

**THE EFFECT OF MEMBER DEMOGRAPHICS ON THE SAVINGS AND  
INVESTMENT OF INDIVIDUALS IN SAVINGS AND CREDIT CO-OPERATIVES  
REGISTERED BY SACCO SOCIETIES REGULATORY AUTHORITY**

**BY**

**DAUD MOHAMED ABDI**

**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF SCIENCE  
IN FINANCE, SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI**

**NOVEMBER 2015**

## **DECLARATION**

This research project is my original work and has not being presented to anywhere to the best of my knowledge. No part of this research may be reproduced without the prior permission of the author.

Signature \_\_\_\_\_ Date: \_\_\_\_\_

**Daud Mohamed Abdi**

**D63/71423/2014**

This research project has been submitted with my approval as the University Supervisor

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Mr. Herick Ondigo**

**Lecturer,**

**Department of Finance & Accounting**

**School of Business**

**University of Nairobi**

## **ACKNOWLEDGEMENTS**

First and foremost I would like to thank Almighty Allah for giving me the strength and stamina to pursue this course and finish my studies in the stipulated time frame.

I also wholeheartedly thank my project supervisor Mr. Herick Ondigo for his relentless guidance all through. We also thank my colleague Mark Ameyo from Kabarak University who to some extent assisted in the analysis of the data during the data analysis and presentation period

Thank you All and God guide you always in the right path.

## **DEDICATION**

I dedicate this work to my family members; my parents Mohamed Abdi and Dahira Siraji and my wife Sahra Mohamed Ismail who were supportive during the writing of this Project.

# TABLE OF CONTENTS

<b>DECLARATION</b> .....	ii
<b>ACKNOWLEDGEMENTS</b> .....	iii
<b>DEDICATION</b> .....	iv
<b>LIST OF TABLES</b> .....	vii
<b>LIST OF ABBREVIATIONS</b> .....	viii
<b>ABSTRACT</b> .....	ix
<b>CHAPTER ONE: INTRODUCTION</b> .....	1
1.1 Background to the study .....	1
1.1.1 Members’ Demographics .....	2
1.1.2 Savings and Investment Behaviour .....	4
1.1.3 Effects of Members’ Demographics on Savings and Investment Behaviour .....	7
1.1.4 SACCOs Registered by SASRA in Kenya .....	9
1.2 Research Problem .....	11
1.3 Research Objective .....	14
1.4 Value of the Study .....	14
<b>CHAPTER TWO: LITERATURE REVIEW</b> .....	16
2.1 Introduction .....	16
2.2 Theoretical Review .....	16
2.2.1 The Life Cycle Theory .....	16
2.2.2 The Permanent Income Theory .....	17
2.2.3 Relative Income Hypothesis .....	18
2.2.4 Neoclassical Growth Theory .....	19
2.2.5 The Human Capital Theory .....	19
2.3 Determinants of Savings and Investment Behaviour of Individuals .....	20
2.4 Empirical Literature Review .....	21
2.5 Summary of the Literature Review .....	27
<b>CHAPTER THREE: RESEARCH METHODOLOGY</b> .....	29
3.1 Introduction .....	29
3.2 Research Design .....	29
3.3 Target population .....	30
3.4 Sample .....	30
3.5 Data Collection .....	31
3.5.1 Data Validity and Reliability .....	32

3.6 Data analysis .....	34
3.6.1 Analytical Model.....	34
3.6.2 Test of Significance .....	35
<b>CHAPTER FOUR: DATA ANALYSIS, PRESENTATION AND DISCUSSION .....</b>	<b>37</b>
4.1: Introduction.....	37
4.2 Demographic information .....	37
4.2.1 Sex of the respondents .....	37
4.2.2. Marital Status of the Respondents .....	38
4.2.3 Household Size of the respondents .....	39
4.2.4: Age of the respondents.....	39
4.2.5: Academic level of the respondents .....	40
4.2.6: Monthly Income level of the respondents.....	41
4.2.7: Monthly Savings of the respondents.....	41
4.2.8: Purpose of opening an account .....	42
4.2.9: Frequency of Saving .....	43
4.2.10: Financial Decisions .....	44
4.2.10: Training to members .....	44
4.3 Descriptive Statistics.....	45
4.5: Summary and Interpretations of the Findings.....	47
<b>CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS .....</b>	<b>49</b>
5.1 Introduction.....	49
5.2 Summary .....	49
5.3 Conclusion .....	42
5.4 Recommendations for Policy and Practice .....	51
5.5 Suggestions for Further Research .....	51
<b>REFERENCES.....</b>	<b>53</b>
<b>APPENDEXES .....</b>	<b>58</b>
Appendix I: Questionnaire .....	58
Appendix II: List of SACCOs registered with SASRA.....	62
Appendix II: Raw Data .....	65

## LIST OF TABLES

TABLE 4.1: Sex.....	38
TABLE 4.2: Marital Status .....	38
TABLE 4.3: Household Size.....	39
TABLE 4.4: Age.....	40
TABLE 4.5: Academic Level.....	40
TABLE 4.6: Monthly Income.....	41
TABLE 4.7: Monthly Savings.....	42
TABLE 4.8: Purpose of Opening an Account.....	43
TABLE 4.9: Frequency of Savings.....	43
TABLE 4.10: Financial Decisions.....	44
TABLE 4.11: Training.....	45
TABLE 4.1: Field of Training.....	45
TABLE 4.13: Descriptive Statistics.....	46
TABLE 4.14: Model Summary of Monthly Savings.....	46

## **LIST OF ABBREVIATIONS**

**BOSA** – Back Office Savings Activities

**EAC** – East African Commission

**FOSA** - Front Office Savings Activities

**GoK** – Government of Kenya

**MCDM** – Ministry of Cooperatives Development and Marketing

**MDI**- Micro Deposit taking Institutions

**MFI** – Micro-Finance Institutions

**OLS**- Ordinary Least Square

**RoK** - Republic of Kenya

**ROSCA** -Rotating Savings and Credit Associations

**SACCO** -Savings and Credit Cooperatives

**SASRA** -Sacco Societies Regulating Authority

**SPSS** - Statistical Package for Social Scientist



## ABSTRACT

Kenya's current saving culture and investment behaviour is a cause for concern, despite the increasing global concern for banks and financial institutions to improve savings among individuals and families. The effect of members' demographics on saving & investment behavior is not well documented. This research project was carried out in Nairobi and it was aimed at determining the effect of members' demographics on saving and investment behavior of individuals in SACCOs. Twenty two (22) respondents were involved in the study from a total population of 78 obtained from 39 SACCOs. A number of studies have demonstrated that demographics factors have influence on the savings and investment culture of members in SACCOs. However, inconsistencies in findings exist in the few studies conducted on the differences in general saving behaviors of individuals in SACCOs. The objective of the study was to assess the effects of member demographics on the savings and investment of individuals in Savings and Credit Cooperatives registered by SASRA in Kenya. The researcher used survey design and sample size was determined using Nassiuma (2000), "survey sampling: theory and methods". The researcher collected data using structured questionnaires. A descriptive analysis of the data was done and involved computing frequencies and percentages with the help of Statistical Package of Social Sciences Software (SPSS) and Microsoft Excel and presented in frequency tables and charts. Marital status of the respondents was found to be statistically significant in terms of the monthly savings. The result implies that a change in marital status will affect the average savings. It is also found out a correlation exists between members' education level and household size as well as age of individuals in Savings and Credit Cooperatives. Monthly income level is found to be having no direct correlation with the savings and investment behaviour of members.

The researcher recommends nurturing of marriage institution and increase trainings on financial management for members as a way of enhancing saving culture members of the SACCOs

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background to the study

According to Keynesian economics, saving is the amount left over when the cost of a person's consumer expenditure is subtracted from the amount of disposable income that he or she earns in a given period of time. Savings mobilization consists therefore in obtaining funds from the savers or surplus units such as households or individuals, business firms, public sector, etc. In particular, poor individuals save for various purposes such as insurance against bad health, disability, investments, social obligations, and future consumption. Investment plays an important role in sustaining growth and development of any country. High rates of investments depend on high rates of saving (Pelrine & Kabatalya, 2005).

According to (Lipsey, 1995) a high saving economy accumulates assets faster and thus grows faster than a low saving economy. SACCOs link borrowers and savers (G.M, 2006) the savers pool their money as savings and shares against which they borrow in form of loans. SACCOs are not- for- profit- organizations as their basic purpose is to help members save (Kyendo, 2011). (bailey, 2001) defines SACCOs as cooperatives which provide their members with convenient and secure means of saving money and obtaining credit at affordable interest rates. Many scholars have written on this subject but little effort has been made in determining the effect of demographics on the savings and investment behaviour of members in savings and cooperative societies (SACCOs) registered by SASRA in Kenya. To this end, analyzing the key factors

affecting households' savings and investment behavior can then help the financial institutions to better strategize in collecting savings from the poor and low income households to increase the financial inclusion and mobilize resources for investment opportunities.

### **1.1.1 Members' Demographics**

In analyzing institutional and personal attributes that influence choices of households amongst various savings modes, Ouma and Roesner (2003) found out that level of education, minimum account balance or membership registration fee, number of dependants, household and income exert significant influence on individuals' choices of the institutions they save with. Ouma (2002) examined the choice problem amongst individuals in urban Kenya.

Increase in age also reduces the likelihood of borrowing from informal financial markets, also corroborated by Atieno (1999). Young entrepreneurs are, therefore, more likely to borrow from informal lenders mainly because they have no credit history, no tangible collaterals and lack social networks that can enable them to benefit from formal group credit using social networks of the group as collateral substituting for traditional security, which they usually lack.

In analyzing institutional and personal attributes that influence choices of households amongst various savings modes, Ouma and Roesner (2003) found out that level of education, minimum account balance or membership registration fee, number of dependants, household and income exert significant influence on SME entrepreneurs choices of institutions they save with. More years of formal education motivate them to save with formal financial institutions because of their relatively higher level of awareness of benefits derivable therefrom and risks associated with informal savings. On the other hand, the higher the level of dependency, the more likely the

proprietors are to save with formal financial institutions to reduce cumulative exposure of their dependants to unnecessary risks when they can minimize or avoid it. Savings in formal financial institutions are accorded protection and transactions pertaining to them have recourse to law, which can be used to arbitrate any disputes that could arise. Informal savings modes do not enjoy this protection and have to rely on goodwill and trust of informal savings institutions. In addition, higher income levels dissuade SME proprietors from saving with informal savings institutions implying that as incomes rise, the likelihood to save with formal savings modes increases too.

More recently, however, (Kibet, 2009) analyzing determinants of rural household savings amongst smallholder farmers, teachers and entrepreneurs found out that household income, occupation, and level of education positively influence savings behaviour. They would, therefore, save more as their levels of income and education rise. Households of businessmen save more than those of teachers and farmers because of frequent expenditure and revenue turnovers given the nature of their economic activity. On the other hand, access to credit, age and dependency ratio negatively affect savings. Households with easy access to credit will not save much because they would not rely heavily on their savings to fund their economic activities. The aging also experience reduced savings because their earning potential or productivity declines as one approaches retirement. In addition, expenditure increases with rising dependency ratio thereby reducing the amount a household would save. Societies are full of constraints likely due to variations and distinctness in the age, sex, culture, tradition, social taboos, and many more which by playing an important role determines the saving behaviour of its members.

Income plays a major role in identifying the saving distinctness among different groups but income cannot always remove all the barriers for availing the opportunities because of the variations offered in the context of culture, gender, class etc. People belonging to diverse ethnic groups can have a refutation to the equal admittance to education, employment, and other basic services by the social and financial institutions as well as the investment opportunities available.

The demographic characteristics include the income, consumption and saving pattern of the society, a number of factors affect these characteristics. The population, number of dependents, education, occupation, the size of the family, income, age composition etc. has a direct impact on the saving pattern of the society or community as a whole.

### **1.1.2 Savings and Investment Behaviour**

According to Mauri (1983), governments in many African countries neglected personal savings in the 1960s. In the wake of the “vicious circle” model (Nurkse, 1953), aid programs were considered the only tool for fighting underdevelopment for more than three decades (Adams, Graham and Von Pischke, 1984), while the mobilization of savings was “the forgotten half” of development finance programs (Vogel, 1984). The awareness that poor people are potential savers, resulting from studies of micro finance activities, is leading to a new paradigm in development issues (adams, 2000). The mobilization of domestic savings for economic development is the next century’s challenge for Africa Indeed, “no country is too poor to save if the available potential is effectively used” (adara, 1995). SACCO’s could be a vehicle for this task because they are currently the only semi -formal financial institutions able to provide financial services to all populations in Africa. One of the objectives of SACCOs is to promote a

saving culture amongst their members since savings have a close relationship with wealth. Higher rates of saving today, lead to faster accumulation of wealth and, the wealthier a nation is, the higher its standard of living in the future (Bernanke, 2001). This is supported by (Pelrine, 2005) that the power of saving and compounding interest is incredible when done consistently for long period of time. One should always be saving some percentage of the income no matter how small or large. Getting started is the hardest but one can do it. Saving constitutes the key elements on which the development of the society depends. Local savings provide the asset for the society's investment in future. Without it, the society and the economy at large cannot grow and, get out of poverty, unless alternative sources of investment such as foreign capital from donors are injected in the society (Micro Finance Unit training Manual 2005). This is further supported by Lipsey and Chrystal, (1995) it is desirable that SACCO membership embraces a saving culture so as to increase their low incomes, leading to improved quality of life. Furthermore, development is induced by saving in that, high levels of saving leads to capital accumulation, later on investment leading to high income levels, ultimately breaking through the vicious cycle of poverty, hence development in the long run.

Market research on savings may help in identifying what clients want and what their priorities or concerns are to deposit their money with a SACCO. Some may value security for their money than the interest rate on savings, others may value liquidity. SACCO members are expected to develop a saving culture to sustain their SACCOS financially and to fight dependency on external borrowing which is rather expensive and thus deprive them of the would-have been dividends. It is stipulated that without saving people could face severe problems of survival when they are no longer able to work (Rogerle Roymiller, 1978) SACCOS are accessible to the people within the

societies unlike urban based commercial banks and other commercial micro finance institutions. The World Bank worldwide inventory of MFIs where SACCOs fall, found that, many of the largest and most sustainable institutions in micro finance industry rely heavily on saving mobilization (World Bank survey, 1995). The survey further revealed that, the ability to effectively mobilize deposit depends greatly on the macro economic and legal environments. The World Bank Development report (1991) thus reveals that the experience of countries like India, China and Kenya clearly demonstrate that low income households are capable of saving a much larger proportion of their income than developed countries. The report points out that the influence saving behavior of household depends on the ability to save, propensity or willingness to save and opportunity to save. The ability to save obviously depends on disposal income and household expenditure which in turn is influenced by the family size or number of dependants. Willingness or propensity to save is on the other hand, influenced by social cultural and economic factors. Family obligations such as education of children, marriage, funeral rites, old age govern the willingness of households to save.

Saving is deferred spending, a preference to consume tomorrow rather than today (Strydom, 2007) Savings flow into the financial system and help provide funds for investment spending by firms. (Tesar L. L., 1991) established that, there is a high correlation between savings and investment in the short run and long run. The study also found countries with high saving rates to have high investment rates too.

Saving is a key component in any development endeavor as it is believed to be the surest way of increasing income and boosting productivity in an attempt to break through the vicious cycle of

poverty. Without saving people are likely to face severe problem of survival when they are no longer able to work (Schmidt, 2006) argue that when poor households' desire and need to save converge, a safe, easily accessible opportunity to do so, their capacity to save, commitment to saving, and the amounts they manage to save are remarkable.

### **1.1.3 Effects of Members' Demographics on Savings and Investment Behaviour**

A number of studies have demonstrated that the investment and retirement saving behaviors of women and men differ. (Sunden, 1998) Indeed the human capital theory postulates that women rationally choose to invest less than men in human capital, including education, skills, and on-the-job training, affecting women's employment opportunities, incomes, and ability to accumulate wealth (Wu, 2005) However, many economic researchers have focused on differences in income, poverty, and asset accumulation by gender. Inconsistencies in findings exist in the few studies conducted on the differences in general saving behaviors between men and women. For instance, (Sunden & Surette, 1998) found that women are less likely to have a defined contribution retirement savings plan, while Agnew (2005) found the opposite. This creates a knowledge gap in literature on the saving culture behaviour across genders. Women have lower incomes and wealth, on average, and are much more likely to be living in poverty during retirement, so it is important to better understand the factors related to saving among women and how these may differ from those of men. It is against this background that the researcher intends to carry out a study to establish the effect of members' attributes on saving and investment culture with a special bias on SACCO members.



A small but growing body of literature strongly suggests there are gender differences in saving decisions and in risk attitude, at least in some developed countries. Given their divergent social and economic circumstances within and outside the household, Floro and Seguino (2002) observe that women and men may have differing propensities to save at the household level. Since this constitutes the most significant component of gross domestic saves in many developing countries, changes in household saving critically influences aggregate saving rates. If so, shifts in women's relative bargaining power are likely to affect household saving rates, and by extension, domestic saving rates. Women have experienced substantial labor market gains over the last half century. The gender gap in labor force participation and the gender gap in earnings have both declined. Several factors have been identified as contributing to these gains.

Amu (2008) explored the savings and investment behaviour of rural families. The study found that the savings and investment among rural families were low and rural households preferred informal forms of savings to the formal forms of savings. There was a negative correlation between age and savings as well investment. Significant relationship was found between family size and savings and investment; as well as knowledge in saving and investment as against actual savings and investment of the respondents.

Inadequate income, over-reliance on natural conditions and other societal demands were found as constraints to respondents' investment, while inadequacy and fear of safety of income were constraints to their saving. The level of knowledge of respondents on savings and investment was also found to be low. The study concluded that rural households' low saving and investment is the result of economic, social and organizational factors.

The saving can be most often determined by the demographic features like the sex ratio, the age distribution, and the rate of dependent population. Saving is highly determined by whether the female's contribution towards saving is more or the male is contributing to its highest level and again if the problem of the age distribution in the family contributing to the saving is optimum then the saving rate is determined in a different perspective. Aggregate savings is exaggerated by the age distribution of the population, if the curve up of dependent population is high than the income earning groups, the savings ratio will be low. According to the life-cycle hypothesis a larger working population next of kin to the older population contributes to raise the savings rate. In an instance if the income earning population is comparably high to that of the dependant population then the saving rate will experience a hike which is in some way will lead to income propagation in a country in a long term basis.

The results of the analysis revealed that income, tax, job experience, education, family size and membership of a social group influence saving attitude of workers. To promote household savings among agro-based workers, policies aim at periodic increase in worker's salary and reduction in tax rate in line with the changing pattern of macro-economic variables in the country were advocated.

#### **1.1.4 SACCOs Registered by SASRA in Kenya**

In 1945, the Co-operative Ordinance Act was passed where the (Kenya, 1997) legally controlled the co-operatives. The act was amended in 1997 removing much of the control from the government through the Commissioner of Co-operatives under the Co-operative Societies Act 1997. This Act was enacted to provide a policy framework for co-operative development in

Kenya therefore delineating these co-operatives from the control of the Government by necessitating the withdrawal of state control over the co-operative movement. The aim was to make co-operatives autonomous, self-reliant, self-controlled and commercially viable institutions. The role of the government was redefined from one that sought to control co-operative development, to one that now seeks to regulate and facilitate their autonomy. This allowed the co-operatives to compete with other private enterprises in the marketing of agricultural produce (Republic of Kenya, 1997a). The 1997 Act was amended in 2004 through the Co-operative Societies (Amendment) Act of 2004 which was enacted to re-enforce state regulation of the co-operative movement through the office of the Commissioner for Co-operatives Development. The SACCO Societies Act of 2008 was enacted later to provide for the licensing, regulation, supervision and promotion of savings and credit co-operatives by the SACCO Societies Regulatory Authority. Thus, this Act provides for the establishment of the SACCO Societies Regulatory Authority (SASRA) whose functions include licensing SACCOs to carry out deposit-taking business as well as regulating and supervising SACCOs (Republic of Kenya, 2008b). (Wanyama, 2009)

According to The Ministry of Cooperative Development, Kenya (2010), SACCO societies were first registered in Kenya as a thrift licensee in 1964 with the objective of mobilizing savings from their members. However, it was not until 1969 that the Government encouraged the registration of SACCOs to mobilize savings and give credit to employed people who had a similar common bond. The government enacted the cooperative societies Act and the rules to better manage the SACCOs in 1966 to better manage the SACCOs. From 1973, many Government Ministries and Departments registered SACCOs in accordance with the common bond. By 1975, there were

over 1,000 registered SACCOs in the country offering back office and credit facilities. SACCOs in Kenya have grown tremendously and currently they have 3.7 million members. SACCOs in Kenya have mobilized deposits from members' equivalent to Ksh 170 billion and have disbursed credit of about Ksh 120 billion. The 200 SACCOs with FOSA's have diversified into specialized bank like activities which include deposit taking, saving facilities, debit card taking, and money transfer both local and internationally.

In the year 2009, The Ministry of Cooperative Development realized the need to have a regulator for the SACCOs which culminated into the SACCO Societies Act 2010 giving rise to The SACCOs Regulating Authority (SASRA). According to The SACCO Societies Act (2008) SASRA has the mandate of licensing SACCOs to carry out deposit taking activities, regulate and supervise deposit taking SACCOs, manage the deposit guarantee fund, and advise the minister. In January 2015, the SACCOs Societies regulating authority (SASRA) published a list 176 SACCOs duly licensed and authorized to carry-out deposit taking Sacco business in Kenya for the financial year ending on 31 December 2015. These Saccos are spread all over the country, However, Nairobi County has the highest number of these licensed Saccos, and there are 39 Saccos out of the 176 permanently addressed in Nairobi.

## **1.2 Research Problem**

It is argued that, when poor households' desire and need to save meets, a safe, easily accessible opportunity to do so, their capacity to save, commitment to saving, and the amounts they manage to save are remarkable. High incomes lead to alleviation of poverty in households, ultimately resulting into improved quality of life of people. A common challenge among most business

owners and various individuals is failure to save some money due to unforeseen financial issues that may require the individual to use some of the business or personal funds. Financial experts recommend that one saves up at least 10 to 20 % of their income so as to enhance chances of his/her business growing and improving his personal life. Saving is a key component in any development endeavour as it is believed to be the surest way of increasing income and boosting productivity in an attempt to break through the vicious cycle of poverty. Without saving people are likely to face severe problems of survival when they are no longer able to work (LeRoyMiller, 1978).

Investment is a prime component in any development effort as it is believed to be the most certain way of enhancing income and promoting productivity with the intention to break through the vicious cycle of poverty (Keynes, 1936) However, the levels of domestic savings and investment in Kenya have been very low (Lawrence, 2009) World Bank (2003) approximates capacity utilization in Kenya at 63%. Kenya's vision 2030 for financial services is to create a successful and globally competitive sector that drives savings and investments in the country. However, the vision 2030 argues that access to financial services still remains low (Adam, 2011) (Kenya W. a., 2008) has shown that 38.3% of Kenyans are not included in financial services access and use. All these indicate low levels of savings and investment in Kenya.

SACCO societies are member-based organizations that are focused on meeting financial needs of their members for personal and enterprise development. SACCOs represent a considerable part of the Kenya financial sector especially with respect to access, savings mobilization and wealth creation. They have membership across different economic activities in both rural and urban

areas and are engaged in Back Office Savings Activities (BOSAs), Front Office Savings Activities (FOSAs), or both (Ministry of Finance, 2011).

The African Confederation of Co-operative Savings and Credit Association [ACCOSCA], 2011) workshop has classified SACCOs as vehicles for economic growth. Moreover, the government of Kenya recognizes cooperatives as the major contributor to national development within the country's growing population (RoK, 2008). However, the problem of low savings and investment among households is a hindrance to SACCOs' goal of stimulating economic growth in Kenya. Money saved or invested stands a greater chance of increasing to ensure the financial security of the households. However, household members' decision to or not to save, how much to save, the frequency of saving, where to save and the forms of saving they engage in are influenced by a multiplicity of factors.

Amu (2008) explored the savings and investment behaviour of rural families. The study found that the savings and investment among rural families were low and rural households preferred informal forms of savings to the formal forms of savings. There was a negative correlation between age and savings as well investment. Significant relationship was found between family size and savings and investment; as well as knowledge in saving and investment as against actual savings and investment of the respondents. Women have lower incomes and wealth, on average, and are much more likely to be living in poverty during retirement, so it is important to better understand the factors related to saving among women and how these may differ from those of men

However, many economic researchers have focused on differences in income, poverty, and asset accumulation by individuals or households. Inconsistencies in findings exist in past studies conducted on effects of individual and households attributes on the general saving and investment behaviors of SACCO members. For instance, (Sunden & Surette, 1998) found that women are less likely to have a defined contribution retirement savings plan, while Agnew (2005) found the opposite. No known specific study has been conducted locally to determine the demographic influence on the savings and investment behaviour of households' members in Kenya particularly Nairobi County. Therefore the study sought to answer the following question: what are the demographic factors that influence the savings and investment behaviours of individuals in SACCOs registered with SASRA in Kenya?

### **1.3 Research Objective**

The objective of this study is to establish the effect of members' demographics on the savings and investment behaviour of individuals in savings and credit co-operative societies (SACCOs) registered by SASRA in Kenya

### **1.4 Value of the Study**

The board of directors and branch managers of the various Sacco's would use the finding of this study to develop strategies focused on encouraging mobilization of savings and adequate lending by SACCO's. The directors may also use these findings to develop solutions to the factors influencing the savings and investment behaviour of Sacco's members in relation to savings and loans which are its major products.

The findings of this study will enhance the efforts of government regulators in coming up with regulations that will govern the operations of SACCOs. The study will contribute to the achievement of the government's policy in enhancing savings mobilization strategies aimed at encouraging the citizens to adapt savings culture through sensitizing the rural poor on how to benefit from being membership in SACCOs.

It will also make community leaders and stakeholders in national development to obtain prior knowledge about establishing a national wide infrastructure of SACCO'S and enable them to access financial services like savings and credit. Hence this study will guide policy makers in general and the government in particular to spearhead the formation, restructuring, strengthening and development of SACCO from an informed view point. Understanding the key determinants of household savings behavior (demand side) could inform the financial services providers (supply side) and guide them in designing savings products tailored to the needs of their targeted individuals in the economy.

The study is especially significant because it will add onto scanty information about saving and investment behavior in the country. The study also contributes to the existing knowledge and provides literature to scholars in the field of savings mobilization and investment with interests on the subject of Sacco services.

Future researchers also in the study have the opportunity to use the finding of this study to further research in this area. It will also inspire other scholars to undertake a study on saving and investment behavior on other financial institutions such as MFIs, savings and transit facilities such as mobile banking that is M-Kesho and M-Pesa.



## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

Literature review involves systematic identification of, location and analysis of documents containing information related to the research problem being investigated. The chapter includes; literature on the effect of members demographics that influence the saving an investment behaviour of individuals and households. The literature review is presented in form of theoretical and empirical literature.

#### **2.2 Theoretical Review**

The study will review theories relevant to the subject under study. The theories reviewed include the life cycle theory, permanent income theory, relative income theory, the neoclassical growth theory and the human capital theory. These theories are relevant in the explanation of phenomena and realities being discussed in the study.

##### **2.2.1 The Life Cycle Theory**

The life cycle theory posits that the main motivation for saving is to accumulate resources for late expenditure and in particular to support consumption at habitual standard during retirement (al, 1970). The basic idea in this theory is that individuals tend to distribute resources to smooth consumption over the life cycle. According to the model saving should be positive for household in their working span and negative for the retired ones and wealth therefore should be hump-shaped.

In the context of the current study, the life cycle theory is relevant in that it appreciates the importance of age in retirement planning. Age is one of the specific objectives in this study. The life cycle hypothesis has been utilized extensively to examine savings and retirement behaviour of older persons. This hypothesis begins with the observation that consumption needs and income are often unequal at various points in the life cycle. Younger people tend to have consumption needs that exceed their income. Their needs tend to be mainly for housing and education, and therefore they have little savings. In middle age, earnings generally rise, enabling debts accumulated earlier in life to be paid off and savings to be accumulated. Finally, in retirement, incomes decline and individuals consume out of previously accumulated savings.

### **2.2.2 The Permanent Income Theory**

The permanent income theory states that people will spend money at a level consistent with their expected long term average income (Friedman, 1957). The level of expected long term income then becomes thought of as the level of “permanent” income that can safely be spent. A worker will only save if his or her current income is higher than the anticipated level of permanent income in order to guard against future declines in income.

This theory is relevant to the current study because it considers a person’s income as a determinant for their retirement planning. In Friedman's permanent income hypothesis model, the key determinant of consumption is an individual's real wealth, not his current real disposable income. Permanent income is determined by a consumer's assets; both physical (shares, bonds, property) and human (education and experience). These influence the consumer's ability to earn income. The consumer can then make an estimation of anticipated lifetime income.

### **2.2.3 Relative Income Hypothesis**

Developed by James Duesenberry (duesenberry, 1949), the relative income hypothesis states that individual's attitude to consumption and saving is dictated more by his income in relation to others than by abstract standard of living. So an individual is less concerned with absolute level of consumption than by relative levels. The percentage of income consumed by an individual depends on his percentile position within the income distribution (duesenberry, 1949) Secondly it hypothesizes that the present consumption is not influenced merely by present levels of absolute and relative income, but also by levels of consumption attained in previous period.

It is difficult for a family to reduce a level of consumption once attained (Blau, 2006). The aggregate ratio of consumption to income is assumed to depend on the level of present income relative to past peak income. Relative income hypothesis has important economic implications. Perhaps the most obvious implication is that consumption creates negative externalities in the society, which are not taken into account in individual Journal of Investment and Management 2015; 4(1): 14-24 17 decision-making. According to (Koçkesen, 2000)if individuals consume, and therefore work, to increase their status, then they will tend to work too much relative to the socially optimal level and hence income taxation could improve the social welfare.

This theory is relevant to the current study. One of the demographic factors being examined as having influence on the savings and investment behaviour of individuals is their gender. Men and women have varying consumption behaviour as such the relative income hypothesis is appropriate for this study

### **2.2.4 Neoclassical Growth Theory**

According to neoclassical growth theory by Harrod and Robert (1987) Savings is not an end in themselves. They play an important role in sustaining growth and development. Through savings there will be capital accumulation, leading to investments hence economic growth and ultimately, development. Thus, a high saving economy accumulates assets faster, and thus grows faster, than does a low saving economy (Lipsey & Chrystal, 1995).

However, in developing countries like Kenya, the theory can be used to improve the current situation of low levels of saving culture owing to poor underdeveloped stock markets, dominance of urban based commercial banks, Micro Deposit Taking Institutions (MDIs) and non-regulated Micro finance institutions in the financial markets as vehicles for savings. Hence Savings and Credit Cooperative Societies (SACCOs) are intended to offer an alternative to improve the above un-desirable situation in low income countries.

### **2.2.5 The Human Capital Theory**

In his human capital theory, Becker (1975) stated that women rationally choose to invest less than men in human capital, including education, skills, and on-the-job training, affecting women's employment opportunities, incomes, and ability to accumulate wealth. Women make different choices than men due to greater family responsibilities with the gender division of labor within the family, resulting in women taking primary responsibility for household work and child care (Bajtelsmit & Bernasek, 1996).

As the human capital theory postulates that women rationally choose to invest less than men in human capital, including education, skills, and on-the-job training, affecting women's employment opportunities, incomes, and ability to accumulate wealth, this theory is relevant to the study because the core factor in the theory being discussed is the gender roles affecting the savings and investment behaviour of men and women in households while the study investigates gender as one of the demographics factor influencing savings and investment behaviour of individuals.

### **2.3 Determinants of Savings and Investment Behaviour of Individuals**

Salam and Kurlsam (2001) define savings as the difference between income and consumption. There is an inverse relationship between savings and consumption, other things being equal. Furthermore, the demographic characteristics of the population dictate the saving behaviour of a country (Schultz, 2004) Above all; income distribution is potentially an important factor that determines the capacity to save of the population. A World Bank study looked at household panel data for 20 countries (Floro, 2002). This concluded that income and other sources of women's bargaining power, including education and assets, have a significant impact on household spending decisions. As in developed countries, women spend more of the money they control on food for their children and other family needs. This could be seen as an investment, as healthy children will live to look after their parents in old age. Women's saving behaviour also depends on local culture – e.g. the need to save for a dowry, or to remit money to parents – and their access to a safe place to keep their money. Saving behaviour is influenced by friends and family. Children and young people, in particular, are likely to pick up money management habit

in childhood. One Dutch study based on two financial capability surveys found some significant correlations between parental saving habits and those of their children (CentiQ, 2008). Children of financially illiterate parents were particularly likely to spend money rather than save it, to ask their parents for money and have debts, they perceived their parents as more generous than children of financially capable parents, who were less likely to give out extra money.

Lack of financial literacy can act as a barrier to saving: if people do not manage their money well they may not have enough left to save after day-to-day expenses, or may accumulate debt they cannot repay. Lack of financial skills also means people do not plan ahead, or understand how financial products can help meet savings goals. Financial literacy will boost the ability to handle day to day financial problem and will reduce the negative consequences of poor financial decisions that otherwise might take years to overcome (Delafrooz and Laily, 2011).

## **2.4 Empirical Literature Review**

Attempts to introduce the household size effects on the life-cycle model have also reveal that larger family size reduces the aggregate saving rate (Davies, 1988). The key for successful approaches to promote domestic savings for development purposes lies in a reversal of the financial and monetary policies up to now pursued in most of the developing countries (Fischer, 1989). There is good reason to suppose that the potential of savings institutions to stimulate financial savings has not yet been exhausted. Moreover there is no indication that, the propensity to save is significantly lower for rural than for urban households (Fischer, 1989). However, it is noted that, in less developed countries a standstill in structural changes and easy access to development aid tend to discourage private savings mobilization. This is again true for low

income countries in particular, where growth of development aid as the only major source of external savings helped recipient countries to neglect internal economic determinants of savings formation. Private savings especially in the form of financial assets are generally far less restricted by low income than has been assumed before, both by economists and policy makers. On the contrary there is strong empirical evidence that, the saving behavior of all private households is highly sensitive towards attractive incentives to save (Fischer, 1989). He further observes that, higher interest rates can stimulate financial savings substantially. He further notes that, excessive administrative interventions into domestic financial markets like low interest rate policies, high reserve requirements and selective credit policies have not only hindered domestic savings and investment mobilization but, also impeded an effective allocation of scarce capital.

General consensus among researchers all around the world has shown that savings are being influenced by demographic variables (Lera López, 1998 ;). Views of hundreds of years ago that, ‘the principle which promotes us to save comes with us from the womb and never leaves us till we go to the grave’. Never the less, the overriding factor to saving is the level of income, i.e. the higher the income the higher the savings and the reverse is true. This theory is supported by the findings of Obwona and Ssentamu (1998) that, people don’t save because of the low income that they receive. In that same study, the dual scholars (Obwona & Ssentamu, 1998) also revealed that, high cost of living and social responsibility was responsible for not saving. In the same research they also found out that family size affect saving in a negative form i.e. people with large families do rarely save compared to those with small families. Furthermore it was also found out that social habits play significant role in influencing saving and investing culture.

Gerrans and Clark-Murphy (2004) consider that there is a close relationship between age and gender. Using a survey of members of the Superannuation Scheme for Australian Universities, they have concluded that younger females are more likely to have a higher risk tolerance and a bigger chance of not saving. Furthermore, saving decisions are also found to be driven by the connection between gender and marital status rather than by gender alone; married women tend to save more than single women. One interesting result was that married young females have a higher probability of having negative savings relative to the old male category. Factors such as age, gender, education or civil status are shown as important aspects in the decision to save. (Aryeetey, 2004) conducted a study in Ghana seeking to ascertain the assets kept by households and the relationship between choice of assets and the socio economic characteristics of rural households. The findings indicated that female headed households tended to concentrate more on non-farm enterprises while male headed households concentrated more on livestock. Women had more loans and fewer saving in their portfolio as compared to men, possibly due to more involvement in non-farm enterprises that required more capital.

A Malawian study attempted to investigate factors that determine household savings in Malawi overtime. (Lihiku, 2006) found that the household savings function in Malawi has been unstable overtime and is influenced by factors like income, liabilities, dependence ratio, location and other demographic factors. Female and illiterate managed households are seen to save more on average than their counterparts. Amino et al (2006) find that the rural Mozambican household saving decisions are responsive to income and amounts of assets owned by the households. They also found that the financial sector plays a crucial role by providing services that local people need. Demery and Duck (2006) also found that saving rates are in line with the life-cycle model.



They have concluded that people in the working life are more interested in savings when they reach the age of fifty. The disadvantage poses by the life-cycle theory is that persons are considered fully rational, acting only in their own interest and being able to know the exact date of retirement, death, as well as other important facts. Furthermore, using the Ordinary Least Square (OLS) method, Orbeta Jr. (2006) has estimated a saving function using income and number of children as dependent variables. The results tend to agree with previous studies and show that an increase in the household size has a negative impact on savings. This effect is even more apparent in the case of low wealth family, further depressing the already low saving rates. Likewise, the study reveals that reducing the household size can be a positive factor for savings and wealth.

Previous studies have examined the effects of education on savings (Laiglesia and Morrisson, 2008). Education is a factor which is closely tied to the wealth accumulation and its influence over income is direct. Over a long period of time, education corrects the savings of different individuals and its effect depends also on the region and economic development within that area. Laiglesia and Morrisson, (2008) found that for each point increase in education, the savings rate increase with 0.37%. Indirectly, education has the ability to modify the behaviour of households. Amu (2008) explored the savings and investment behaviour of rural families in the Ho Municipality of Ghana. The study found that the savings and investment among rural families in the municipality were low and rural households in the Municipality preferred informal forms of savings to the formal forms of savings. There was a negative correlation between age and savings as well investment. No significant relationship was found between family size and

savings and investment; as well as knowledge in saving and investment as against actual savings and investment of the respondents.

Empirical research found that civil status as well as domestic partnership has been found to influence savings behaviour. Married persons are more likely to be more interested about their wealth and savings (Fernandez, Otero, Vivel and Rodeiro, 2009). They have taken the discussion further and consider that savings are usually “shared” between partners, without any difference between being married or not. Investments, on the other hand, are being held independently by each couple member. Additionally, savings tend to influence also the psychological well-being of the partner, where investments or debt held by one partner do not seem to have an influence on the behaviour of the other partner. Income is also an important feature in the process of household savings. In general, literature on savings considers that a higher income raises the chances of wealth accumulation Fernandez et al. (2009) also asserted that income and job uncertainty are being highly correlated, so there is a close link between job uncertainty (income uncertainty) and the savings. There is evidence that people which do not have a stable job, either working as freelancer or in project-based companies, are more willing to save more, taking into consideration the uncertainty which lies in front. For example, Fernandez et al. (2009) investigate the determinants of savings from eight countries in Europe. In accordance to the life-cycle economic approach that people tend to save more as they reach retirement, they have found that age has a positive impact on savings. Furthermore, the results show that the probability to save is rising with age, but at a progressively lower rate.

One of the best factors with an important impact over savings is financial education. Using the DNB (De Nederlandsche Bank) Household Survey, Van Rooij et al. (2010) provide evidence that financial education is strongly influencing net worth. First, a higher degree of financial knowledge increases the possibility of having gains from the stock market. Second, it has a large impact on the creation of retirement plans which lead to a boost in savings. Overall, financial literacy has been found to influence directly as well as indirectly the wealth and savings of households, proving to be much more efficient in determining the saving behaviour of households. Furthermore, gender has an impact on the willingness to save. Recent studies point out the higher degree of risk aversion among women (Pan and Statman, 2010) show evidence that women do save more relative to men, even after an increase in women's income and bargaining power.

In a study of household saving in Kenya, Njunge (2011) Results showed that savings is positively related to total income, gender and education but negatively to employment status, age and age squared of the household head. Being a male household head indicate that the household saving would increase by Kshs. 2,824.26 while being a female household head, the household saving would increase by Kshs. 13,047.4. Similarly (s, 2012) sought to determine the influence of social cultural factors on household savings among Maasai community in Transmara District, Narok County. According to the findings education plays a big role in influencing household savings. Gender also influences household savings; individual 'attitude also determines household savings and the household size determine the level of household savings. (w, 2014) examined the rural household saving situation in Bungoma County with the ultimate goal of providing a tenable answer to the principal policy question of what are the determinants of rural

household saving in Bungoma County. The study was organized around three. The framework for analysis involved the estimation of an extended saving model derived from the Permanent Income Hypothesis (Friedman, 1957). The study results indicated that permanent income, education level and wealth significantly contribute to rural household saving in Bungoma County. However, expenditure on children education and landholding significantly lead to negative rural household savings. Education increased males' likelihood of saving in the short term and saving regularly.

## **2.5 Summary of the Literature Review**

The ability, willingness, and opportunity of households to save over time can therefore significantly influence the rate and sustainability of capital accumulation and economic growth in developing countries (Lamberte and Bautista, 1990). Understanding the nature of household savings behavior is therefore critical in designing policies to promote savings and investment.

However, many economic researchers have focused on differences in income, poverty, and asset accumulation by gender. Inconsistencies in findings exist in the few studies conducted on the differences in general saving behaviors between men and women. For instance, (Sunden & Surrette, 1998) found that women are less likely to have a defined contribution retirement savings plan, while Agnew (2005) found the opposite.

To determine the key factors influencing the household savings behavior in developing countries, a number of empirical papers have used the socio-economic and demographic variables. Bairamli and Kostoglou (2010) examined the impact of the income, gender, age, level of education, marital status, the size of the household, etc. on the savings decision. Additionally,

these authors pointed out that the government policy variables (taxation policy) and the interest rates are also key determinants of households' savings behavior.

The age composition of a country's population may be associated with its saving rate, and may therefore have consequences for its economic growth. One explanation for such an association is that the savings rate tends to be relatively high for a birth cohort when it experiences its peak earnings, and relatively low when a cohort anticipates relatively low earnings, such as during retirement. Variations in the age composition of a population may then determine variations in national savings rates, over time and across countries, holding other things equal. This life cycle savings hypothesis is intuitively appealing, and economists and demographers have explored the theoretical and empirical implications of the hypothesis following (Modigliani, 1954) Recent studies reexamined this empirical association within Asian countries, where the changing age compositions has been attributed a central role in the recent increase in savings and economic growth (j, 1996).

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter discusses the methods and procedures that are to be used in this research study. The chapter covers the research design, target population, sampling plan, data collection, data validity and reliability, data presentation and analysis.

#### **3.2 Research Design**

The study adopted a survey approach in design that sought to investigate the study variables without manipulating any of them or tampering with them in an attempt to understand, describe and explain the SACCOs members' demographic aspects that influence their savings and investment culture. Data was collected from selected respondents on the structured questionnaire. The study will use descriptive design where measures of the proposed determinants of acceptance are taken once in cross sectional study of the respondents (Hopkins, 2000). A research design is the conceptual structure within which research is conducted. According to (Mugenda, 2003), this design is a systematic inquiry into which the researcher does not have direct control of the independent variables because their manifestation has already occurred. A survey is an attempt to collect data from members of a population in order to determine the current status of that population with respect to one or more variables (Mugenda and Mugenda, 2003). According to Babbie (1990), it can apply questionnaires or structured interviews for data collection. A survey was chosen because it has a rapid turnaround in data collection. It also has

the advantage of identifying attributes of a large population from a small group of individuals (Babbie, 1990 & Fowler, 2002). A survey research is present oriented and is used to investigate populations by selecting samples to analyze and discover occurrences (Onen et al., 2005). Its main purpose is to provide quantitative and numeric descriptions of some part of the population. The study would be conducted in Nairobi County, Kenya.

### **3.3 Target population**

Target population refers to the total number of subjects or the total environment of interest to the researcher (Oso and Onen, 2009). The population of the study was two members from all the 39 SACCOs in Nairobi County registered by SASRA and that were in operations from 2010 to 2014, making a total population of 78. The population relied upon was from the Ministry of Cooperative Development and Marketing. This population had more similarities in terms of job levels, functions and responsibilities and each and every member is expected to contribute towards the achievement of organizational goals and/or would be affected in one way or the other by the organization's operations.

### **3.4 Sample**

The desirable sample size was twenty-two respondents of the target population. The sample size (n) was obtained using (Nassiuma, 2000), "survey sampling: theory and methods"

$$n = \frac{NC^2}{C^2 + (N-1)e^2}$$

n- Sample size

N-Target population size

e- Margin of error ( $\pm 0.05$ )

C- Coefficient of variation; which should be at most 30%.

Using the formula, a desirable number of 22 respondents were selected out of the target population 78 members across the 39 SACCOs

### **3.5 Data Collection**

This section sets out how data for the study will be collected. It covers the research instruments, administration of the research instruments and the data collection procedures.

Primary data was collected using a structured questionnaire which will be administered by a self-administered drop and pick method. The researcher used structured questionnaires to collect data for this research. The questionnaires (Appendix II & III) contained both closed and open-ended questions. Closed ended questions were formulated because they are easy to administer and easier to analyze.

Open ended questions were used because they permit a greater depth of response and expression. The questionnaires were administered to gather data from those categories with numerous respondents. It has the advantages of being cheap, the questions can be made as easy as possible, easier to administer, and results in data was suitable for analysis as designed by the researcher. Structured questions were mainly used in the instrument but open-ended questions were also used where widely varied views on an issue was expected. A questionnaire was administered to the SACCOs members in order to capture all the parameters objectively. Two respondents per



SACCO were selected randomly among the members present during the time of the administering the questionnaires.

The questionnaires were divided into sections whereby the first section consists of statements seeking information on the respondents' background. This was necessary in describing the respondents (Borg, 1997). The other sections solicited data on particular variables of the study.

The questionnaires was administered by the researcher to ensure the sampled respondents were the ones supplying the data and providing any clarification, thus probing and prompting of appropriate responses in the questionnaires. This ensured that the picking of respondents was done with ease and is appropriate to meet the objectives of the research. The questionnaires were hand delivered to the respondents and allowed them time to respond to the questions.

The study was facilitated by use of secondary data that was be extracted from published financial reports of the licensed SACCOs, articles, publications and other relevant materials by the Ministry of Cooperative Development and Marketing, and papers relating to SASRA regulatory reports for the period of 2010 to 2014.

### **3.5.1 Data Validity and Reliability**

According to (Mugenda, 2007), validity refers to the accuracy and meaningfulness of inferences, which are based on the research results. It is the degree to which results obtained from the analysis of the data actually represent the phenomenon under study.

Validity therefore, has to do with how accurately the data obtained in the study represents the variables of the study. If such data is a true reflection of the variables, then inferences based on such data will be accurate and meaningful. The instrument (questionnaire) was rated in terms of

how effectively it sampled significant aspects of the purpose of the study. Best and Kahn (1989) suggest that the validity of the instrument is asking the right questions framed in the least ambiguous way. Thus a valid measure depends on collecting accurate data. Fraenkel (1993) suggests that the instrument should be given to an individual who can be expected to render an intelligent judgment about the adequacy of the instrument. Prior to using the research instruments (questionnaire), the content validity of the instruments would be determined by the researcher discussing the items in the instrument with supervisor and colleagues. This will help in enhancing accuracy and removing ambiguity. The comments, suggestions and observations obtained will be used to improve the instruments by making the questions clear, correcting deficiencies and any other changes that were deemed necessary. For the research instrument to be considered valid, the content selected and included in the questionnaire must also be relevant to the variable being investigated (Kerlinger, 1973). The research instrument would be used not only to collect data but also cross-check the correctness of data obtained by others.

The reliability of an instrument refers to the extent to which the measure gives consistent results (Mugenda A. and., 1999) it also refers to the consistency of scores obtained by the same test on different occasions, or with different sets of equivalent items or under other variables examining conditions. In this study, the reliability of the questionnaire was measured by the results obtained at the end of data collection in answering the research questions and measuring the study objectives.

### **3.6 Data analysis**

Burns and Grove (2003) define data analysis as a mechanism for reducing and organizing data to produce findings that require interpretation by the researcher; this involves coding, editing, data entry, and monitoring the whole data processing procedure. The data collected for study is edited for accuracy, uniformity, consistency, completeness and arranged to enable coding and tabulation before final analysis, (Cooper and Emory, 1998). The data collected was analyzed using descriptive statistics and the results presented using descriptive analysis such as frequency distribution, mean, percentages and standard deviations. Data analysis was done using the Statistical Package for Social Sciences (SPSS) and Microsoft Excel package.

#### **3.6.1 Analytical Model**

Inferential statistics such as multiple regressions and Pearson correlation were used. Multiple regressions are used to determine the nature of relationship between independent variables and the dependent variable. According Hair, Black, Babin, Anderson, and Tathan (2006) multiple regression analysis is described as a statistical technique that is used to analyze the relationship between dependent variable and several independent variables. The objective is to predict the dependent variable from known independent variables. The coefficient of multiple correlations is symbolized by the correlation  $R$  which indicates the strength of the correlation between the combination of the predictor variables and criteria variables.

The required assumptions of this multiple regression model are; the error variable ( $\epsilon$ ) is normally distributed, the mean value of the error variable is zero, the variance of the error variable is a fixed but unknown value, the values of the error variable are independent of one another, and

relationship between savings and investment behaviour and variables of the members' demographics is linear.

Regression analysis done by the use of an econometric model:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \varepsilon$$

Where:

Y= is the dependent variable representing savings and investment by individuals

$\alpha$ = is a constant term, the value of Y when all Xs are zero

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6$ , = are the regression co-efficients or change introduced in Y by each X

$\varepsilon$  = is the random error term accounting for all other factors not captured in the model.

$X_1$ = gender (Male=1, Female =0)

$X_2$ = the natural Log of members age (in years)

$X_3$ = Marital status (Yes=1, No=0)

$X_4$ =the natural Log of members education level (number of years spent in school)

$X_5$ = the natural Log of members income level (in shillings)

$X_6$ = household size (number)

The magnitude of regression coefficient was to help the researcher know the direction and magnitude of the relationship between the independent variables and the dependent variable.

The coefficient of determination  $R^2$  is evaluated to determine the explanatory power of the model and how well data fit into the statistical model. The F statistic is evaluated to determine the overall significance of the models

### **3.6.2 Test of Significance**

Test of significance was done and the coefficient of determination ( $R^2$ ) was used to check if member demographics have an effect on savings and investment behaviour of members in SACCOs registered by SASRA. The significance of the regression model was determined at 95% confidence interval and 5% level of significance.

## **CHAPTER FOUR**

### **DATA ANALYSIS, PRESENTATION AND DISCUSSION**

#### **4.1: Introduction**

This chapter covers the general findings of the research, data analysis; interpretation and discussion of the results. A total of 22 questionnaires were returned. This chapter looks at the respondent's characteristics as well as findings of the analysis. In the analysis both descriptive statistics and inferential statistics were used. The measures of central tendency were used as descriptive statistics. For inferential statistics, parsimonious multiple regression models were fitted based on different dependent targets implemented.

#### **4.2 Demographic information**

The study collected data from a set of respondents. Demographic information entailed getting data on sex, marital status, household size, age, academic level, monthly income and annual savings.

##### **4.2.1 Sex of the respondents**

Table 1 and figure 1 below shows the distribution of sex of the respondents who are members of a Sacco. This shows that females engage more in saving in Saccos than their male counterparts, with females having a percentage of 63.6% and males 36.4%.

**Table 4.1: SEX**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid female	14	63.6	63.6	63.6
Valid male	8	36.4	36.4	100.0
Total	22	100.0	100.0	100.0

Source: Research findings

#### **4.2.2. Marital Status of the Respondents**

Table 2 and figure 2 below shows the distribution of marital status of the respondents who are members of a Sacco. This shows that married respondents engage more in saving in Saccos than the single, divorced and widowed ones, with the married ones having a percentage of 45.5%, 13.6%, 31.8% and 9.1% respectively hence there is a relationship between the marital status of respondents and their saving and investment behaviour. Married persons stated that they are inspired to save for several reasons including for wealth accumulation, to be able to pay their children's education, own real properties such as houses, business and for investment purposes. Whereas the single persons are not under the pressure to save for family future and welfare.

**Table 4.2: MARITAL STATUS**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Single	3	13.6	13.6	13.6
Valid Married	10	45.5	45.5	59.1
Valid divorced	7	31.8	31.8	90.9
Valid widowed	2	9.1	9.1	100.0
Total	22	100.0	100.0	

Source: Research findings

### 4.2.3 Household Size of the respondents

Table 3 and figure 3 below shows the distribution of household sizes of the respondents who are members of a Sacco. This shows that those respondents having large families tend to save more than those having few family members hence there exists diversity in the sense that the ones having less responsibilities tend to evade saving than the ones having bigger families because of the pressure associated with taking care of the future of the family members.

**Table 4.3: HOUSEHOLD SIZE**

	Frequency	Percent	Valid Percent	Cumulative Percent
2	3	13.6	13.6	13.6
3	2	9.1	9.1	22.7
4	4	18.2	18.2	40.9
Valid 5	6	27.3	27.3	68.2
>6	7	31.8	31.8	100.0
Total	22	100.0	100.0	

**Source: Research findings**

### 4.2.4: Age of the respondents

Table 4 and figure 4 below shows the distribution of age of the respondents who are members of a Sacco. This clearly demonstrates that those respondents who are older tend to save more than those who are younger with age brackets of those between 45-60 and greater than 61 being with percentages of 41% and 32% respectively. The younger ones with age brackets of 18-30 and 31-45 having percentages of 9% and 18% respectively, hence the older one gets the more inclined to save owing to the many responsibilities they shoulder such as family obligations.



**Table 4.4: AGE**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 18-30	2	9.1	9.1	9.1
31-45	4	18.2	18.2	27.3
45-60	9	40.9	40.9	68.2
>61	7	31.8	31.8	100.0
Total	22	100.0	100.0	

**Source: Research findings****4.2.5: Academic level of the respondents**

Table 5 and figure 5 below shows the distribution of education level of the respondents who are members of a Sacco. This clearly shows that those respondents who are highly literate tend to save more than those who are a bit literate. Hence the higher the level of education the more the need to save by the respondents. This clearly shows that education plays a vital role in the saving culture of individuals.

**Table 4.5: ACADEMIC LEVEL**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Secondary	2	9.1	9.1	9.1
College	6	27.3	27.3	36.4
Undergraduate	6	27.3	27.3	63.6
Postgraduate	8	36.4	36.4	100.0
Total	22	100.0	100.0	

**Source: Research findings**

#### 4.2.6: Monthly Income level of the respondents

Table 6 and figure 6 below shows the distribution of monthly income of the respondents who are members of a Sacco. The results show that those respondents who earn between 10,000 to 50,000 and those who earn over 100,000 tend to save more than those earning less than that. Hence there exists no strong correlation between in income levels and savings and investment among the respondents. This could depend on personal commitments and self-discipline.

**Table 4.6: MONTHLY INCOME**

	Frequency	Percent	Valid Percent	Cumulative Percent
kes 1000-10000	2	9.1	9.1	9.1
kes 10001-50000	9	40.9	40.9	50.0
Valid kes 50001-100000	3	13.6	13.6	63.6
>100000	8	36.4	36.4	100.0
Total	22	100.0	100.0	

Source: Research findings

#### 4.2.7: Monthly Savings of the respondents

Table 7 and figure 7 below shows the distribution of monthly savings of the respondents who are members of a Sacco. This clearly shows that most respondents save between KES 1000 to KES 10,000 monthly hence need to put emphasis on the saving culture.

**Table 4.7: MONTHLY SAVINGS**

	Frequency	Percent	Valid Percent	Cumulative Percent
<1000	5	22.7	22.7	22.7
1000-10000	8	36.4	36.4	59.1
Valid 10001-50000	5	22.7	22.7	81.8
50001-100000	4	18.2	18.2	100.0
Total	22	100.0	100.0	

**Source: Research findings**

#### **4.2.8: Purpose of opening an account**

Table 8 and figure 8 below shows the distribution of respondents based on the purpose of opening their accounts. Most respondents feel that their greatest reason is for expansion of their business and children inheritance with percentages of 46% and 18% respectively with saving for future expenses being the least reason followed by children education and finally emergencies with percentages of 13.6%, 9% and 5% respectively.

**Table 4.8: PURPOSE OF OPENING ACCOUNT**

	Frequency	Percent	Valid Percent	Cumulative Percent
expand business	10	45.5	45.5	45.5
education for children	2	9.1	9.1	54.5
wealth accumulation	3	13.6	13.6	68.2
Valid Emergencies	2	9.1	9.1	77.3
future consumption	1	4.5	4.5	81.8
children inheritance	4	18.2	18.2	100.0
Total	22	100.0	100.0	

**Source: Research findings****4.2.9: Frequency of Saving**

Table 9 and figure 9 below shows the distribution of respondents based on how frequent they save. Most respondents feel that it is better to save monthly than yearly and weekly with percentages of 64%, 23% and 14% respectively.

**Table 4.9: FREQ OF SAVING**

	Frequency	Percent	Valid Percent	Cumulative Percent
weekly	3	13.6	13.6	13.6
Valid monthly	14	63.6	63.6	77.3
yearly	5	22.7	22.7	100.0
Total	22	100.0	100.0	

**Source: Research findings**

#### 4.2.10: Financial Decisions

Table 10 and figure 10 below shows the distribution of respondents based who make the decisions for them when it comes to finances. 68% argue that it is themselves who make the decisions while 23% argue that their spouse makes the decisions for them with 9% affirming that all their financial decisions are based on discussions with their parents/guardians.

**Table 4.10: FINANCIAL DECISIONS**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Myself	15	68.2	68.2	68.2
Spouse	5	22.7	22.7	90.9
parents/guardians	2	9.1	9.1	100.0
Total	22	100.0	100.0	

**Source: Research findings**

#### 4.2.11: Training

Table 11 and figure 11 below shows the distribution of respondents based on whether they have undergone training on saving. 72% of them affirmed that they have not undergone any training whatsoever with 27% affirming that indeed they have taken up training courses on saving. A large number of respondents (64%) have indicated that they would like or have already undertaken training in business management, followed by savings benefits with 18%, then investment benefits with 14% and finally strategic planning with 5% approximately. Hence there is need to improve on training facilities and courses so that people are given knowledge and

skills in sound financial management as this aids in the understanding of the prudence of saving and investing their money, hence this will impact their general saving culture in the country.

**Table 4.11: TRAINING**

	Frequency	Percent	Valid Percent	Cumulative Percent
no	16	72.7	72.7	72.7
Valid yes	6	27.3	27.3	100.0
Total	22	100.0	100.0	

**Source: Research Findings**

**Table 4.12: FIELD OF TRAINING**

	Frequency	Percent	Valid Percent	Cumulative Percent
investment benefits	3	13.6	13.6	13.6
savings benefits	4	18.2	18.2	31.8
Valid business management	14	63.6	63.6	95.5
strategic planning	1	4.5	4.5	100.0
Total	22	100.0	100.0	

**Source: Research findings**

### 4.3 Descriptive statistics

This section deals with the measures of central tendency and how they can be used to describe the data.

**Table 4.13: Descriptive Statistics**

	N	Minimum	Maximum	Sum	Mean	Std. Deviation	Variance
MONTHLY INCOME	22	1	4	61	2.77	1.066	1.136
Monthly SAVINGS	22	1	4	52	2.36	1.049	1.100
Valid N (listwise)	22						

**Source: Research findings**

Table 4.13 above shows the descriptive statistics of monthly income and annual savings. We are going to interpret the table. On average each member requires to earn a monthly income of 50001-100000 to be able to save monthly sum of 10001-50000.

#### 4.4.1: Monthly savings relationship with training

**Table 4.14: Model Summary of Monthly Savings**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.317 <sup>a</sup>	.100	.055	.443	.100	2.234	1	20	.151

a. Predictors: (Constant), MONTHLY SAVINGS

31.7 % of the variation can be explained in the model.

#### **4.5 Interpretation of the Findings**

From the above regression model, the study found out that there were factors influencing investment by households are total savings by households in SACCOs. They influenced investment by households positively.

The independent variables that were studied (savings by households and members demography) explain a substantial savings by households as represented by adjusted  $R_2$ . This means that the independent variables contribute to savings and investment by households while other factors and random variations not studied in this research may also influence household savings and investment behaviour.

The study established that the coefficient correlation for savings by households and members demographics as age, income level, marital status, education and household size meaning that savings by households positively and significantly influenced by members demographics. This is in line with Zia (1981) who indicated that large and rapid increases in household income have a positive impact on the rate of investment. The rate of growth of income is a major determinant of investment

A social support network is required to encourage them to save in the form of community development financial institutions. This can be done by improving access to financial institutions and ensuring appropriate savings instruments are available. Financial educators can join hands with the community development credit unions to enhance development and delivery of financial education on savings.

According to most respondents the major factor that affects the individual's savings culture were demographics factors age, marital status and education level of the members. . It was also found



that SACCOs can affect the savings culture of individuals by ensuring security, convenience and organizing for training on financial management and investment. There were also other factors that affect savings but were not under the control of the SACCO. These included the level of income, the ability and willingness to save, and the level of inflation. These findings concurs with (Adam, Collier & Ndungu, 2011) indicates that there are three factors that mostly determine savings behavior of a household in Kenya which they mentioned as the ability to save

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

This research is set out to study the effect of members demographics on the savings and investment of individuals in savings and credit cooperatives (SACCOs) registered by SASRA in Kenya. In chapter one, the background and the problem of the study was given and the study variable indicated. In chapter two a detailed review of the literature on the topic of the research was done. In this chapter relevant academic and books highlighted the various aspects of the study so as to shed light on the various aspects of the study. Chapter three presented the methodology of the study while chapter four presented the analysis of the findings and interpretation of the study. In this chapter the solutions of the study as presented in chapter four are discussed and conclusions drawn upon which recommendations and areas thought necessary for further research will be identified.

#### **5.2 Summary**

This section represents a summary of research findings arising from the study on how each objective was addressed to and the study established the effect of member demographics on the savings and investment behavior of individuals in savings and credit co-operatives (SACCOs) registered by SASRA. The research study considered a cross-section of SACCOs and the findings were obtained, compared and analyzed to give factual results.

Married respondents engage more in saving in Saccos than the single, divorced and widowed ones, hence being married inspires one into savings and investing. The reasons could be they

tend to think of the future and welfare of their dependents, such as having enough funds for their children's education, establishing family properties such as real estate, farming and other long term investment. Parents usually aspire to leave a good legacy behind for their children. Every parent would wish some wealth behind upon their death for their dependants so that they don't become destitute.

Sexes of the respondents were mostly women who were member of the Saccos though the respondents were randomly selected during the data collection period. There is a correlation between the gender of respondents and their saving and investment behavior. Women tend to save more than males. This could be attributed that due to gender empowerment programmes, female are more sensitive to owning properties, self-reliant and to reduce dependency. In addition, there is a consideration that females are more prudent in their savings and less likely indulge in extravagant spending unlike their male counter-parts who are likely to indulge in leisurely expenditures, more so with the single young men.

Older respondents tend to save more than those who are younger owing to increased responsibilities. Hence the higher the age the more willingness or likelihood to save for the future welfare of their dependants such as quality education, wealth creation and inheritance.

Higher education levels increases savings due to increase in income as those with high education are mostly employed and engage in professional and well-paying jobs. Further, it is mentioned that this cadre have sound financial management skills that can assist them to properly plan for their current and deferred expenditures. They are said to be prudent and understand more the relationship between the savings and investment and wealth creation.

Respondents with large families tend to save more than those having lesser families hence increased parental responsibility increases savings.

Respondents earning between 10,000 to 50,000 and over 100,000 tend to save more than those earning lower income hence income plays a big role in saving. Respondents save between 10000 to 50,000 monthly hence need to put emphasis on the saving culture.

### **5.3 Conclusion**

The coefficients of variation obtained were low. This is because saving is affected by several factors other than demographics. These are the factors that affect overall implementation of saving among individuals in SACCOs. This needs to be identified in all aspects for implementation of the culture to save.

### **5.4 Recommendations for Policy and Practice**

Based on the findings of this study the following recommendations were suggested;

The study found that marital status have influences the savings on members, there the study recommends nurturing of marriage institution as a way of protecting saving culture among women and men members of the SACCO

The study found that education level has a significant influence on average savings by SACCO members the researcher recommends bot citizens and the government to put more emphasis one education of the younger generation. Further, it is recommended financial institution to offer training opportunities for their member on sound financial management and prudent and sensitize on the importance of savings on the individual wealth and the economic development of the country as a whole.

Since the study found that some respondents normally saves money depending on how much they, the research recommend civic education to be conducted among the citizens and especially youth in order to embrace saving culture. Indeed, saving should be done by every account holder irrespective of how much they earn.

### **5.5 Suggestion for Further Research**

While there are factors that affect overall savings behaviour of members in Saccos, the study concentrated on the demographic-related factors of the members in SACCOs registered with SASRA. There is the possibility that there are many other factors that influence savings and investment behaviour of individuals other than the demographic related ones. Furthermore, the savings and investment of individuals saving with other financial institutions could be influenced by other factors such as micro and macro-economic variables. Further studies need to be done on non-demographic factors that could influence the savings and investment culture of members of Saccos.

## REFERENCES

- Adams, D.W. (2000). *Mobilizing Household Savings through Rural Financial Markets*.  
Ohio.: University of Chicago Press
- Ademba, H. (2007). Why revitalization of Co-operative, *SACCO Star*. Nairobi Government Press,
- Aduda, J. & Kaane, H. (2009). Government Regulations on SACCOs. Government Press.
- Amu, M. E. K. & Amu, E. K. (2012) Savings behavior in Ghana: A study of rural households in the Ho Municipality of Volta Region. *Online Journal of Social Sciences Research* 1(2) pp. 54-61
- Bloom, D.E. and J.G. Williamson (1998) A Demographic Transition and Economic Miracles in Emerging Asia, *World Bank Economic Review*, 12(3): 419-455.
- Booth, T.D., and Stroombergen, A.G. (2000) *Determinants of Saving Behaviour*.  
Research Report, Office of the Retirement Commissioner, New Zealand.  
[http://www.infometrics.co.nz/reports/saving\\_behaviour.pdf](http://www.infometrics.co.nz/reports/saving_behaviour.pdf)
- Bosworth, B. (1993) *Saving and Investment in a Global Economy*. Washington: Brookings Institution
- Browning, M. and Lusardi, A. (1996), Household saving: Micro theories and micro facts. *Journal of Economic Literature*, XXXIV(4), pp. 1797–1855.  
[www.jstor.org/stable/10.2307/2729595](http://www.jstor.org/stable/10.2307/2729595)
- Browning M. (1992) Children and Household Economic Behavior, *Journal of Economic Literature* 30(3):1434-75.
- Browning M. and Lusardi.A (1996) A Household Savings: Micro Theories and Micro Facts, *Journal of Economic Literature* 34(4): 1797-1855.
- Burrit K. (2006) *Expanding Access to Financial Services in Malawi*, United Nations Capital Development Fund, New York, NY 10017, retrieved from <http://www.unCDF.org>

- Canova, L., A. Rattazzi and P. Webley, (2005) The hierarchical structure of saving motives. *Journal of Economic Psychology* 26(1), pp. 21-34.  
<http://www.sciencedirect.com/science/article/pii/S0167487003001077>
- Claessens S., Feijen E. (2006), *Financial Sector Development and the Millennium Development Goals*, Washington DC: The World Bank.
- Coale A.J. and E.M. Hoover, (1958) *Population Growth and Economic Development in Low Income Countries*, Princeton: Princeton University Press.
- Deaton, A. (1995). “*Growth and savings: What do we know, what do we need to know, and what might we learn: A re-search programme in development studies*. Princeton: Princeton University.
- Delafrooz N and L.H.J. Paim. (2011). *Determinants of Financial Wellness among Malaysia Workers*. Kuala Lumpur: Asia Life Sciences.
- Development International. (2001). *Micro finance Market Analysis and Survey: MFIs and SACCOs in Dares Salaam*.
- Duesenberry, J. S. (1949). *Income, Saving and the Theory of Consumer Behaviour*. Cambridge: Harvard University Press.
- Fernandez, S., Otero, L., Vivel, M., Rodeiro, D., 2009, Determinants of the Europeans’ retirement savings, *Working Paper*, University of Santiago de Compostela;
- Fernando A. N. (2007), *Low Income Households’ Access to Financial Services: International experience, Measures for Improvement and for Future*. Manila: Asian Development Bank, retrieved from <http://www.adb.org/microfinance>
- Fisher I. (1930). *The Theory of Interest*, New York: Kelley and Millman
- Fry M.J. and Mason. A (1982) *The Variable Rate of Growth Effect of the Life Cycle Savings Model*, *Economic Enquiry* 20:426-442
- Hammer J.S., (1986) A Children and Savings in Less Developed Countries, *Journal of*

- Development Economics*, 23:107-118.
- Hira, T.K. (1987). Money Management Practices Influencing Household Asset Ownership. *Journal of Consumer Studies and Home Economics*
- Higgins M. (1998) Demography, National Savings, and International Capital Flows, *International Economic Review*, 39 (2): 343-369.
- Higgins M. and Williamson J.G. (1996) *Asian Demography and Foreign Capital Dependence*, NBER Working Paper No. 5560, MA: National Bureau of Economic Research, Cambridge.
- Issahaku, H. (2011). Determinants of Savings and Investment in deprived district capital in Ghana: A case study of Nadowli in Upper West Region of Ghana. *Continental Journal of Social Sciences* 4 pp 1-11
- Keynes, J. M. (1973). *The General Theory of Employment, Interest and Money* in Volume VII of the Collected Writings of John Maynard Keynes, London: St. Martin's Press.
- Kibirige, E. (1980) *Human Development through Credit Unions: Guide for Credit Union Promoters*. Nairobi, Kenya.
- Lee. S., Park M.H. and Montalto, C.P. (2000). The Effect of Family Life Cycle and Financial Management Practices on Household Saving Patterns. *Journal of Korean Home Economics Association English Edition*.
- Leff, N. H. (1969) Dependency rates and savings. *The American Review*. 59(5), 886 – 896.
- Loayza N., Schmidt-Hebbel K., and Servén L. (2000) Saving in Development Countries: An Overview, *The World Bank Economic Review*, Vol. 14, NO. 3, 399.
- Makeni, T. (2004). Strategic Responses Adapted by SACCOs in Nairobi to Changed Operating Environment. *Unpublished MBA Project*. University of Nairobi.
- Manzocchi, S. (1999). *Foreign capital in developing economies: Perspectives from the theory of economic growth*. New York: St. Martin's Press



- Mason A. (1981). “*An Extension of the Life-Cycle Model and its Application to Population Growth and Aggregate Saving*”, Honolulu East-West Center.
- Modigliani, F. (1970) *The life cycle hypothesis of saving and intercountry differences in the saving ratio*. In, W. Eltis, M. Scott, & J, Wolfe, (Eds.). Induction, growth, and trade. London: Oxford University Press.
- Mukhongo, W. (2014). *Determinants of Rural Household Savings in Bungoma County - Kenya*. Nairobi: Kenyatta University.
- Mukindia, S. M. (2012). *Influence of socio-cultural factors on households savings among Maasai Community in Transmara District, Narok County*. Nairobi: University of Nairobi.
- Ministry of Cooperative Development, 2014, Kenya, Government Printers.
- Ogaki, M., Ostry, J., & Reinhart, C. (1996) *Saving behavior in low and middle-income developing countries*, Staff papers, International Monetary Fund. 43, 38-71.
- Olson, D. H., & DeFrain, J. (2000). *Marriage and the family: Diversity and strengths* (3rd ed.) London: Mayfield Publishing Company.
- Parrotta, J.L. and Johnson, P.J. (1998).The impact of financial attitudes and knowledge on financial management and satisfaction of recently married individuals. *Financial Counseling and Planning*.
- The Sacco Societies Act, 2014, Government Printers.
- Schultz, P. (2004) *Demographic Determinants of Savings: Estimating and Interpreting the Aggregate Association in Asia*, Centre Discussion Paper No. 901, Yale University.
- Slovic P. (1972) Psychological Study of Human Judgment: Implications for Investment

Decision Makin, *Journal of Finance*, Vol.27, Iss.4, PP.779 Websites:

<http://newmops.tse.com.tw/http://www.cepd.gov.tw/>

Wanyama, O. F. (2009). *Surviving Liberalization: The Cooperative Movement in Kenya*. Geneva: International Labour Organization.

Wright, G.A.N. (1999). *A critical Review of Savings Services in Africa and Elsewhere*. Nairobi, Kenya.

Van Rooij, M., Lusardi, A & Alessie, R., 2011, Financial literacy, retirement planning and household wealth, Working Paper 313, De Nederlandsche Bank;

## APPENDEXES

### Appendix I: Questionnaire

Dear respondent,

My name is Daud Mohamed Abdi, Masters Student at the University of Nairobi. I am carrying out a research on the effect of Members; demographics on the savings and investment behaviour of individuals in savings and credit co-operatives (SACCOs) registered by SASRA in Kenya. Please answer the following questions honestly and to the best of your knowledge. All information gathered from you will be treated with strict confidentiality. This will contribute greatly to the success of this project. Your objectivity and cooperation will be highly appreciated.

**Tick or write answers in full where applicable.**

#### Section II: Demographic factors

1) Sex: male ( )          female ( )

2) Marital status: single ( )    married ( )    divorced ( )          widowed ( )

3) If Married, Household size:

Members 2 ( )

3 ( )

4 ( )

5 ( )

6 above

4) Age 18-30 ( )

31-45 ( )

46-60 ( )

61 & above ( )

5) Highest academic level completed:

None ( )

Primary ( )

Secondary ( )

College ( )

Undergraduate ( )

Postgraduate ( )

6) Average monthly income:

Less than KES 10,000 ( )

KES 1,000 – KES, 10,000 ( )

KES 10,001 – KES 50,000 ( )

KES 50,001 – KES 100,000 ( )

Over KES 100,000 ( )

7) Average monthly Savings

Less than KES 10,000 ( )

KES 1,000 – KES, 10,000 ( )

KES 10,001 – KES 50,000 ( )

KES 50,001 – KES 100,000 ( )

Over KES 100,000 ( )

### **Section III: Saving and investment culture**

8) How long have you been saving?

Less than 1 year ( )

1 – 3 years ( )

3 – 5 years ( )

5 – 10 years ( )

Over 10 years ( )

9) What are your reasons for saving?

1. Expand business ( )

2. Education (children school fees) ( )

3. Accumulation of wealth ( )

4. For emergency i.e. burial, medical ( )

5. Save for future consumption ( )

6. For your children to inherit ( )

10) Have you ever received any training on saving and investing?

Yes ( )

No ( )

11) Did the training improve your saving and investment behavior?

Yes ( ) No ( )

12) In what fields would you require any/more training from your SACCO?

1. Investment benefits ( )

2. Savings benefits ( )

3. Business management ( )

4. Strategic planning ( )

13) How often do you save?

1. Daily ( )

2. Weekly ( )

3. Monthly ( )

4. Yearly ( )

14) How have SACCOs motivated you to save and invest?

1. Reasonable interest ( )

2. Easy accessibility ( )

3. Good savings products ( )

4. Others (specify).....

15) Who makes the financial decisions in your family?

Myself ( )

My spouse ( )

My parents/guardians ( )

**Thank you for your valuable time.**

## **Appendix II: List of SACCOs Registered by SASRA in Nairobi**

### **Name of the SACCO**

1. Ardhi
2. Elimu
3. Lenga tumaini
4. Nest
5. Reli
6. Teleposta
7. Transcom
8. Ufanisi
9. Ufundi
10. Ukristo na ufanisi
11. Afya
12. Airports
13. Asili cooperative
14. Chai

15. Chuna
16. Comoco
17. Elimu
18. Fundilima
19. Harambee
20. Hazina
21. Jamii
22. Kenpipe
23. Kenversity
24. Kenya bankers
25. Kenya police
26. Kingdom
27. Magereza
28. Maisha bora
29. Mwalimu national
30. Mwito
31. Nacico
32. Nafaka
33. Naku
34. Nassefu
35. Nation staff



- 36. Orthodox
- 37. Commocco
- 38. Cosmo- Politan
- 39. UN SACCO

**Source: Sacco Societies Regulatory Authority (SASRA)**

**Appendix III: Raw Data**

SEX	MS	HH Size	AGE	EDU	INCOME	M. SAVING	PURPOSE OF OPENING ACC	FRQ	FD	TR	TR TYPE	DURATN	MTVN
0	2	4	3	5	3	2	1	3	2	0	3	4	1
0	3	4	4	6	4	4	6	3	1	0	3	5	3
1	2	2	2	4	2	2	1	2	1	0	3	3	2
0	2	5	3	6	4	4	1	4	2	0	3	4	1
1	1	3	1	5	2	2	1	3	3	0	3	2	3
0	3	1	4	4	2	1	5	3	1	0	3	4	2
1	2	4	3	6	4	3	6	4	1	0	2	4	1
0	2	5	2	6	4	4	1	4	2	0	3	3	1
0	4	1	4	4	2	2	1	2	1	1	3	5	1
0	3	3	3	5	2	1	3	3	1	1	2	3	2
0	2	5	3	4	2	2	1	3	2	1	1	3	2
0	1	1	2	5	2	1	3	4	1	0	3	3	3
0	3	5	4	6	4	3	6	3	1	0	2	3	1
1	2	2	1	6	4	4	6	3	1	0	1	3	2
1	3	4	3	3	1	1	2	3	1	0	3	4	1
0	2	3	3	4	3	3	1	3	2	1	3	4	3
0	3	5	4	5	2	2	1	4	1	0	4	4	2
0	4	3	4	3	1	1	3	3	1	1	3	5	1
1	1	4	2	6	4	2	4	3	3	0	2	4	1
1	2	4	3	4	2	2	4	3	1	1	3	3	3
0	3	5	3	5	3	3	2	3	1	0	1	4	1
1	2	5	4	6	4	3	1	2	1	0	3	4	2

**Source: Raw data collected through Questionnaires**