

**FACTORS THAT INFLUENCE SAVINGS OF SMALL SCALE TEA
FARMERS IN KERICHO TOWN- KENYA**

BY

SATAKWAWO BANDA ZUZE

D61/76440/2012

**A RESEARCH PROJECT REPORT SUBMITTED IN PARTIAL
FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF
DEGREE OF MASTER OF BUSINESS ADMINISTRATION,
UNIVERSITY OF NAIROBI, SCHOOL OF BUSINESS**

NOVEMBER 2014

DECLARATION

I declare that this research project report is my original work and has never been presented for the award of a degree or any qualification in any other University or institution of higher learning.

Signed _____ Date _____

Zuze, S.B

Registration No.: D61/76440/2012

This research project has been submitted for examination with my approval as the university supervisor.

Signed _____ Date _____

Luther Otieno

Lecturer, Department of Finance and Accounting

School of Business

University of Nairobi

ACKNOWLEDGEMENTS

I thank God for the opportunity he granted me to successfully go through this program, for his grace, guidance and wisdom.

I am grateful to my family especially my spouse for being there for me, for being very supportive and understanding. Thanks to my parents, siblings and friends for their encouragements and prayers God bless you all.

I am grateful to my supervisor Mr. Luther Otieno who offered me tireless support, guidance and positive criticism to see to it that this project is a success.

Thanks to KTDA, KTB, Mr. D Korir, Kaisugu Managing director and out-growers manager, and to the numerous people who helped me easily access tea growers in the field and for the useful information they provided me that has seen me successfully complete this project.

Lastly to the academic staff of Nairobi University for the knowledge i have acquired from them throughout my study.

The lord bless each one of you and your families abundantly.

DEDICATION

I dedicate this project to my husband Mabvuto A. Zuze for being very helpful, encouraging and supportive both spiritually and physically the lord bless you.

To my late father M.Z.C Banda who remains my role model on issues of hard work, persistence and staying focused may his soul rest in peace.

ABSTRACT

Saving has been a challenge to a lot of people since time in memorial. The tea business is a thriving industry in Kenya considering that tea has a huge market in Europe, Asia, and some parts of Africa e.g. Egypt. It is believed that the tea farmers are casualties when it comes to the aspect of putting their proceeds into good use and hence they have not really embraced the savings discipline.

Most studies have not been conclusive on the factors that influence savings among various individuals and households especially in the developing countries. The purposive explanatory survey was conducted in Kericho town where factors that influence savings among Kericho town based tea farmers were being investigated. Primary data was collected from a sample of 190 tea growers, purposively selected using cluster sampling technique. Through the application of principal and component analysis and frequency distribution analysis the finding was that the majority of the respondents viewed dependency ratio, income, access to credit and access to Sacco as influencing their decision to save to a very great extent. Age, gender and tax were seen to have no effect on influencing the tea growers' decision to save. Interest rate as a factor had two extreme views where an equal percentage viewed it as a factor that influence their saving decision to a very great extent and a similar percentage viewed it as not influencing their saving decision. Other common factors that positively influence the growers' decision to save include the desire to expand businesses, retirement needs, school fees and emergency needs.

The study concluded that various factors that influence individuals or household decisions to save have varying effects in different settings. There are no factors that are cast in stone to cut across the board that can be conclusively generalised to have the same effect on individuals of all walks of life.

This study is of value to policy makers on economic issues and brings attention to the government on the levels of savings among this sector of the society. Decision makers in the financial services industry can also take advantage of the findings. The study recommends a wider scope survey covering the whole country to assess the factors that influence saving among tea farmers on a national level and an assessment of savings discipline among the farmers.

TABLE OF CONTENTS

DECLARATION.....	ii
ACKNOWLEDGEMENTS	iii
DEDICATION.....	iv
ABSTRACT.....	v
LIST OF TABLES AND FIGURES.....	ix
ABBREVIATIONS.....	x
CHAPTER ONE: INTRODUCTION.....	1
1.1 Background of the study:	1
1.1.1 Savings and Investments	5
1.1.2 Factors influencing savings.....	5
1.1.3 Tea farming in Kenya and Kericho	6
1.2 Research problem.....	8
1.3 Research objective	9
1.4 Value of the study	9
CHAPTER TWO: LITERATURE REVIEW.....	11
2.1 Introduction.....	11
2.2 Theoretical Review	11
The Neoclassical Economic Theory of Saving	11
The Behavioural Theory of Saving	13
The Psychological and Sociological Theories of Saving	13
2.3 Factors influencing saving	14
2.3.1 Age and gender of household head	14
2.3.2 Dependency ratio.....	14

2.3.3 Income.....	15
2.3.4 Access to credit	15
2.3.5 Tax.....	16
2.3.6 Interest rate.....	16
2.3.7 Saccos.....	16
2.4 Empirical evidence on factors influencing saving.....	17
CHAPTER THREE: RESEARCH METHODOLOGY	21
3.0 Introduction.....	21
3.1 Research design	21
3.2 Population	21
3.3 Sample design.....	21
3.4 Data collection	22
3.5 Data analysis	22
CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION	24
4.1 Introduction.....	24
4.1 Response rate	24
4.2 Descriptive statistics	25
4.2.1 Correlation.....	25
4.2.2 Frequency distribution and statistics	27
4.3 Factor analysis	30
4.3.1 Sample Adequacy Test.....	31
4.3.2 Communalities	31
4.3.3 Total variance explained - unrotated matrix	32
4.3.4 Total variance explained - rotated matrix	34

4.3.5 The scree plot	34
4.3.6 Rotated Component Matrix	35
4.4 Summary and conclusion of findings	36
CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS	40
5.1 Introduction.....	40
5.2 Summary of findings.....	40
5.3 Conclusion	41
5.4 Recommendations.....	42
5.5 Limitations of the study	43
REFERENCES.....	44
Appendix 1: Applied questionnaire.....	48
Appendix 2: Descriptive statistics.....	51

LIST OF TABLES AND FIGURES

Figure 2: hypothesis of the study

Figure 4: Scree plot

Table 4.1: Correlation results

Table 4.2: Summary of correlations among variables

Table 4.3: Statistics and frequency distribution

Table 4.4: KMO and Bartlett's test

Table 4.5: Communalities

Tables 4.6: Initial eigenvalues and extraction of sums of squared loadings

Table 4.7: Rotation sums of squared loadings

Table 4.8: component matrix

ABBREVIATIONS

KTDA- Kenya Tea Development Agency

KTGA- Kenya Tea Growers Association

LCH- Life-Cycle Hypothesis

SACCO- Savings and Credit Co-Operatives

TBK- Tea board of Kenya

CHAPTER ONE: INTRODUCTION

1.1 Background of the study:

Savings is the difference between income and consumption (Howells and Bain, 2007). The economic theory states that saving represents the difference between income and consumption. Income includes all earnings from all sources during a year and is net of costs incurred in producing that income. Consumption on the other hand is the total amount of goods and services consumed by the household which include expenditure on things like food items, housing, clothing, education, health care among other expenditures.

Household saving plays an important role in economic development of both developed and developing nations due to its significant influence on the circular flow of income in the economy. Iyoha et al., 2003 (as cited in Akpan, Udoh and Aya Aya, 2011). Saving as a key macroeconomic variable is a potential source of investments which translates to economic growth. Savings plays a crucial role of monetary transmission mechanism (Beckmann, Hake and Urvova, 2011). Financial institutions and banks transfer money from high savers to low savers in the form of loans. The savers put their money in savings or investment accounts which earn them interest income and the same saved money is transferred to individuals, institutions or corporates and even the government in some cases in the form of loans. The government sometimes borrows money from the public through treasury bills or bonds and pay back good interest in the short and long run.

Mostly high levels of gross national savings reduce a country's reliance on and exposure to the unpredictable global capital market (Cronje, 2010). Savings has been a challenge for most developing countries Kenya being one of them. The rate of household and national savings is seen to be significantly low evidenced in the fact that developing countries rely mostly on development partners and foreign investors to help boost and grow their economies since national savings alone cannot achieve this purpose. Athukorala and Sen (2001) observe that households account for the largest number of small savers in most of the developing economies.

From a household/individual saving perspective, besides being a great challenge saving helps in so many ways considering that we are living in a highly dynamic environment causing a lot of unease and uncertainty about the future hence households save in order to meet various needs such as investment needs, payment of school fees, payment of medical bills, servicing personal loans, purchase of homes and those involved in business save money to buy raw materials, business assets and to meet a lot more other needs (Selhausen, 2011). Savings are an important means of improving the well being, insuring against times of shocks and providing a buffer to help people cope in times of crisis Iyoha et al.,2003 (as cited in Sunday et al, 2011). Households/individuals derive savings from their income which is obtained from formal or informal employment such as self employment or ownership of small or big businesses which bring income into their households. Athukorala and Sen (2001) observe that savings rate rises with both the rate and growth of disposable income. The Keynesian theory of 1936 identified disposable income as an important factor that influences saving.

Franco Modigliani observes that saving mobilization among low income earners or the population that lives on or close to the starvation line is a challenge evidenced in the tendency of hand to mouth. Dev (2012) in his study on small farmers in India observed that smallholder farmers need credit for both consumption and investment purposes which results in increased indebtedness. The main source of this debt is the informal sources or sectors.

Bodie, Kane and Marcus (2008) define investments as the current commitment of money or other resources in the expectation of reaping future benefits. Time and risk are the key attributes involved. Bodie, Merton and Cleeton (2009) define risk as uncertainty that matters. Bodie et al (2008) note some of the risks involved in investing money which include reduced expected future returns that manifest in reduction in expected returns on interest rate, loss of an investment due to bankruptcy suffered by a financial institution or fund manager entrusted with the funds. In investing, a sacrifice takes place in the present with the view of anticipating certain future cash flows hence the reward comes later if at all the amount of the reward is certain. It is further noted by Bodie et al (2008) that in some cases time factor dominates for instance in government bonds and in other cases risk is the dominant factor example of common stocks and call options.

A distinction is made between real and financial investments. Real investments generally involve tangible (physical) assets such as land machinery or factories while financial investments involve contracts written on paper e.g. common stocks and bonds (Alexander, Sharpe and Barley, 2001).

Theories of savings

Beverly (1997) classified the theories of saving into four categories namely the neoclassical savings theory, behavioural theories, psychological and sociological theories and institutional theories.

The neoclassical theory assumes that human beings are rational beings who seek to maximize pleasure and minimize pain, and individual utility is assumed to be a function of consumption. This theory also assumes that individuals make choices between present and future consumption hence their saving behaviour reflect their preference on present or future consumption. The main neoclassical theories of saving are the Life Cycle Hypothesis and Permanent Income Hypothesis.

Life-cycle Hypothesis championed by Franco Modigliani (1963) assumes that accumulation of money for retirement is the key motive behind individual's saving. The model is built around the consumption and saving behaviour of an individual who is assumed to maximize the present value of life time utility subject to budget constraint. The Permanent Income Hypothesis developed by Milton Friedman states that people base their spending decisions on expectations of permanent income. Friedman describes permanent income as the average income that people earn over their life time. According to the Keynesian theory on consumption function, household saving is directly linked to people's disposable income. Consumption is the key determinant of the amount of personal saving. As saving is the difference between what one earns and what they consume, the amount that an individual saves depends on the amount of money one needs to spend on current expenses or needs. Consumption may be in the form of paying for immediate family needs or farming needs such as food, health care, farm inputs, servicing of a loan and any other need.

Psychological and sociological theories of saving are grounded on the assumption that consumer's tastes and aspirations are not fixed but are instead affected by economic or social

stimuli and conditions. Psychological theory views that change in the environment or information received is viewed as stimulus which influences the individual and their response. Economic psychologists try to examine how the effects of external stimuli on economic behaviour are conditioned by intervening variables such as motives, aspirations, expectations and effects of families, peers and past savings experiences. Behavioural theories of saving assume that individuals are expected to respond and create their own behavioural incentives and constraints. The Institutional theories of saving are grounded on the notion that individual and household saving is shaped by institutional processes through which savings occurs.

Motives for saving

LCH model by Modigliani (1963), notes that the motive for saving is to prepare for life after retirement. Beverly (1997) observes that advanced LCH models also consider the desire to leave a bequest and desire to prepare for emergencies as possible motives for saving. Matur, Sabuncu, and Bahceci (2012) observes that uncertainty and risks about the future give rise to precautionary saving motives for people who are risk averse, they further explain that precautionary saving is more relevant to people who are prone to income volatility. Campbell and Hercowitz (2014) observe that households accumulate assets in order to pay for an impending need. Individuals save in order to use the money at a future date as a cushion against unforeseen circumstances for example unexpected job loss, attending to medical bills, for farmers in case of poor harvest or unexpected input expenditures. The neoclassical theories of saving observe target saving as another motivating factor to save. People save in order to make investment expenditures or huge expenditure and acquire tangible assets that translate to high returns in the future. The motive behind saving may also be avoidance of debts.

Various studies have examined the factors that influence the saving behaviour of various groups of people which include the age and gender of household head, dependency ratio, tax, interest rate, access to credit and access to financial services institutions among other determinants. This study aimed at establishing the factors that influence saving among Kericho town based smallholder tea farmers.

1.1.1 Savings and Investments

Bodie et al (2009) defines saving as non expenditure of one's entire income on consumption, the difference between one's income and consumption is what is regarded as saving. On the other hand they note that investing means choosing what assets to hold in anticipation of future returns which can rarely be predicted with precision. Jangili (2011) noted that a portion of income that is saved by individuals is usually committed to investment activities. Bodie et al notes that one may choose to invest in safe assets or risky assets or both. An investor can have a portfolio which is a collection of investment assets which can include stocks, bonds, real estate, any other commodities of choice or anything thing they decided to invest in. Beckmann Hake and Urvova (2011) in their study on determinants of saving in Europe recognize that savings as a key macroeconomic variable is a potential source of investment. The study goes on to note that the private sector including households provide the bulk of savings in an economy. Jangili (2011) notes the existence of reciprocal causality from savings and investments of the private sector to economic growth. This reciprocal casualty comes from the household sector where savings and investment led growth is observed. It is noted that savings alone cannot lead to economic growth but a combination of savings leading to investments promotes economic growth. Feldstein and Horioka (1980) observe that there is a perfect correlation between savings and investments in a closed economy but the presence of capital mobility disturbs the correlation and renders it void this has however led to debates and disagreements on the same.

1.1.2 Factors influencing savings

Various studies have been conducted around the globe to establish the determinants of saving among various groups of people. A study by Lahiri (1989) of some Asian countries reported that the rate of growth of personal disposable income determines private savings. An investigation by Kibet, Mutai, Ouma, Ouma and Owuor (2009) reported that savings among small holder farmers, entrepreneurs and teachers in rural Kenya is determined by the type of occupation, household income, age, gender of household head, education, dependency ratio, service charges for accessing financial services, transportation cost and access to credit. Oliveira and others, 1998 (as cited in Akpan et al, 2011) found that income, physical wealth, household size, education and

age of household head as the determinants of financial savings in rural Mozambique. A study by Akpan et al (2011) reveals that tax, income, education, family size and membership of a social group influence saving attitude of workers.

A survey conducted by Selhausen (2011) on Mpanga Tea growers found a relatively low savings culture among Mpanga's tea growers. It was noted that tea growers save to protect themselves from unpredictable emergencies such as sickness, natural disaster, burials and plan for the future to acquire assets. On the other hand saving was observed to be higher during peak seasons. The survey observed the following as factors that contributed to a low savings culture among Mpanga tea farmers; firstly, individuals preferred saving in local groups or other Saccos because distance from their homes to the Sacco posed as a barrier. The second factor was lack of money. This was due to the fact that some earned too little to save and others did not have enough money to save. The thirdly, distance between the Mpanga factory and respondent's tea centres attracts high financial costs in terms of transport and lost time.

1.1.3 Tea farming in Kenya and Kericho

Tea is a major cash crop that is grown in Kenya. The initial tea seedlings were introduced to Kenya from India by G.W.L Caine in 1903 and were planted in Limuru at the current Unilever's Mabroukie Tea estate near Nairobi. Commercial cultivation of tea in Kenya began in 1924; currently Kenya is one of the world's leading black tea producers. It is the 3rd largest tea producer after China and India. In China and India most of the tea grown is consumed locally whereas in Kenya 5% of the tea produced is consumed locally and 95% is exported making Kenya to be the leading exporter of tea to the world contributing about 23%.

Tea farmers in Kenya comprise of large and small scale farmers. The large scale farmers occupy the vast majority of land and produce huge volumes of tea. They comprise of the big multinationals, private and government factories. The large scale farmers rely on small scale farmers to meet their production needs. The small scale farmers are categorised in groups of self delivery and outreach farmers. The self delivery farmers pluck, weigh, manage and deliver the green leaf to their assigned tea factories directly while the outreach farmers are collected in

groups also known as zones and are allocated tea collection centres where they deliver their tea and the large scale farmers collect from there. The study is going to concentrate and discuss Kericho town smallholder farmers who supply green leaf to various factories in Kericho.

According to information obtained from the Tea Board of Kenya the following are the key tea industry institutions in Kenya. First, the Tea Board of Kenya (TBK) is the main body that is charged with the responsibility of regulating and promoting the tea industry by ensuring a smooth and orderly functioning of the tea industry through policy guidance, licensing, regulation and trade development. The board also facilitates research in all aspects of tea growing, manufacturing and pest and disease control. Second, Kenya Tea Development Agency (KTDA), formed in 1964 is the management agency of smallholder tea growers. It is responsible for the management of the smallholder tea subsector through provision of extension services, production inputs, green leaf collection, processing and marketing of processed tea on behalf of smallholders. In 1996, KTDA was privatised following privatisation structural adjustment programs championed by the World Bank which was advocating for a free economy also known as Soko Uhuru. Third, Kenya Tea Growers Association (KTGA) is an association of large tea producers which was established to promote the common interests of its members. Some of the large tea producers under this association include James Finlays, Eastern Produce, Williamson Tea, Unilever Tea Kenya, Kaisugu Tea Factory to mention a few.

Tea business is an integral part of the agricultural sector of the Kenyan economy that has contributed significantly to the Kenyan economy in a number of significant ways. The Agricultural industry itself contributes 24% to the GDP of the economy. The tea business has been instrumental in creating employment hence employs two thirds of the population. It is the highest foreign exchange earner in Kenya which plays a crucial role in boosting the foreign exchange currency streaming into the country.

The following are the major roles played by the tea business towards the Kenyan economy. Firstly, Contribution to the national GDP; Gross domestic product (GDP) is the measure of all currently produced final goods and services evaluated at market prices. It is the measure of output per time period (John Sloman & Kevin Hinde, 2010). According to statistics obtained

from the Tea Board of Kenya, the tea business in Kenya currently contributes 4% to the national GDP. Secondly the tea sector is one of the biggest employers in Kenya employing about 3 million people directly and indirectly. The big tea companies rely on smallholder farmers who supply them with green leaf to supplement their processing needs. In the process the out-growers have created employment opportunities for themselves and others within the communities in which they operate. The farmers employ individuals or families to take care of their tea farms, harvest the leaf and others are hired to transport the leaf to various tea factories. Thirdly, the tea industry has boosted wealth creation among individuals and their households which has aided them to improve their lives. Various farmers have managed to build houses, expand into other areas of business such as animal husbandry and crop husbandry among other business ventures. Fourthly, the tea business has positively contributed to the export market considering that Kenya exports 95% of the tea it produces in the process contributing to 25% of national export earnings. These exports in essence brings into the country foreign currency.

1.2 Research problem

Saving has been a challenge to a lot of people since time in memorial. Tea farmers have not been spared and yet they belong to a sector that makes considerably good sums of money out of their tea proceeds. The tea business is a thriving industry in Kenya considering that the Kenyan tea has a huge market in Europe, Asia and some parts of Africa especially Egypt.

There are different theories of savings and competing determinants of saving. The neoclassical theories of saving which include the Life Cycle Hypothesis and Permanent Income Hypothesis view future consumption as the motive to save and that these savings come from permanent income which is average income that people earn over their life time. The Behavioural theory of saving is grounded on the economic theory of self control where individual behaviour is altered to constrain spending. The psychological and sociological theories view saving as a function of the ability and willingness to save. The theories note that some individuals find it hard to save because of limited resources while those who have the capability of postponing consumption need to show the willingness to save.

Studies have been done by researchers such as (Lahiri(1989), Kibet et al (2009), Oliveira et al (1998), Akpan et al (2011), Swasdpeera and Pandey (2012)) on the factors that influence people to save or not. The following are some of the factors that have influenced savings among various groups of people; education, family size, membership of social group, income, occupation, gender and age of household head, marital status, credit access, dependency ratio, high costs of transport and low variety of savings products. There has been lack of consensus on which factors cut across the board in a similar way. It has been observed that various factors play different roles in various settings as such there is need for further research to establish the main factors that cut across the board in influencing the saving behaviour among households and individuals of different walks of life. A study by Kibet et al (2009) indicates age as a factor that negatively influence savings among Nakuru households while the findings of a study by Swasdpeera and Pandey (2012) reveal that age of the household head has a positive influence the decision to save. This research aimed at using the Kenyan data to examine the effect of some of the factors that influence saving behaviour. The research used factors such as age and gender of household head, dependency ratio, income, access to credit, tax, interest rates and existence of Saccos as the factors that influence savings among Kericho small scale tea farmers. In that respect the study sought to answer the following question; what are the factors that have contributed to Kericho town small scale tea farmers saving behaviour or lack of it?

1.3 Research objective

The main objective of the research was to establish the factors that influence savings among tea farmers based in Kericho town.

1.4 Value of the study

The study will help in supplementing the literature on determinants of saving hence enriching the body of knowledge on the subject matter. The study will also highlight to tea farmers good and bad savings practices. It will enlighten them on how to put the proceeds of their sales to good use to benefit their families and the communities they live in.

The Tea Farmers Associations will identify the areas in which they need to improve in order to make the lives of farmers better. Tea associations are much closer to the farmers hence they can take advantage of the weak areas that are contributing to farmer's lack of saving or bad saving practices and help farmers cultivate a spirit of saving in order to help farmers realise value in their hard work.

The government of Kenya will benefit from the study by gaining awareness of the weaknesses and strengths in saving patterns of tea farmers in Kericho which may be similar to other farmer's in the country and device policies that will encourage tea farmers' ability to save.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter outlines the literature and authorities of savings discipline. The paper relied on empirical evidence from the field and reference to literature was based on the concept of savings and how it can be applied to the smallholder tea farmers and determinants of savings. The study acknowledges the knowledge that exists on determinants of savings relevant to the research and has identified areas of further elaboration.

2.2 Theoretical Review

The study will be based on the theory of saving. It will look into the theories of saving and factors that influence people to save or not. There are several theories of saving and the study will dwell on a few. Beverly (1997) classified theories of saving into four categories namely the neoclassical economic theory, behavioural theory, psychological and sociological theory and institutional theories.

The Neoclassical Economic Theory of Saving

The two main theories anchoring the concept of saving are the Life-Cycle Hypothesis and Permanent Income Hypothesis. The Lifecycle Hypothesis advanced by Modigliani and Richard Brumberg and Permanent Income Hypothesis advanced by Friedman. According to Chowa, Masa and Ansong (2012) the two theories assume that households are concerned about long term consumption opportunities and therefore explain savings and consumption in terms of expected future income. The two theories assume that savings is a way of smoothing out consumption in the face of income fluctuations.

The Life Cycle hypotheses' advanced by Ando and Modigliani, (1963), Modigliani and Brumberg (1954), view the primary motive of saving as future consumption that is to meet expenses after retirement and acquire wealth. The model is built around the consumption and saving behaviour of an individual who is assumed to maximize the present value of lifetime

utility, subject to budget constraint. Modigliani refers to the analysis of consumption and saving patterns and implies that constrained individuals consume a constant percentage of the present value of their lifetime income due the consumption smoothing motive. It implies that individuals both plan their consumption and savings behaviour over the long term and intend to even out their consumption in the best possible manner over their entire lifetime. Hence people consume less than their economic resources to enable them save for a future rainy day.

According to the LCH model, with fluctuations in income over a course of a person's life, saving behaviour is determined by one's stage in the life cycle. Change in age is seen as playing a vital role on spending and saving decisions. Individuals who smoothen their consumption over their lifetime are net savers during their working years and don't save during retirement. The middle aged become conscious net savers because they plan for their life after retirement.

The Permanent income Hypothesis by Friedman(1957) stresses the fact that consumption is proportional to an individual's estimation of his or her permanent income hence people base their spending decisions on expectations of permanent income. Friedman describes permanent income as the average income that people can earn over their life time. He also makes a distinction between transitory income and permanent income where transitory income is viewed as windfall gain or income. Changes in transitory income are believed not have an effect on spending and saving decisions but shifts in permanent income would be important in shaping spending levels. Individual's consumption is adjusted based on their perception of permanent income over their life time. When the permanent income changes their consumption patterns responds accordingly. The concern about long term permanent income for consumption is the main motivating factor to save.

The two theories assume that human beings are logical in their views or feel about the future as such they balance their present spending according to the effect it will have on their income levels. They consciously spend their resources in a manner that does not have a negative impact on the resources that they rely on to assist them in the future. In the process of deciding on whether to spend or not intervening variables such as income level, age, education, and various financial commitments emerges to play a role in determining an individual's action to save.

Gedela (2012) observes that most households in developing countries are poor, risk averse and operate in scenarios of uncertainty and imperfect financial markets hence the above theories are deficient in explaining the saving behaviour of such households.

The Behavioural Theory of Saving

Beverly (1997) observes that the primary behavioural theory is the behavioural life cycle hypothesis proposed by Shefrin and Thaler (1988) which is grounded in an economic theory of self control where an individual is viewed as a planner and Doer. The planner is concerned with lifetime utility while the doer exists for a single period and is selfish and myopic. In order for self control to manifest in the doer, his preferences must be modified, incentives altered and his set of choices constrained. Shefrin indicates that although the behavioural theory is rooted in economics saving and consumption preferences are not assumed to be fixed, neither is it assumed that individual economic behaviour is determined by preferences and economic behaviour instead individuals are expected to respond to and even create their own behavioural incentives and constraints. According to Shefrin and Thaler individuals voluntarily adopt rules which restrict the doers to spend. These rules can be externally imposed or self imposed. This causes household saving to be seen as “the result of successful and sophisticated imposition of welfare improving, self imposed constraints on spending” Maital and Maital, 1994 (as cited in Beverly, 1997).

The Psychological and Sociological Theories of Saving

These theories are based on the assumption that consumer’s tastes and aspirations are not fixed but are affected by economic or social stimuli and conditions. Psychological theories are grounded on a framework of stimulus-organism-response where changes in the environment or information received is viewed as stimulus which influences the individual (organism) and response, Katona, 1975 (as cited in Beverly, 1997). Katona has posited that saving is a function of ability and willingness to save. Ability to save acknowledges that some individuals who have limited economic resources or special consumption needs find it hard to defer consumption. At the same time those who have the capacity and ability to postpone consumption need to show willingness. Other sociological and psychological propositions consider the effects of families,

peers and past saving experiences on consumption patterns, saving related beliefs and aspirations for saving.

2.3 Factors influencing saving

Various studies have looked into the factors that influence savings among various groups of people across the globe. Some of the notable determinants of saving include; age and gender of household head, dependency ratio, income, access to credit, tax, interest rates and access to Saccos.

2.3.1 Age and gender of household head

The LCH suggests that there exists a relationship between age and savings rate. Burney and Khan (1992) found that savings increase with age crossing a certain limit. Gedela (2012) in his study on determinants of saving behaviour in rural households found a positive relationship between age of the household head and savings where increase in age resulted in increase in saving but as the household head becomes old the savings start declining.

The gender of the household heads in most studies has shown to have an impact on the level of saving. A study conducted by Lihuku (2006) revealed that households that were headed by males saved a lot more than female headed households because the females are usually required to share their time between activities that increase the income of the household and housekeeping.

2.3.2 Dependency ratio

A study conducted by Kibet et al in Nakuru district revealed that an increase in dependency ratio is bound to cause a decline in savings while a decline in dependency ratio will result in an increase in saving. This concurs with the study by Johansson (1998) which investigated the reasons for sustained growth in private savings in Indonesia since 1970. The findings of the study were that predictions from the Life cycle hypothesis indicate that growth in private savings rate is associated with drop in dependency ratio. This suggested that a reduction in the number of children relative to the working age population alleviated budget constraints thereby boosting savings rates. The neoclassical theories of saving note that households with more children at home save less until the children leave home which in turn raises the capita income of the

household, thus a high dependency ratio reduces savings. A study by Gedela (2012) on Visakhapatnam households indicates a strong negative influence as a result of high dependency ratio where an increase in number of dependants drastically reduce savings rate. Matur et al (2012) notes a high percentage of older people in a population decrease the saving rate because they are not part of the active labour force and are expected to finance their consumption out of their past savings. On the other hand they still observe that higher young dependency ratio may have dual effect on savings and consumption. Consumption of families for child care may increase and force families to save for future expenses for their children such as their education.

2.3.3 Income

Income is considered as an important factor in the determination of the saving behaviour of an individual (Gedela, 2012). The Keynesian theory of 1936 identified disposable income as an important determinant of saving. A survey on Mpanga tea growers by Selhausen (2011) indicates that some famers fail to save because they do not have enough money to save or their income is too little to allow them to set aside money for saving purposes. In the research conducted by Athukorala and Sen (2001) on determinants of private saving in India found that savings rate of households rose with the growth rate and level of disposable income. Chowa et al (2012) in their study on determinants of saving among low-income individuals in rural Uganda their findings were consistent with neoclassical theory which states that when people have more disposable income they save more.

2.3.4 Access to credit

Access to credit is another determinant of saving which is observed by various studies to have a negative effect on saving. Kibet et al (2009) in their study noted that among low income households saving is usually done for consumption purposes and is rarely converted to investments. They further observed that credit constraint encourages households to save while improved access to credit results in reduced saving and relatively less increase in investment expenditure by the households in the short run. A study conducted by Cronje (2010) draws lessons from china where the financial services sector is under developed leading to credit constraint a factor which contributes to high levels of household saving. Households in China are

forced to save in order to purchase big items such as houses and cars which are investment expenditures.

2.3.5 Tax

In a study conducted by Akpan et al (2011), in Nigeria on determinants of saving among Agro-based firm workers indicate that tax has a negative effect influence on savings of agro based workers. The study goes on to notice that as tax rate increases the permanent income according to the permanent income hypothesis by Friedman will reduce, thereby resulting in the reduction of transitory income which in return lowers the ability to save by the workers. The study notes that as tax rate increases, it lowers the aggregate disposable income resulting in an increase in the consumption expenditure of households and a corresponding decrease in savings.

2.3.6 Interest rate

Matur et al (2012) observes that real interest rates have theoretically ambiguous effect on savings due to the opposing substitution and income effects. They note that an increase in real interest rates reduces the present value of future income flows and therefore has a negative impact on savings, at the same time it increases the net return on savings making savings attractive today. This leads to postponement of consumption and has positive impact on savings (substitution effect). The net impact of real interest rates is determined by the relative strength of the income and substitution effect and it is an empirical question. Athukorala and Sen (2001) observe that although LCH suggests interest rate on bank deposits and wealth as a determinant of saving the net effect of the interest rate on consumption/saving is unclear in this model. In a study conducted by Kibet et al (2009) reveals that none of the respondents viewed interest gained on savings as a motivating factor to save. The households in the study preferred putting the money away in investments the returns of which are viewed to exceed those of savings with a net result of higher than anticipated opportunity cost.

2.3.7 Saccos

Saccos are community membership based financial institutions that are formed and owned by their members in proportion of their member's economic interests, Seyd, 1991 (as cited in Cheruiyot, Kimeli and Ogendo, 2012). Saccos exist as institutions that offer financial services

support to individuals or groups that are marginalised by the main stream banking sector. Saccos offer products and services that meet diverse needs of different segments of the population up to the lowest strata of the society (Selhausen, 2011).

Poor people get by on incomes that are small and irregular. But they often need sums of money larger than they have immediately on hand, to pay for lifecycle events such as birth, marriage, death, and for emergencies, and to seize opportunities to invest in assets or businesses. The only reliable and sustainable way to build these sums is to build them somehow or other forms of savings. Poor people have to save and financial services for the poor are there to help them find ways to do so.

Rutherford and Arora 2011 (as cited in Selhausen, 2011, p. 4)

The study by Selhausen shows that Saccos have been instrumental in mobilizing savings of Mpanga tea farmers in Uganda considering that the Saccos offer a wide range of products that cater for all groups of customers including those that are sidelined by the main stream banks because of small deposits. Despite the study revealing that most farmers were not able to access Mpanga tea Sacco services because of distance barriers, they were still able to deposit and transact at other Saccos an indication of how useful the Sacco services have been to various groups of farmers.

2.4 Empirical evidence on factors influencing saving

A study was conducted by Akpan et al (2011) on the analysis of savings determinants among agro-based firm workers in Nigeria. A two stage least squares method of simultaneous equation model was used in the analysis. Cross-section data was collected from 250 randomly selected workers of 5 agro-based firms in the study area. Primary data was collected using structured questionnaires and interviews. The results of the analysis revealed that education, family size and membership of a social group were some of the factors that influenced the saving attitude of workers.

A study by Chowa et al (2012) on determinants of saving among low income individuals in rural Uganda examined the determinants of saving and asset accumulation among low income individuals in Uganda. The pilot project used quasi-experimental design comparing across treatment and comparison villages. A sample of 400 participants was selected. Data was collected through face to face surveys where questionnaires were administered. Data was analysed using hierarchical multiple regressions the findings of the study indicated that poor people can and do save when institutional barriers to saving are removed.

A study conducted by Kibet et al (2009) on determinants of household saving in rural Kenya found that household income, nature of business occupation, gender and education of household head positively influenced saving while credit access, age and dependency ratio negatively influenced household saving.

A microeconomic approach in investigating the factors that influence savings among households of teachers, entrepreneurs and smallholder farmers in rural parts of Nakuru district was adopted. The sample comprised 359 respondents selected through a multi stage sampling technique from several administrative divisions of the district. Cross-sectional primary data was collected by interview method. Through application of least square method the main findings were that household savings were determined by the type of occupation of the household head which saw that farmers and teachers household heads saved much less than businessmen.

A study by Selhausen (2011) tried to establish the savings culture of Mpanga Tea farmers in Uganda. The study found a relatively low saving culture among Mpanga Tea growers. Factors that attributed to the low savings culture included low variety of savings products offered by the Sacco, high costs incurred in transport due to long distance covered from tea centres to the factories, lack of money and in other cases too little money to save.

A field research was carried out where data was collected from 7 tea centres spread out over Mpanga's tea small scale farmers. A sample of 139 respondents was used. Data was collected using questionnaires which was then analysed through graphs and tables.

Swasdpeera and Pandey (2012) carried out a cross-sectional study on the factors that influence the saving behaviour of salaried individuals in Thailand. Questionnaires and in-depth interviews were used as the main tools for data collection. A case study approach in collecting the survey data was used instead of simple random sampling in order to have a close interaction with the subjects and observe them in their natural working setting. The results of the univariate and multivariate analysis showed that income, age, marital status, number of children, and educational level positively influenced individual's average saving. The proposed model of influence on saving suggested individuals take a series of action on saving if they have a surplus portion of income, a concern for future spending and trusted saving product.

Contentious issues have arisen from various studies on factors that influence saving. Athukorala and Sen (2001) observe that the LCH theory assumes that individuals are forward looking and base their saving decisions on lifetime income rather than current income. The validity of this premise may not be true especially in low income countries. Modigliani noted that,

For at least that portion of the population that lives at or near the starvation level may find it impossible or too burdensome to set aside resources now in order to provide for later consumption. People from that predicament may tend to live more from hand to mouth, skipping retirement or being supported by extended families.

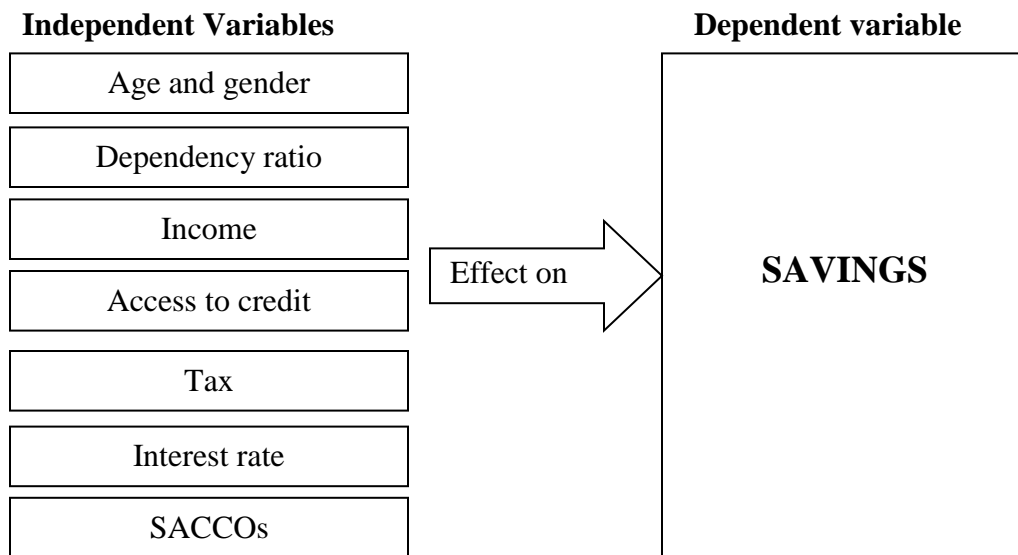
Modigliani F (2005), pp.131-132

Beverly (1997) notes that the permanent income hypothesis provides low insight into the behaviour of individuals with low permanent income. The theory suggests that changes in income which are perceived as transitory have little effect on consumption patterns. Modigliani 1949 (as cited in Beverly, 1997) in their version of relative income hypothesis posit that “households base their consumption decisions on previous income or consumption standards and that households seeking to maintain habitual behaviour will not reduce consumption when income reduces.” This proposition according to Beverly suggests that individuals with lower transitory income may have lower savings rates than other households. Relating this with the LCH low income is associated with the youth implying that the desire to smooth consumption will result in below average savings rates for many low income households.

Based on the various studies, different factors have been observed to contribute to the decision by households and individuals to save of which there has been no consensus that the same determinants apply across the board. Akpan (2011) observed that education, family size and membership of social group influence saving attitude of workers. A study by Kibet et al (2009) found that income, occupation, gender and education positively influenced savings while credit access, age and dependency ratio negatively affected the decisions to save. Selhausen (2011) observed high costs of transport, low variety of savings products and lack of money as factors contributing to low savings culture while Swasdpeera and Pandey (2012) established income, age, gender, marital status, number of children and educational level as determinants of saving. This study aimed at establishing how factors such as age and gender of household head, dependency ratio, levels of income, Access to credit, tax, interest rate and existence of Saccos affect Kericho town based tea farmers' decision to save.

The hypothesis of the research shows the effect of the independent variables on the depended variable as demonstrated in the figure below:

Fig2: hypothesis of the study



Source: Satakwawo B Zuze 2014.

CHAPTER THREE: RESEARCH METHODOLOGY

3.0 Introduction

This chapter outlines the design of the research, the population, sampling design, data collection methods and data analysis. The study was carried out in Kericho County a region where most of the large scale tea plantations are found and where most of the tea is grown in Kenya.

3.1 Research design

Research design is defined as the conceptual structure within which research is conducted. It constitutes the blue print for collection, measurement and analysis of data (Kothari, 2011). The study was based on a cross section explanatory survey as demonstrated by Swasdepera and Pandey (2012) where the results of the research explain the relationship between saving and the factors that influence saving. Explanatory survey method was used to enable the results to explain and not just describe if a relationship exists between savings and the factors that influence savings.

3.2 Population

Saunders, Lewis and Thornhill (2009) define population as group of members you are researching. The research's target population was Kericho town based tea farmers whose population is 380 according to KTDA.

3.3 Sample design

The research used cluster sampling technique where the respondents were drawn from various tea centres in Kericho. Using a confidence level of 95% and 5% margin of error, and 50% proportion of the target population, a sample of 190 tea farmers from Kericho town was randomly picked. The sample was calculated using the following formula by Mugenda and Mugenda (1999):

Sample size: $n / (1+n/N)$

Where; n= required sample size if population is greater than 10, 000

$n = Z^2 pq/d^2$ (where n is desired sample size, Z is required confidence level, q= 1-p, P is proportion of the population being measured, d is statistical significance.)

N= target population

3.4 Data collection

The research collected qualitative and quantitative primary data using structured and self administered questionnaires which targeted smallholder farmers. The data was collected by the researcher and was targeting the heads of households/ decision makers among the Kericho town based tea farmers. Primary data obtained from the small scale farmers established the importance of the factors that influence their decision to save. How levels of income influence the need to save, importance of age and gender of household on the decision to save, how existence of institutional bodies such as Saccos affect farmers decision to save, how interest earned on a savings account influence decision to save, the importance of tax to their saving decision, importance of dependency ratio to their saving decisions and how access to credit influence saving decisions.

3.5 Data analysis

A univariate analysis analysed each variable of the factors that influence saving to establish its effect on saving. The research hypothesis aimed at establishing the relationship between savings and each of the factors that influence savings among tea farmers in Kericho. A confidence level of 95% was employed and a margin of error of five percent was used. In order to test the significance to determine whether the null hypothesis should be rejected or alternative hypothesis to be accepted, Chi-square method of testing was used. Multivariate analysis used regression to analyse the effect of demographic factors on saving as demonstrated by Swasdepeera and Pandey (2012). To analyze the pattern of correlations among the variables that influence saving decisions under the study, factor analysis and principal component analysis methods were used. The model in essence analysed savings as a function of age, gender of household head, dependency ratio,

tax, existence of Saccos, access to credit and interest rate earned on savings on individual's savings.

Savings level model:

$$S_L = \alpha + \beta_1 \text{age} + \beta_2 \text{gender} + \beta_3 \text{dependency ratio} + \beta_4 \text{income} + \beta_5 \text{credit} + \beta_6 \text{sacco} + \beta_7 \text{interest rate} + \beta_8 \text{Tax}$$

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

In this chapter the findings of the study are presented. The objective of the study was to establish the factors that influence savings among Kericho town based tea growers. To achieve the objective, data was collected from small scale tea farmers spread across Kericho town. To achieve the objective of the research, the questionnaire captured some of the main factors that have commonly influenced savings among various groups of people across the globe. This decision was arrived at in order to ascertain if these factors have the same or similar influence on Kericho tea farmers' decision to save. The main factors being examined included age and gender of household head, dependency ratio, income, access to credit, tax, interest rate and access to credit. The respondents were required to rate the extent to which these factors influence their decision to save on a seven point likert scale. Frequency distribution tables and statistical figures showing the mean, mode and standard deviation of the responses were derived to indicate the frequency and occurrence of the responses. Open ended and closed ended questions were used in the questionnaire. Open ended questions were aimed at allowing the respondents the chance to explain and express themselves further in order for the researcher to obtain more information from the respondents.

The rest of the chapter is organized as follows: in section 4.1 is the response rate, in section 4.2 are descriptive statistics, including correlations among the variables; in section 4.3 is factor analysis and section 4.4 is summary and discussions of the findings.

4.1 Response rate

The target sample of the study was 190. Questionnaires were administered by the researcher to the 190 farmers and 94 farmers responded representing 49.47 response rate. 66% of the respondents were male and 34% were female. The majority of the respondents fell within the age bracket of 31-40 which represented 40% of which 73% were the heads of their households and 23% were not.

4.2 Descriptive statistics

4.2.1 Correlation

Table 4.1: Correlation results. As attached in appendix 2

A sure positive or negative relationship among the variables summarised in table 4.1 exists. The occurrence of the relationships is certain and not by chance. There is no strong evidence that a relationship exists between age and gender, income, access to credit, tax, and access to Sacco except a positive linear relationship with itself and dependency ratio and a negative relationship with interest rate.

There is no strong evidence that a relationship exists between gender and the rest of the variables except a linear relationship with itself.

There is no strong evidence that a relationship exists between dependency ratio and gender, access to credit, tax, interest rate and access to Sacco except a linear relationship with itself, and a positive relationship with age and income.

There is no strong evidence that a relationship exists between income and gender, tax, and interest rate exists except a linear relationship with itself and a positive relationship with dependency ratio, income, access to credit and access to Sacco.

There is no strong evidence that a relationship exists between access to credit and gender, dependency ratio, tax and interest except a linear relationship with itself and a positive relationship with income, access to credit and access to Sacco.

There is no strong evidence that a relationship between tax and the rest of the variables exist except a linear relationship with itself. There is no strong evidence that a relationship exists between interest rate and gender, dependency ratio, income, access to credit, tax and access to Sacco except a negative relationship with age and a linear relationship with itself.

There is no strong evidence that a relationship exists between access to Sacco and age, dependency ratio, tax and interest rate except a linear relationship with itself and a positive relationship with income and access to credit.

Table4.2: Summary of correlations among the variables

	Variables	Relationshi p	Correlatio n	Statistical significance
1	Dependency ratio and age	Positive	0.273	Present
2	Interest rate and age	Negative	-0.217	Present
3	Income and dependency ratio	Positive	0.365	Present
4	Access to credit and Income	Positive	0.451	Present
5	Access to Sacco and Income	Positive	0.469	Present
6	Access to Saco and access to credit	Positive	0.485	Present

Source: Research data (2014).

A positive relationship between dependency ratio and age exists. According to the responses, as one grows old the need to save for their dependants increases. In the Kericho set up and African set up the dependency ratio is usually high because support is extended to extended families as well.

A negative relationship exists between interest rate and age because the older one grows the less motivated they become to saving for the sake of the interest to be earned on the savings account hence they are not motivated to a great extent to save because of interest. Their decision to save is motivated by other factors interest does not play a significant role in their saving decision.

A positive relationship exists between dependency ratio and income because as dependency ratio increases it puts a strain on income/ resource base hence the need for increased income with higher dependency ratio. The higher the dependency ratio the higher the need for increased income.

A positive relationship exists between access to credit and income. As the income levels of the individuals goes down or are low, the desire to access credit goes up to satisfy their consumption needs.

A positive relationship exists between access to Sacco and income. The respondents' need for increased income is motivated partly by their participation in a Sacco in order to earn dividends as they deposit their resources and in the process gain part ownership of the institution. On the other hand, when their income levels go up especially during peak seasons and during the tea bonus months, the need to deposit more funds by the respondents is increased.

A positive relationship exists between access to Sacco and access to credit. Most of the respondents deposit their resources with the Saccos in order to access easy loans. The need for the loans creates a positive relationship. The Sacco loans are sought because they are deemed to be relatively cheaper than loans obtained from commercial banks. The terms and conditions of borrowing are also flexible. A customer is able to access a loan and use their savings deposits as collateral for the loan.

4.2.2 Frequency distribution and statistics

Table 4.3: Statistics and frequency distribution

	Number	Mean	Mode	Std. Deviation	Min	Max	Frequency %							Total	
							Valid	Missing	Not at all	Very small extent	Small extent	Moderate extent	Fairly great extent		To a great extent
Age	94	0	4	1	2	1	7	20	10	10	18	13	16	14	100
Gender	94	0	3	1	2	1	7	30	5	15	19	11	7	13	100
Dependency Ratio	94	0	4	7	2	1	7	12	6	16	18	11	17	20	100
Income Access to Credit	94	0	5	7	2	1	7	3	4	6	15	10	27	35	100
Tax	94	0	3	1	2	1	7	43	11	14	9	4	10	11	100
Interest Rate Access to Sacco	94	0	4	1a	2	1	7	20	6	9	13	15	17	20	100
	94	0	5	7	2	1	7	11	4	4	6	11	16	48	100

1a = multiple mode exists

Source: Research data (2014).

Based on the above analysis and figures, 20.2% of the respondents which represented the majority of the responses indicated that their age does not influence their decision to save. The respondents indicated that they save in order to meet the consumption needs of their families but do not consider age as a factor that influences their decision to save.

29.8% of the respondents indicated that gender does not influence their decision to save at all. This was followed by 19.1% of the respondents who indicated that gender influences their saving decision to a moderate extent.

Majority of the responses indicated that dependency ratio influences their decision to save to a very great extent represented by 20.2 % of the respondents. Those who indicated dependency ratio as having a positive influence on their decision to save indicated this as the case because besides having their resources depleted by the growing number of dependants they are still motivated to work hard and save with Saccos in order to have easy access to loans that can enable them to meet the consumption needs of their families. Among the respondents who indicated that high dependency ratio does not influence their decision to save, the reason was because they have a few or no dependents who affect their decision to save. In the respect of the respondents with a few dependants, their resource base is higher because they have a few or no dependants at all and this encourages them to save. Overall, majority of the respondents indicated dependency ratio as having a positive influence to their decision to save.

Income was viewed by the majority of respondents comprising 35.1% as a factor that influences their decision to save to a very great extent. As their levels of income goes up especially during peak seasons and bonus seasons, farmers are motivated to save more whereas when the resource base goes down they are not keen to save because of limited resources hence low levels of income have a negative effect on their decision.

Access to credit was one of the motivating factors why most respondents comprising 29.8% save their money. This percentage represented the majority of the respondents being influenced to a very great extent. Kibet et al (2009) in their study noted that among low income households saving is usually done for consumption purposes. They further observed that credit constraint encourages households to save while improved access to credit results in reduced saving. A study conducted by Cronje (2010) draws lessons from china where the financial services sector is under developed leading to credit constraint a factor which contributes to high levels of household saving. Households in China are forced to save in order to purchase big items such as houses and cars which are investment expenditures.

In the Kenyan case, the majority of the farmers indicated that they save more in order to access credit, the majority of which save with Saccos who use savings account as security for the loan. Those who responded no to access to credit having an influence on their decision to save were in the bracket of 6%. This group believes in saving for future consumption as opposed to acquiring a loan in order to finance their consumption needs.

Tax was seen to have no effect at all on the respondents' decision to save observed by a 42.6% response rate. Most of the respondents do not even recognise the effect of tax that is levied on their tea proceeds or proceeds from other arenas as having a significant effect on their decision to save or not. Those who indicated tax as negatively influencing their decision to save indicated that the higher the tax rate the lower the disposable income hence less income is difficult to commit to savings. These are the respondents that ranged from being influenced to a small extent to a very great extent.

Interest rate variable had extreme varying responses. 20.2% respondents indicated that interest earned on savings account does not influence their decision to save. This is the case because most of them did not appreciate the significance of interest earned on their savings accounts because it is very little. Hence interest earned did not pose as a motivating factor for this category of respondents to save. A similar percentage of responses of 20.2% indicated that interest influence their decision to save to a very great extent.

47.9% of the respondents indicated that access to Sacco influences their saving decision to a very great extent. The majority of the respondents choose to save with the Sacco because the Saccos offer a lot of incentives and flexible terms of saving and borrowing money as opposed to the traditional banks. Some of the notable benefits obtained from saving from Saccos include ability to access a cheaper loan where the borrower is allowed to access a loan 3 times their savings (deposits). The savings account is used as security for the loan. The Saccos do not demand collateral for one to access credit. When one deposits their savings with a Sacco they automatically qualify for part ownership of the organisation and are allocated shares. This in return entitles them to dividends paid at a given period. The main motivating factor for most of the individual's decision to save with the Sacco is to have easy access to credit.

Apart from the above mentioned factors, the respondents also indicated the following as common factors that influence their decision to save to a positive great extent these include desire to expand business, investment needs, school fees and the unpredictable and volatile cost of living.

According to the statistics obtained, dependency ratio, income, access to credit and access to Sacco had a mode of 7 indicating that most of the respondents had the mentioned factors as influencing their decision to save to a very great extent. Factors such as age, gender and tax were indicated by most of the respondents as having no influence at all on their decision to save.

The standard deviation in this study signifies the variation in the responses of the respondents on factors that influence their decision to save. A standard deviation of 1 indicates no variation in the responses hence one common answer which is not the case in this study. The various factors have obtained various standard deviations as demonstrated in age with 2.087, gender 2.093, dependency ratio 1.986, income 1.676, access to credit 1.908, tax 2.162, interest rate 2.187 and access to Sacco 2.066. Based on the results of this study, the standard deviation indicates that if the study was to be repeated multiple times, chances are that the same results will be obtained. The confidence is drawn from the fact that the standard deviations obtained are within the estimated margin of error of not more than 5% at 95% confidence level.

4.3 Factor analysis

Factor analysis identifies underlying variables, or factors, that explain the pattern of correlations within a set of observed variables. Factor analysis is often used in data reduction to identify a small number of factors that explain most of the variance that is observed in a much larger number of manifest variables. Factor analysis can also be used to generate hypotheses regarding causal mechanisms or to screen variables for subsequent analysis In this study factor analysis is the purpose of structure detection, i.e. to examine the underlying (or latent) relationships between the variables, specifically factors that influence savings of small scale tea farmers in Kericho town- Kenya.

With any extraction method, the two questions that a good solution should try to answer are "How many components (factors) are needed to represent the variables?" and "What do these

components represent?" In this study the analysis variables are age, gender, dependency ratio, income, access to credit, tax, interest rate and access to Sacco.

4.3.1 Sample Adequacy Test

The Kaiser-Meyer-Olking (KMO) test is used to test the adequacy of the sample before applying factor analysis (Patil, Singh, Mishra & Donovan, 2007). Apart from testing sampling adequacy, KMO is used to evaluate the correlations and partial correlations to determine if the data are likely to coalesce on components. The result is presented in table 4.4. Essentially, the Kaiser-Meyer-Olking (KMO) statistic should be greater than 0.600 and the Bartlett's test should be significant (e.g. $p < .05$).

Table 4.4: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Adequacy.	Measure of Sampling	.635
Bartlett's Test of Sphericity	Approx. Chi-Square	94.865
	Df	28
	Sig.	.000

The Bartlett's test evaluates whether or not our correlation matrix is an identity matrix (1 on the diagonal and 0 on the off-diagonal). On the basis of results in table 4.4, we reject the hypothesis that the sample is not adequate. We therefore proceed with the analysis.

4.3.2 Communalities

Communalities indicate the amount of variance in each variable that is accounted for. Initial communalities are estimates of the variance in each variable accounted for by all components or factors; and in the case of principal components extraction, this is always equal to 1.0 for correlation analyses. In Table 4.5 in the first column are variable names and communalities.

Table 4.5: Communalities

Variable	Initial	Extraction
Age	1.000	.631
Gender	1.000	.569
Dependency Ratio	1.000	.584
Income	1.000	.714
Access to Credit	1.000	.602
Tax	1.000	.621
Interest Rate	1.000	.401
Access to Sacco	1.000	.609

Extraction Method: Principal Component Analysis.

Originally, eigenvalues greater than 1 was generally accepted. However Zwick and Velicer (1986) have suggested, Horn's (1965) parallel analysis tends to be more precise in determining the number of reliable components or factors.

Extraction communalities are estimates of the variance in each variable accounted for by the components. The communalities in this table are above average, which indicates that the extracted components represent the variables.

Communality (h^2) is the sum of the squared component loadings and represents the amount of variance in that variable accounted for by all the components. For example, all eight extracted components account for 71.4% of the variance in variable income ($h^2 = .714$).

4.3.3 Total variance explained - unrotated matrix

The variance explained by the initial solution, extracted components, and rotated components is presented in Table 4.6 below. This first section of the table shows the initial eigenvalues; while

the second part present extraction sums of squared loadings. The total column gives the eigenvalue, or amount of variance in the original variables accounted for by each component. The percentage (%) of variance column gives the ratio, expressed as a percentage, of the variance accounted for by each component to the total variance in all of the variables. The cumulative percentage (%) column gives the percentage of variance accounted for by the first n components. For example, the cumulative percentage for the second component is the sum of the percentage of variance for the first and second components. For the initial solution, there are as many components as variables, and in a correlations analysis, the sum of the eigenvalues equals the number of components, in this case there are eight components.

Table4.6: Initial eigenvalues and extraction sums of squared loadings

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.144	26.797	26.797	2.144	26.797	26.797
2	1.449	18.107	44.905	1.449	18.107	44.905
3	1.138	14.225	59.130	1.138	14.225	59.130
4	.929	11.611	70.742			
5	.759	9.486	80.227			
6	.661	8.267	88.495			
7	.499	6.239	94.734			
8	.421	5.266	100.000			

Extraction Method: Principal Component Analysis.

The request is that extracted, so the first three principal components form the extracted solution and presented on the second part of the table under extraction sums of squared loadings as presented in Table 4.6. They explain nearly 59 (59.130) percent (%) of the variability in the original eight variables, so you can considerably reduce the complexity of the data set by using these components, with 41 (40.870) percent (%) loss of information.

4.3.4 Total variance explained - rotated matrix

The unrotated output maximizes variance accounted for by the first and subsequent factors, and forcing the factors to be orthogonal. However this comes at the cost of having most items load on the early factors, and usually, of having many items load substantially on more than one factor. Rotation serves to make the output more understandable, by creating a pattern of loadings where items load most strongly on one factor, and much more weakly on the other factors. The results of the rotation are presented in Table 4.7.

Table 4.7: Rotation Sums of Squared Loadings

Rotation Sums of Squared Loadings		
Total	% of Variance	Cumulative %
2.094	26.170	26.170
1.441	18.013	44.183
1.196	14.947	59.130

Extraction Method: Principal Component Analysis.

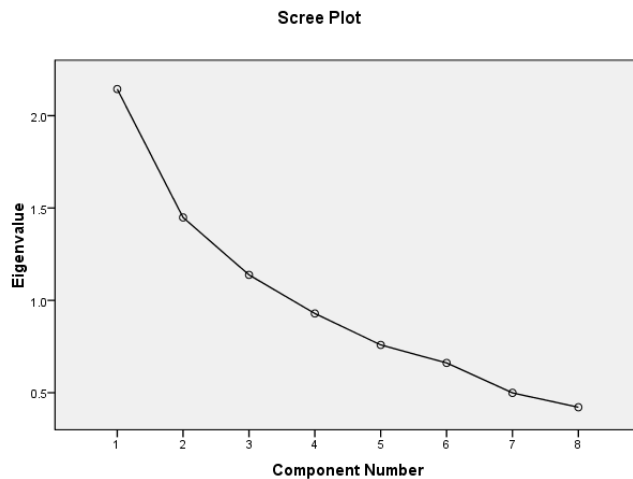
The rotation maintains the cumulative percentage of variation explained by the extracted components; but that variation is now spread more evenly over the components (Cumulative percentage is 59.130 in Tables 4.6 and 4.7). The large changes in the individual totals suggest that the rotated component matrix will be easier to interpret than the unrotated matrix.

4.3.5 The scree plot

The scree plot helps you to determine the optimal number of components. The scree plot graphically displays the information in Table 3.2 and 3.3; the components' eigenvalues in the

scree plot the eigenvalue of each component in the initial solution is plotted. The components on the steep slope are the relevant ones to extract. In the graph the first three components are to be extracted. The components on the shallow slope contribute little to the solution.

Figure 4: Scree plot



The last big drop occurs between the second and third components, so using the first two components is an easy choice.

4.3.6 Rotated Component Matrix

The rotated component matrix helps you to determine what the components represent. The extent to which each variable contribute to each component is presented in Table 4.8. The first component is most highly correlated with income (0.816) and access to credit (0.752). Therefore, Income is a better representative, however, because it is less correlated with the other two components (with low correlation of 0.189 with component 1 and -0.109 with component 2).

Table 4.8: Component Matrix^a

	Component		
	1	2	3
Age	.119	.747	.242
Gender	.082	.333	-.672
Dependency Ratio	.429	.549	.313
Income	.816	.189	-.109
Access to Credit	.752	-.180	-.067
Tax	.268	-.270	.690
Interest Rate	.304	-.553	-.060
Access to Sacco	.737	-.178	-.184

The second component is most highly correlated with age (0.747) but lowly correlated with components 1(0.119) and 3(0.242). The third component is most highly correlated with tax (0.690) but lowly correlated with components 1(0.268) and 2 (-0.270). This suggests that we can focus on income, age and tax in further analyses, as determinants of savings.

4.4 Summary and conclusion of findings

The results of the survey show varying relationships among the factors that influence the tea farmers' decision to save. Both positive and negative relationships are in existence due to varying views of the respondents.

According to this study age is considered as a factor that does not influence the farmers' decision to save. Contrary to Burney and Khan (1992)'s observation where savings increase with age

crossing a certain limit. Gedela (2012) in his study on determinants of saving behaviour in rural households found a positive relationship between age of the household head and savings where increase in age resulted in increase in saving but as the household head becomes old the savings start declining.

In this study, gender is observed to have no influence on the tea farmers' decision to save. It is not seen as a primary motivating factor influencing the saving decision. Contrary to other findings in other set ups where the gender of the household heads is shown to have an impact on the level of saving. A study conducted by Lihuku (2006) revealed that households that were headed by males saved a lot more than female headed households.

Dependency ratio in this study is viewed as having a positive influence on most of the respondents' decision to save. This result is not in agreement with observations made in a study by Kibet et al (2009) in Nakuru district Kenya where an increase in dependency ratio is bound to cause a decline in savings while a decline in dependency ratio will result in an increase in saving. The results of a study by Johansson (1998) on the reasons for sustained growth in private savings in Indonesia found that predictions from the Life cycle hypothesis indicate that growth in private savings rate is associated with drop in dependency ratio. A study by Gedela (2012) on Visakhapatnam households indicates a strong negative influence as a result of high dependency ratio where an increase in number of dependants drastically reduce savings rate.

The Keynesian theory of 1936 identified disposable income as an important determinant of saving. A survey on Mpanga tea growers by Selhausen (2011) indicates that some farmers fail to save because they do not have enough money to save or their income is too little to allow them to set aside money for saving purposes. This concurs with some of the responses indicated by the Kericho tea farmers. In the research conducted by Athukorala and Sen (2001) on determinants of private saving in India found that savings rate of households rose with the growth rate and level of disposable income. Chowa et al (2012) in their study on determinants of saving among low-income individuals in rural Uganda their findings were consistent with neoclassical theory which states that when people have more disposable income they save more. Overall in the Kericho town setting, income is a factor that is considered to have an influence on farmers' decision to

save. During peak seasons and bonus season the farmers' disposable income goes up in the process encouraging them to save more.

In this study, access to credit is seen to have an impact on the decision to save. Most of the respondents indicate that they are motivated to save in order to access loans at the back of their savings. This is not in agreement with studies conducted by Kibet et al (2009) and Cronje (2010). Kibet et al (2009) in their study noted that credit constraint encourages households to save while improved access to credit results in reduced saving. A study conducted by Cronje (2010) draws lessons from china where credit constraint is a factor which contributes to high levels of household saving. This has an opposite effect on Kericho town based tea farmers because the respondents save in order to access credit from Saccos and use the savings account as security for the loan.

In the Kericho town study, tax is seen as a factor that has no influence of the tea farmers' decision to save. Most of them find the levied tax to have an insignificant effect on their income. In a study conducted by Akpan et al (2011), in Nigeria on determinants of saving among Agro-based firm workers indicate that tax has a negative effect on savings of agro based workers. The study notes that as tax rate increases, it lowers the aggregate disposable income resulting in an increase in the consumption expenditure of households and a corresponding decrease in savings.

Interest rate is seen as a factor that influences 20.2% of farmers' decision to save and a similar percentage does not view it as a crucial factor in influencing their decision to save. Those that are not influenced by tax concur with the study conducted by Matur et al (2012) where it is noted that an increase in real interest rates reduces the present value of future income flows and therefore has a negative impact on savings. A study conducted by Kibet et al (2009) reveals that none of the respondents viewed interest gained on savings as a motivating factor to save.

A study by Selhausen (2011) showed that Saccos have been instrumental in mobilizing savings among Mpanga tea farmers in Uganda. In this study, Saccos are observed to be very instrumental in influencing the farmers' decision to save. Most of them save in order to benefit from flexible loan terms and other services.

Based on the above observations, different factors have different influences on individuals or household decisions to save. The relationships are also observed in the correlations and factor analysis.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

In this chapter the summary of the findings is discussed as well as the conclusion of the study in line with the objective of the study. Recommendations, limitations of the study and suggestions of areas for further research are also included.

5.2 Summary of findings

Tea business is an integral part of the agricultural sector of the Kenyan economy that has contributed significantly to the Kenyan economy in a number of significant ways. The tea business has been instrumental in creating employment. It is the highest foreign exchange earner in Kenya which plays a crucial role in boosting the foreign exchange currency streaming into the country. The tea business also significantly contributes 4% to the national GDP. Most of the tea in Kenya is grown in the rift valley region specifically Kericho hence the area within which the study was conducted.

The objective of the study was to establish factors that influence savings among Kericho town based tea growers. The study established the following as factors that positively influence the tea farmers' decision to save; these include dependency ratio, income, access to credit, and access to Sacco. Interest rate was seen to have both a positive and negative impact on saving decisions.

Dependency ratio was viewed as having a positive influence because the higher the number of dependants one has the lower the resource base which in other circumstances would discourage one from saving but the respondents indicated that they are motivated to save in order to access cheaper loans from Saccos to provide for the needs of their growing number of dependants.

Income was seen to have a positive influence on the tea grower's decision to save in a sense that during peak seasons and when bonuses are declared, the growers tend to have a high income base which in return motivates them to save.

Access to credit was another factor that was observed to have a positive influence on the respondents' need to save. Most of the respondents save with institutions that offer loans at the back of one's savings without requesting for collateral. Hence access to credit positively influenced the respondents' decision to save.

Access to Sacco was one of the main motivating factors that influenced the tea growers' decision to save. Saccos are believed to offer better services that are tailor made to suit the needs of the farmers. The farmers are able to access cheaper loans, acquire credit and use the savings account as security for the loan. Membership to a Sacco automatically qualifies one to become part of the institution's ownership in return yielding the members dividends at the end of a given period.

Interest rate earned on savings account as a factor had two extreme results where an equal percentage of respondents had varying views. One end was influenced to a very great extent while the other percentage was not influenced at all because they do not appreciate the effect that interest earned has on their savings.

Age and gender, were observed to have no influence at all on one's decision to save and that these individuals save their resources regardless of their gender. Tax on the other hand was seen to have no influence at all on the farmers' decision to save because of its insignificance in reducing the income of the farmers.

5.3 Conclusion

Saving is a very important aspect in life. Most people do not understand the importance of saving and do not practice the same. The individual savings usually contribute to the national savings hence the need for policy makers to take matters of savings seriously because it contributes to the running of the government of the day in one way or another. Governments borrow funds from the populace through bonds or treasury bills.

This study indicates that various factors influence individuals and households decision to save in different settings differently. This indicates that no one factor influences savings in the same way across the board. The correlations between various factors that influence savings in the study have indicated how different factors depend of each other or how factors have multiple influences on the saving decision.

The study has revealed that most of the farmers do not fully understand the importance of saving. The more they put their funds away in savings accounts the more indebted they are at the end of the day. Most of their income ends up in loan repayments which sees them constantly topping up their loans to sustain their livelihoods. The study reveals a poor saving culture among the tea farmers due to low literacy levels, poor funds management and low income levels among other contributing factors.

Saccos which are the key institutions through which most of the farmers are paid and through which they access credit have not been seen to take an active role in reducing the debt burden off the tea farmers and encourage them to save for future consumption and investment besides other factors playing a role in influencing the decision to save. The key role played by the Sacco has been encouraging the farmers to access more loans.

There is need to civic educate the masses on the importance of saving considering that some of the factors indicated in the study as being those that influence them to save only leave them highly indebted. These factors are access to credit, access to Sacco and the need for more income. During peak seasons the farmers make considerable amounts of money but this money is not put to good use because of lack of knowledge on good personal financial management mostly contributed by low literacy levels.

5.4 Recommendations

A study covering a wider scope assessing the factors that influence savings among tea farmers in Kenya and an examination of the savings discipline among tea farmers in Kenya needs to be carried out in order to have a national picture on what motivates the tea farmers to save or the lack of it.

Most of the tea growers do not understand the importance of saving for lack of knowledge on the same. Financial institutions need to go out of their way and demonstrate a social responsibility gesture towards their customers in an effort to promote good saving habits which are lacking. Financial institutions need to come up with tailor made solutions for this section of the market because they earn considerably good sums of money during peak seasons and bonus times and some of the farmers on a monthly basis which if put to good use would alleviate their poverty and remove them from the debts that have overwhelmed them.

The government through relevant ministries need to come up with programs that promote the livelihood of farmers in all aspects of their lives, financial management included considering that tea farming contributes greatly to the GDP of the economy and it is one of the big foreign currency earners of the country. The government needs to also provide subsidised farm inputs in order to reduce the burden of debt on farmers who access loans to buy farm inputs that are highly priced among other things.

5.5 Limitations of the study

The results of the study are biased because the study was conducted in Kericho town targeting Kericho town based farmers with tea farms within Kericho County. The study focused on a smaller population of the tea farmers in the rift valley.

Full understanding of the concept of saving was a challenge to most of the respondents. Some of the respondents did not know if some factors such as tax have a real effect on their income because they do not have an idea of how much tax is levied on their proceeds.

REFERENCES

- Akpan, S.B., Udoh, E.J., and Aya Aya, E. (2011). Analysis of Savings determinants among agro-based firm workers in Nigeria: a simultaneous equation an approach. *Research Paper on Humanities and Social Sciences*, Vol.1, No.3. pp. 1-12. Retrieved from <http://www.iitse.org/journals/index.php/RHSS/1281/1182>
- Alexander, G.J., Sharpe, W.F., and Barley, J.V. (2001). *Fundamentals of Investments*. 3rd ed. Prentice Hall, USA. PP1.
- Athukorala, P., and Sen, K. (2001). Determinants of private saving in India. *Journal of Economic Literature*, D1, O11, O53. Retrieved from <https://www.crawford.anu.edu.au/wp2001-1>
- Beckmann, E., Hake, M., & Urvova J. (2011). Determinants of Household Savings in Central, Eastern and South-eastern Europe paper. P.8. Retrieved from [Http://www.bde.es/f/13/svi_Beckman_Hake_Urvova](http://www.bde.es/f/13/svi_Beckman_Hake_Urvova)
- Beverly, S. (1997). How can the poor save? Theory and evidence on saving in low-income households. *Working paper*, No. 97-3. PP. 1-7. Retrieved from [Http://www.csd.wustl.edu/publications/documents](http://www.csd.wustl.edu/publications/documents)
- Bodie, Z., Kane, A., & Marcus, A.J. (2008). *Investments*. 7th Ed, MacGraw Hill/Irwin, New York. p.1
- Bodie, Z., Merton, R.C., & Cleeton, D.L. (2009). *Financial Economics*. 2nd edition.
- Campbell, J.R., & Hercowitz, Z. (2014). Liquidity constraints of the middle class. *Journal of Economic Literature*, E21. Retrieved from <http://www.tau.ac.il/campbell> Hercowitz
- Cheruiyot, T.K., Kimeli, C.M., & Ogendo, S.M. (2012). Effect of Savings and Credit Co-operative Societies strategies on member's savings mobilization in Nairobi, Kenya. *International Journal of Business and Commerce*, Vol.1 No.11. Retrieved from [Http://www.ijbcnet.com/1-11/IJBC-12-11103](http://www.ijbcnet.com/1-11/IJBC-12-11103)

- Chowa, G.A.N., Masa, R.D., & Ansong, D. (2012). “Determinants of saving among low income individuals in rural Uganda: Evidence from Assets Africa”. *Journal Advances in Applied Sociology* Vol. 2, No. 2, PP. 280-291. Retrieved from <Http://www.scirp.org/journal>.
- Cronje, M. (2009). Creating a savings culture for the black middle class in South Africa- Policy guidelines and lessons from China and India. *MBA research project*, University of Stellenbosch Business School. Retrieved from <Http://www.usb.ac.za>
- Dev, S.M. (2012). Small Farmers in India: Challenges and Opportunities 2012-014 working paper.
- Gedela, S.P.R. (2012). Determinants of saving behaviour in rural and tribal households: an empirical analysis of Visakhapatnam district *IJRSS* volume 2, Issue 3. Retrieved from <Http://www.ijmra.us/project/IJMRA-Rss1414>
- Horn, J. (1965). A rationale and test for the number of factors in factor analysis. *Psychometrika*, 30, 179 – 185.
- Howells, P., and Bain, K. (2007). *Financial Markets and Institutions*. Pearson Education Limited
<Http://www.custominsight.com>
info@teaboard.or.ke
- Jangili, R. (2011). Casual relationship between savings, investing and economic growth in India, *Journal of Economic Literature*. F43, E21, E22, C32. Retrieved from <Http://www.rbi.org>
- Johansson, S. (1998). Life cycles, oil cycles, or financial reforms? The growth in private savings rate in Indonesia. *Savings, Investment and Economic reforms in Developing Countries*. pp19
- Kibet, L.K., Mutai, B.K., Ouma, D.E., Ouma, S.A., and Owuor, G. (2009). Determinants of household saving: Case study of smallholder farmers, entrepreneurs and teachers in

- rural areas of Kenya, *Journal of Development and Agricultural Economics*, Vol. 1(7), PP. 137-143. Retrieved from [Http://www.academicjournals.org/article1379606223](http://www.academicjournals.org/article1379606223)
- Kothari, C.R. (2011). *Research Methodology; Methods and Techniques*. 2nd Revised Ed. New Age International publishers. New Delhi
- Matur, E.P., Sabuncu, A., and Bahceci, S. (2012) Determinants of Private savings and interaction between public and private savings in Turkey. *Journal of Economic Literature* E20, E21, E23. Retrieved from [Http://www.luc.edu](http://www.luc.edu)
- Modigliani, F. (2005). Recent declines in savings rate: a life cycle perspective. Pp. 131-132. Retrieved from [Http://www.novasbe.unl.pt](http://www.novasbe.unl.pt)
- Moore, A., Beverly, S., Sherraden, M., Sherraden, M., Johnson, L., and Schreiner, M. (2000). Saving and asset accumulation strategies used by low-income individuals. *Working paper 00-1*. Retrieved from [Http://csd.wustl.edu/publication](http://csd.wustl.edu/publication)
- Mugenda, O.M., and Mugenda, A.G. (1999). *Research Methods: Quantitative and Qualitative approaches*. Acts Press- Nairobi, Kenya
- O'Rourke, N., Hatcher, L., & Stepanski, E.J. (2005). *A step-by-step approach to using SAS for univariate and multivariate statistics*, Second Edition. Cary, NC: SAS Institute Inc.
- Patil, V.H., Singh, S.N., Mishra, S., & Donavan, D. T. (2007). *Parallel Analysis Engine to Aid Determining Number of Factors to Retain [Computer software]*. Retrieved 08/23/2009 from <http://ires.ku.edu/~smishra/parallelengine.htm>
- Saunders, M., Lewis, P., and Thornhill, A. (2009). *Research methods for Business Students*, 5th Ed. Prentice Hall, USA.
- Selhausen, F.M.Z. (2011), Mpanga Tea grower's savings survey

Swasdpeera, P., and Pandey, I.M. (2012). “Determinants of personal saving: a study of salaried individuals in Thailand,” *Afro-Asian Journal of Finance and Accounting*, Vol.3, No.1, PP34-68. Retrieved from [Http://www.inderscience.com](http://www.inderscience.com)

Zwick, W.R., &Velicer, W.F. (1986). Factors influencing five rules for determining the number of components to retain. *Psychological Bulletin*, 99, 432 – 442.

Appendix 1: Applied questionnaire

1. Gender Male..... Female.....
2. Age below 30..... 30-40..... 40-50..... Above 50.....
3. Are you the head of your family? Yes.... No....
4. How many dependants do you have?
5. Name your source of income Tea farming..... Others.....
6. How much do you earn from Tea per month (Kshs) 0-5,000..... 10,000-20,000....
20,000-50, 000..... Above 50,000.....
7. How much do you earn from other sources (Kshs) 0-5,000..... 10,000-20,000....
20,000-50, 000..... Above 50,000.....
8. Do you save your income? Yes..... No.....
9. Where do you save? Bank..... Sacco.... Other (specify).....
10. When do you save more? Monthly..... Peak season..... Others.....
11. What is your tax bracket?
12. Where do you borrow money from?
13. Does interest earned on a savings account entice you to save?
14. Do you have access to a SACCO? Yes..... No..... If Yes, how does it influence your saving decision?
15. Do you have access credit from the tea companies where you supply your green leaf?
Please indicate the reason for your answer (Why?).....
.....

To what extent do the following factors influence the amount you save?

Score: Not at all=1. Very small extent=2, To a small extent=3, To a moderate extent=4, Fairly great extent=5, To a great extent=6, To a very great extent=7

	Not at all	Very small extent	To a small extent	To a moderate extent	Fairly great extent	To a great extent	To a very great extent
Age							
Gender							
Dependency ratio(dependants below 15 and above 65 years of age)							
Income							
Access to credit							
Tax							

Interest rate							
Access to Sacco							

Indicate any other factors that influence your decision to save

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

Appendix 2: Descriptive statistics

Table 4.1: Correlation results

		Age	Gender	Dependency Ratio	Income	Access to Credit	Tax	Interest Rate	Access to Sacco
Age	Pearson Correlation	1	0.085	.273**	0.145	-0.033	0.002	-.217*	-0.022
	Sig. (2-tailed)		0.416	0.008	0.162	0.752	0.986	0.035	0.834
	N	94	94	94	94	94	94	94	94
Gender	Pearson Correlation	0.085	1	0.039	0.129	0.007	-0.161	0.003	0
	Sig. (2-tailed)	0.416		0.712	0.217	0.95	0.122	0.977	0.998
	N	94	94	94	94	94	94	94	94
Dependency Ratio	Pearson Correlation	.273**	0.039	1	.365**	0.119	0.09	-0.034	0.073
	Sig. (2-tailed)	0.008	0.712		0	0.254	0.389	0.744	0.485
	N	94	94	94	94	94	94	94	94
Income	Pearson Correlation	0.145	0.129	.365**	1	.451**	0.068	0.152	.469**
	Sig. (2-tailed)	0.162	0.217	0		0	0.512	0.145	0
	N	94	94	94	94	94	94	94	94
Access to Credit	Pearson Correlation	-0.033	0.007	0.119	.451**	1	0.163	0.142	.485**
	Sig. (2-tailed)	0.752	0.95	0.254	0		0.117	0.173	0
	N	94	94	94	94	94	94	94	94
Tax	Pearson Correlation	0.002	-0.161	0.09	0.068	0.163	1	0.161	0.072
	Sig. (2-tailed)	0.986	0.122	0.389	0.512	0.117		0.12	0.49
	N	94	94	94	94	94	94	94	94
Interest Rate	Pearson Correlation	-.217*	0.003	-0.034	0.152	0.142	0.161	1	0.155
	Sig. (2-tailed)	0.035	0.977	0.744	0.145	0.173	0.12		0.135
	N	94	94	94	94	94	94	94	94
Access to Sacco	Pearson Correlation	-0.022	0	0.073	.469**	.485**	0.072	0.155	1
	Sig. (2-tailed)	0.834	0.998	0.485	0	0	0.49	0.135	
	N	94	94	94	94	94	94	94	94

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

* Correlation is significant at the 0.05 level (2-tailed).

Source: Research data 2014.