

**DETERMINANTS OF SAVING DECISIONS AMONG MEMBERS OF MAASAI
GROUP RANCHES IN KAJIADO COUNTY, KENYA: A CASE OF KUKU GROUP
RANCHES**

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DECLARATION

I hereby declare that this research project report is my original work and has not been presented in any other institution for any award.

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This research project report has been submitted for examination with my approval as University Supervisor

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DEDICATION

I dedicate this research project report to my lovely wife Winnie and adorable son Ryan for their invaluable support.

ACKNOWLEDGEMENT

I wish to extend by heartfelt appreciation to my supervisor Dr. Agnes Njeru for her invaluable guidance and encouragement in all the stages this research.

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ABBREVIATIONS AND ACRONYMS

GDP	Gross Domestic Product
USA	United States of America

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OPERATIONAL DEFINITION OF TERMS

Maasai: This refers to semi-nomadic people who live under communal land management system in Southern Kenya mainly keeping cattle, goats and sheep both as a source of income and store of value.

Group Ranch: This refers to a communally owned land under one title deed which is managed by an elected committee for the benefit of all members and their successors.

Group Ranch Member: This is typically a Maasai man whose name appears in the register of members but is normally succeeded by his wife or children if they are of age upon his death.

Maa: This refers to the ethnic language spoken by the Maasai people

ABSTRACT

Savings mobilization is an important element in determining the welfare of individuals and the society at large. There is usually a significant difference in the saving rates among countries and over time periods. National savings consists of personal savings, business savings and public savings. This study sought to establish the determinants of saving among members of Maasai Group Ranches in Kajiado County by considering the case of Kuku Group Ranches. The study specifically sought to establish if the level of income, availability of information, personal factors and market frictions influenced saving decisions among members of Maasai Group Ranches in Kajiado County. Mixed methods research design, which entails the use of quantitative and qualitative study approaches, was adopted. The population of interest was the 12,667 registered members of Kuku Group Ranches. Stratified random sampling was used and a sample of 384 registered members of Kuku Group Ranches was selected. Semi-structured questionnaires were administered to collect primary data, which was analysed using descriptive statistics alongside ordinary least squares regression. The study established that the level of income, availability of information and personal factors were positively and significantly related to saving decisions while market frictions were negatively and significantly related to saving decisions. This implies that an increase in the level of income leads to an increase in saving decisions. Majority of the respondents in this study earned above the set minimum daily wage in Kenya and were involved in some form of saving. Similarly, an increase in the availability of information leads to an increase in saving decisions. Majority of those interviewed in this study did not have sufficient information about formal saving products provided by financial institutions in Kenya. An improvement in personal factors such as level of education leads to an increase in saving decisions. Even though the majority of the respondents in this study possessed at least basic education, it was observed that they lacked basic financial literacy. An increase in market frictions such as transaction costs, lack of trust and regulatory barriers leads to a decrease in saving decisions. The majority of the respondents in this study deemed the fees charged to access and operate bank savings accounts in Kenya too high. Similarly, the requirements for opening and operating bank accounts were deemed too complicated by majority of those interviewed in this study. These findings were presented in form of graphs, charts and tables. The study recommended that members of Maasai Group Ranches should diversify their sources of income and methods of saving to avoid overreliance on livestock. They should also actively seek for financial information. In addition, the financial institutions in Kenya should provide basic financial literacy and financial products targeting members of Maasai Group Ranches. Finally the Government of Kenya should consider designing and implementing an incentive scheme to motivate financial institutions towards promoting financial inclusion policies. The incentive scheme could include granting of tax waivers to financial institutions that provide banking services to rural underserved communities at affordable costs.

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Savings mobilization is an important element in determining the welfare of individuals and the society at large. The individuals who save are able to smooth their consumption and contribute towards capital formation through their investments. The combined saving rates by individuals play a critical role in determining the overall economic growth of the society (Karlan, Ratan and Zinman, 2014).

Savings determine the amount of funds available for investment in a country with a completely closed economy. Governments are particularly interested in investments in physical capital, human capital, research and development all of which are vital for economic growth. However, in a completely open economy savings have indirect effect on domestic investment. This is because changes in the capital account leads to changes in exchange rates and balance of trade. This in turn affects the entire structure of the economy including domestic investment. In reality, economies are neither completely open nor completely closed and as such savings mobilization usually attracts immediate policy concerns (Virmani, 1986).

Saving rates usually vary significantly among countries and over time periods. According to the data published by the World Bank (2014) on Gross Savings as a percentage of Gross National Product, Kuwait recorded the highest saving rate at 56% while Afghanistan recorded the least saving rate at -21% among the listed countries in the year 2013. The other countries which recorded a saving rate of 50% and above in the year 2013 apart from Kuwait include Bermuda at 54%, Macao SAR at 53% and China at 50%. The other countries which recorded a negative saving rate apart from Afghanistan in the year 2013 include Dominica -1%,

Grenada -5%, St. Vincent and the Grenadines -5% and Guinea -17%. Some big economies such as United Kingdom and United States of America recorded saving rates of 13% and 18% respectively for both years 2012 and 2013. However, the 2013 World Bank saving rate list does not have data for Timor-Leste which has been recording the highest saving rates in recent times. For instance Timor-Leste recorded a saving rate of 239% in 2010, 318% in 2011 and 249% in 2012 according to data published by the World Bank for the respective years. Among the listed African countries, Algeria recorded the highest saving rate at 45% in the year 2013. The saving rates among the East African countries from the years 2010 to 2014 was as shown in table 1.1 according to the data published by the Word Bank:

Table 1.1: East African Saving Rates for years 2010 - 2014

County	Gross Saving (% of GDP)				
	Year	Year	Year	Year	Year
	2010	2011	2012	2013	2014
Kenya	13	11	11	10	12
Uganda	21	19	20	22	15
Tanzania	17	17	15	15	18

Source: World Bank (2014)

The saving rate in Kenya dropped from 11% in 2012 to 10% in 2013 but increased to 12% in 2014. According to the data published by the Economy Watch (2014), Kenya was ranked number 132 in the world in terms of Gross National Savings (% of GDP) in the year 2014. It's saving rate of 12% in the year 2014 fell below the world's average Gross National Savings (% of GDP) value of 18%. Kenya's Gross National Saving (% of GDP) is expected to increase in the coming years as shown in figure 1.1



Figure 1.1: Kenya's Gross National Saving (% of GDP) from 1980 - 2019

Source: Economy Watch (2014)

According to Piana (2003) national savings consists of personal savings, business savings and public savings. Personal savings represents postponed consumption and the funds so generated are either left in bank accounts or put in productive investments. Business savings are represented by undistributed profits while public savings are represented by tax revenues less public expenditure. Any saving that accumulates from taxes represents forced saving since taxes are compulsory for both individuals and businesses. Private savings for both individuals and businesses are usually voluntary. National saving in Kenya consists of personal savings, business savings and public savings. The tax revenues in Kenya are not sufficient to cover all public expenditure so private savings by both individuals and businesses contribute significantly to national savings. This is further enhanced by net transfers from abroad.

1.1.1 Group Ranches

Group ranches in Kenya were formed under the Land (Group Representative) Act of 1968. This Act provides for incorporation of representatives of groups who have been recorded as owners of land under the Land Adjudication Act and are connected for the purpose of

collective management of their resources especially land use (Ntiati, 2002). According to Mwangi (2007) group ranches represent one of Kenya's early experiments with land reform in rangeland areas. By the year 1979 a total of 57 group ranches had been created in Maasailand but by the year 2000 a total of 31 group ranches had already been subdivided with 14 others being surveyed for subdivision. It is only 12 group ranches that resisted subdivision. Kajiado County was home to 51 group ranches before the wave of subdivision and still hosts most of the remaining group ranches in Maasailand. Kuku group ranches are some of the remaining Maasailand group ranches which are not under the threat of subdivision. It was initially one group ranch under one title deed but was later divided into two group ranches namely Kuku A Group Ranch (18,712 hectares) and Kuku B Group Ranch (96,000 hectares). These group ranches are located in southern Kenya as shown on the map in Appendix 2 produced by African Wildlife Foundation (2008). According to the respective group ranch registers in January 2016 Kuku A Group Ranch had 6,417 members and Kuku B Group Ranch had 6,250 members.

1.2 Statement of the Problem

The level of savings in a country depends on the power and will to save. The power to save in an economy mainly depends on the average level of income and the distribution of national income. The higher the level of income the greater will be the level of savings. Additionally, the greater the inequalities of income the greater will be the level of saving in an economy. According to Ike and Umuedafe (2013) low investment leads to low output which further translates to low income followed by low savings. This situation perpetuates itself into a vicious cycle of poverty. However, according to Banerjee and Duflo (2007) even the poor have a substantial demand for savings. This is because the poor do have some surplus that they use for non-essential expenditures.

Barriers to saving do exist especially among the world's poor. Demirguc-Kunt and Klapper (2012) noted that only 22% of adults worldwide reported having saved in formal financial institutions between April 2011 and April 2012. They further noted that 77% of adults living on less than \$2 a day had no accounts in formal financial institutions over the same period. However these findings do not mean that this category of people does not participate in saving for their welfare. According to Karlan et al. (2014) when formal saving products are unavailable or unaffordable, the poor often save in informal groups, under mattresses and/or in livestock. This argument agreed with Ike and Umuedafe (2013) who categorized savings into financial and non-financial forms. They noted that the non-financial form includes livestock among other valuable products.

The Maasai represent the few communities in the world that have remained loyal to their traditional culture despite the pressure of modernization fueled by globalization. However, increasing population has greatly reduced the land available for their nomadic lifestyle and has forced some of them to adopt alternative lifestyles. The Maasai of Kuku Group Ranches heavily rely on their livestock as a source of livelihood but some members have in addition adopted crop farming, trading and formal employment in pursuit of better lifestyles. Mobile phone technology has also found its place among the group ranch members. Dupas and Robinson (2013) conducted a study in Kenya on savings constraints and microenterprise development but their study did not focus on rangeland communities. Even though the studies of Ntiati (2002) and Mwangi (2007) were done in Maasai Group Ranches they did not focus on the determinants of their saving. Inganga, Njeru, Ombui and Tirimba (2014) recommended further research on the problems facing saving culture in Kenya. It is therefore important to understand the determinants of saving in Kenya in order to address the problems that face the saving culture. This research therefore contributed in understanding the determinants of

saving among rangeland communities in Maasai Group Ranches. The findings of this research were expected to have an impact on financial inclusion of rangeland communities in Kenya.

1.3 General Objective

The general objective was to investigate the determinants of saving decisions among members of Maasai Group Ranches in Kajiado County.

1.3.1 Specific Objectives

The specific objectives of the study were as follows:

- (i) To establish if the level of income influenced saving decisions among members of Maasai Group Ranches in Kajiado County.
- (ii) To find out if availability of information shaped saving decisions among members of Maasai Group Ranches in Kajiado County.
- (iii) To determine if personal factors motivated saving decisions among members of Maasai Group Ranches in Kajiado County.
- (iv) To assess if market frictions affected saving decisions among members of Maasai Group Ranches in Kajiado County.

1.4 Research Questions

The research questions used in this study were as follows:

- (i) How does the level of income influence saving decisions among members of Maasai Group Ranches in Kajiado County?
- (ii) How does availability of information shape saving decisions among members of Maasai Group Ranches in Kajiado County?

(iii) How do personal factors motivate saving decisions among members of Maasai Group Ranches in Kajiado County?

(iv) How do market frictions affect saving decisions among members of Maasai Group Ranches in Kajiado County?

1.5 Significance of the Study

The outcome of this study was beneficial to the following stakeholders;

The Government

The results of this study provided the government with essential information for guiding relevant economic policies especially with regard to financial inclusion of rangeland communities.

Financial Institutions

The findings of this study were important to financial institutions in developing financial products that specifically address the needs of rangeland communities.

Researchers

This study added knowledge in the field of research. It also provided a basis for similar or new research focusing on rangeland communities in other parts of Kenya or the world.

1.6 Scope of the Study

This study was carried out within Kajiado County, Kenya. It specifically focused on the 12,667 registered members of Kuku Group Ranches according to the respective group ranch registers in year 2016. A sample of 384 group ranch members was selected for the study.

1.7 Limitations of the Study

There were harsh weather conditions prevailing in Kuku Group Ranches during this study. The days were hot and dusty from late morning to early afternoons necessitating reduced research activity over that period. In order to overcome this limitation, the researcher rescheduled administration of questionnaires to take place in early mornings and late afternoons when weather conditions were more bearable. This effectively increased the data collection period from what had earlier been allocated. Similarly, the generally rough terrain in Kuku Group Ranches slowed down research activity. The researcher used motorbikes to reach respondents in areas that could not be accessed in a car.

Instances of language barrier were also a limitation in this study. The questionnaires were prepared in English language but there were some respondents who could only understand *Maa* language. The researcher made use of research assistants who could understand both English and *Maa* languages to interpret the questionnaires as needed. It would also have been ideal to interview all members of Kuku Group Ranches but due to time and financial constraints, the researcher settled for a representative sample drawn from the target population.

In addition, this research relied on self-reported data by the respondents, which was not independently verified. The respondents provided data through the questionnaires that were administered and the researcher accepted the data on face value. It therefore follows that potential sources of bias such selective memory and exaggeration were not completely eliminated. However, these potential biases only become apparent if found to be incongruent with data from other sources which was not readily available in this study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter explored the theories that support both the independent variables and the dependent variable and contains a conceptual framework showing the relationship between the independent variables and the dependent variable. In addition, there is an empirical review section, which discusses relevant studies and relating their findings to this study. Finally the research gap was identified after critique of all reviewed literature and summarization of main issues.

2.2 Theoretical Framework

This section focused on the theories that addressed the variables of this study.

2.2.1 Saving Theories

(i) Life Cycle Theory

This theory was put forward by Modigliani and Brumberg (1954). It postulates that in early working life labour income is usually low but it increases in later working life before declining at retirement. Consumers who are keen on smoothing their consumption usually prefer to borrow during low income years then repay their loans during high income years as they save for their retirement. This implies that individuals are able to transfer their purchasing power from one cycle of life to another by having a lifetime budget. This theory supports level of income as an independent variable which determines saving. It explains some of the financial decisions which people make at different stages of life so as such it explains personal factors as a determinant of saving. It is therefore relevant to this study.

(ii) Permanent Income Theory

This theory was proposed by Friedman (1957). It focuses on the general problem faced by households when their income fluctuates over time regardless of the cause of the fluctuation. It therefore considers effects caused by life cycles, business cycles and other factors. He advances the argument that households expect a normal level of income which he called permanent income and any deviations from this level result to transitory income. In addition, he identified permanent consumption and transitory consumption. Permanent consumption is that part of household consumption which is planned and steady while transitory consumption is the part which is unexpected. He argues that permanent consumption is normally a proportion of permanent income and transitory consumption is independent of income.

This theory explains income, which was one of the independent variables of this study. It recognizes different levels of income by categorizing income into permanent and transitory components. In addition, it supported personal factors as a determinant of saving by categorizing consumption into permanent and transitory components both of which result from personal financial decisions.

(iii) New Theory of Saving

This theory is attributed to the work of Deaton (1990), Modigliani (1992) and (1994). They argue that financial reserve is a form of security against periods of radical changes in income. This is referred to as the precautionary motive. It therefore follows that accumulation of financial reserves is a form of precautionary behaviour which is shaped by individual's changing expectations regarding the economic situation.

This theory strongly supported both the independent variables and the dependent variable of this study. The financial reserve stated in the theory is actually saving and the radical changes in income actually refer to different levels of income. The precautionary behaviour by individuals in response to changing expectations in economic situations is mainly informed by personal factors. The consideration of economic situation in financial decision making was in support of market frictions and availability of information as determinants of saving. This is because economic analysis relies on the information which is available in the market.

2.3 Conceptual Framework

According to Mugenda and Mugenda (2003) a conceptual framework is a hypothesized model, which identifies the concepts under study and their relationships. The relationship between the independent and dependent variables for this study was as shown in figure 2.1

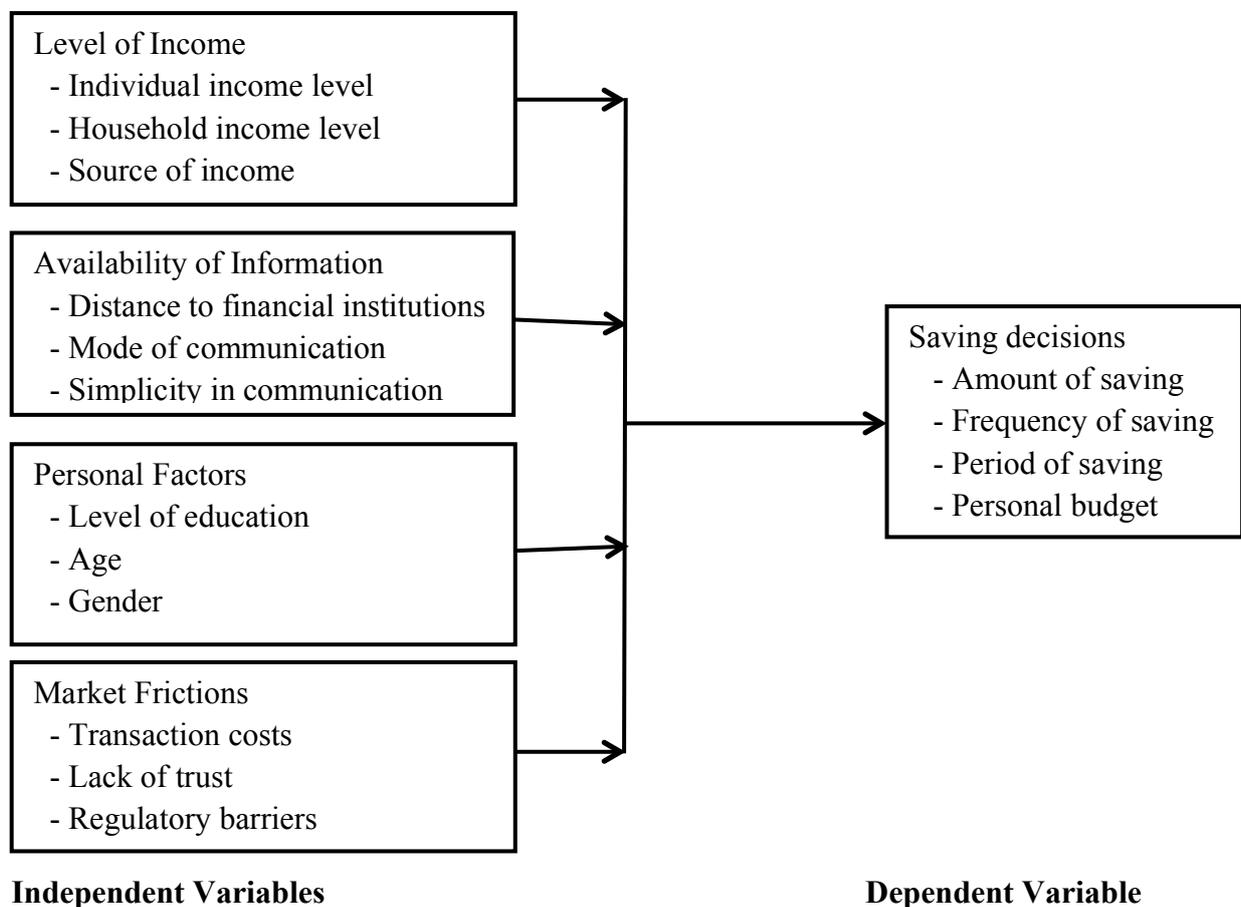


Figure 2.1 Conceptual Framework

2.3.1 Saving Decisions

According to Ike and Idoge (2006) saving refers to accumulation of assets that perform specific function for the saver. It follows that the accumulated assets could either be financial or non-financial. The saver could be an individual, business or government.

Shipton (1990) says that saving is setting aside some items for future use. These items could be in the form of money, livestock, jewelry, crops and resalable household goods. Some of these forms of saving are specific to gender while others are used secretly. Some people have been noted to keep their money in sealed containers, others deposit their money with trusted local keepers while others request for deferred wages. There is also a tendency among people who cannot properly manage liquidity to convert their wealth into forms that shield it from the daily demands of their spouses, kin and neighbours.

Virmani (1986) argues that people save in order to undertake future personal consumption, make provision for expenditure on their children and leave bequests to their heirs. The amount and pattern of saving is influenced by tastes and motivation of savers as well as the constraints imposed by the market opportunities and the government. Potential savers normally weigh their tastes against available opportunities as shaped by the interaction between constraints and incentives.

Karlan et al. (2014) observes that saving in formal and informal instruments that have high risk, high cost and limited functionality can lead to undersaving compared with a world with perfect markets. This undersaving can in turn have important welfare consequences such as variable personal or household consumption, low resilience to economic shocks and foregone profitable investments. Microfinance institutions have been broadening their primary focus on

microcredit to include saving products. There is a widespread interest in urging people to save more but most of the time the target sections of the population remains unclear. Increase in savings flows into a saving vehicle must come from somewhere. The source could be lower consumption, increased debt, lower savings elsewhere, increased income or informal sources which are usually difficult to measure.

According to Piana (2003) accumulation and investment of personal savings gives rise to personal wealth stock. An increase in personal savings can boost investment by firms if financial institutions finance business investments by making use of deposits held. Personal savings tend to reduce during the time of economic recession because people usually try to keep the same level of consumption with the hope that the economic disturbance would be short-lived. However, as the economic reality of a recession becomes clearer and previously created saving buffers are exhausted, people tend to consume less and save more in an effort to restore saving buffers. On the other hand, the optimistic expectation created by economic recovery leads to reduced saving until the fast growing income allows both higher consumption and saving.

According to Demirguc-Kunt and Klapper (2012) formal saving varies widely across regions, income groups and individual characteristics. This variation is mainly caused by existence of barriers such as high costs, physical distance and lack of proper documentation. The development of inclusive financial systems helps the poor and other disadvantaged groups to meet their wide range of needs which cannot be fully financed by their limited savings. The introduction of mobile money has recorded great success in promoting financial inclusion especially in sub-Saharan Africa. In addition, informal saving clubs are commonly used in developing economies as substitutes or complements to operating formal savings accounts.

2.3.2 Level of Income

Rószkiewicz (2014) observes that creation of financial reserves and the conditions of saving are usually shaped by individual perception of income levels and associated material conditions. For instance, if no bequests are made then households or individuals will only accumulate reserves after attaining financial independence. Individuals or households with higher incomes are likely to attain financial independence faster than those with lower incomes. The creation of buffer reserve requires sufficient income which must be properly managed in addition to exercising self-restraint in consumption. The active management of available income results into either a positive or negative gap between disposable income and expenditure. A positive gap represents residual savings which results from unintentional accumulation of financial resources while a negative gap represents unconscious and unintentional loan. However in current times there is a growing trend of individualism and consumerism which is promoting an attitude of living for the moment with less focus on the future and ignoring social responsibilities.

According to Demirguc-Kunt and Klapper (2012) the most common reason worldwide given by people who do not operate formal bank accounts is lack of enough money to use one. This points to the fact that individuals and households must first meet their consumption needs before they can engage in saving. In addition, having a formal bank account attracts costs which cannot be conveniently met by people whose income stream is low or irregular. The penetration of bank accounts is higher in economies with higher national incomes as measured by GDP per capita. This is because individuals and households in such economies usually have higher incomes which enable them to meet their consumption needs and accumulate some financial reserves. However, the level at which income is said to be enough remains a matter of individual perception and this influences the choice of saving vehicle.

According to Jongwanich (2009) the richer we are the lower the proportion of our income is spend on consumption and the higher is our saving. Individuals and households are likely to be richer in an environment characterized by increasing economic growth, decreasing inflation and better terms of trade. These richer individuals and households usually spend less and save more proportions of their incomes. However, the saving rates of these individuals and households are usually lower when they have added responsibility of taking care of both old and young dependents. This happens because a higher proportion of their income has to be allocated towards consumption by these dependents.

Coulibaly and Diaby (2013) points out that households, firms and governments make their saving decisions based on their current and future incomes which are determined by the volatility of the economy. The level of income will also influence the choice of saving vehicle. Low income households usually prefer non-financial vehicles such as livestock, land and cash holdings among others.

Piana (2003) argues that given a certain level of income the decision to buy goods and services negatively affects saving. In this case saving acts as a resource slack that provides a buffer against shocks in income and consumption desires. However, saving can be actively planned through binding agreements as is the case with most pension schemes. If this is the case then consumption is adjusted according to changes in the level of income. Additionally, if an individual or household have negative expectations about future income, then they reduce their consumption and engage in saving to create a cushion against future hardships. The rich usually save more than the poor with most savings financed by overall yield of wealth. This is because they can comfortably meet their consumption needs and allocate a higher proportion of their consolidated income towards saving.

2.3.3 Availability of Information

According to Karlan et al. (2014) both developed and developing countries have significant share of their populations lacking basic financial knowledge which is essential for promoting saving. There is a tendency of low knowledge people to have psychological biases which drive undersaving as they mainly rely on social learning in making saving decisions. The information available within the social learning set up is usually based on subjective opinions and its use normally leads to sub-optimal financial decision. For instance social norms especially among the poor households necessitate that an individual provides support to friends and relatives when called upon so cash in hand is highly preferred. This cash which is normally given towards support of friends and relatives is mostly for consumption purposes and as such the level of saving is reduced.

Calvet, Campbell and Sodini (2007) argue that low knowledge people are likely to opt out of the market when saving returns are risky. This is because when saving returns are risky there is need for well thought-out diversification which is designed after analysis of available market information. In most cases low knowledge people usually have low education and low wealth which exposes them to poor diversification if they chose to participate in the financial markets. Individuals with low education usually find it difficult to understand and interpret available information which is necessary for making optimal financial decisions. This situation is usually worse if the available information is presented in a form which is too complex for low knowledge people and as such they are pushed towards informal financial products. The alternative for these disadvantaged financial market players would be to engage the services of financial consultants and agents but their low wealth keeps them off. The welfare cost for non-participation in risky markets is usually lower than under-diversification cost for low knowledge people so they usually take this as their best option.

Carpena, Cole, Shapiro and Zia (2011) observe that financial education influences individual's awareness and attitude towards financial products. It follows that individuals and households who receive financial education are not only aware about the financial products and services which are available to them but they are also familiar with the details of such products and services. This equips them with sufficient information to choose their best saving product or service alongside other crucial financial decisions. In addition, financial education plays an important role in changing the attitude of individuals towards formal financial products. This usually happens when numerical skills of individuals are improved to a level where they can compare different financial products and make optimal decisions. However, the provision of financial education does not immediately make the recipients better financial decision makers but the mode of communication used normally enhances the skills required for optimal financial decisions. For instance familiarizing individuals with available financial products or planning tools will be more effective than emphasizing on financial numeracy skills.

According to Njeru (2013) information asymmetry increases perceived risk hence influences the choice of source of finance. It follows that information asymmetry influences mobilization of saving as a source of finance. There is a notable reliance on savings as a significant source of finance for small and medium enterprises in Kenya. However, there is generally poor knowledge and awareness of financial products in Kenya. The situation has been caused by existence of fragmented financial information coupled with insufficient targeted awareness and educational schemes. This lack of appropriate information has given room to misconceptions which have led to misuse of finances which could have otherwise been channeled to appropriate saving products or services.

2.3.4 Personal Factors

Virmani (1986) observes that tastes and motivation of savers contribute in determining the amount and pattern of saving. The earnings of individuals usually increase with education and experience other factors held constant. However, these earnings usually decrease at retirement so individuals who are keen on smoothing their lifetime consumption usually engage in saving activities during high income years. It follows that individuals who are at the peak of their careers are usually more active in saving compared to those who are either retired or about to retire. In addition, individuals working in economic sectors which are prone to uncertainty are usually more active in saving compared to those working in stable economic sectors. The timing and number of children also influences the saving behaviour of individuals and households. Some households increase savings in anticipation of children birth while others deplete their savings in taking care of their large families.

According to Horioka and Wan (2007) the age structure in a population is an important predictor of saving patterns. For instance a decrease in the dependency ratio usually leads to an increase in the saving rates. The dependency ratio consists of children and old people both of whom rely on the working population for their consumption needs. The households or individuals with relatively greater number of dependents are usually less active in saving since a significant portion of their earnings is committed towards consumption. The absence of policies limiting the number of children per household coupled with increased life expectancy usually leads to high dependency ratios. This in turn lowers the national saving rates.

Njeru (2013) identifies gender, religion and education level as some of the personal characteristics which might influence financial decisions. Individuals who are relatively better

educated usually make better financial decisions. This is because they are able to understand the range of financial products available then choose the one or a portfolio which best suits them. However, training normally plays a great role towards overcoming financial illiteracy thus leading to better financial decisions. The gender and religion of an individual can play a significant role in influencing financial decisions especially where specialized financial products are offered targeting a particular portion of the population.

Saving decisions are usually made by the person who controls finances. It follows that in a household the man or woman who controls family finances makes the ultimate saving decision and as such gender becomes a key determinant of saving decisions. Similarly if saving products are offered to a specific gender or religion, then these personal factors become key determinants of saving especially in mixed populations.

Masson, Bayoumi and Samiei (1998) postulate that a high proportion of working age in a population corresponds to high private savings but as this cohort reaches retirement age then their private savings decline. Individuals are usually active in saving during their working age as they seek to provide for their retirement. The accumulated savings are usually used for consumption during retirement and this normally reduces the overall saving rates. A higher proportion of the young and elderly in relation to the persons of working age is usually associated with lower saving rates. This is because the young and elderly usually do not earn incomes but depend on the working age for their upkeep. As a result, a higher proportion of the incomes of the working age is allocated to consumption at the expense of saving hence reducing the saving rates. In addition, the young people usually lower their saving if they have access to bequests left by their parents or other relatives. This is because they do not

usually see an imminent threat to their smooth consumption especially if the bequests are substantial.

2.3.5 Market Frictions

According to Virmani (1986) the amount and pattern of saving is affected by constraints imposed by the market opportunities and the government among other factors. The incentives provided by the government play a vital role in determining the saving rates. Saving decisions are influenced to a great extent by uncertainty which is determined by the nature of insurance and annuity markets. The nature of these markets also determines the effectiveness of government policies on savings. There is a tendency of extended family and other social institutions to substitute formal credit markets and often influence saving behaviour. Saving decisions are either personal or corporate but both depend on consumption plans. The government can implement policies which provide incentives to corporate saving such as investment credits, development rebate and tax holidays among others. Similarly, a system of capital taxation with full loss offset can effectively increase direct savings.

Karlan et al. (2014) observe that market frictions such as transaction costs, lack of trust and regulatory barriers affect provision of saving products especially among the poor. The use of formal saving products attracts costs such as account opening fees, minimum balance requirement, withdrawal fees, transport and other related costs. These costs are usually a large proportion of poor people's savings. If the cost associated with opening and running formal bank accounts is subsidized, the rate of up-take of formal savings accounts usually increases especially among the poor. In addition, there are other non-monetary costs which discourage mostly the poor from engaging in formal saving. For instance opportunity cost in terms of time and forgone wages can discourage potential savers if they have to physically travel to the

financial institutions offering saving products. However, there has been an effort to address this problem by introducing products and technologies that change the way people access and interact with financial institutions. Lack of trust is another form of market friction. The trust accorded by savers to a particular financial institution will influence the willingness of individuals to save. The presence or absence of trust on a financial institution or a financial product is usually as a result of a subjective assessment by savers on its reliability. The friction brought about by lack of trust also exists between financial institutions and their regulators. This is because some of the regulation requirements force the financial institutions to handle their customers or potential customers in a manner that creates mistrust between them. This mistrust leads to either increased cost of monitoring and enforcement or unconsummated transactions. For instance the strict regulations aimed at monitoring bank account ownership and transactions discourage entry by the poor into the formal financial institutions. These prudential regulations aimed at eliminating money laundering and funding of terrorisms have in addition imposed additional transactions costs by both banks and their customers.

According to Ivatury and Mas (2008) due diligence requirements for expansion of small balance savings accounts has hindered their growth. This is because if a small balance savings accounts holder wants to make additional deposit they are required to provide specific identification documents showing details such as their name, date of birth, nationality and residential address. The small savers usually have few formal documents and as such these requirements normally lock them out of the formal saving institutions. In addition, formal financial institutions normally collect predetermined information about their customers and monitor their account activities and this makes most small savers uncomfortable. There has been a call for low cost standardized requirements which will still achieve the objective of

knowing the customer to the extent required by regulators of financial institutions. For instance the use of biometric identification can eliminate the need for several documents to identify a customer and in turn lead to financial inclusion of the poor.

2.4 Empirical Review

This section reviewed some of the studies that had been conducted in relation to the variables under this research.

Ike and Umuedafe (2013) conducted a study to find out the Determinants of Savings and Capital Formation among rural farmers in Isoko North local area in Nigeria. A multi-stage random sampling procedure was used to select a sample of 175 farming households to whom questionnaires were administered. The study found out that majority of rural farmers accumulate savings in non-monetary form such as livestock and their saving decisions are determined by their level of income, age and distance to financial institutions. According to Collins, Morduch, Rutherford and Ruthven (2009) even the poor in the society too have complex financial lives characterized by saving and borrowing using formal and informal tools with an eye for the future. They reached this conclusion after studying over 250 families in India, Bangladesh and South Africa through interviewing each of them every two weeks for a year.

Brune, Giné, Goldberg and Yang (2011) conducted a study in Malawi among 3150 smallholder tobacco farmers organized into 299 farmer clubs to establish their commitment to saving. A third of the farmers' clubs were assisted in opening ordinary savings accounts. Another third was assisted in opening both ordinary and commitment savings accounts. The final third was not assisted in opening any account. It was noted that providing these tobacco

farmers with access to any saving account increased their level of savings. According to a survey done by Djankov, Miranda, Seira and Sharma (2008) involving 4765 Mexican households, majority of those without bank accounts said they did not have enough money to warrant opening of bank accounts. This finding was similar to that of Ike and Umuedafe (2013) who identified level of income as one of the factors determining saving and capital formation among rural farmers in Isoko North local area in Nigeria.

Inganga et al. (2014) conducted a study to find out the factors affecting customer demand of the financial services offered by commercial banks in Nairobi County. In this study, a sample of 115 respondents drawn from 13 commercial banks was investigated. The researchers found out that individuals with high levels of income had relatively higher levels of savings. These researchers recommended further study on the problems facing saving culture in Kenya. Burgess and Pande (2005) established that expansion of both credit and saving financial services to the underserved areas in India between 1977 and 1990 led to reduction in poverty. This was achieved through a change in regulation that allowed banks to expand and offer services to the underserved areas. This observation agreed with Ike and Umuedafe (2013) whose study established that distance to financial institutions was one of the factors determining saving and capital formation among rural farmers in Isoko North local area in Nigeria.

Flory (2011) studied the effect of bringing banks closer to geographically secluded populations in Malawi. In this study, a fully-equipped mobile van “bank on wheels” was introduced to geographically secluded populations and informative campaigns done to encourage uptake of formal saving. An analysis of two-year panel dataset containing 2006 households showed an increase in formal saving following this intervention. Cole, Sampson

and Zia (2011) conducted a study to compare price and information as barriers to saving in Indonesia. A free two-hour financial education program on the workings and benefits of bank accounts was offered to the target population. It was noted among those who accepted to participate, those with low level of education or financial literacy increased their uptake of formal bank accounts. In the study done by Ike and Umuedafe (2013) on the determinants of saving and capital formation among rural farmers in Isoko North local area in Nigeria, age of the farmers was identified as one of the determinants.

Cole et al. (2011) in their study where they offered a free two-hour financial education to their target population in Indonesia noted that the level of education influences the uptake of formal bank accounts. Similarly, Carpena et al. (2011) established that financial education influences awareness and attitudes of individuals towards financial products and financial planning tools. This conclusion was reached after offering video-based financial education program to participants drawn from 1200 urban households in Western India. However, in another study in Western India done by Field, Jayachandran and Pande (2010) giving financial literacy training to women working in the informal sector did not have an impact on their probability of saving. A sample of 636 women drawn from the Self Employed Women's Association participated in this study.

The cost of opening and maintaining bank accounts influences the take-up of formal saving accounts and the saving balances among rural populations. This was informed by a study done by Dupas and Robinson (2013) in Kenya focusing on savings constraints and microenterprise development. This study focused on 250 self-employed individuals in a market area in Western Kenya from which a sample of 156 individuals was randomly selected and given an opportunity to open bank accounts with the opening fees and minimum balance

paid for by the researchers. This intervention increased the uptake of formal bank accounts. Prina (2013) conducted a similar field study to find out the effects of eliminating the cost of opening formal savings accounts among the poor in Nepal. The study focused on 1118 households in 19 slum settlements from which a sample of 567 female household heads were randomly selected and given the opportunity to open formal bank accounts which did not attract any fees. It was noted that over 80% of the sampled household heads opened formal bank accounts and used them frequently indicating that they had been held back by the associated costs. In a related study of 564 unbanked households in Indonesia done by Cole et al. (2011) where the subsidy to open a bank saving account was increased from \$3 to \$14, the uptake of bank saving accounts increased three-fold.

Chin, Karkoviata and Wilcox (2011) conducted a study on 184 Mexican immigrants in the United States of America to find out the impact of overcoming a regulatory barrier on saving. It was found out that those in the sample who were assisted and given a fee waiver to obtain formal identification cards were more likely to increase their savings since the cards were a requirement for opening bank saving accounts. The study by Djankov et al. (2008) seeking to find out the main reason for not having a bank account among 4765 Mexican households established a very weak correlation between opening bank accounts and confidence in the financial institutions.

2.5 Critique of Existing Literature

The reviewed theories which relate to saving decisions recognize income level of households as a major determinant of saving decisions. In addition they support the view that income declines with advancement in age so saving is seen as a cushion for the future. However, these theories do not make a distinction between individual income and household income.

This distinction is important because household income could be earned by more than one member of the household with diverse saving needs. In addition, income does not always decline with advancement in age. For instance if individuals or households invest their savings in profitable ventures their ordinary income is enhanced and this could actually increase in the future periods.

It is clear from review of existing literature that saving decisions are made with an eye into the future. The savings could be for the benefit of the savers or their descendants. The personal benefit could be smooth consumption in the future while descendants benefit from bequests in addition to smooth future consumption. However this proposition does not consider the possibility that successful children can fully take care of the future needs of their parents and as such the parents might not necessarily need their own saving for the future.

Most of the existing studies focused on formal savings as the indicator of whether individuals or households were engaged in saving decisions. Such studies revolved around checking whether their target populations had bank accounts. However, informal saving which is common among most rural populations cannot be overlooked. It entails practices such as saving cash under mattresses, keeping livestock and saving in informal groups. The challenge with informal saving is that no records are maintained and as such this contribution to national economies is usually unaccounted for.

The existing literature clearly brings out the determinants of saving decisions which can be summarized as level of income, availability of information, personal factors and market frictions. However, it is worth noting that even though individuals and households may have the same level of income, same information and have access to the same market conditions,

personal factors are usually not universal. In addition, the circumstances of individuals and households change over time and so is the economic development in a country. This means that there is a need and there will always be a need for empirical studies on the determinants of saving decisions among human populations. The reviewed studies done in Kenya did not focus on the determinants of saving decisions among rangeland communities.

2.6 Research Gap

The critique of existing literature revealed that saving was not an end to itself especially where accumulated savings were invested to generate further income. The factors that determine saving decisions could be universal in nature but their relative importance remains diverse among human populations. The economic conditions and individual circumstances change over time and so does the relative importance of the determinants of saving. This is why empirical study on the determinants of saving among human populations remains inconclusive.

This study investigated the influence of the level of income, availability of information, personal factors and market frictions on saving decisions among members of a rangeland community, which had not been adequately addressed by reviewed studies.

2.7 Summary

Saving is setting aside monetary or non-monetary assets for future use. The saving decisions made by individuals or households lead to accumulation of either formal or informal savings. In the case of formal saving, the asset is usually money or other valuables saved in bank accounts while informal saving is usually made up of assets such as money kept in homes, livestock and land. The motive of saving could be smoothing future personal consumption, making provision for expenditure on children and leaving bequests to heirs.

The major factors that determine saving decisions as identified from existing literature include level of income, availability of information, personal factors and market frictions. There is a tendency of individuals or households with higher levels of income to accumulate savings but there is evidence that even the poor in the society make saving decisions. The availability of information to potential savers plays a major role in shaping their saving decisions. This explains why potential savers who are closer to formal financial institutions usually engage in formal saving while those in rural areas away from formal financial institutions usually engage in informal saving. The mode of communication used to reach the potential savers also contributes in shaping saving decisions since it determines their understanding of available saving options.

Personal factors such as level of education, age and gender have also been found to influence saving decisions. Individuals with higher levels of education and middle age usually engage in formal saving. The gender that controls household income in a particular society usually makes household saving decisions. Additionally, market frictions such transaction costs, lack of trust and regulatory barriers usually discourage formal saving especially among low income earners in the society.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter contains the research design, which was adopted in this study and identifies the target population from which a representative sample was drawn. In addition, it contains explanation on the sampling frame, sample size and sampling technique for this study. Finally it contains details on the data collection instrument, data collection procedure and data analysis and presentation methods adopted in this research.

3.2 Research Design

Research design refers to the general approach adopted by the study in order to obtain evidence which addresses the research questions as unambiguously as possible. This research followed mixed methods research design, which entails use of quantitative and qualitative study approaches.

According to Namusonge (2010) this method is suitable where the researcher wishes to use direct query to gather descriptive information about people or attitudes in relation to one or more variables. This view is corroborated by George and Bennett (2005) who argue that a good descriptive research effectively answers the ‘what’ questions and sets the stage for ‘why’ questions of explanatory research. A mixed research design, which incorporates elements of descriptive research, was thus deemed as the most appropriate for this study.

3.3 Target Population

According to Mugenda and Mugenda (2003) population refers to the entire group of individuals, events or objects that have a common observable characteristic. In the case of this study, the total population was all members of Maasai Group Ranches in Kajiado County, Kenya. However, due to time and financial limitations, the researcher focused on all registered members of Kuku Group Ranches as shown in Table 3.1.

Table 3.1: Population Frame

Group Ranch Name	Registered Members
Kuku A	6,417
Kuku B	6,250
Total	12,667

Source: Kuku Group Ranches Registers (2016)

3.4 Sampling Frame

According to Saunders, Lewis & Thornhill (2009) a sampling frame for any probability sample is a complete list of all the cases in the population from which a sample is drawn. In the case of this study, the sample frame consisted of the 12,667 registered members of the Kuku Group Ranches.

3.5 Sample Size and Sampling Technique

According to Mugenda and Mugenda (2003) the rule of thumb is to obtain as big a sample as possible. However, due to time and resource constraints the following formula is used to determine the sample size if the target population is greater than 10,000.

$$n = \frac{Z^2 pq}{d^2}$$

where: n = the desired sample size (for target population greater than 10,000)

z = the standard normal deviate at the required confidence level

p = the proportion in the target population estimated to have characteristics of interest

q = 1-p

d = the level of statistical significance set

Mugenda and Mugenda (2003, as contained in Fisher, Laing and Styoeckel, 1983) recommend that if there is no available estimate of the proportion in the target population that has the characteristics of interest, then use 50%. This was the case for the target population in this study. The z-statistic is 1.96 with p being 50% and the desired accuracy is at the level of 5%. The sample size for the proposed study is computed as follows:

$$n = \frac{(1.96)^2 (.50)(.50)}{(.05)^2}$$

$$n = 384$$

This study therefore used a sample of 384 registered members of Kuku Group Ranches drawn from both Kuku A and Kuku B.

Sampling technique refers to the process of selecting individuals, objects or subjects that will form the representative sample. In this study, a stratified random sampling was used. The use of strata ensured that data was collected from both registered members of Kuku A and Kuku B Group Ranches. The sample was allocated to Kuku A and Kuku B Group Ranches on proportional basis so as to reflect the ratio of membership in the target population. The use of a random sampling method ensured that any registered member of both group ranches had an equal chance of being part of the sample. This helped in avoiding bias in the study. The sample distribution was as shown in Table 3.2

Table 3.2: Sample Distribution

Group Ranch Name	Registered Members	Sample Size
Kuku A	6,417	195
Kuku B	6,250	189
Total	12,667	384

Source: Kuku Group Ranches Registers (2016)

3.6 Data Collection Instrument

Semi-structured questionnaires were used to collect primary data during this research. This enabled the researcher to collect both quantitative and qualitative data. The questionnaires were addressed to registered members of Kuku Group Ranches and sought to find out the determinants of their saving decisions. According to Kothari (1993) questionnaires give respondents adequate time to give well thought out answers. Kothari and Pals (1993) observe that open-ended questions give respondents freedom of response whereas closed questions facilitate consistency of certain data across respondents.

3.6.1 Validity of Data Collection Instrument

Validity refers to the degree to which results obtained from analysis of collected data actually represent the phenomenon under study. Researchers often resort to sampling validity due to the inherent difficulty in constructing an instrument that includes all possible measures of the phenomenon under study. It is common for researchers to use professionals or experts in a particular field to assess content validity of research instruments (Mugenda and Mugenda, 2003). The measures and related questionnaires for this research were developed in consultation with the supervisor and other finance professionals. They were therefore deemed to be valid in relation to this study.

3.7 Pilot Test

Mugenda and Mugenda (2003) recommend a pretest sample of between 1% and 10%. In this study the researcher used a pretest sample of 4 registered Kuku Group Ranch members (1%) to whom questionnaires were administered. The resultant data was analysed and correlated. Problems detected during the pilot test were corrected before the actual study. The group ranch members selected for the pilot test were avoided during the actual study where 384 questionnaires were administered.

3.8 Data Collection Procedures

The researcher trained data collection assistants who were fluent in both English and *Maa* languages to help in interpreting questionnaires to members of Kuku Group Ranches who formed part of the research sample but had low literacy levels. Njeru (2013) administered questionnaires to respondents with low level of education through interpretation. The registered group ranch members completed the questionnaires and handed them back to the researcher on the spot. The researcher offered any clarification, which was required by the respondents during the research, and this improved the quality of the collected data.

3.9 Data Analysis and Presentation

The collected data was analysed using a combination of designs. This included descriptive statistics such as means, standard deviations, frequencies and percentages alongside ordinary least squares regression. Graphical presentations, charts and tables were used in the report of findings. Mugenda and Mugenda (2003) observe that descriptive statistics facilitate meaningful description of distribution of scores or measurements using a few indices or statistics. The regression model was as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 - \beta_4 X_4$$

Where:

Y = Saving Decisions

β_0 = Constant

β_1 = Coefficient of Level of Income

X_1 = Level of Income

β_2 = Coefficient of Availability of Information

X_2 = Availability of Information

β_3 = Coefficient of Personal Factors

X_3 = Personal Factors

β_4 = Coefficient of Market Frictions

X_4 = Market Frictions

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter contains data analysis, findings and interpretation. The results were presented in tables and diagrams. The analyzed data was arranged under themes that reflected the research objectives.

4.2 Response Rate

The number of questionnaires that were administered was 384. A total of 287 questionnaires were properly filled and returned. This represented an overall successful response rate of 74.7% as shown in Table 4.1. According to Mugenda and Mugenda (2003) and also Kothari (2004) a response rate of above 50% is adequate for a descriptive study. Babbie (2004) also asserted that return rates of above 50% are acceptable to analyze and publish, 60% is good, 70% is very good while above 80% is excellent. Based on these assertions from renowned scholars, 74.7% response rate was very good for the study.

Table 4.1: Response Rate

Response	Frequency	Percentage
Returned	287	74.7%
Unreturned	97	25.3%
Total	384	100%

4.3 Demographic Characteristics

This section consists of information that describes basic characteristics of the respondents such as group ranch membership, gender, age, marital status, level of education and primary source of income.

4.3.1 Group Ranch Membership

The respondents were asked to indicate which group ranch they belong to. Majority (56%) of the respondents indicated that they belong to Kuku B Group Ranch while 44% indicated that they belong to Kuku A Group Ranch. This implied that the two Group Ranches were fairly represented in the study.

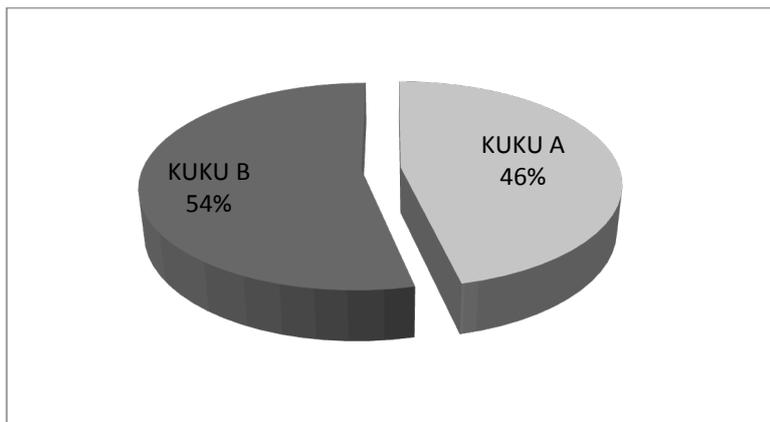


Figure 4.1: Group Ranch Membership

4.3.2 Gender of the Respondents

Respondents were asked to state their gender. Majority (76%) of the respondents were male while only 24% were female. This implied that membership of both Group Ranches was male dominated.

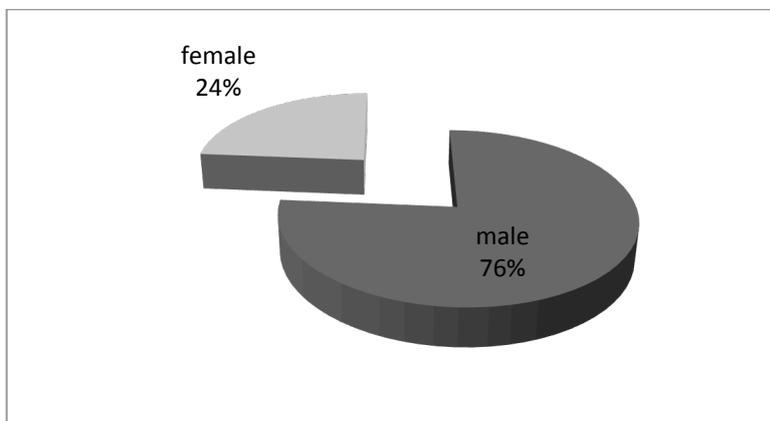


Figure 4.2: Gender of the Respondents

4.3.3 Age of the Respondents

The respondents were asked to specify their age brackets. Majority (76.3%) of the respondents indicated that they were aged between 15-59 years while 21.3% of the respondents indicated that they were above 59 years. The remaining 2.3% of the respondents indicated that they were below 15 years. This indicated that most of the respondents who were interviewed were within the working population age bracket. In addition, majority of those interviewed had been members of the Kuku Group Ranches for a long period based on their ages therefore had a good knowledge on group ranch livelihoods. This study relied on age as one of the attributes of personal factors that influence saving decisions. The finding that majority of the respondents were within the working population age bracket and were involved in some form of saving implies that age as a personal factor influences saving decisions. This finding agrees with Ike and Umuedafe (2013) who established that age among other factors was a determinant of savings and capital formation among rural farmers in Isoko North local area in Nigeria. In addition, this finding supports life cycle theory put forward by Modigliani and Brumberg (1954) in that individuals make saving decisions based on their cycle in life, which is usually determined by their age bracket.

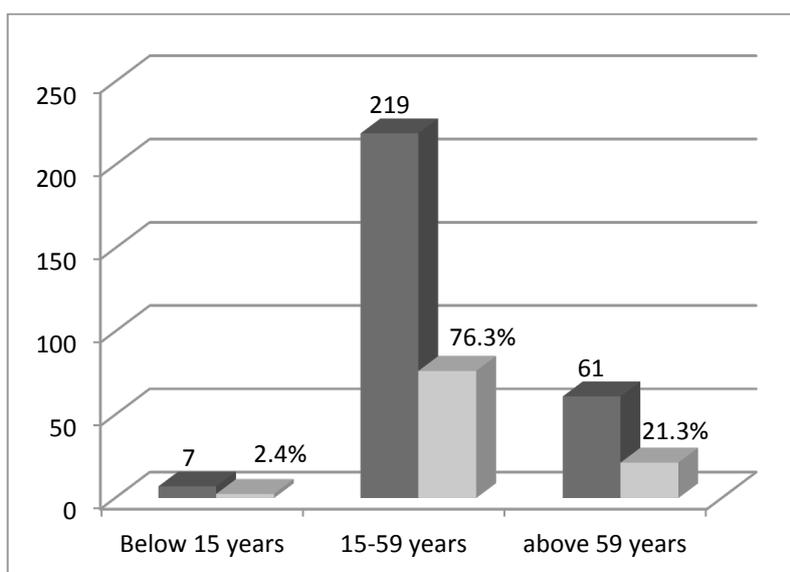


Figure 4.3: Age of the Respondents

4.3.4 Marital Status of the Respondents

The respondents were asked to indicate their marital status. The majority of the respondents (82.2%) indicated they were married while 13.2% indicated they were single. The remaining 4.5% fell under other categories. This implied that majority of the respondents in this study had family responsibilities which could have influenced their saving decisions.

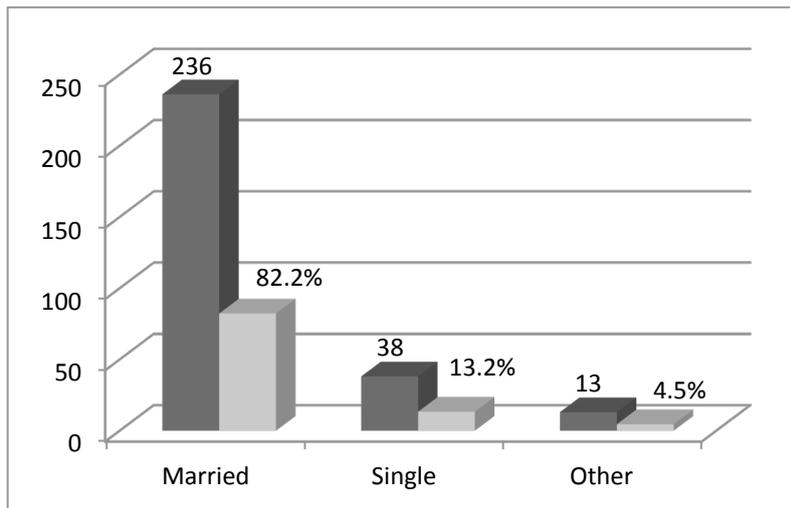


Figure 4.4: Marital status of the Respondents

4.3.5 Level of Education

The respondents were asked to specify their level of education. Majority (44.3%) of the respondents indicated that they were uneducated, 23.3% of the respondents indicated that they had studied up to primary school, 15.7% of the respondents indicated that they had studied up to secondary school, 12.5% of the respondents had attained college education and 4.2% of the respondents indicated that they had attained university level. This indicated that most of the respondents who were interviewed had some form of basic education. This study relied on level of education as one of the attributes of personal factors that influence saving decisions. The finding that majority of the respondents had basic education and were involved in some form of saving implies that the level of education influences saving decisions. This finding agrees with Cole et al. (2011) and Carpena et al. (2011) who in their separate studies

established that financial education influences awareness and attitudes of individuals towards financial products and subsequent uptake. In addition, this finding supports life cycle theory put forward by Modigliani and Brumberg (1954); permanent income theory by Friedman (1957) and new theory of saving attributed to the work of Deaton (1990), Modigliani (1992) and (1994) in that financial decisions are shaped by the interaction of personal factors and individual's circumstances. However, this finding disagree with Field et al. (2010) who found out that provision of financial education to women working in informal sector in Western India did not have any impact on their probability of saving.

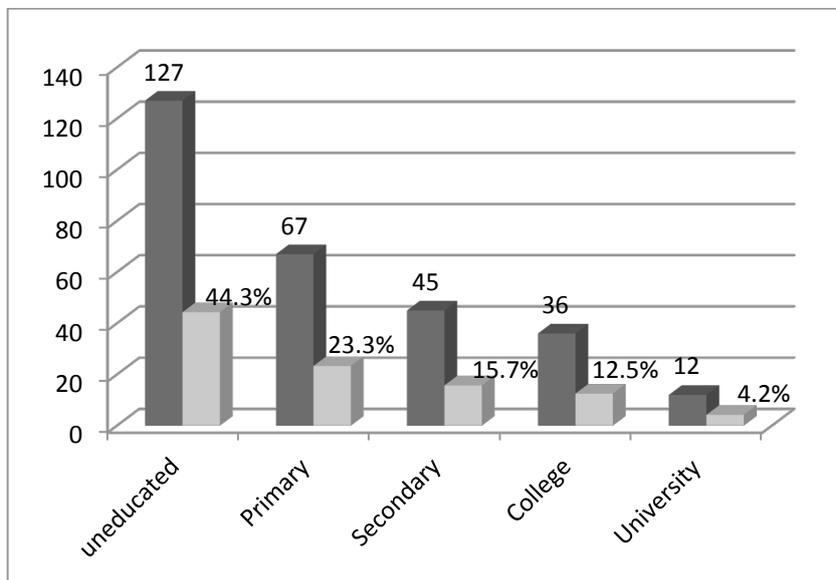


Figure 4.5: Level of Education

4.3.6 Primary Source of Income

The respondents were asked to specify their primary source of income. Majority (54.7%) of the respondents indicated that their primary source of income was livestock, 24.7% indicated employment, 11.9% indicated business, 6.6% indicated crop farming and the remaining 2.1% indicated other activities. This indicates that most of the respondents who were interviewed depended on livestock as their primary source of income.

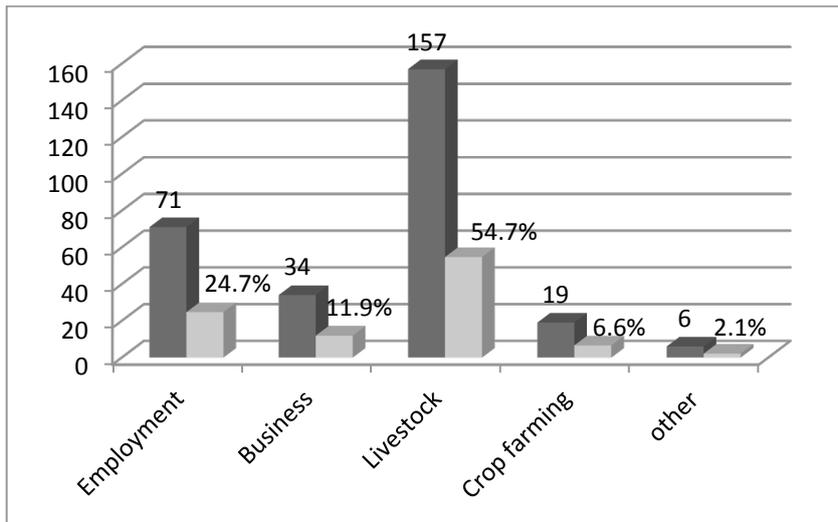


Figure 4.6: Primary Source of Income

4.4 Results and Discussion on the Study Objectives

The following section contains the results and discussion of the study in line with the research objectives.

4.4.1 Influence of the Level of Income on Saving Decisions

The first objective of this study was to establish if the level of income influenced saving decisions among members of Maasai Group Ranches in Kajiado County.

The respondents were asked to indicate their average daily gross income with respect to the given income scale derived from the schedule of basic minimum consolidated wages in Kenya as published by the Ministry of Labour, Social Security and Services through legal notice number 116 of 2015. 33.8% of the respondents indicated that they earned below Kshs 228.30, 44.6% of the respondents indicated that they earned between Kshs 228.30 and Kshs 456.60 and 21.6% indicated that they earned above Kshs 456.60. This means that majority of those interviewed in this study earned above the minimum daily wage in Kenya. The finding that majority of the respondents in this study were involved in some form of saving implies

that their level of income influenced their saving decisions. This finding agrees with Ike and Umuedafe (2013), Collins et al. (2009) and Inganga et al. (2014) who in their separate studies established that the level of income is one of the factors which influence saving decisions. In addition, this finding supports life cycle theory put forward by Modigliani and Brumberg (1954); permanent income theory by Friedman (1957) and new theory of saving attributed to the work of Deaton (1990), Modigliani (1992) and (1994) in that individuals make appropriate financial decisions at different levels of income with an aim of securing their futures.

Table 4.2: Level of Income

Income level	Frequency	Percentage
Below Kshs 228.30	97	33.8%
Between kshs.228.30 and Kshs 456.60	128	44.6%
Above 456.60 Kshs	62	21.6%
Total	287	100.0%

The respondents were also asked to indicate their levels of income in respect to the source of income. 30.7% of the respondents indicated that they earned above Kshs 913.20 from employment, 58.3% indicated that they earned between Kshs 228.30 and Kshs. 456.60 from business, 47.6% indicated that they earned between Kshs 228.30 and Kshs 456.60 from livestock, 57.9% indicated they earned below Kshs 228.30 from crop farming and 65.4% indicated that they earned below Kshs 228.30 from other sources. The average mean was 2.02 indicating that majority of the respondents earned between Kshs 228.30 and Kshs 456.60. These results imply that there is an effort by members of Kuku Group Ranches to diversify their sources of income by engaging in employment, business, livestock keeping, crop farming and other income generating activities. These results further imply that even though the members of Kuku Group Ranches predominantly keep livestock, they are not necessarily kept as a source of income but for cultural values.

Table 4.3: Level of Income per Source

Source of Income	Below 228.30 Kshs	228.30 to 456.60 Kshs	456.60 to 684.90 Kshs	684.90 to 913.20 Kshs	Above 913.20 Kshs	Mean	Std Dev
Employment	6.7%	28.0%	10.7%	22.7%	30.7%	3.39	1.41
Business	19.4%	58.3%	16.7%	0.0%	5.6%	2.14	0.93
Livestock	45.6%	47.6%	6.8%	0.0%	0.0%	1.61	0.61
Crop farming	57.9%	39.5%	2.6%	0.0%	0.0%	1.45	0.56
Other sources	65.4%	19.2%	15.4%	0.0%	0.0%	1.50	0.76
Average						2.02	0.85

The results presented in Table 4.4 shows the fitness of the regression model used in explaining the study phenomena. Level of income was found to be a satisfactory variable in explaining saving decisions. This was supported by coefficient of determination also known as the R square of 18.5%. This meant that the level of income explained 18.5% of the variations in savings decisions. These results further meant that the model applied to link the relationship of the variables was satisfactory.

Table 4.4:Level of Income Model Fitness

Indicator	Coefficient
R	0.430
R Square	0.185
Adjusted R Square	0.182
Std. Error of the Estimate	0.516

In statistics significance testing, the P-value indicates the level of relation of the independent variable to the dependent variable. If the significance number found is less than the critical value also known as the probability value (p) which is statistically set at 0.05, then the conclusion would be that the model is significant in explaining the relationship; else the model would be regarded as non-significant. Table 4.5 contains the results on the analysis of the variance (ANOVA). The results indicated that the overall model was statistically

significant. Further, the results implied that the independent variable which was level of income was a good predictor of saving decisions. This was supported by an F statistic of 64.451 and the reported p value (0.000) which is less than the conventional probability of 0.05 significance level.

Table 4.5: Level of Income Analysis of Variance

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	17.179	1	17.179	64.451	0.000
Residual	75.699	284	0.267		
Total	92.879	285			

Level of income and saving decisions were positively and significantly related ($r = 0.207$, $p = 0.000$). This meant that a unit increase in the level of income led to an increase in saving decisions by 20.7%.

Table 4.6: Level of Income Regression of Coefficients

Variable	B	Std. Error	T	Sig.
(Constant)	2.592	0.062	41.804	0.000
Level of income	0.207	0.026	8.028	0.000

The specific model was:

$$\text{Saving Decisions} = 2.592 + 0.207X_1$$

where X_1 is level of income.

The level of income and saving decisions were found to be positively and significantly related. An increase in the level of income led to an increase in saving decisions. Majority of those interviewed in this study indicated that their primary source of income was livestock. The basic consolidated daily income of most of those interviewed in this study was found to

be above the minimum daily wage in Kenya. When asked their main method of saving finances, majority of the respondents in this study indicated livestock.

These findings on the level of income as a determinant of saving decisions among members of Kuku Group Ranches were in agreement with the findings of the study done by Ike and Umuedafe (2013) on the determinants of savings and capital formation among rural farmers in Isoko North local area in Nigeria. This study found out that majority of the rural farmers accumulated savings in non-monetary form such as livestock and their saving decisions were determined by their level of income among other factors. Collins et al. (2009) in their study in selected families in India, Bangladesh and South Africa established that even the poor in the society too have complex financial lives characterized by saving and borrowing using formal and informal tools with an eye for the future. Similarly Inganga et al. (2014) in their study on the factors affecting customer demand of the financial services offered by commercial banks in Nairobi County established that individuals with high levels of income had relatively higher levels of savings. These findings were also in agreement with life cycle theory put forward by Modigliani and Brumberg (1954); permanent income theory by Friedman (1957) and new theory of saving attributed to the work of Deaton (1990), Modigliani (1992) and (1994). The point of convergence was that individuals and households make appropriate financial decisions at different levels of income with an aim of securing their future.

4.4.2 Effect of Availability of Information on Saving Decisions

The second objective of this study was to find out if the availability of information shaped saving decisions among members of Maasai Group Ranches in Kajiado County.

The respondents were asked to indicate their access to information in respect to whether they read, watched or listened to financial news. 39% of the respondents indicated that they read, watched or listened to financial news while 61% did not. It took the respondents an average of 1.82 hours to reach the nearest financial institution using available public transport.

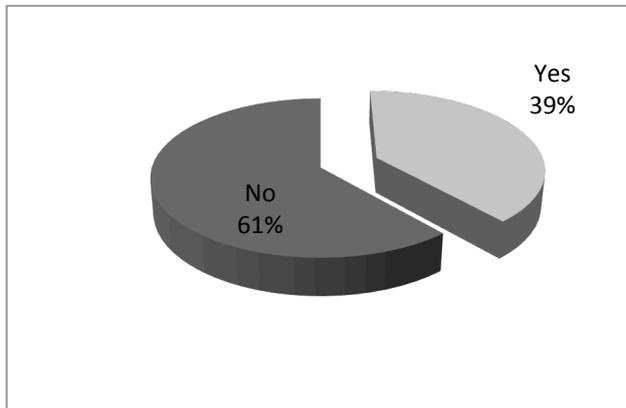


Figure 4.7: Access to Information

The respondents were also asked to indicate the extent to which they agreed or disagreed with given statements regarding their access to information relevant to saving decisions. Majority (46.9%) of the respondents disagreed that they had sufficient information about the saving products available in the market, 47.4% disagreed that information on saving products was normally communicated to them in a simple language, 42.3% disagreed that they were aware about formal saving products because they could easily reach financial institutions, 41.4% were neutral on whether saving products offered by financial institutions were not complicated for them to understand and 58.9% agreed that they liked putting their money where they could see it every day. The average mean was 2.8 indicating that most of the respondents who were interviewed did not have access to information relevant to saving decisions.

Table 4.7: Access to Information

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	Std Dev
I have sufficient information about the saving products available in the market	21.70%	46.90%	24.80%	5.60%	1.00%	2.2	0.9
Information on saving products is normally communicated to me in a simple language	13.20%	47.40%	27.20%	11.10%	0.70%	2.4	1.0
I am aware about formal saving products because I can easily reach financial institutions	11.20%	42.30%	30.10%	16.10%	0.30%	2.5	0.9
Saving products offered by financial institutions are not complicated for me to understand	7.40%	30.20%	41.40%	18.20%	2.10%	2.9	2.0
I like putting my money where I can see it every day	2.10%	9.40%	9.10%	58.90%	19.5%	3.9	1.2
Average						2.8	1.2

The results presented in Table 4.7 show the fitness of the regression model used in explaining the study phenomena. Availability of information was found to be a satisfactory variable in explaining saving decisions. This was supported by coefficient of determination also known as the R square of 26.2%. This meant that availability of information explained 26.2% of the variations in saving decisions. The results further meant that the model applied to link the relationship of the variables was satisfactory.

Table 4.8: Availability of Information Model Fitness

Indicator	Coefficient
R	0.512
R Square	0.262
Adjusted R Square	0.260
Std. Error of the Estimate	0.493

In statistics significance testing the P-value indicates the level of relation of the independent variable to the dependent variable. If the significance number found is less than the critical value also known as the probability value (p) which is statistically set at 0.05, then the conclusion would be that the model is significant in explaining the relationship; else the model would be regarded as non-significant. Table 4.8 provides the results on the analysis of the variance (ANOVA). The results indicated that the overall model was statistically significant. Further, the results implied that the independent variable which was availability of information was a good predictor of saving decisions. This was supported by an F statistic of 101.31 and the reported p value (0.000) which was less than the conventional probability of 0.05 significance level.

Table 4.9: Availability of Information Analysis of Variance

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	24.606	1	24.606	101.31	0.000
Residual	69.221	285	0.243		
Total	93.827	286			

Availability of information and saving decisions were positively and significantly related ($r = 0.315$, $p = 0.000$). This meant that a unit increase in availability of information led to an increase in saving decisions by 31.5%.

Table 4.10: Availability of Information Regression of Coefficients

Variable	B	Std. Error	T	P
(Constant)	2.158	0.091	23.677	0.000
Availability of Information	0.315	0.031	10.065	0.000

The specific model was:

$$\text{Saving Decisions} = 2.158 + 0.315X_2$$

Where X_2 is availability of information.

Availability of information and saving decisions were found to be positively and significantly related. An increase in the availability of information led to an increase in saving decisions. Majority of the respondents in this study indicated that they never read, watched nor listened to financial news. They further indicated that they did not have sufficient information about saving products in the market and neither was information on saving products communicated to them in a simple language. When it came to the question on whether saving products offered by financial institutions were complicated for them to understand, majority of the respondents were neutral affirming that they did not have information about the said saving products hence they could not tell whether they were complicated or not. However, majority of the respondents agreed that they liked putting their money where they could see it every day.

The findings on availability of information as a determinant of saving decisions among members of Kuku Group Ranches were similar to the findings of Brune et al. (2011) who in their study among smallholder tobacco farmers in Malawi found out that providing the farmers with access to any type of saving account improved their savings. Similarly these findings agreed with Burgess and Pande (2005); Ike and Umuedafe (2013); Flory (2011) and Cole et al. (2011) whose separate studies established that taking financial services closer to rural underserved communities accompanied with relevant information had a positive impact on the quality of their lives and related saving decisions. These findings were also in support of the new theory of saving attributed to the work of Deaton (1990), Modigliani (1992) and (1994) in that the economic analysis, which informs accumulation of financial reserves, relies

on the information available in the market. However, these findings disagreed with Field et al. (2010) whose study in Western India found out that provision of financial information to women working in informal sector did not have any impact on their probability of saving.

4.4.3 Effect of Personal Factors on Saving Decisions

The third objective of this study was to determine if personal factors motivated saving decisions among members of Maasai Group Ranches in Kajiado County.

The respondents were asked to indicate the number of their children and specify if they were the breadwinners for their families. Majority (71%) of respondents indicated that they were the breadwinners while 21% indicated that they were not. In addition, the respondents had an average of 5 children. This implied that majority of those interviewed in this study had the financial planning role for their families.

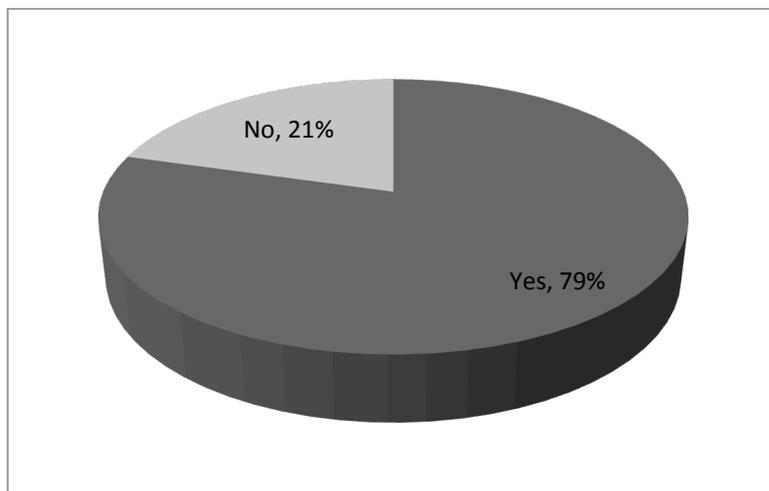


Figure 4.8 Family Breadwinner Roles

The respondents were also asked to indicate the extent to which they agreed or disagreed with given statements on their personal factors that are relevant to saving decisions. Majority (79.8%) of the respondents disagreed that they had been trained on how to accumulate

savings, 79.1% disagreed that they had been trained on how to keep simple books of accounts, 70.0% disagreed that they had been trained on how to make a personal budget, 50.2% disagreed that their financial literacy was above average and 50.9% disagreed that their level of education had assisted them in their choices of saving products. These results indicated that most of the respondents in this study acknowledged that their personal factors were weak towards making sound saving decisions. The average mean was 2.21 indicating that majority of the respondents disagreed with the given statements.

Table 4.11: Basic Financial Literacy

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std Dev.
I have been trained on how to accumulate savings	35.50%	44.30%	12.20%	6.6%	1.40%	1.94	0.93
I have been trained on how to keep simple books of accounts	35.20%	43.90%	7.30%	12.5%	1.00%	2.00	1.01
I have been trained on how to make a personal budget	24.40%	45.60%	13.20%	15.7%	1.00%	2.23	1.02
My financial literacy is above average	23.70%	26.50%	34.80%	13.2%	1.70%	2.43	1.05
My level of education has assisted me in my choices of saving products	27.20%	23.70%	23.70%	23.3%	2.10%	2.49	1.18
Average						2.21	1.04

The results presented in Table 4.11 show the fitness of the regression model in explaining the study phenomena. Personal factors was found to be a satisfactory variable in explaining saving decisions. This was supported by coefficient of determination also known as the R square of 30.9%. This meant that personal factors explained 30.9% of the variations in saving decisions. The results further meant that the model applied to link the relationship of the variables was satisfactory.

Table 4.12: Personal Factors Model Fitness

Indicator	Coefficient
R	0.556
R Square	0.309
Adjusted R Square	0.297
Std. Error of the Estimate	0.480

In statistics significance testing the P-value indicates the level of relation of the independent variable to the dependent variable. If the significance number found is less than the critical value also known as the probability value (p) which is statistically set at 0.05, then the conclusion would be that the model is significant in explaining the relationship; else the model would be regarded as non-significant. Table 4.12 provides the results on the analysis of the variance (ANOVA). The results indicated that the overall model was statistically significant. Further, the results implied that the independent variable which was personal factors was a good predictor of saving decisions. This was supported by an F statistic of 96.903 and the reported p value (0.000) which was less than the conventional probability of 0.05 significance level.

Table 4.13: Personal Factors Analysis of Variance

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	23.807	1	23.807	96.903	0.000
Residual	70.019	285	0.246		
Total	93.827	286			

Personal factors and saving decisions were positively and significantly related ($r = 0.332$, $p = 0.000$). This meant that a unit of positive variation in personal factors led to an increase in saving decisions by 33.2%.

Table 4.14: Personal Factors Regression of Coefficients

Variable	B	Std. Error	T	Sig.
(Constant)	2.291	0.080	28.510	0.000
Persona factors	0.332	0.034	9.844	0.000

The specific model was:

$$\text{Saving Decisions} = 2.291 + 0.332X_3$$

Where X_3 is personal factors.

Personal factors and saving decisions were found to be positively and significantly related. An improvement in personal factors led to an improvement in saving decisions. The personal factors considered in this study included gender, age, marital status, level of education and role of being the family breadwinner. Majority of the respondents in this study were married men within the age bracket of working population who were also the breadwinners for their families. When asked about their level of education, majority of the respondents indicated that they atleast had basic education. However when asked about their financial literacy, majority of the respondents indicated that they had not been trained on how to accumulate savings and neither had they been trained on how to keep simple books of accounts nor personal budgets. Similarly, majority of the respondents indicated that their financial literacy was not above average and their level of education had not assisted them in making choices of financial products.

The findings on personal factors as a determinant of saving decisions among members of Kuku Group Ranches agreed with the findings of Ike and Umuedafe (2013) who observed that age among other factors was a determinant of savings and capital formation among rural farmers in Isoko North local area in Nigeria. Similarly Cole et al. (2011) and Carpena et al. (2011) in their separate studies observed that financial education influences awareness and

attitudes of individuals towards financial products and subsequent uptake. These findings were in support of life cycle theory put forward by Modigliani and Brumberg (1954); permanent income theory by Friedman (1957) and new theory of saving attributed to the work of Deaton (1990), Modigliani (1992) and (1994) with the point of convergence being that financial decisions such as saving depend on individual's circumstances as defined by personal factors. On the contrary, these findings disagreed with Field et al. (2010) who observed that provision of financial education to women working in informal sector in Western India did not have any impact on their probability of saving.

4.4.4 Effect of Market Frictions on Saving Decisions

The fourth objective of this study was to assess if market frictions affected saving decisions among members of Maasai Group Ranches in Kajiado County.

The respondents were requested to indicate if the fees charged by financial institutions in Kenya were too high. Majority (89%) of the respondents indicated that the fees charged by financial institutions in Kenya were too high while 11% were of a contrary opinion. This shows that majority of the respondents were uncomfortable with the level of fees charged by Kenyan financial institutions.

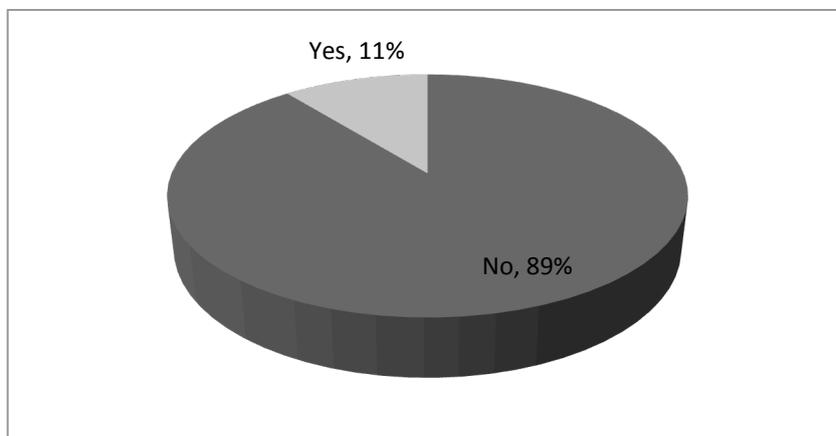


Figure 4.9: Perception on Kenyan Financial Institutions Fees

The respondents were also asked whether the requirements for opening and operating bank accounts in Kenya should be simplified. Majority (91%) of the respondents indicated that the requirements for opening and operating bank accounts in Kenya should be simplified while 9% thought otherwise. This implies that most of the respondents who were interviewed in this study felt that opening and operating a bank account in Kenya is a complicated process hence the need for simplification.

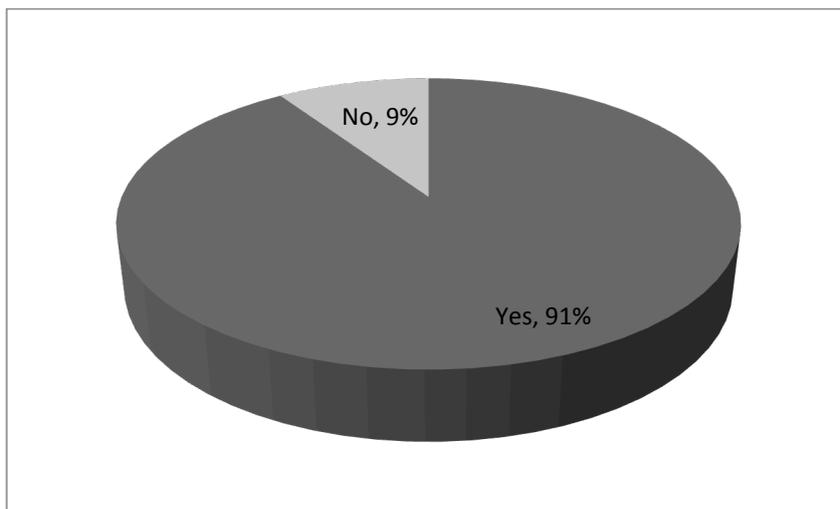


Figure 4.10: Complexity of Kenyan Banking Process

The respondents were asked to indicate the extent to which they agreed or disagreed with given statements on market frictions in relation to saving decisions. Majority (73.1%) of the respondents disagreed that the fees charged by financial institutions to operate a saving account were fair to them, 43.6% were neutral on whether they had all the documents required by financial institutions to open a saving account, 57.5% were neutral on whether the procedure for opening a formal saving account was simple to them, 48.1% were neutral on whether they trusted financial institutions with their money and 79% agreed that they kept their money where they could easily access it. The average mean was 3.14 meaning that the respondents agreed that market frictions influenced their saving decisions.

Table 4.15: Kenyan Financial Institutions Market Frictions

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std Dev.
The fees charged by financial institutions to operate a saving account are fair to me	27.50%	45.60%	21.30%	5.20%	0.30%	2.05	0.85
I have all the documents required by financial institutions to open a saving account	5.90%	8.70%	43.60%	40.10%	1.70%	3.23	0.86
The procedure of opening formal saving account is simple	0.70%	10.10%	57.50%	31.40%	0.30%	3.21	0.65
I trust financial institutions with my money	1.00%	6.60%	48.10%	41.10%	3.10%	3.39	0.71
I keep my money where I can easily access it	3.80%	2.80%	14.30%	62.60%	16.40%	3.85	0.86
Average						3.14	0.78

The results presented in Table 4.15 show the fitness of the regression model in explaining the study phenomena. Market frictions was found to be a satisfactory variable in explaining saving decisions. This was supported by coefficient of determination also known as the R square of 3.2%. This meant that market frictions explained 3.2% of the variations in saving decisions. The results further meant that the model applied to link the relationship of the variables was satisfactory.

Table 4.16: Market Frictions Model Fitness

Indicator	Coefficient
R	0.179
R Square	0.032
Adjusted R Square	0.029
Std. Error of the Estimate	0.564

In statistics significance testing the p-value indicates the level of relation of the independent variable to the dependent variable. If the significance number found is less than the critical value also known as the probability value (p) which is statistically set at 0.05, then the conclusion would be that the model is significant in explaining the relationship; else the model would be regarded as non-significant. Table 4.16 provides the results on the analysis of the variance (ANOVA). The results indicated that the overall model was statistically significant. Further, the results implied that the independent variable which was market frictions was a good predictor of saving decisions. This was supported by an F statistic of 9.46 and the reported p value (0.002) which was less than the conventional probability of 0.05 significance level.

Table 4.17: Market Frictions Analysis of Variance

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	3.014	1	3.014	9.46	0.002
Residual	90.812	285	0.319		
Total	93.827	286			

Market frictions and saving decisions were negatively and significantly related ($r = -0.074$, $p = 0.002$). This meant that a unit increase in market frictions led to a decrease in saving decisions by -7.4%.

Table 4.18: Market Frictions Regression of Coefficients

	B	Std. Error	T	Sig.
(Constant)	3.164	0.055	57.122	0.000
Market frictions	-0.074	0.024	-0.179	0.002

The specific model was:

$$\text{Saving Decisions} = 3.164 - 0.074X_4$$

Where X_4 is market frictions.

Market frictions and saving decisions were found to be negatively and significantly related. An increase in market frictions led to a decrease in saving decisions. The market frictions which were considered in this study include transaction costs, lack of trust and regulatory barriers. Majority of the respondents in this study indicated that the fees charged by financial institutions in Kenya are too high and the requirements for opening and operating bank accounts should be simplified. It was also observed that majority of those interviewed in this study were neutral as to whether they had all the documents required to open a bank saving account and they were also neutral on whether the procedure of opening a formal saving account was simple to them. Similarly, most of the respondents in this study were neutral on whether they trusted financial institutions with their money. This neutrality points to insufficient information about the saving products available in financial institutions, requirements for accessing them and related procedures. However, majority of the respondents indicated that they kept their money where they could easily access it.

These findings on market frictions as a determinant of saving decisions among members of Kuku Group Ranches were similar to the findings of the study done by Dupas and Robinson (2013) in Kenya on savings constraints and microenterprise development, which established that the cost of opening and maintaining bank accounts influences the take-up of formal saving accounts and the saving balances among rural populations. Similarly Prina (2013) and Cole et al. (2011) in separate studies established that elimination or reduction of the costs of opening and operating bank savings accounts led to an increase in their uptake. Chin et al. (2011) in their study on the impact of overcoming a regulatory barrier on saving in USA found out that a waiver of the fees charged on obtaining identification cards increased uptake

of bank savings accounts since the cards were a requirement for opening such accounts. These findings were in support of the new theory of saving attributed to the work of Deaton (1990), Modigliani (1992) and (1994) in that the economic analysis, which informs accumulation of financial reserves, is normally done in the light of market frictions. On the contrary, the findings of this study disagreed with Djankov et al. (2008) who established a very weak correlation between opening bank accounts and confidence in the financial institutions when they studied the main reason for not having a bank account among Mexican households.

4.5 Saving Decisions

The respondents were asked to indicate their main method of saving finances. 184 respondents indicated livestock, 12 respondents indicated cash at home, 63 indicated financial institution deposit and the remaining 28 indicated mobile phone deposit.

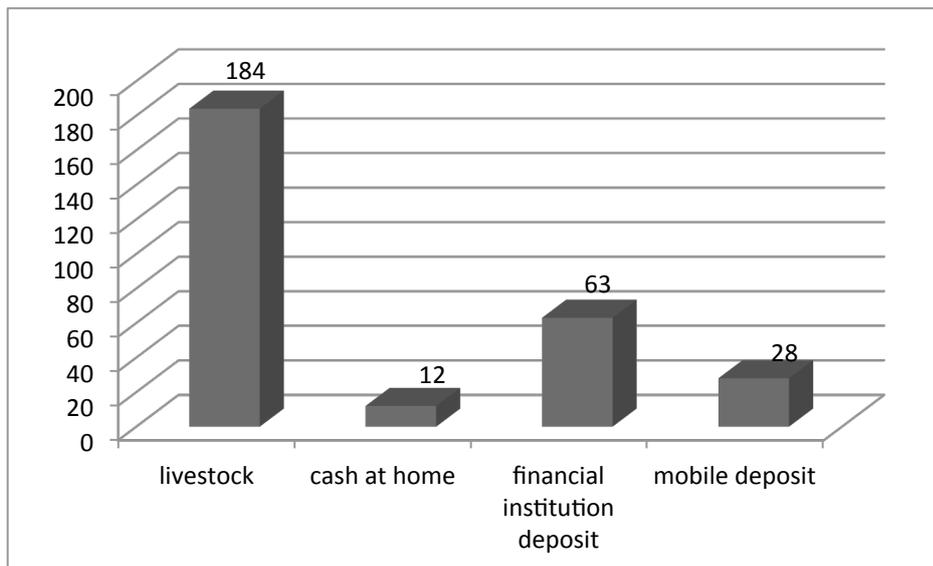


Figure 4.11: Methods of Saving Finances

When asked to indicate their preferred saving period, majority (81.9%) of the respondents indicated that they preferred short-term (0 - 2 years), 10.1% indicated that they were preferred mid-term (2 - 5 years) and the remaining 8.0% preferred long-term (above 5 years).

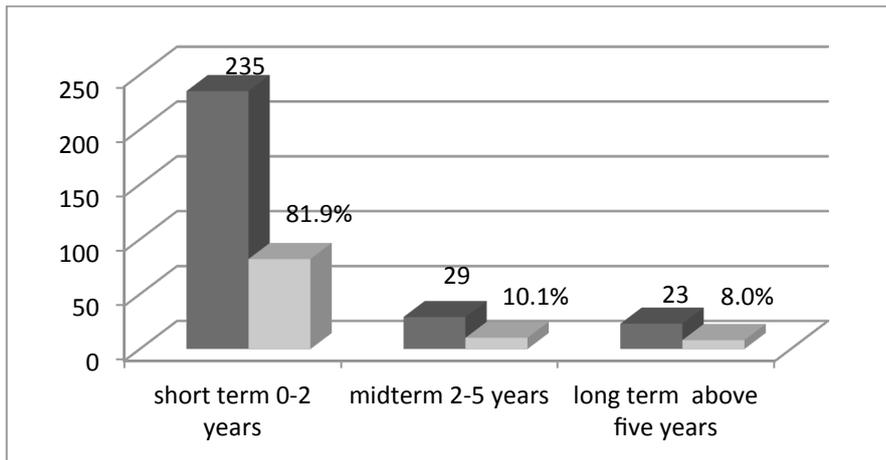


Figure 4.12: Preferred Saving Periods

The respondents were also asked to indicate the extent to which they agreed or disagreed with given statements on saving decisions. 46% of the respondents disagreed that they had a personal saving plan, 42.3% disagreed that they usually make a budget to guide them in their spending, 45.5% agreed that they usually keep aside a portion of their income for future use, 50.0% were neutral on whether they had a set period for their savings and 61.9% were neutral on whether they had a set target for their savings. The mean average was 3.03 meaning that the respondents were generally neutral on saving decisions.

Table 4.19: Savings Decisions

Saving Decisions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std Dev.
I have a personal saving plan	13.90%	32.10%	29.30%	23.70%	1.00%	2.66	1.02
I usually make a budget to guide me in my spending	7.30%	35.00%	29.40%	27.60%	0.70%	2.79	0.95
I usually keep aside a portion of my income for future use	1.70%	19.20%	33.60%	44.80%	0.70%	3.23	0.83
I have a set period for my saving	0.00%	11.20%	50.00%	37.80%	1.00%	3.29	0.67
I have a target amount for my saving	2.10%	8.00%	61.90%	27.60%	0.30%	3.16	0.66
Average						3.03	0.82

When asked about their preferred saving duration, majority of the respondents in this study indicated that they preferred short-term saving. In addition, majority of the respondents indicated that they neither had a personal saving plan nor made a budget to guide their spending. However, majority of those interviewed in this study indicated that they usually kept aside a portion of their income for future use but were neutral on whether they had a set period and target amount for their saving.

4.6 Correlation Analysis

The level of income and saving decisions were positively and significantly related ($r = 0.430$, $p = 0.000$). Availability of information and saving decisions were also positively and significantly related ($r = 0.512$, $p = 0.000$). Similarly personal factors and saving decisions were positively and significantly related ($r = 0.504$, $p = 0.000$). Lastly market frictions and saving decisions were negatively and significantly related ($r = -0.179$, $p = 0.002$). This implied that an increase in the level of income, availability of information and personal factors led to an improvement in saving decisions while an increase in market frictions led to a decrease in saving decisions.

Table 4.20: Correlation Matrix

		Saving decisions	Level of income	Availability of information	Personal factors	Market frictions
Saving decisions	Pearson Correlation	1.000				
	Sig. (2-tailed)					
Level of income	Pearson Correlation	0.430**	1.000			
	Sig. (2-tailed)	0.000				
Availability of information	Pearson Correlation	0.512**	0.384**	1.000		
	Sig. (2-tailed)	0.000	0.000			
Personal factors	Pearson Correlation	0.504**	0.540**	0.512**	1.000	
	Sig. (2-tailed)	0.000	0.000	0.000		
Market frictions	Pearson Correlation	-0.179**	-0.072	-0.037	0.033	1.000
	Sig. (2-tailed)	0.002	0.225	0.527	0.578	

** Correlation is significant at the 0.01 level (2-tailed).

4.7 Overall Regression Model

The results presented in Table 4.20 show the fitness of the regression model in explaining the study phenomena. The level of income, availability of information, personal factors and market friction explained 38.7% of the variation in saving decisions. These results further meant that the model applied to link the relationship of the variables was satisfactory.

Table 4.21: Overall Model Fitness

Indicator	Coefficient
R	0.622
R Square	0.387
Adjusted R Square	0.379
Std. Error of the Estimate	0.450

In statistics significance testing the p-value indicates the level of relation of the independent variable to the dependent variable. If the significance number found is less than the critical

value also known as the probability value (p) which is statistically set at 0.05, then the conclusion would be that the model is significant in explaining the relationship; else the model would be regarded as non-significant. Table 4.21 provides the results on the analysis of the variance (ANOVA). The results indicate that the overall model was statistically significant. Further, the results implied that the independent variables were good predictors of saving decisions. This was supported by an F statistic of 44.438 and the reported p value (0.000) which was less than the conventional probability of 0.05 significance level.

Table 4.22: Overall Analysis of Variance

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	35.988	4	8.997	44.438	0.000
Residual	56.891	281	0.202		
Total	92.879	285			

The level of income and saving decisions were positively and significantly related ($r = 0.076$, $p = 0.005$). Availability of information and saving decisions were also positively and significantly related ($r = 0.193$, $p = 0.000$). Similarly personal factors and saving decisions were positively and significantly related ($r = 0.170$, $p = 0.000$). Lastly market frictions and saving decisions were negatively and significantly related ($r = -0.067$, $p = 0.001$).

Table 4.23: Overall Regression of Coefficients

	B	Std. Error	T	Sig.
(Constant)	2.08	0.097	21.507	0.000
Level of income	0.076	0.027	2.808	0.005
Availability of information	0.193	0.034	5.724	0.000
Personal factors	0.170	0.04	4.244	0.000
Market frictions	-0.067	0.019	-3.454	0.001

The specific model was:

$$Y = 2.08 + 0.076X_1 + 0.193X_2 + 0.170X_3 - 0.067X_4$$

Where:

Y = saving decisions

X₁ = level of income

X₂ = availability of information

X₃ = personal factors

X₄ = market frictions

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter contains the summary, conclusions and recommendations in line with the objectives of the study. The general objective of the study was to investigate the determinants of saving decisions among members of Maasai Group Ranches in Kajiado County.

5.2 Summary of Findings

This section contains a summary of the findings in line with the specific objectives of the study.

5.2.1 Influence of the Level of Income on Saving Decisions

The first objective of this study was to establish if the level of income influenced saving decisions among members of Maasai Group Ranches in Kajiado County. It was established that the level of income and saving decisions were positively and significantly related. An increase in the level of income led to an increase in saving decisions. Livestock keeping was found to be the major source of income and also the preferred method of saving for most of the respondents in this study. In addition, it was established that most of the respondents earned above the set minimum daily wage in Kenya and were involved in some form of saving.

5.2.2 Effect of Availability of Information on Saving Decisions

The second objective of this study was to find out if availability of information shaped saving decisions among members of Maasai Group Ranches in Kajiado County. It was found out that availability of information and saving decisions were positively and significantly related. An

increase in the availability of information led to an increase in saving decisions. Generally majority of those interviewed in this study did not have access to information on formal saving products provided by financial institutions and they indicated that they liked keeping their money where they could see it everyday.

5.2.3 Effect of Personal Factors on Saving Decisions

The third objective of this study was to determine if personal factors motivated saving decisions among members of Maasai Group Ranches in Kajiado County. It was determined that personal factors and saving decisions were positively and significantly related. An improvement in personal factors led to an improvement in saving decisions. This study considered personal factors such as gender, age, marital status, level of education and role of being the family breadwinner. It was observed that most respondents in this study were married men within the age bracket of working population who were also the breadwinners for their families. In addition, majority of the respondents had attained atleast basic education but lacked basic financial literacy.

5.2.4 Effect of Market Frictions on Saving Decisions

The fourth objective of this study was to asses if market frictions affected saving decisions among members of Maasai Group Ranches in Kajiado County. The assessment established that market frictions and saving decisions were negatively and significantly related. An increase in market frictions led to a decrease in saving decisions. The market frictions considered in this study included transaction costs, lack of trust and regulatory barriers. Generally the fees charged to access and operate bank savings accounts were deemed too high and the requirements for opening and operating bank accounts deemed too complicated by majority of the respondents in this study. Even though most respondents in this study were

indifferent as to whether they trusted financial institutions with their money, they strongly indicated that ease of access was a major consideration in their choice of a saving method.

5.3 Conclusions

This section contains conclusions made from the study in line with the study objectives.

5.3.1 Influence of the Level of Income on Saving Decisions

An increase in the level of income led to an increase in saving decisions. This finding implies that if the level of income is increased then the level of saving is also expected to increase since individuals and households make positive saving decisions. It can be concluded that the level of income was a good predictor of saving decisions. The finding that majority of the respondents in this study earned above the set minimum daily wage in Kenya and were actively involved in informal saving validates this conclusion.

5.3.2 Effect of Availability of Information on Saving Decisions

Saving decisions increase with increase in the availability of information. This finding has broad implication in that if the information available on saving products is diverse, the potential savers are exposed to multiple saving vehicles then left to choose one or a portfolio that works best for them. Similarly if information on a single saving product which is held by a section of the population is exposed to the entire population then more positive saving decisions are made thus increasing the level of saving. Most respondents in this study did not have sufficient information on formal saving products provided by financial institutions hence they chose livestock keeping as their preferred method of saving. In the light of these findings it was concluded that availability of information was a good predictor of saving decisions.

5.3.3 Effect of Personal Factors on Saving Decisions

If personal factors such as gender, age, marital status, level of education and role of being the family breadwinner are favourable then positive saving decisions are made. Most respondents in this study were married men within the age bracket of working population who were also the breadwinners for their families. This empowered them to make financial decisions for their families. The fact that they chose a saving method even though informal implies that personal factors was a good predictor of saving decisions.

5.3.4 Effect of Market Frictions on Saving Decisions

When market frictions such as transaction costs, lack of trust and regulatory barriers increase then saving decisions decrease. Most of the respondents in this study indicated that the fees charged by financial institutions in Kenya to open and operate savings accounts were too high and the procedure too complicated. They chose to keep their savings where they could easily access them without exposure to high transaction costs. The fact that they chose to save in livestock at the expense of formal saving products gives a firm ground to conclude that market frictions was a good predictor of saving decisions.

5.4 Recommendations

This section contains recommendations made by the researcher in this study in line with the study objectives in addition to identified areas for further study.

5.4.1 Influence of the Level of Income on Saving Decisions

Based on the findings of this study, it was recommended that members of Maasai Group Ranches should diversify their sources of income and their methods of saving to avoid overreliance on livestock. This was because livestock keeping both as a source of income and

a method of saving relies on a land which is a limited factor of production hence unsustainable in the long run.

5.4.2 Effect of Availability of Information on Saving Decisions

Following the findings in this study, it was recommended that financial institutions in Kenya should strive towards providing financial information to members of Maasai Group Ranches in a simple language that they can understand. Similarly, the members of Maasai Group Ranches were encouraged to actively seek for financial information and this can be done by listening to local radio stations, watching television, reading newspapers or even visiting local financial institutions.

5.4.3 Effect of Personal Factors on Saving Decisions

Based on the findings of this study, some personal factors such as level of education can be enhanced. Specifically, it was recommended that financial institutions in Kenya should come up with simple financial literacy programmes targeting members of Maasai Group Ranches in line with financial inclusion policies. In addition, these financial institutions can come up with formal saving products targeting specific genders and age sets among members of Maasai Group Ranches.

5.4.4 Effect of Market Frictions on Saving Decisions

Following the findings of this study, it was recommended that financial institutions in Kenya should consider coming up with innovative, sustainable and affordable saving products targeting rangeland communities which will eventually replace popular informal saving products such as livestock. For instance the financial institutions could package their saving products in terms of ‘virtual cows’ which might be more attractive to rangeland communities.

Additionally, the Government of Kenya should consider designing and implementing an incentive scheme to motivate financial institutions towards promoting financial inclusion policies. The incentive scheme could include granting of tax waivers to financial institutions that provide banking services to rural underserved communities at affordable costs.

5.4.5 Areas for Further Research

In the light of this study, it was recommended that a similar study can be done among members of other group ranches in Kenya outside Kajiado County for comparison with the findings of this study. In addition, a new study can be done on the factors influencing the uptake of informal saving products among rangeland communities in Kenya.

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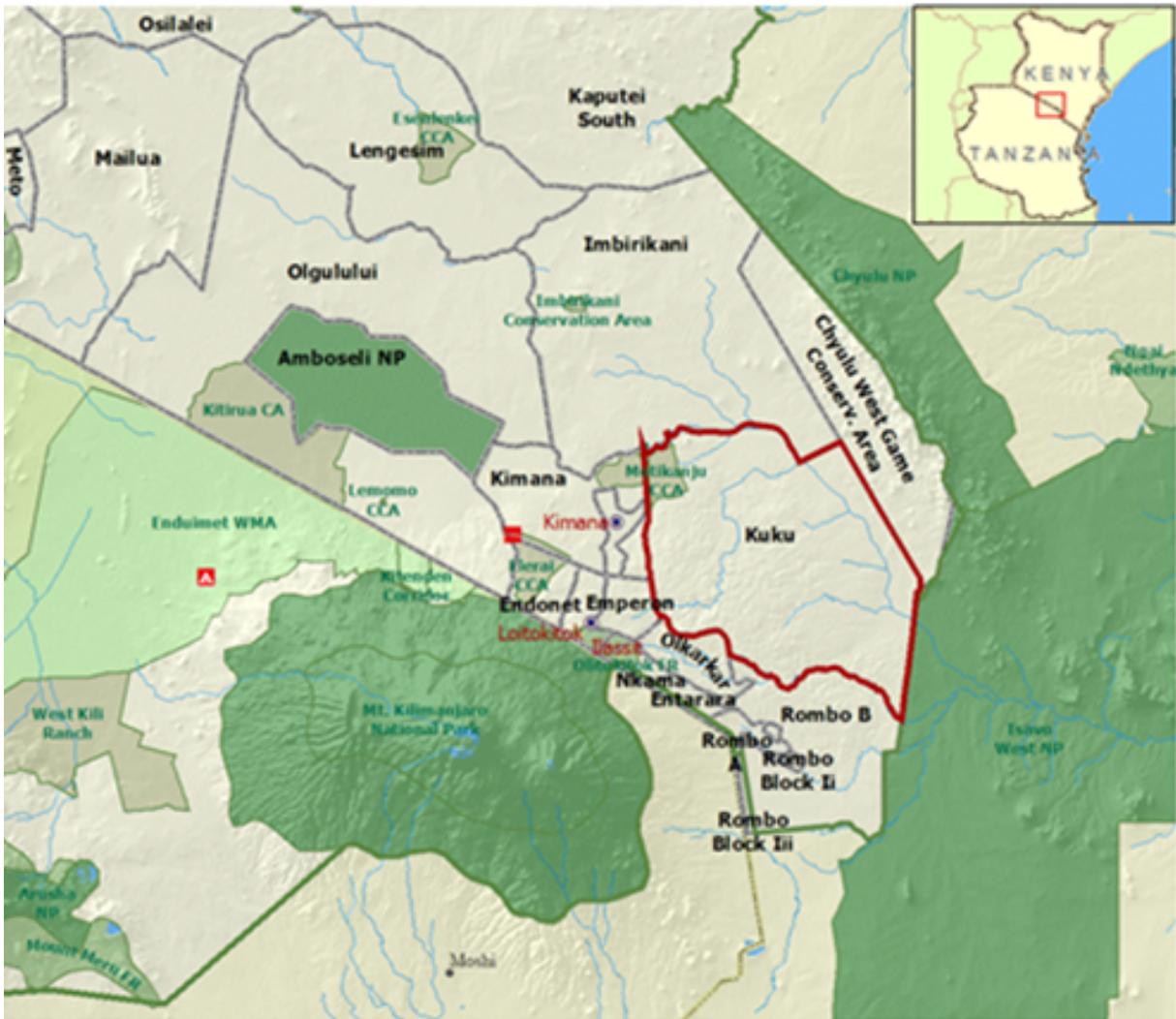
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APPENDICES

Appendix 1: Location of Kuku Group Ranches



Source: African Wildlife Foundation (2008)

Appendix 2: Legal Notice No. 116 of 2015

NATIONAL ARCHIVE FOR
LEGISLATION
KENYA

SPECIAL ISSUE

587

Kenya Gazette Supplement No. 91

26th June, 2015

(Legislative Supplement No. 38)

LEGAL NOTICE NO. 116

THE LABOUR INSTITUTIONS ACT

(No. 12 of 2007)

IN EXERCISE of the powers conferred by section 46 of the Labour Institutions Act, 2007, the Cabinet Secretary for Ministry of Labour, Social Security and Services makes the following Order.

THE REGULATION OF WAGES (AGRICULTURAL INDUSTRY) (AMENDMENT) ORDER 2015

1. This order may be cited as Regulation of Wages (Agricultural Industry) (Amendment) Order, 2015, and shall be deemed to have come into operation on the 1st May, 2015.

2. The Regulation of Wages (Agricultural Industry) Order is amended by deleting the Schedule and substituting therefor the following new Schedule:

SCHEDULE

BASIC MINIMUM CONSOLIDATED WAGES

Occupation	Per month		Per day	
	KSh.	Cts	KSh.	Cts
Unskilled employee	5,436	90	228	30
Stockman, herdsman, watchman	6,278	80	265	90
<i>Skilled and semi skilled employees</i>				
House Servant or cook	6,206	50	236	30
Farm foreman	9,808	10	414	50
Farm Clerk	9,808	10	414	50
Senior foreman	6,349	50	270	00
Farm artisan	6,498	30	276	30
Tractor driver	6,891	00	292	70
Combined harvester driver	7,591	50	322	10
Lorry driver or car driver	7,966	80	337	70

Dated the 20th May, 2015.

RAYCHELLE OMAMO,
Ag. Cabinet Secretary for Labour, Social Security and Services.

Appendix 3: Questionnaire for Kuku Group Ranch Members

Please answer all questions as honestly as possible

Instructions:

1. There are **two (2)** sections in this questionnaire.
2. Please answer **all** questions.
3. Completion of the questionnaire will take you approximately **10 minutes**
4. Information provided shall be kept **confidential**

Section A: Demographic Profile

In this section, I am interested in your basic information in brief. All information gathered in this research is strictly confidential. Please tick in the appropriate box or fill in the blank for each of the following:

1. Group ranch membership:
 - Kuku A
 - Kuku B
2. Gender:
 - Male
 - Female
3. Age (years):
 - Below 15
 - 15-59
 - Above 59
4. Marital Status
 - Married
 - Single
 - Other: _____
5. Highest education level attained
 - Uneducated
 - Primary
 - Secondary
 - College
 - University
6. Primary source of income
 - Employment
 - Business
 - Livestock
 - Crop farming
 - Other: _____

Section B: Independent variables and dependent variable

In this section I am interested in understanding the factors that determine your saving decisions. Please answer the listed questions and circle one number per line where applicable to indicate the extent to which you agree or disagree with the provided statements by using 5 likert scale [(1) = Strongly Disagree; (2) = Disagree; (3) = Neutral; (4) = Agree and (5) = Strongly Agree.]

Level of Income

7. (a) What is your average daily gross income?
- Below kshs. 228.30
 - Between kshs. 228.30 and kshs. 456.60
 - Above kshs. 456.60

No.	Average gross daily income in kshs. from:	Below 228.30	228.30 to 456.60	456.60 to 684.90	684.90 to 913.20	Above 913.20
LI1	Employment	1	2	3	4	5
LI2	Business	1	2	3	4	5
LI3	Livestock	1	2	3	4	5
LI4	Crop farming	1	2	3	4	5
LI5	Other sources	1	2	3	4	5

Availability of Information

8. (a) How long will it take you to reach the nearest financial institution using available public transport? _____ hours
- (b) Do you usually read/listen/watch financial news?
- Yes
 - No

(c) Indicate the extent to which you agree or disagree with the following statements:

No.	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
AI1	I have sufficient information about the saving products available in the market	5	4	3	2	1
AI2	Information on saving products is normally communicated to me in a simple language	5	4	3	2	1
AI3	I am aware about formal saving products because I can easily reach financial institutions	5	4	3	2	1
AI4	Saving products offered by financial institutions are not complicated for me to understand	5	4	3	2	1
AI5	I like putting my money where I can see it every day	5	4	3	2	1

Personal Factors

9. (a) How many children do you have? _____

(b) Are you the bread winner of your family?

Yes

No

(c) Indicate the extent to which you agree or disagree with the following statements:

No.	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
PF1	I have been trained on how to accumulate savings	5	4	3	2	1
PF2	I have been trained on how keep simple books of accounts	5	4	3	2	1
PF3	I have been trained on how to make a personal budget	5	4	3	2	1
PF4	My financial literacy is above average	5	4	3	2	1
PF5	My level of education has assisted me in my choices of saving products	5	4	3	2	1

Market Frictions

10. (a) Do you think the fees charged by financial institutions in Kenya are too high?

Yes

No

(b) Do you think the requirements for opening and operating bank accounts in Kenya should be simplified?

Yes

No

(c) Indicate the extent to which you agree or disagree with the following statements:

No.	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
MF1	The fees charged by financial institutions to operate a saving account are fair to me	5	4	3	2	1
MF2	I have all the documents required by financial institutions to open a saving account	5	4	3	2	1
MF3	The procedure of opening formal saving account is simple	5	4	3	2	1
MF4	I trust financial institutions with my money	5	4	3	2	1
MF5	I keep my money where my i can easily access it	5	4	3	2	1

Saving Decisions

11. (a) What is your main method of saving finances?

Livestock

Cash at home

Financial institution deposit

Mobile phone deposit

(b) What period of saving is most appealing to you?

Short-term (0 to 2 years)

Mid-term (2 to 5 years)

Long-term (Above 5 years)

(c) Indicate the extent to which you agree or disagree with the following statements:

No.	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
SD1	I have a personal saving plan	5	4	3	2	1
SD2	I usually make a budget to guide me in my spending	5	4	3	2	1
SD3	I usually keep aside a portion of my income for future use	5	4	3	2	1
SD4	I have a set period for my saving	5	4	3	2	1
SD5	I have a target amount for my saving	5	4	3	2	1

Thank you for your time, opinions and comments

-The End-