FACTORS DETERMINING ACCESS TO CREDIT FACILITIES FOR FARMERS IN CHERANGANY CONSTITUENCY IN TRANS- NZOIA COUNTY

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DECLARATION

<u>STUDENT</u>

This research project report is my original work and has not been presented for any award to any examination body.

Signature.......................... Date………………………

<u>SUPERVISOR</u>

MR. MARTIN ODIPO

Signature................................. Date:……………………..

ACKNOWLEDGEMENT

I would like to express my sincere gratitude to my supervisor Mr. Martin Odipo for his valuable guidance throughout this research project of which without his direction it would have been impossible to reach this far.

DEDICATION

I dedicate this work to God who has bestowed me with knowledge and wisdom throughout the entire course, to my brothers and sisters for their immense support and to my friends for their motivation.

ABSTRACT

It has been postulated that access to credit for farmers has been influenced by a number of factors. It is presumed that there exists a relationship between agriculture productivity and poverty alleviation (Nyoro, 2002), and hence the critical need to address inadequate credit facilities in rural areas that are a key constraint to farmers investments. Given that the major economic function of financial institutions include addressing the restraints imposed by inadequate access to financial services; it is argued that these institutions are well positioned to dealing with these financial constrains among which include access to credit. Literature review in chapter two revealed that access to credit was a challenge facing farmers in various parts of the globe. Studies indicated that a significant proportion of challenges in the farming industry could be alleviated through the provision of sustainable and easily accessible credit. For this study, data was gathered using questionnaires and was analyzed using Ms-Excel and presented using elementary statistical techniques such frequency tables and charts. After analyzing the findings, the researcher drew conclusions and made recommendations. Areas for further studies were identified as well. Research established that collateral, basic loan requirements and interest rates on loans are key determinants to farmer's access to credit, deficiency in any of the above factors hindered farmers from getting credit. After assessing the findings of the study, the researcher made recommendations aimed at improving and making it easy for farmers to access credit, e.g. coming up with loan products specifically tailored for farmers and opening of rural branches by financial institutions to bring services closer to farmers.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Until recently, the African agricultural landscape was characterized by sluggish growth, low factor productivity, declining terms of trade, and often also by practices that aggravated environmental problems. Since the late 1970s to mid 1980s, many African countries have implemented macroeconomic and sectoral reforms aimed at ensuring high and sustainable food productivity, economic growth and poverty reduction.

Some recent agricultural growth accelerations notwithstanding, the sector's growth remained insufficient to adequately address poverty, attain food security, and lead to sustained GDP growth on the continent (Nyoro, 2002).

The principal function of credit is to transfer property from those who own it to those who wish to use it, as in the granting of loans by banks to individuals who plan to initiate or expand a business venture. The transfer is temporary and is made for a price, known as interest, which varies with the risk involved and with the demand for, and supply of, credit. Credit puts to use property that would otherwise lay idle, thus enabling individuals or a country to more fully employ its resources.

A study by Atieno (2001), indicates that income level, distance to credit sources, security, past credit participation and assets owned were significant variables that explain the participation in formal credit markets. Hussein (2007), also indicated that Farm

households are more likely to prefer the informal sector to the formal sector with respect to flexibility in rescheduling loan repayments in times of unexpected income shocks. This was also supported by Padmanabhan (1996), comparing the informal credit sector from the formal stated that proximity, comfortable atmosphere, quick credit, all times access, freedom of deployment, repayment flexibility and lower transaction costs are the advantages of the informal sector have made them almost indispensable, particularly to small farmers.

1.1.1 Access to Credit by farmers

Rural credit markets in developing countries are full of imperfections. The imperfections manifest in the generally accepted fact that, despite numerous government policies to increase household's access to credit, many rural households remain credit-constrained. The formal banking sector does not satisfy the growing demand for credit, and many borrowers turn to informal loan sources (relatives, private moneylenders, etc.) to meet their production and consumption needs. It has been estimated that only five percent of the farmers in Africa and about fifteen percent in Asia and Latin America have had access to formal credit; and on an average across developing countries five percent of the borrowers have received eighty percent of the credit (Bali, 2001). Access to affordable agricultural credit enables farmers, who constitute the majority of population in most developing countries, to adopt new technology and take advantage of new economic opportunities to increase production and income.

The principal function of credit is to transfer resources from those who have and don't use them to those who don't have and wish to use them, this is done using different

avenues e.g. granting of loans by banks and MFI's to individuals who plan to initiate or expand a business venture or agricultural production. The transfer is temporary and is made for a price, known as interest, which varies with the risk involved and with the demand for, and supply of, credit (Kimuyu and Omiti 2000).

According to Mutua and Oyugi (2005), interest in access to finance has increased significantly in recent years, as growing evidence suggests that lack of access to credit prevents lower-income households and small firms from financing high return investment projects, having an adverse effect on growth and poverty alleviation. They examined literature on the causal relationship between access to financial services and its impact on agricultural production. The literature, mostly observational from a few case studies, reveals that access to financial services by the rural people (or low income population segments) can improve their incomes and therefore their welfare.

1.1.2 Factors determining access to Credit

The business of Kenya is agriculture – the principal source of income for 75% of the nation's population. Yet agriculture accounts for only 25% of the Gross Domestic Product. As a result, 75% of Kenyans depend on a technically inefficient industry whose average labor input is three times greater than its output. Due to its dominance, any change in the agricultural sector translates to changes in the entire economy. Efforts to grow the economy and reduce poverty must begin with agriculture. For the majority of Kenyans, farming exists mainly for subsistence. The level and scale of crop production is geared towards satisfying household requirements. Kenya's agriculture is mainly rain-fed and is entirely dependent on the bimodal rainfall in most parts of the country. A large

proportion of the country, accounting for more than 80 per cent, is semi-arid and arid with an annual rainfall average of 400 mm. Droughts are frequent and crops fail in one out of every three seasons.

Kenya's agriculture is predominantly small-scale farming mainly in the high-potential areas. Production is carried out on farms averaging 0.2–3 ha, mostly on a commercial basis. This small-scale production accounts for 75 per cent of the total agricultural output and 70 per cent of marketed agricultural produce.

In 2005, agriculture, including forestry and fishing, accounted for about 24 percent of the GDP, as well as for 18 percent of wage employment and 50 percent of revenue from exports. (Macharia *et al*, 2008).

Farming is the most important economic sector in Kenya, although less than 8 percent of the land is used for crop and feed production, and less than 20 percent is suitable for cultivation. Kenya is a leading producer of tea and coffee, as well as the third-leading exporter of fresh produce, such as cabbages, onions and mangoes. Small farms grow most of the corn and also produce potatoes, bananas, beans and peas. Growth of the national economy is therefore highly correlated to growth and development in agriculture.

1.1.3 Credit and determinants for access to credit for farmers

Credit provision is one of the principal components of rural development, which helps to attain rapid and sustainable growth of agriculture. Rural credit is a temporary substitute for personal savings, which catalyses the process of agricultural production and

productivity. To boost agricultural production and productivity farmers have to use improved agricultural technologies. However the adoption of modern technologies is relatively expensive and small farmers cannot afford to self finance. It is widely acknowledged that inadequate financial resources are a key constraint to farmers' investments, the key to enhancing agricultural productivity (Townsend, 2008). In Kenya, MFI's have set strategies aimed at addressing financial deficiency in the farming industry. Such institutions are well positioned to explore innovations and design products that are tailored toward addressing constraints of access to credit, with a view of stimulating agricultural growth and productivity.

In the first Medium Term Plan of Kenya's vision 2030, the government aims at transforming the agriculture sector into a vibrant modern sector, supporting value-addition through scientific and technological innovation, and most importantly access to credit.

1.2   Research Problem

Despite the fact that a bigger percentage of Kenya's population live in rural areas and that 80 percent are involved in farming activities, there is little effort by commercial banks and other financial institutions to facilitate credit to this industry which is crucial in rapid development of this dominant section of the population. There is no bank which caters for the specific credit and saving needs. The available piecemeal credit services are operated by small credit schemes, which are limited in scope and have specific target groups. The inadequacy in financing and credit arrangements in rural Kenya and in specific the spread of this study impede development of agriculture

and rural sectors. Given that this sector is the mainstay of a large segment of the populace; their poor performance makes the fight against poverty even more challenging (Kimuyu and Omiti, 2000).

According to Nyoro (2002), lack of access to credit facilities has been highlighted a key constraint to farmers investment. The demand for credit by farmers has been high and increasing. It includes access to credit to cover lump sum and smooth farmers' consumption among others. The expenditure requiring lump sum includes purchase of farm inputs, ploughing, top dressing, and labor and irrigation activities. Many farmers have hardly been able to meet these farm expenditures due to lack of financial command and potential. The thrust of this study draws from the premise that access to credit by farmers is key to increasing productivity. In this respect, one of the major reasons is that purchased seasonal inputs and requisite labor are rarely affordable by farmers on a "cash" basis. Majority of these farmers face liquidity constraints that compromise the crucial investments in agriculture and other sectors necessary in increasing productivity (Doward *et al*, 1998).

The study therefore seeks to establish how lack of collateral, basic loan requirements by financial institutions and interest on loans has hindered farmer's access to credit.

1.3 Objective of the Study

The objective of the study is to establish factors determining access to credit facilities for farmers in Cherangany constituency.

1.4 Value of the Study

The study will provide useful information on the status of farmers in accessing credit from commercial banks and other financial institutions. This information will be vital for policy makers in taking appropriate actions toward facilitating the establishment of comprehensive and sustainable credit products for the development of agriculture in Cherangany. The study results will also benefit development partners and civil society organizations involved in the provision of credit facilities to farmers in modifying the lending measures and conditions to better serve the specific credit needs of their clients. In general, it is hoped that the end result of this study will provide a thrust to explore the possibility of providing credit facilities that directly support farmers to increase productivity.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter will look into studies done by other researchers on the same topic. It will therefore contain theoretical review, give an overview on rural finance and discuss on empirical studies on determinants of borrowers access to credit.

2.2 Theoretical Review

2.2.1 Demand and Supply Theory

Demand theory was first raised as a fundamental principle of microeconomics by a French economist Walras (1834-1910). The theory is an analysis of the relationship between the demand for goods or services and prices which examines purchasing decisions of consumers and subsequent impact of prices on commodity demanded. According to Walras (1834-1910), price of a commodity influences its demand. This theory was criticized by later up-coming economists as shallow; however, they used it as a base to develop the law of demand, stated by many economists as: an inverse relationship exists between the price of a commodity and the quantity demanded of the product, that is, when the price of some commodities goes up, the quantity we consume of these commodities goes down and vice versa, other things held equal (Saleemi, 2000; Mudida, 2003).

Economists have attempted to explain consumer behavior on demand for a commodity using different theoretical and empirical economic concepts. A large number of social-economic factors play an important role in determining demand for a commodity by an individual entrepreneur. Credit is an important commodity for improving the welfare of the poor in their micro-economic activities especially in developing countries. In the Kenyan economy, most of small-scale enterprises are operated within the informal sector. The sector covers all semi-organized and unregulated economic activities that are small scale in terms of employment. Its economic contribution is more than double that of medium and large enterprise sectors that stands at 7% of the country's GDP (GoK, 2003). The sector therefore is a major source of employment and income to many households in Kenya.

When cost of credit goes up, the marginal utility per Shilling raised from that credit goes down. The household therefore chooses to consume, or use less of the credit (David, 2001). The concept of utility and marginal utility used by economists explains consumer demand on a commodity. Utility is the capacity or power of a commodity to satisfy the desire of a user (Lisper *et al*, 1987). Any commodity that satisfies human wants has utility. For example, if credit borrowed will satisfy financial needs of a household, then credit has utility (Saleemi, 2000). The main objective of any individual business operator is to maximize satisfaction out of any financial support borrowed, given or self made.

Mudida (2003), points out that if income increases, the demand for most goods will increase. Small-scale investors tend to cluster and limit their business activities to similar products mostly of low quality that target low income earners. This leads to low business

returns that cannot empower the business owners to borrow credit from formal institutions where the trader will be required to undergo implicit and explicit costs.

Livingston and Ord (1994) argued that the amount an individual wishes to buy of a commodity depends on several factors. Firstly is his/her taste or preference, which may be influenced by factors such as age, sex, education or religion. Secondly, the amount an individual buys may depend on the price of the commodity. Therefore, if the goods are very expensive, the buying power is reduced and vice versa. In the credit market, this consideration is on implicit and explicit costs of credit, which are added costs to business operators and have to be considered when making a decision to borrow or not to borrow and from which source. Thirdly, Livingston and Ord (1994) explained that amount bought is affected by availability of other goods. This applies more to close substitutes like in this case, consideration of borrowing credit from commercial formal institutions, formal government subsidized institutions, or from informal credit markets. If formal markets prove expensive, borrowers are likely to turn to informal markets. The opposite will apply if the informal markets are expensive. Lastly, Livingston and Ord (1994) pointed out that the size of a household's income affects the amount it buys of a commodity. If the income increases, they will be able to buy more. This argument holds only for necessity goods such as credit borrowing to finance business operations, otherwise it will not apply to inferior goods.

2.2.2 The Pecking Order Theory

The pecking order theory of capital structure is among the most influential theories of leverage. Originally developed by Myers (1984), it considers the role of information

asymmetries. According to Myers, firms use internal funds that are less costly than external funds. When internal funds are insufficient, firms then consider outside funds. Here, firms prefer debt to equity because of lower information costs associated with debt issues, while equity is rarely issued. Later, these ideas were refined into testable predictions and confirmed by Vogt (1994) who finds that internal funds have an important influence in firm's investment decisions. In agriculture, pecking order behavior is clearly pronounced where farmers who invest in this industry prefer to use internal funds (in many cases savings) and when the latter is not sufficient they resort to debt in form of loans from financial institutions to finance their farming investments.

2.2.3 The Signaling Theory

The concept of signaling was first studied in the context of job and product markets by Akerlof and Arrow and was developed into signal equilibrium theory by Spence (1973), which says a good firm can distinguish itself from a bad firm by sending a credible signal about its quality to markets. The signal will be credible only if the bad firm is unable to mimic the good firm by sending the same signal. If the cost of the signal is higher for the bad type than that of the good type firm, the bad type may not find it worthwhile to imitate, and so the signal could be credible. Ross (1977) shows how debt could be used as a costly signal to separate the good from the bad firms. Under the asymmetric information between management and investors, signals from firms are crucial to obtain financial resources. Signaling of higher debt by managers then suggests an optimistic future and high quality firms would use more debt while low quality firms have lower debt levels. In this way,　good firm can separate itself by attracting scrutiny while the

bad firm will not ape because the bad firm will not want to be discovered. Two types of signaling inside information have been suggested: one is the costly signaling equilibrium discussed by Spence (1973), Leland and Pyle (1977), Ross (1977) and Talmor (1981) etc., the other is the costless signaling equilibrium as proposed by Bhattacharya and Heinkel (1982), Rennan and Kraus (1984). A signal is costly if the production of the signal consumes resource or if the signal is associated with a loss in welfare generated by deviations from distribution of claims in perfect markets. The signaling paradigm is multivariate for financial instruments.

Poitevin (1989) demonstrates that debt could be used as a signal to differentiate the potential competition of new entrant firms. Low cost entrants signal this fact by issuing debt while the incumbent or high cost entrants issue only equity; (Harris and Raviv, 1985) argue that calling firm's convertibles can be a kind of signal and Bhattacharya and Dittmar (1991) show stock repurchase is another kind of signal to represent firm value.

In farming industry, the signaling theory talks about financing tactics, where good firms try to distinguish themselves from bad quality firms by using different financing device. Farm owners also have incentives to get external financing by adopting such financing strategies. Unlike corporate firms who offer signals to stock market, farm owners send signals to all potential lenders in agricultural capital market. The signal instruments for farm business can be its profitability, farm income, the historical good performance record (return on assets) farm leverage, risk management documentation, operating products

2.3 Empirical Studies

A study by Kashuliza *et al,* (1996) revealed that the type of financial institution and its policy will often determine the access. Where credit duration, terms of payment, required security and the provisions of supplementary services do not fit the needs of the target group, potential borrowers will not apply for credit even where it exists and when they do, they will be denied access. In addition, Bigsten et al. (2003), and fliesig (1995), stated that in developing countries asymmetric information, high risks, lack of collateral, lender-borrower distance, small and frequent credit transactions of rural households make real costs of borrowing vary among different sources of credit.

In another study, based on the data from a sample survey of 699 randomly selected peasant farmers in Bolivia, Miller and Ladman (1983), applied discriminant analysis to identify a set of socio-economic, physical and psychological factors that influence credit use among small farmers with a view to differentiate between borrowers, potential borrowers, and non-borrowers. The results of the study indicated that borrowers were characterized by higher resource base, farm size, higher level of education, large number of cattle, higher household incomes, higher level of market integration, greater use of improved technology, larger operating costs and investments, higher risk ability, etc. Potential borrowers were characterized by further distance from markets, low level of market integration, higher transaction costs, less number of cattle, etc. Furthermore, non-potential borrowers were characterized by lack of interest to expand production, lower level of education, limited use of improved technology, shortage of labour and proximity to market.

In the 1950s and early 1960s, credit provision was considered a key instrument for breaking the 'vicious circle' of low incomes, low savings, and low productivity. However, in that period emphasis was far more on market oriented farmers and commercial agriculture than on peasants. From the mid-1960s, and up to the present time, farmers and the rural poor has increasingly become the chief target of credit interventions. In addition, since the early-1970s a strong equity dimension emerged in the aims of credit schemes and small farm projects.

The traditional approach to credit policy is funds for lending to farmers to be predominantly supply-led. This means that they originate from the central bank or from external donors, rather than from local saving in the rural economy (Ellis, 1992). According to Assefa *et al* (2005), the new rural financial market approach assigned a different role to the government with less direct intervention of the government in credit allocation and credit delivery.

Ellis (1992) stated that Past credit policies have tended to make wrong assumptions about peasants, viz. that they are unable to save, and that their demand for credit is highly sensitive to the level of the interest rate. There were new views of credit objectives, instruments (interest rate, credit targeting, and loan portfolio regulation and others) and institutions that arise from the defects of the old. A traditional view that smallholder farmers and poor rural people are unable to save has been shown to be wrong in several experiments. The main features of the rural poor in this context are: their income is uneven; their potential to save involves very small amounts, they cannot afford 'costs' associated with saving, and they are naturally concerned with the security of saving. For peasants who are not so-poor, lack of saving is much more to do with lack of opportunity,

or distrust of the alternatives available, than to do with low savings capacity. Households keep their assets in goats or cattle rather than in the bank, especially when the bank discourages savings, or appears to be run by untrustworthy officials.

In a study by Kebede (1995), credit makes traditional agriculture more productive through the purchase of farm equipment and other agricultural inputs, the introduction of modern irrigation system and other technological developments. Credit can also be used as an instrument for market stability. Rural farmers can build their bargaining power by establishing storage facilities and providing transport system acquired through credit. Credit plays a key role in covering consumption deficits of farm households. This would, in turn, enable the farm family to work efficiently in agricultural activities. Credit can further be used as an income transfer mechanism to remove the inequalities in income distribution among the small, middle, and big farmers. Moreover, credit encourages savings and savings held with rural financial institutions that could be channeled to farmers for use in agricultural production. Credit also creates employment opportunities for rural farmers.

Poor households do not want to use formal financial services due to costs implication such as transaction costs, processing fee, commission, insurance fee and minimum requirement, or proximity to financial institutions; they prefer informal services due to reasons like lower transaction costs and greater flexibility. Bertrand *et al* (2010) in a survey in South Africa tested the relative importance of interest charged on poor household decision to open saving account and marketing features, they found that interest rates mattered. Likewise interest rates influence the usage of formal financial institutions. For instance, in an experiment in Philippine conducted by Ashraf *et al* (2006)

shows the evidence that distance to the bank, education and income are positively correlated with the use of informal financial institutions. On the other hand, Rahman (1998) shows that lack of proximity is one of the major reasons for not using formal financial institutions.

Evidence from Asia and Latin America illustrates that the major constraint for accessing credit was product design; as such products need to be tailored specifically to the needs of the borrowers (Meyer, 2002). According to Hudon (2004), the poor require flexible and inexpensive products that match their capacity to borrow, and address their needs for them to cope with crisis thus there is a strong need for credit. The challenge for MFI's is to design credit products tailored to respond to different client needs. Similarly these products should be easily accessible (opening hours and proximity), with reasonable interest charged and more attractive terms than what they already access informally (Bass *et al* 2000).

Transaction cost incurred by poor household to access credit services influences their decision**.** The time spent to gain access to credit in formal institution is among such cost that leads small borrowers to prefer informal lending services. For example, a survey on women in Kenya by Anderson and Baland (2002) found that majority of women joining informal funds groups were aimed at saving and borrowing to keep their money away from commercial banks to avoid costs and commissions charged.

Physical distance of farm households from formal lending institutions is one of the factors that influence access to formal credit. According to Hussein (2007), farm households are discouraged to borrow from credit sector if it is located farther. This is

because both temporal and monetary costs of transaction, especially transportation cost, increase with lender-borrower distance which raises the effective cost of borrowing at otherwise relatively lower interest rate in the sector.

The orientation of credit policy in the future requires an imaginative and experimental approach to institutional innovation. Rural credit provision needs to be located in a context of diverse institutions providing lots of different services, not a single bureaucracy providing just one kind of service. The few case studies of successful credit institutions show that devices like regular small savings collected on the door step, group lending and group accountability for loan repayment, and improved incentives and performance methods within financial institutions, provide potential ways forward (Ellis, 1992).

The government of Kenya has underscored, in its national plans and policies, the key role of the Agricultural Sector in promoting economic growth and in poverty alleviation. The sector contributes about 24 per cent of the GDP, and is one of the major employers of rural people, with an estimated 3.8 million Kenyans directly employed in farms, livestock production, and fishing (Mutua and Oyugi, 2005).

Sustaining and improving production efficiency in agriculture by poor small holder farmers under the existing credit constraint conditions, require the improvement of access to credit and other factors involved. Within the design of agriculture in Kenya, for credit components to be effective in rural development, they must be demand driven and have a clear and efficient method of implementation. Linkage of credit to proven modern farming methods that are well suited to increasing productivity is a necessary starting

point for farmers seeking to increase production. Lending to small-scale farmers has been an important policy measure to stimulate agricultural development in Kenya (Mutua and Oyugi, 2005).

2.4 Summary of Literature Review

From the literature review, it is clear that researchers have assessed various determinants of access to credit for farmers', they acknowledge that farming industry has been sidelined by credit providers due to a number of factors like lack of collateral, asymmetry information, proximity to these institutions among others. Within the design of agriculture in Kenya, for credit components to be effective in rural development, they must be demand driven and tailored the specific needs of farmers while at the same time supply should be readily available and accessible.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter focuses on the methodology that was employed to carry out the study, determining the population and the sampling procedure as well as data collection and analysis methods used.

3.1 Research Design

This research adopted a descriptive survey design. Descriptive research portrays an accurate profile of persons, events, or situations. Surveys allow the collection of large amount of data from a sizable population in a highly economical way. It allows one to collect quantitative data which can be analyzed quantitatively using descriptive and inferential statistics (Saunders et al, 2009). Therefore, the descriptive survey was deemed the best strategy to fulfill the objectives of the study.

3.2 Target Population

In research, target population is the entire set of units for which the survey data is to be used to make inferences. It can also be defined as the eligible population that is included in research work. The constituency of the study has a total population of 48,455 people as per the 2009 census. The target population was 50 farmers in Cherangany constituency.

3.3 Data Collection Methods

Primary data was collected using questionnaires. The questionnaires were administered with the help of a research assistant who helped the respondents in cases where a need for assistance arose. The questionnaires were distributed using a drop and pick format where the researcher and the assistant delivered them to farmers and picked them after a week.

3.5 Data Analysis and Report Writing

Data was analyzed using descriptive statistics using frequency distributions to measure and compare results. Information was presented using percentages, tables and charts. MS Excel and Statistical Package for Social Sciences Software (SPSS) were used to conduct statistical analysis of the data. Bar graphs and percentages were used to analyze section A of the questionnaire which covers demographic information of the respondents. To assess the determinants of access to credit covered in section B, regression analysis was used;

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 \text{ where;}$$

Y is the dependent variable denoting access to credit, a is a constant, b_1, b_2, b_3 and b_4 are the coefficients for independent variables X_1, X_2, and respectively, X1, X2, and X3 are the independent variables i.e. X1(Collateral), X2(Basic Loan requirements) and X3(interest on loans). The X variables were measured and obtained from data got from section B of the questionnaire.

The analysis was done to assess determinants of access to credit facilities for farmers in Cherangany constituency.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter was concerned with discussing data findings, analysis, interpretation, and presentation. The data collected was analyzed using the Statistical method and the output presented in tabular form. Descriptive survey was undertaken for the study where the target population for this study was the 50 farmers. The response for farmers was 32 out of the 50 targeted thus indicating a 64% response rate. The findings were presented as follows;

4.2 Demographic Information

This section was concerned with general information of the respondents. The research was interested in knowing the age of the respondent, gender; years of farming, farm size and income from farming. This Information enabled the researcher get a general idea of the farmers and judge whether they had chosen the appropriate persons for the study.

Table 4.1 Respondents Age in Years

	Frequency	Percentage	Cumulative (%)
<30	8	25	25
Between 31-50	14	44	69
>50	10	31	100
Total	32		

Table 4.1 above sought to establish the respondent's age where farmers who were below the age of 30 years were 25% of the total respondents, 44% were between the ages of thirty one to fifty years while those above 50 years were 31%. Majority of those who were below the age of thirty were school leavers who had cleared colleges and universities and were waiting either to graduate or join, in this category as well there were some respondents who dropped from school and were actively involved in farming as this is their main source of income and livelihood. Those between the ages of 31-50 were practicing farming for various reasons ranging from as a source of livelihood and others for commercial purposes. A bigger percentage of those who were above 50 years were retirees.

Table 4.2 Respondents Gender

	Frequency	Percentage	Cumulative (%)
Male	19	59	59
Female	13	41	100
Total	32		

The table above sought to establish gender of the respondents. From the total farmers who participated in the study, 59% were male while 41% were female. This area being in a rural set up, majority of the communities here believe that farming is male activity while female gender is mainly concerned with household affair. This concept explains why majority of the respondents were male as well the rationale as to why the researcher was directed to male partners where he was initially approaching the female gender. In a

sub-location like Kapsara, the respondents constituted a large number of female farmers and the researcher also noted that majority of them we either single parents or widows.

Table 4.3 Years of Farming

	Frequency	Percentage	Cumulative (%)
Below 5 Years	5	15.6	15.6
Between 5-15 Years	9	28.1	43.7
More than 15 Years	18	56.3	100
Total	32		

The table above sought to know the number of years the respondents have practiced farming. This question was asked for the researcher to have a clear view and an idea in mind that the respondents know too well about farming thus making it easy to get information from them, the researcher concluded that the more years the respondents have practiced farming the more easy it would be for them to provide the information needed for the study. From the findings, the researcher established that 15.6% had been in farming for less than 5 years, 28.1% between 5 to 15 years and 56.3% more than 15 years respectively. Majority of those who were in the less than 5 years brackets acquired land here recently. Those who had more than 5 and 10 years were born in this region thus grew up practicing farming thus explaining the reason why they had many years in farming. Considering that 84.4% of the respondents had practiced farming for more than

5 years, they were in a good position to give the researcher reliable information to aid in the study.

Figure 4.1 Size of the Farm
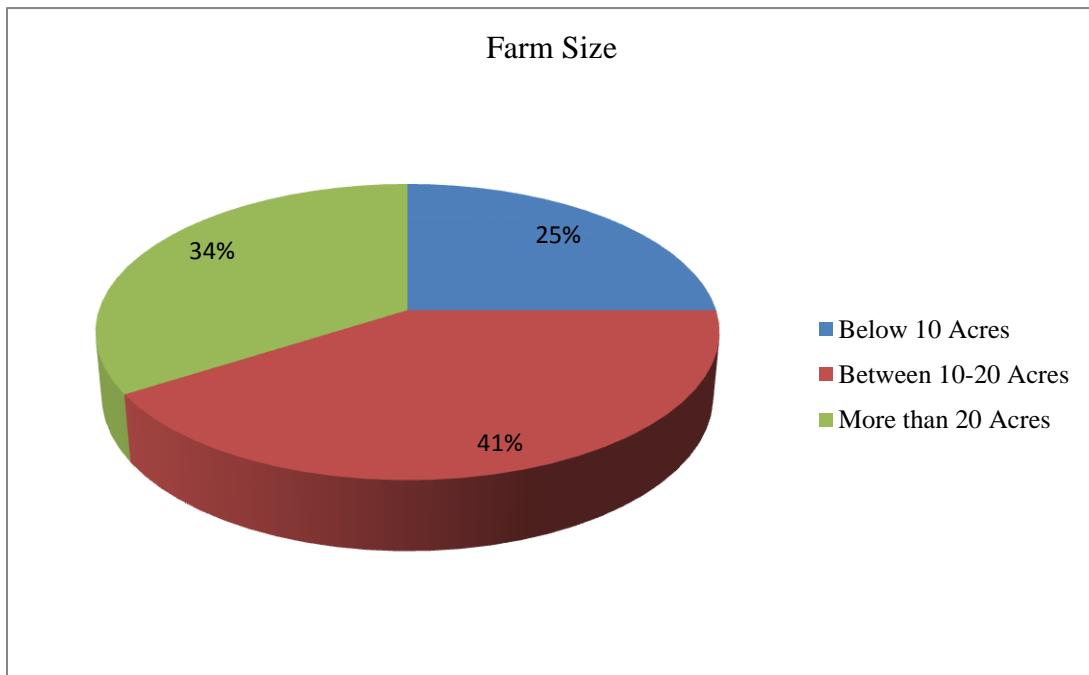
The figure above shows the respondents farm size. From the findings the researcher established that 25% of the respondents owned less than 10 acres of land, this group mainly consisted of those owners who had bought land in the area in the recent past. 41% owned between 10 to 20 acres and this category consisted majorly of those who had acquired or inherited ancestral lands. In this region, land was owned in schemes of 24 acres per one scheme therefore when families inherited lands, they subdivided them thus explaining ownership in this bracket. 34% of the respondents owned land more than 20 acres and the researcher noted that those who owned these lands were family lands that had not been subdivided and a bigger percentage were in schemes. The question on the size of land was meant to give the researcher insight and knowledge to estimate what these lands would need in terms of resources i.e. farm inputs, labor and other

requirements thus establishing the sources of this finances and to concentrate on credit source which is the backbone of this study.

Figure 4.2 Incomes from Farming
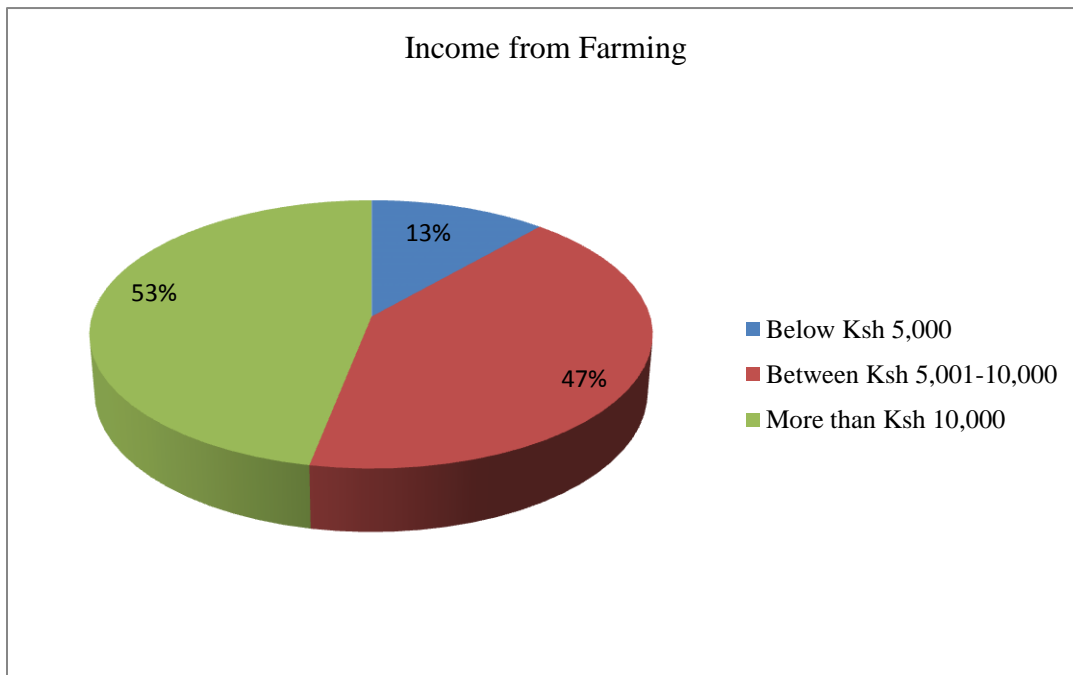
The figure sought to establish what the farmers get as income from farming. This question was important as it showed how farming is significant in this area

SECTION B: STUDY INFORMATION

Figure 4.3 If the respondents owe Credit to any Institution
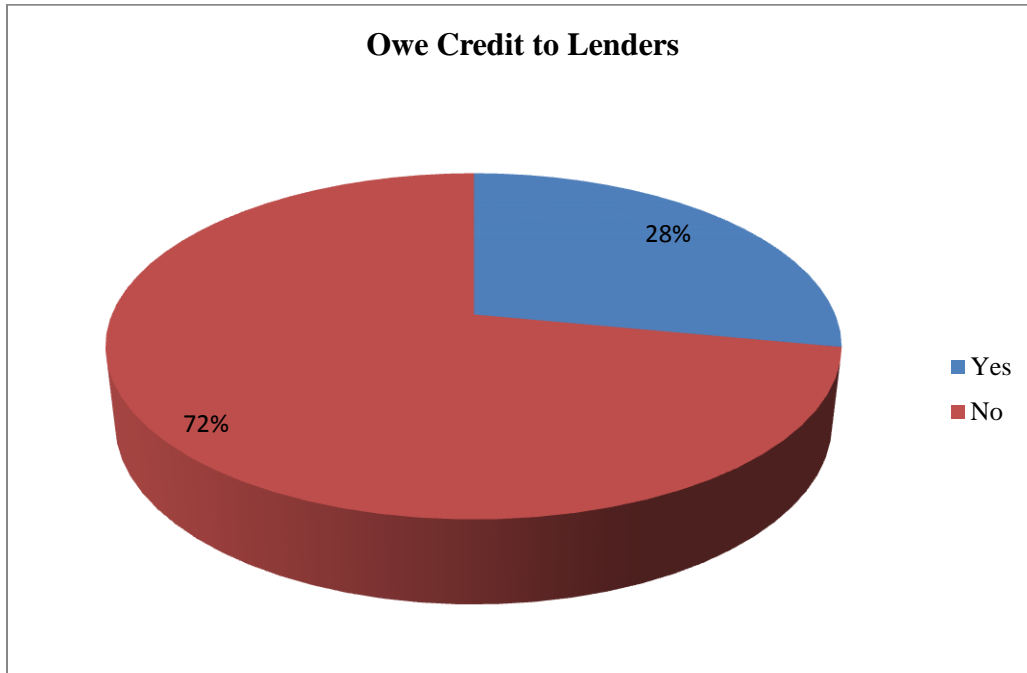
Figure 4.3 above show reply from farmers on a question that sought to know if they owed credit to any institution. The results showed that 28% said yes while 72% said no. The researcher noted that those who said yes were majority the owners of farms with more than 10 acres, reason being that this group has a consistent source of income from tea and coffee and majority used their pay slips to show guarantee that they were able to repay. Since income from these proceeds is paid through these institutions like banks, the banks deduct their loans first before channeling the remainder to the farmers. Others used their title deed as assurance for the loan and therefore the institutions were sure they would recover their money in case of any default. For those who said no, the researcher established that they had either applied for a loan and were denied or they had never applied, those who had applied but were denied cited reasons ranging from lack of

collateral, lack of guarantors, proximity from this institutions as they have to travel 16

miles to reach them while at the same the infrastructure is not good.

Figure 4.4 Measure of extent to which the following are used as security

for a loan
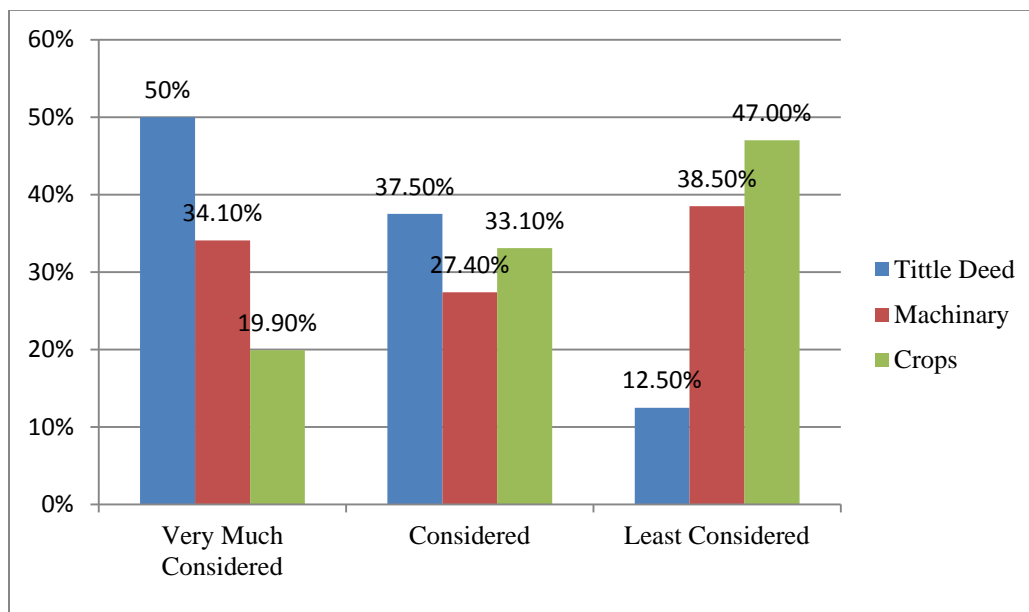
The above bar chart shows the measures as to the extent the above factors are considered

when granting a loan to the farmers, the researcher identified three components which

were title deed, farm machinery and crops, crops included tea and coffee plantations. The

respondents were to rank from components they think was very much considered to the

least considered. Findings indicated that title deed was very much considered with a 50%

confirmation from the respondents, 37.5% ranked title deed second while 12.5% said it

was least considered. The second measure was by use of farm machinery as collateral for

a loan and findings showed that 34.1% of the responded ranked it as very much

considered, 27.4% ranked it second while 38.5% ranked it least considered. The

percentage of those who thought it was least considered here was big and majority of

them said that the use machinery is less considered because of its nature of depreciation thus may not be a good gauge of value. The third class was use of crops to secure a loan, and in this category 19.9% of the respondents said it was very much considered, 33.1% ranked it second while 47% said it was least considered. The researcher further established that in this category those who were considered were those with cash crops like tea and coffee as they have assurance of getting income at the end of every month thus recovering loan from them would not be difficult.

Figure 4.5 Measure of extent to which basic loan requirements are considered
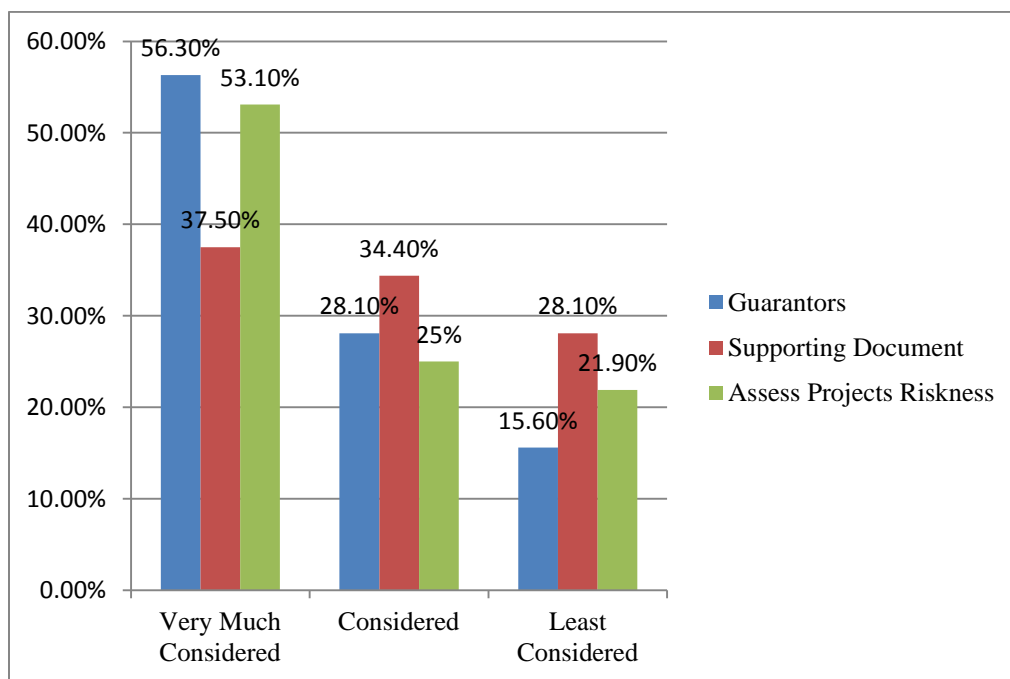
Figure 4.8 sought to measure extent to which the above basic loan requirements are considered before a loan is granted. Of the total response, 56.3% said that the policy of guarantors is very much considered, 28.1% ranked it second while 15.6% said it was least considered. This policy of guarantors' states that a person applying for a loan must have sponsors for a loan and the total amount of all sponsors must be equal to or more than the

loan amount being applied; the concept behind use of guarantors is to ensure that in case the applicant fails to honor his liabilities the lender will be in a position to get back his money. Usually the guarantors are people well known to the applicant. The second factor was consideration of supporting documents, findings showed that 37.5% rated it as very much considered, 34.4% rated it second while 28.1% ranked it least considered; these documents include invoices for those who wish to acquire a loan to procure farm inputs, pay slips for those farmers who have a regular income e.g. from coffee, tea and milk. These documents are usually used to support the cause of application and they give surety of the intent of the loan therefore they are an important aspect in the application process. The third factor was to requirement to assess the projects riskiness against what is being applied as a loan; 53.1% said it was very much considered, 25% ranked it second while 21.9% said it was least considered. The assess of riskiness ensures that the lender is aware of the probable circumstances that may accrue should they grant a loan to a risky project that is uncertain, this concept is intended towards cautioning the lenders and to extension the borrowers from predictable loses that may arise as a result of investing in an unworthy investment or use of the loan.

Figure 4.6 Measure of extent to which the following factors are considered to determine interest charged on loans
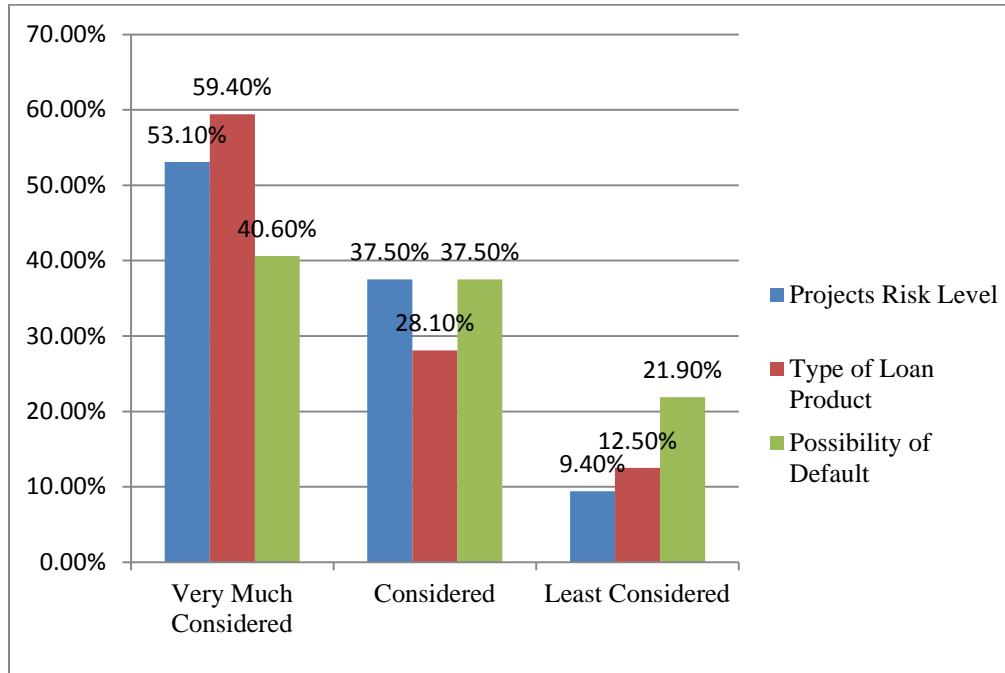
Table 4.6 intended to measure the extent to which type of loan product, projects risk level and possibility of default determine the rate of interest to be charged on the loans. On the factor of projects risk level, 53.1% of the respondents said it was very much considered, 37.5% ranked it second while 9.4% said it was least considered. The issue of projects risk level was explained in the fact that those projects that are considered to be highly risky attract a high rate of interest. Loans to the agricultural sector are considered risky as it is uncertain to know if the farming will yield due to expected and known variables like climatic changes. On the type of loan product being offered, 59.4% of the respondents said it was very much considered to determine the rate of interest charged on a particular loan, 28.1% rated it second while 12.5% thought it was least considered when determining the rate of interest for a loan. Different loan products have been allocated different interest rates and different requirements across different loan providers which

are set using their respective policies and by laws as guideline. Loan products to projects that are considered unpredictable like farming usually attract a high interest rate. On the possibility of default on loan, 40.6% thought it was very much considered, 37.5% ranked it as second considered while 21.9% thought it was least considered. To establish the risk or possibility of default, majority of lenders look at the credit history of the borrowers before deciding whether to grant them a loan or not and if they decide to give them this concept guides them on what type of loan to give and the interest to charge. Basically loans to agricultural industry for farming and dairy activities are considered to be risky because of the nature of the industry which is surrounded by many uncertain and non predictable events thus they tend to attract a high interest rate.

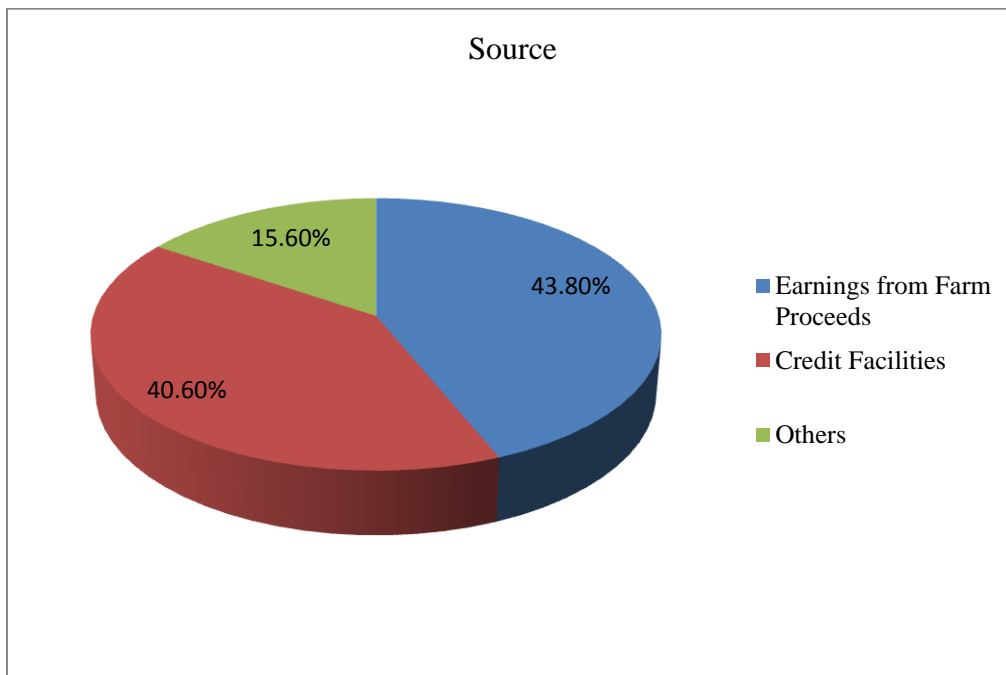**Figure 4.7 Sources of money for labor, farm inputs, school fee and other investments**

Figure 4.7 shows the source of money for labor, farm inputs, school fee and other investments and findings show that 40.6% said their source was credit, 43.8% said

earning from farm inputs while other sources had 15.6%, the researcher established that those who used credit were mainly for school fees and buying farm inputs since majority of them have big farms and have no ready cash for acquisition of the required inputs. This credit is got from lenders like commercial banks, Sacco's, self help group and MFI's. Earnings from farm proceeds included sale of horticulture crops, earnings from cash crops like tea and coffee and milk for those who practice daily farming. Other sources mentioned included support from friends and families though this component was small in number. This question therefore was important to assess as the researcher's findings show that those who rely on credit are 40.6% which is a considerable percentage thus significant for the study.

4.4 T Test for Coefficients

First, the researcher regressed the findings to assist explain how the determinants under study influence access to credit for farmers. The following regression model was adopted to show the expected relationship between the above variables: $Y = a + b_1 x_1 + b_2 x_2 + b_3 x_3 + b_4 x_4$ Where: Y = access to credit which was measured using the responses on determinants of access to credit ; a = the intercept that is the value of Y when x is zero; b_1, b_2, and b_3, are independent variables; x_1 = collateral; x_2 = basic loan requirements and x_3 = interest rate. All the three independent variables were considered using the responses on each of the variables obtained from the respondents. The results are shown below;

Table 4.4 Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations		
		B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part
1	Constant	-.012	.166		-.062	.923			
	Collateral	.268	.173	.273	1.632	.134	.729	.292	.139
	Loan Requirements	.057	.144	.057	.218	.001	.621	-.047	-.021
	Interest Rate	.670	.123	.136	1.118	.257	.493	.209	.107

Where: x_1 = collateral, x_2 = loan requirements and x_3 = interest rate. Using a significance level of 5%, any variable having a significant value greater than 5% is not statistically significant. These are x_1, x_2, and x_4 while x_3 is statistically significant (0.01%)

This means that basic requirements for a loan is a suitable predictor of Y.This means that for every unit increase in measure of loan requirement, the measure of access to credit increases by 57%

4.5 Coefficient Results

Table 4.5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.857	.735	.725	.250	.735	.192	4	26	.001

Table 4.12 indicates that there is an R^2 value of 73.5%. This value indicates that the three independent variables explain 73.5% of the variance in the access to credit for farmers. It

is clear that they determine to a large extent the access to credit for farmers in commercial banks and other credit providers. It's therefore adequate to conclude that these factors are essential in determining access to credit given that the inexplicable variance is only 26.5%.

4.6 F Test for the Full Model

Table 4.6: ANOVA Table

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.057	4	1.514	19.22	.001
	Residual	1.620	26	.062		
	Total	7.677	30			

For 5% level of significance, the numerator df=4 and denominator df=26, computed F value is 19.22% Hence, the regression model is statistically significant, meaning that it is a suitable prediction model for assessing determinants of access to credit.

The researcher also wanted to know the opinion of farmers from their point of view as to why they thought it was difficult to get credit from banks and other financial institutions, they mentioned among others; lack of security for the loan, lack of adequate information on available loan products for farmers, distance from lenders as farmers are far from town centres where this institutions are located. Others mentioned strict restrictions to loans being granted to agriculture industry since lenders consider investments to this industry uncertain and unpredictable.

Figure 4.8 What Lenders should do to encourage farmers apply for credit

What Lenders should do

42%
13%
36%
9%

■ Set up Rural Branches

■ Educate Farmers on Loans

■ Provide variety of Loan Products

■ Upgrade Infrustructure
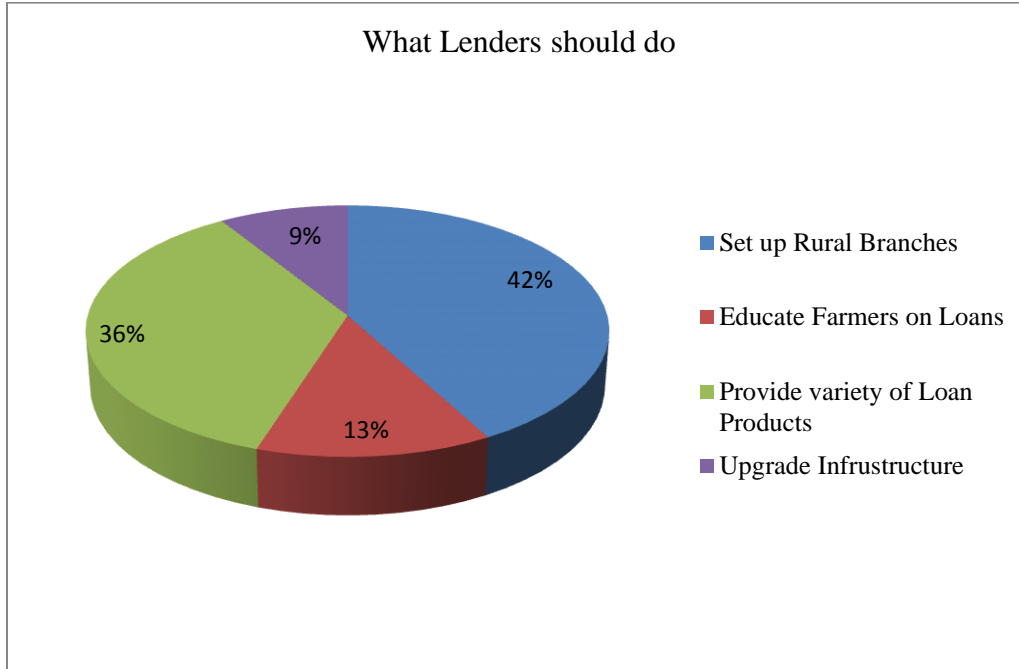
From the findings above, the researcher established that 42% of the respondents suggested that credit providers should set up rural branches to encourage farmers apply for credit, this would mean that proximity to this institutions is fast hence borrowers will not have to travel long distances to get this service. 13% said that the providers should educate farmers on loan products and how to apply, what is required and how long it will take before a loan is granted, 36% suggested that they provide a variety of loan products for farmers to choose from while 9% thought upgrading infrastructure like communication in farming areas would encourage farmers to apply. These suggestions if taken into consideration would play an important role in ensuring farmers access credit.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter draws a correlation between the objectives of the study, the literature review and findings made by the researcher in the field. The purpose is to see whether the set objectives were achieved after they were tested in the field and an analysis carried on them in chapter four. From these the researcher draws inference to make conclusions on each of the set objective after critically discussing it using supportive evidence from the data analysis. After the summary and conclusions, the researcher makes recommendations, limitations of the study and identifies areas for further research in future. In this case the recommendations target the lending institutions and farmers who formed a big part of the study.

5.2 Summary of Findings

From the findings, the researcher was able to establish that collateral, basic loan requirements and interest rates are key determinants to credit. Findings showed that majority of the farmers were unable to access credit due to strict loan policies that had requirements in which one way or another they were not able to meet, these requirements included compulsory prerequisite for every applicant to have guarantors whose value must be equal to or more than credit intended to be borrowed, this poses a challenge to those in different providers as those acting as sponsors must be in the same institution. Collateral for a loan is another major challenge as borrowers are

required to attach their assets like land and machinery; a challenge in this aspect arises where a farmer

5.3 Conclusions

This paper examined the various determinants of access to credit for farmers. The data collected from Cherangany constituency was used to identify and analyze these determinants. The main factors explaining inaccessibility to credit were found to be security for the applied credit, strict loan policies for applicants in the agriculture sector, high interest rates charged on loans, proximity to financial institutions and lack of proper and accurate information on available credit. The study results show that farming has limited access to credit services in Cherangany, a situation which has constrained the agricultural development in this expanse. The findings indicate that lending institutions have inadequate products for meeting credit needs of the farming society since the yardstick they use to assess their creditworthiness is same with all applicants from other sectors. Commercial banks were found to have no specific products designed for farmers and above all, most of the credit conditions are too difficult for farmers to meet. Interest rates charged by the banks and collateral requirements largely restricted them from seeking loans from these sources.

These findings no doubt show that farmers have inadequacy in accessing credit and other financial services, and therefore it becomes a concept that must be looked in to and ways developed to address the challenges facing farmers.

5.4 Recommendations

After making conclusions from the research findings, the researcher made the following recommendations;

The government, banks as well as other lending institutions should consider the possibility of coming up with policies and procedures geared towards catering for specific credit needs for farmers by developing customized designed loan products targeting farmers, e.g. coming up with a different loan product for a farmer who practices horticulture farming, for those who practice perennial farming and dairy farming. Credit to this various farming methods should be customized to each mode of farming as they have different challenges and therefore would require different requirements and assessment before credit is granted. These credits should also require minimal collateral.

The existing commercial banks need to be encouraged to lend to farmers. Government owned institutions like Agricultural Finance Corporation and National Bank have to take a principal role in extending credit facilities designed for the agriculture sector. It has to take purposeful initiatives, like reducing the cost of lending and computerizing operational systems in order to reduce operating costs. These exercises will make sure the loans are more accessible and affordable to borrowers.

The establishment of bank branches in rural areas to serve the farming sector may not be possible to the banking institutions thus the formation of farmer's cooperatives, farmers associations or other forms of group responsibility for the administration and supervision of credit programmes at the local level should be promoted and encouraged. Group lending approach may not only reduce the high operating cost costs associated with lending in rural areas but may also encourage the establishment of good credit culture and

help in achieving acceptable loan products for farmers. The emergence of saving and credit cooperatives (SACCOs) and saving and credit groups e.g. Kapsara Tea Sacco should be encouraged to cater for other farmers as well as it caters for tea farmers only. Provision of training to credit beneficiaries in aspects of credit should be enhanced; this will ensure beneficiaries are well informed on their obligations, particularly on loan requirements and repayment needs and therefore will make sound decisions on credit.

5.5 Limitations of the Study

The research was conducted in a small area and conclusions made with the researcher assuming that findings from this area reflect what is in other parts of the country which may not be the case as different regions have different set up as well as varied challenges.

The provision of sustainable credit facilities to farmers is only one of the possible factors that influence production especially in relation to availability of farm inputs. There are many other factors and therefore the study will not explore these others.

Time and resources were limited and therefore the findings the researcher got used it to generalize. Information made using generalization may sometime stray away from accuracy thus giving conclusions which are not correct.

5.6 Suggestions for Further Research

The researcher suggests that further research study be carried out on farmers in other parts of the country as this study only concentrated on those in Cherangany constituency.

Research should be conducted to establish why there are no financial institutions and MFI's in Cherangany and other remote areas as a whole, and investigate possible reasons that are hindering their establishment.

Research should also be conducted in banks to establish from their perspective what hindrances exist that limit farmers to access credit compared to other borrowers.

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APPENDICES 1: QUESTIONNAIRE

Section A: Demographic Information

1.   What is your age?

Below 30 years   ( )

Between 31- 50 years   ( )

Above 51 years   ( )

2.   Gender

Male   ( )

Female   ( )

Section B: Study Information

3.   How many years have you practiced farming?

Below 5 years   ( )

Between 5-15   ( )

Over 15 years   ( )

4.   What is the size of your farm in acres? (Tick in the box provide)

Below 10   ( )

Between 10-20   ( )

More than 20   ( )

5.   What is the estimate income you get from farming monthly?

Below Ksh 5,000   ( )

Between Ksh 5,501– Ksh 10,000   ( )

Over Ksh 10,000   ( )

6. Currently, do you owe any Credit/ loan to any institution?

Yes   ( )

No   ( )

7. i.To what extent are the following measures of security for a loan considered?

Measure	1	2	3
Use of title deed			
Use of farm machinery			
Use of farm crops			

ii. To what extent are the following measures on loan requirements considered?

Measure	1	2	3
Verification of guarantors			
Use of supporting documents			
Risk assessment of the project			

ii. To what extent are the following measures used to determine interest on a loan?

Measure	1	2	3
Projects risk level			
Type of loan product			
Possibility of default			

Have you ever applied , what were the reason/s cited for you not qualifying? List them

i. ………………………………………………………………………………

ii. ………………………………………………………………………………

iii. ………………………………………………………………………………

8. If you answered No to question 6 above, please list down the reasons why you have never applied for a loan

i. ………………………………………………………………………………

ii. ………………………………………………………………………………

iii. ………………………………………………………………………………

9. What is your source of money for labor, farm inputs, school fees, and other investments?

Earnings from farm proceeds   ( )

Credit facilities   ( )

Other   (   )

10. In your own opinion, what do you think are the reasons why it's difficult for farmers
    to access loans or credit in commercial banks and other lending institutions?

    i.   …………………………………………………………………………………

    ii. …………………………………………………………………………………

    iii. …………………………………………………………………………………

    iv. …………………………………………………………………………………

    v.   …………………………………………………………………………………

11. What do you think should be done by credit providers to encourage farmers apply for
    credit? Rank from the most important to the least i.e. 1 being most important and 4
    least important

Action	Rank
Set up rural branches/ agents to bring service near to farmers	
Educate farmers on need and benefits of loans	
Offer a variety of loan products farmers	
Upgrade infrastructure (e.g. communication/roads) in farming areas	

    Other(s) specify…………………………………………………………………………