specific you want to do?					
How often are you keen on saving for every expense you make?					
Agricultural Risk Mitigating Measures					
I have information on insurance products in the market					
Has uncertainty in weather conditions affected your well being?					
Has pest and diseases affected your level of farm management?					
I understand climate smart agriculture and opportunities for insurance					
Has AFC increased your risk appetite to venture in different enterprise?					
Training/Capacity Building					
I know technical assistance is important in farm management					
I have been trained on personal investment					
I have been trained on financial planning					
Have you been trained on how microcredit can improve your					

SECTION B: GROWTH OF SMALLHOLDER FARMERS

The following are statements regarding an individual micro finance credit. Please indicate your level of agreement with each of the following statements:

Growth of Small Holder Farmers	**1 Strongly Disagree**	**2 Disagree**	**3 Neutral**	**4 Agree**	**5 Strongly Agree**

Do you think your overall income has increased?					
Have you been exposed to numerous investment opportunities in agriculture					
Have diversify your agricultural production?					
Food shortage in Kenya has motivated my level of output					
There is increased in global demand for agricultural produce					
Technology has contributed to the growth of me as a farmer					

Additional comments on any aspect of choice……
……..……
……..END

THANK YOU FOR YOUR TIME

Lastly you are kindly reminded to countercheck and ensure that all the items have been completed before submitting the questionnaire.

APPENDIX II: MICROFINANCE CREDIT					
Descriptive Statistics					
Micrifinance Credit Aspects	N	Minimum	Maximum	Mean	Std. Deviation
Microfinance credit has helped me improve my living standards	56	1	5	3.54	1.144
I have an idea of the different microfinance products in the market other than agricultural credit	58	1	5	3.5	1.128
I have adequate knowledge on how to manage agricultural credit	58	1	5	3.6	1.091
I can determined the amount of costs I incur in farming	57	1	5	3.74	1.044
I can determine how much income I get from farming	58	2	5	3.84	1.023
I receive financial advice from financial providers	58	1	5	3.16	1.089
Microfinance credit has helped me reduce poverty	58	1	5	3.57	1.011
I know the cost of getting microcredit is low	57	1	5	2.96	1.195
Market intermediaries are important in farming	58	1	5	3.67	0.998
AFC has a designed microfinance services	58	1	5	3.34	1.035
Farmers organizations are important during credit	57	2	5	3.54	0.927
I understand basic record keeping	58	1	5	3.86	1.099
Saving Plan					
How often have you been actively saving?	58	1	5	3.47	1.188
How often do you set aside money for emergencies?	56	1	5	3.09	1.366
How often do you set aside money for your future needs?	57	1	5	3.21	1.333
How often do you save when there is something specific you want to do?	58	2	5	3.74	1.001

How often are you keen on saving for every expense you make?	58	1	5	3.36	1.294
Agricultural Risk Mitigating Measures					
Has AFC increased your risk appetite to venture in different enterprise?	58	1	5	2.84	1.005
Has uncertainty in weather conditions affected your well being?	57	1	5	3.81	1.025
Has pest and diseases affected your level of farm management?	56	1	5	3.57	1.042
I understand climate smart agriculture and opportunities for insurance	58	1	5	3.02	0.946
I get information on early warning system	57	1	5	3.26	0.992
Training/Capacity Building					
I know technical assistance is important in farm management	58	1	5	3.71	1.124
I have been trained on personal investment	58	1	5	3.24	1.014
I have been trained on financial planning	58	1	5	3.03	1.139
Have you been trained on how microcredit can improve your welfare	57	1	5	3.28	1.114
Growth of Smallholder Farmers					
Microcredit has affected my growth as a farmer	57	1	5	3.81	0.972
There are numerous investment opportunities in agriculture	56	1	5	3.64	0.98
Diversification in agricultural sector is very important	56	1	5	3.54	1.175
Food shortage in Kenya has motivated my level of output	56	1	5	3.63	1.329
There is increased in global demand for agricultural produce	56	1	5	4	1.16
Technology has contributed to the growth of me as a farmer	56	1	5	3.61	1.171