

Effect Of Market Frictions
On Saving Decisions
Among Members Of Maasai
Group Ranches In Kajiado
County, Kenya: A Case Of
Kuku Group Ranches

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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. This study sought to establish the effect of market frictions on saving decisions among members of Maasai Group Ranches in Kajiado County, Kenya by considering the case of Kuku Group Ranches. 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 market frictions were negatively and significantly related to saving decisions. This implied that an increase in market frictions such as transaction costs, lack of trust and regulatory barriers led to a decrease in saving decisions. The study recommended that the Government of Kenya should consider designing and implementing an incentive scheme to motivate financial institutions towards promoting financial inclusion policies.

Key Words: Saving, Market Frictions, Transaction Costs, Regulatory Barriers

1. 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:

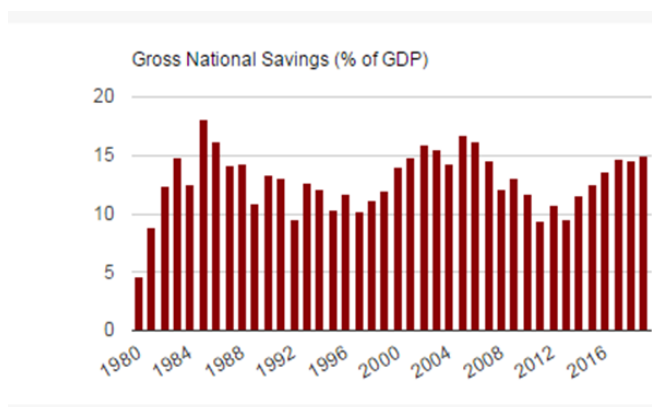
Table 1.1: East African Saving Rates for years 2010 - 2014

County	Gross Saving (% of GDP)				
	Year 2010	Year 2011	Year 2012	Year 2013	Year 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 and 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. Demircuc-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.

2. RESEARCH OBJECTIVE

The objective of this study was to investigate the effect of market frictions on saving decisions among members of Maasai Group Ranches in Kajiado County.

3. LITERATURE REVIEW

3.1 THEORETICAL FRAMEWORK

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

3.1.1 SAVING THEORIES

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 saving which was the dependent variable of the study.

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 while the consideration of economic situation in financial decision making is in support of market frictions.

3.2 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 3.1

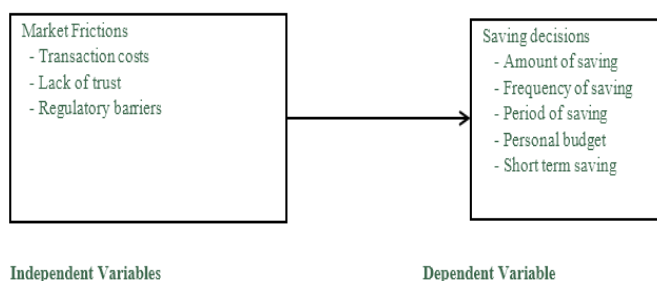


Figure 3.1 Conceptual Framework

3.2.1 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 Demircuc-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.

3.2.2 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.

3.3 EMPIRICAL REVIEW

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

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, Sampson and Zia (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, Miranda, Seira and Sharma (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.

4. RESEARCH METHODOLOGY

4.1 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.

4.2 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 4.1.

Table 4.1: Population Frame

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

Source: Kuku Group Ranches Registers (2016)

4.3 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.

4.4 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 4.2

Table 4.2: 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)

4.5 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.

4.6 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.

5. RESULTS AND DISCUSSION

5.1 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 5.1. 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.

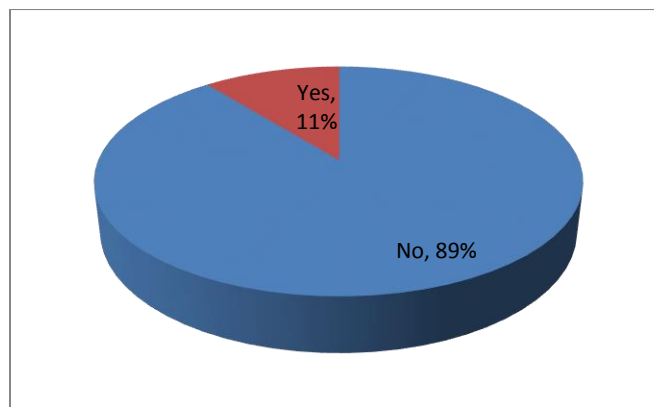
Table 5.1: Response Rate

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

5.2 EFFECT OF MARKET FRICTIONS ON SAVING DECISIONS

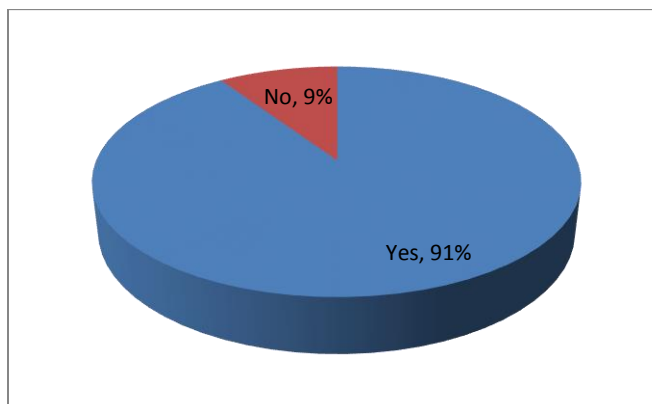
The respondents were requested to indicate if the fees charged by financial institutions in Kenya were too high. Majority (89%) of the respondents indicated that the fees charged by financial institutions in Kenya were too high while 11% were of a contrary opinion. This shows that majority of the respondents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

Figure 5.1: 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 5.2: 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 5.2: 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 5.3 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 5.3: 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 5.4 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 5.4: 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 5.5: 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	-3.076	0.002

The specific model was:

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

Where X_4 was 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,

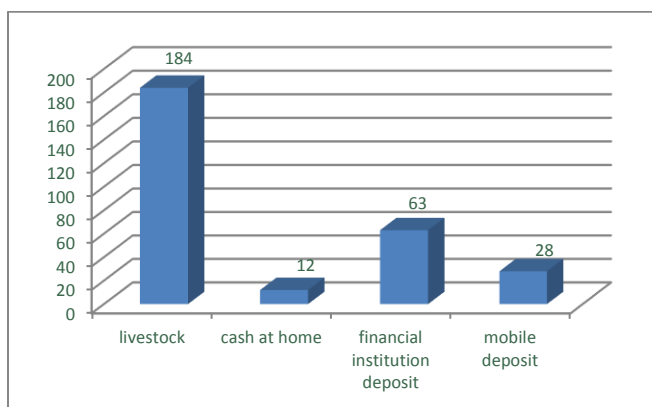
most of the respondents in this study were neutral on whether they trusted financial institutions with their money. This neutrality points to insufficient information about the saving products available in financial institutions, requirements for accessing them and related procedures. However, majority 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.

5.3 SAVING DECISIONS

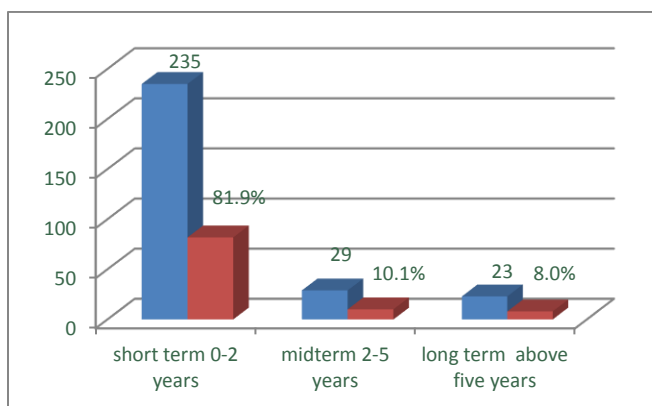
The respondents were asked to indicate their main method of saving finances. 184 respondents indicated livestock, 12 respondents indicated cash at home, 63 indicated financial institution deposit and the remaining 28 indicated mobile phone deposit.

Figure 5.3: 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 5.4: 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 5.6: 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.

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 CONCLUSIONS

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.

6.2 RECOMMENDATIONS

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. Further, in the light of this study, it was recommended that a similar study could 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 could be done on the factors influencing the uptake of informal saving products among rangeland communities in Kenya.

7. REFERENCES

- Babbie, E. (2004). *The practice of social research*. (10th ed.). Wadsworth: Thomson Learning Inc.
- Banerjee, A., and Duflo, E. (2007). The economic lives of the poor. *Journal of Economic Perspectives*, 21(1), 141-168.
- Chin, A., Karkoviata, L., and N. Wilcox, N. (2011). Impact of bank accounts on migrant savings and remittances: Evidence from a field experiment (University of Houston Working Paper). Retrieved from: http://www.uh.edu/~achin/research/ckw_banking_june2011.pdf
- Cole, S., Sampson, T., and Zia, B. (2011). Prices or knowledge? What drives demand for financial services in emerging markets? *Journal of Finance*, 66(6), 1933-1967.
- Deaton, A. (1990). *Understanding consumption*. Oxford, England: Clarendon Press.
- Demircuc-Kunt, A. and Klapper, L. (2012). Measuring financial inclusion: The global finindex database (World Bank Policy Research Working Paper No. 6025). Retrieved from: <http://elibrary.worldbank.org/doi/abs/10.1596/1813-9450-6025>
- Djankov, S., Miranda, P., Seira, E., and Sharma, S. (2008). Who are the unbanked? (World Bank Policy Research Working Paper No. 4647). Retrieved from: <http://elibrary.worldbank.org/doi/abs/10.1596/1813-9450-4647>
- Dupas, P. and Robinson, J. (2013). Savings constraints and microenterprise development: Evidence from a field experiment in Kenya. *American Economic Journal: Applied Economics*, 5(1), 163-192.

- Economy Watch. (2014). *Gross national savings (% of GDP) data for all countries*. Retrieved from: http://www.economywatch.com/economic-statistics/economic-indicators/Gross_National_Savings_Percentage_of_GDP/
- George, A. L., & Bennett, A. (2005). *Case studies and theory development in the social sciences*. Cambridge, Mass: MIT Press.
- Ike, P.C., and Idoge, D.E. (2006). Determinants of financial savings among rural households in Delta state, Nigeria. *Journal of Applied Chemistry and Agricultural Research*, 9, 95 -103.
- Ike, P. C., and Umuedafe, D. E. (2013). Determinants of saving and capital formation among rural farmers in Isoko North local government area of Delta state, Nigeria. *Asian Economic and Financial Review*, 3(10), 1289-1297.
- Inganga, B. W., Njeru, A., Ombui, K., and Tirimba, O. I. (2014) Factors affecting customer demand of financial services offered by commercial banks in Nairobi county. *International Journal of Scientific and Research Publications*, 4(11), 582-605.
- Ivatury, G. and Mas, I. (2008). The early experience with branchless banking (CGAP Focus Note No. 46). Retrieved from: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1655257
- Karlan, D., Ratan, A. L., and Zinman, J. (2014). Savings by and for the poor: A research review and agenda. *Review of Income and Wealth*, 60(1), 36-78. doi: 10.1111/roiw.12101
- Kothari, C. R. (1993). *Research methodology: Methods and techniques*. New Delhi. Vishwa Prakashan.
- Kothari, C.R. (2004). *Research methodology: Methods and techniques*. (2nd ed.). New Delhi: New Age international ltd.
- Kothari, N. & Pals, D. (1993). *Introduction to educational research*. Njoro: Egerton University.
- Kuku Group Ranches Registers (2016). Retrieved from: Kajiado Land Adjudication Office.
- Modigliani, F. & Brumberg, R. (1954). *Utility analysis and the consumption function: An interpretation of the cross-section data*. New Brunswick: Rutgers University Press.
- Mugenda, O. M., and Mugenda, A. G. (2003). *Research methods: Quantitative and qualitative approaches*. Nairobi, Kenya: ACTS Press.
- Mwangi, E. (2007). The Puzzle of Group Ranch Subdivision in Kenya's Maasailand. *Development and Change*, 38(5), 889-910.
- Namusonge, G. S. (2010). *Business statistics: Concepts and applications*. Beau Bassin, Mauritius: VDM Publishing House Ltd
- Ntiati, P. (2002). Group ranches subdivision study in Loitokitok Division of Kajiado District, Kenya (International Livestock Research Institute Working Paper No.7). Retrieved from: <https://cgspace.cgiar.org/handle/10568/1826>
- Piana, V. (2003). Savings (Economics Web Institute). Retrieved from: <http://www.economicswebinstitute.org/main.htm>
- Prina, S. (2013). Banking the poor via savings accounts: Evidence from a field experiment- Case Western Reserve University (Weatherhead School of Management Working Paper). Retrieved from: http://economics.yale.edu/sites/default/files/prina_130304.pdf
- Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students* (5th ed.). Edinburgh: Prentice Hall.
- Shipton, P. (1990). How Gambians save - and what their strategies imply for international aid (World Bank Policy Research Working Paper No. 395). Retrieved from: http://www-wds.worldbank.org/servlet/WDSCContentServer/WDSP/IB/1990/04/01/000009265_3960929005858/Rendered/PDF/multi_page.pdf
- The World Bank. (2014). *Gross savings (% of GDP)*. Retrieved from <http://data.worldbank.org/indicator/NY.GNS.ICTR.ZS/countries?display=default>
- Virmani, A. (1986). The determinants of savings in developing countries: Theory, policy and research issues (World Bank Departmental Working Paper No. DRD186). Retrieved from: <http://documents.worldbank.org/curated/en/1986/08/17069083/determinants-savings-developing-countries-theory-policy-research-issues>