

**GENDER AND HOUSEHOLD SAVINGS BEHAVIOR IN  
KENYA**

**PENNINAH MUKAMI NJUNG'E**

**X50/72237/2011**

**Research paper submitted in partial fulfillment of the requirements for  
the Degree of Master of Arts in Economics of the University of Nairobi**

**November, 2013**

**DECLARATION**

This research paper is my original work and has not been presented for a degree in any other university.

..... **Date** .....

Penninah Mukami Njung'e  
X50/72237/2011

This research paper has been submitted for examination with our approval as university supervisors.

..... **Date** .....

**Prof. Tabitha Kiriti Ng'ang'a**

..... **Date** .....

**Dr. Joy Kiiru**

## **DEDICATION**

To my husband Njoroge and daughter Minnie.

## **ACKNOWLEDGEMENT**

I wish to thank those people who have contributed in one way or another to making this research paper a success.

I am grateful to God Almighty for giving me the opportunity and ability to undertake this course.

My sincere gratitude go to my supervisors, Prof. Tabitha Kiriti Ng'ang'a and Dr. Joy Kiiru. They devoted much of their time reading through all the drafts of this research paper and made useful and constructive comments and suggestions. Their guidance helped to clarify many of my ideas.

I also wish to pass my sincere gratitude to the Ministry of Devolution and Planning for the financial support. I also appreciate all the information and support offered by the KNBS staff.

Most sincere thanks go to my dad Mr. Francis N. Nguturi and mum Dorcas Njung'e together with my siblings, whose continuous prayers, moral support and constant encouragement and wishes have made my academic life so far a success. May God bless you profusely.

Last but not least, special thanks to my husband Njoroge Njuguna and our beautiful and lovely daughter Minnie Muthoni for their cooperation during the two years. It is impossible to mention everyone but for sure this is a product of combined effort of many. God bless you all.

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## ACRONYMS AND ABBREVIATIONS

<b>ADG</b>	African Development Group
<b>AIH</b>	Absolute Income Hypotheses
<b>ANCOVA</b>	Analysis of Covariance
<b>ANOVA</b>	Analysis of Variance
<b>GDP</b>	Gross Domestic Product
<b>GNDI</b>	Gross National Disposable Income
<b>GNP</b>	Gross National Product
<b>KIHBS</b>	Kenya Integrated Household Budget Survey
<b>KNBS</b>	Kenya National Bureau of Statistics
<b>LCH</b>	Lifecycle Hypothesis
<b>NGO</b>	Non Governmental Organizations
<b>PSID</b>	Panel Study of Income Dynamics
<b>RIH</b>	Relative Income Hypothesis
<b>SSA</b>	Sub-Saharan Africa
<b>WHO</b>	World Health Organization

## **DEFINITION OF TERMS**

### **Cross-sectional data**

A data set collected by sampling a population at a given point in time.

### **Breusch-pagan test:**

A test for heteroskedasticity where the squared OLS residuals are regressed on the explanatory variables in the model

### **Household:**

A person or a group of people living in the same compound, answerable to the same household head, and sharing a common source of food and/or income.

### **Household head:**

The senior-most member, who makes key decisions in the household and whose authority is acknowledged by other members. The head of the household was measured as 1 for head and 2 for spouse.

### **Gender:**

Refers to the socially constructed roles, behaviours, activities, and attributes that a given society considers appropriate for men and women. It therefore refers to either masculine or feminine. It is the category to which an individual is assigned by self or others, on the basis of sex.

### **Sex:**

Refers to the biological and physiological characteristics which define men and women. Thus refers to male or female.

### **Distinction between sex and gender**

The differences in the sexes do not vary throughout the world, but differences in gender do. Sex does not change with time but gender roles change over time as when people's circumstances change. Sex is fixed and based in nature, gender is flexible and based on culture.

### **Gender equity**

WHO defines it as "fairness and justice in the distribution of benefits and responsibilities between women and men". It is the process of being fair to both women and men.

**Gender equality**

Means equal rights of men and women. It implies that men and women should receive equal treatment, unless there is a sound biological reason for different treatment.

**Gender inequality**

It refers to unequal treatment or perceptions of individuals, based on their gender.

## **ABSTRACT**

Savings play a major role in economic development since an increase in savings leads to an increase in investment hence improve gross domestic product. Low savings in an economy means unfavorable growth of the economy, poor job creation and inferior overall living standards relative to nations with a better savings performance. The study used KIHBS 05/06 data which covered a total of 13,430 households across all districts in Kenya, both rural and urban. For the purposes of this project a sample of 1500 households was considered. The results show that both male and female household heads save a portion of their household income in Kenya. The study revealed that household heads within the age bracket of 45-65 years had the highest (65.6 percent) saving rate of 0.00-0.20 percent and the least (9.4 percent) saving rate of 0.041-0.60. 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 Shs. 2,824.26 while being a female household head, the household saving would increase by Shs. 13,047.4. The study recommends that Low income earning households should be sensitized on the importance of savings. Results also indicate that the more the level of education of the households heads the more the likelihood of falling within higher saving rate threshold. Therefore the government should put up measures to educate as many people as possible.



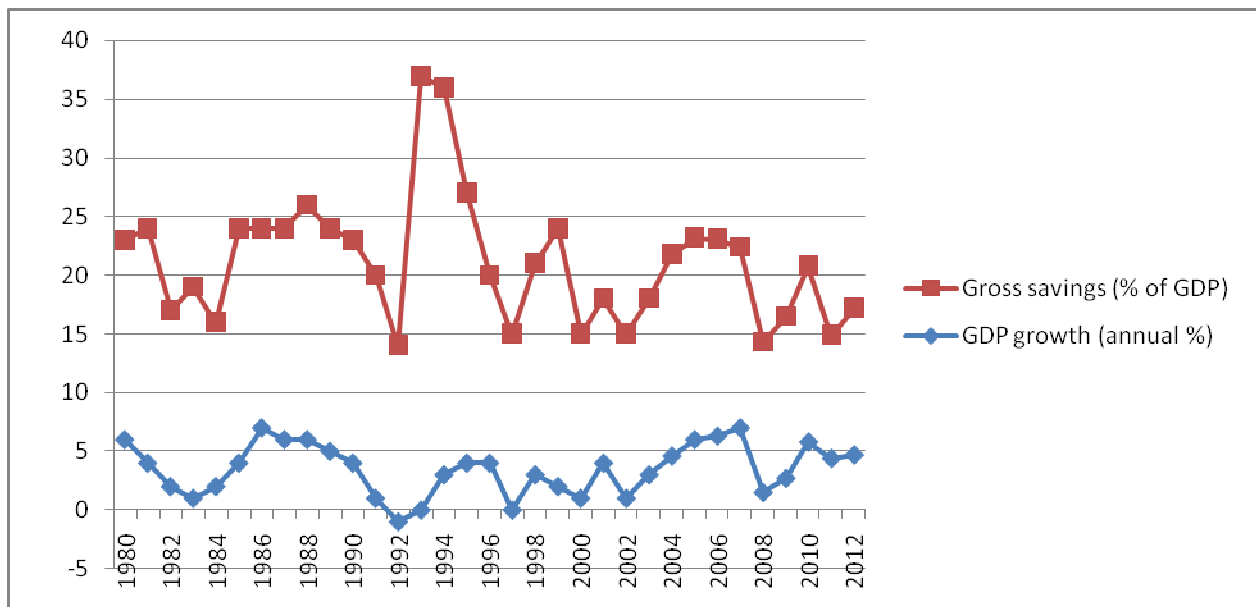
# CHAPTER ONE

## INTRODUCTION

### 1.1 Background

Savings are necessary for stimulation of economic growth and development. A major part of the national savings is the household saving. The level of savings can have a big impact on the performance of an economy. In Africa economic performance has been poor, resulting, since 1978, in actual declines in per capita income, according to a report by African Development Group, 2012. Savings rates have declined in Africa and in recent years have been barely over half the levels attained in East Asia (African Development Group, 2012). Savings and consequently investment has duly suffered. Like many Sub Saharan African countries, Kenya has not been able to finance her investments fully. She has relied on foreign savings and foreign debt to supplement her domestic resources (African Development Group Report, 2012). This has also resulted to budget deficits. The low saving rates consequently affects the level of growth in the economy. This is supported by the figure 1.1 that shows fluctuating saving rates over the years.

**Figure 1-** Gross domestic product (GDP) rate and gross savings (% of GDP).



Source: Various Economic Survey Publications

Fig 1.1 shows that there is causal relationship between savings and Growth.

There are various definition of savings, and according to Keynes, it is spending less out of a given amount of resources in the present in order to consume more in the future. It is the decision to defer consumption and store this deferred consumption in some form of asset. It can also be defined as the income that consumers earn but do not spend on consumption. It is simply the residual between income and current consumption (Keynes 1936).

Savings play a major role in economic development since an increase in savings leads to an increase in investment hence improve gross domestic product. If a country saves too little, it means that the households eventually struggle financially and for the broader economy it means that there will be insufficient funds available to finance investment in physical and social infrastructure. Low savings in an economy also means unfavorable growth of the economy, poor job creation and inferior overall living standards relative to nations with a better savings performance.

Across countries higher saving rates tend to go hand in hand with higher income growth, a fact that has been taken as proof of the existence of both vicious cycles of saving and prosperity and poverty traps of insufficient saving and stagnation (Loayza, Schmidt-Hebbel and Servén (2000). High savings rates typically tend to be associated with higher employment levels and less cyclical economic volatility. According to (African Development Group, 2012), restoring public finances remains a priority in countries where public sector deficits remain high, especially those that rely on oil imports.

Gender refers to the socially constructed roles, behavior, actions and attributes that a particular society considers appropriate for men and women according to World Health Organization (WHO). The different roles and behavior played by each party may lead to gender inequalities, hence, differences between men and women that eventually favor one group. With time, such inequalities can lead to inequities between women and men.



Sex is the biological differences between women and men. Sex plays an important role because individuals may experience various processes differently based on their biology. It is therefore important to include women and men in social science research because results for one group may not necessarily apply to the other group. The valuation of males over females is one way that gender is a part of all human interactions and is stable form of structured inequality.

The relationship between sex and gender affect who we are, what we do, and how we are treated, and this has significant effects on policy outcome.

One of the major challenges faced by developing countries, Kenya included, is how to create an enabling environment that recognizes gender roles and responsibilities in economic development. The Vision 2030 and its First Medium Term plan (2008-2012), are the country's long and medium term economic blue prints respectively, which identify regional, gender and income equity as key challenges. They also recognize that the government needs to mainstream gender into its policies, plans, budget and programmes in order to realize the aspirations of the vision goal.

A nation's competitiveness and growth potential depends significantly on whether and how the country strives for gender equality, that ensure women are given the same privileges, responsibilities, and opportunities as men, hence gender equity. Gender equity therefore means fairness, where just treatment is given to both men and women. Equity sometimes calls for assenting action to allow fair play, especially where two groups and one has an advantage over the other are competing for same resources.

The issue of inequality remains a key challenge in Kenya (Kariuki, 2010). There exist various gender disparities especially where women are concerned. Low levels of educational attainment by women coupled with retrogressive social cultural practices have resulted in low participation and representation of women in decision making positions and lack of access to economic opportunities (Republic of Kenya, 1996). A clear and accurate understanding of its causes, nature, effects and manifestation is necessary if policy is to respond in an effective and proper manner. Equally important is the need to have a clear understanding of the theoretical or conceptual foundation on which to ground this debate while at the same time teasing out possible policy options.

A more aggressive savings policy is required to further reduce the low savings problem, address gender disparity in access to economic opportunities and consequently, improve economic growth in the country.

## **1.2 Evolution of savings in Kenya**

In Kenya, an important source of growth is the ability of the economy to sustain high levels of savings and investment (Mwega, et. al., 1994). Since 1965, gross investment has comprised more than 19% of Gross National Product (GNP), with much of this financed from domestic savings. In their study Mwega et, al. (1994) found out that, for reasonable intermediate import ratios, foreign exchange is the binding resource constraint to potential growth in Kenya. Thus, its increased availability through exports promotion and more concessionary capital inflows and coupled with reduction of import compression would improve the saving, fiscal, and external gaps that undermine good macroeconomic performance.

Despite liberalization in Africa, the saving rate has perpetually been the lowest compared to other regions (Ndung'u and Ngugi, 2000). It is also true that Africa faces serious credit constraints; and this, coupled with low income could greatly reduce any little incentive to save. According to a research conducted through the World Bank (Loayza, et. al., 2000) found that, saving rates around the world vary widely: on average East Asia saves more than 30 percent of gross national disposable income (GNDI), while Sub-Saharan Africa saves less than 15 percent. They also noted that, regional differences have been rising over the past three decades. Saving rates have doubled in East Asia and stagnated in Sub-Saharan Africa and in Latin America and the Caribbean (Loayza, et. al., 2000). The case is not different for Kenya being one of the African countries.

Domestic savings is undertaken through government, companies and by households. Some savings are directly invested by the savers, while others pass through financial institutions.

The National savings rate and Kenya's Gross Domestic Product (GDP) growth rate has been fluctuating over the years as shown by the table in Appendix 1.

It shows that between the years 1980 and 1995 domestic saving was high with the years, 1993 and 1994 recording the highest saving rate of > 30 % despite the low growth in gross domestic product over the years. Between the years 2000 to 2012 there has been fluctuating trend as indicated by the table in the appendix 1. The highest gross domestic growth rate of 7% was recorded in 1986 and 2007 with saving rates of 17% and 15.4% respectively.

### **1.3 Problem Statement**

Economic theory suggests that savings helps to foster economic growth. Savings has an immediate impact on economic growth of a country. Household saving rates in Kenya are not only low but also declining in the last years as indicated in figure 1.1 and table 1.1. This retards the economic growth of the country as it has to rely on foreign aid to finance its investments which also makes it vulnerable to external shocks.

There are many factors that affect how much people are willing and able to save. Income is the strongest predictor according to the various saving models as discussed in chapter two. Given the important role savings play in long-term well-being, persistent gender inequality and disparity in access to economic opportunities in the economy, could perhaps play a role in determining the level of savings for the economy.

There is mixed evidence in the empirical literature on the gender differentials in savings behavior. Men and women saving behavior may differ due to economic vulnerability, gender roles and norms which make their interests to be different (Chowa, 2006).

To fully detect the impact of gender on savings, one must consider how the impact of other factors on savings, are dependent upon their interaction with gender. Multiple aspects of individuals' lives are influenced by gender and the combination of those effects contributes to the likelihood of whether or not one participates in a savings plan. This study seeks to provide steps toward revealing where important gender relationships exist across variables associated with savings behavior.

#### **1.4 Research questions.**

- i. Does gender affect savings in Kenya?
- ii. How relevant is gender in explaining the differences in saving decisions?
- iii. How does gender interact with other factors that affect savings?

#### **1.5 Objectives of the study**

##### **1.5.1 General Objective**

The main objective of this study is to empirically examine the relationship between gender and savings behaviour in Kenya.

##### **1.5.2 Specific Objectives**

- i. To find out how gender affects savings in Kenya.
- ii. To assess the relevance of gender in explaining the differences in saving.
- iii. To find out how gender interacts with other factors that affect savings.
- iv. To draw conclusions and suggest policy measures to adopt in order to mobilize savings and support self sustained economic growth based on the empirical findings.

#### **1.6 Justification of the study**

The choice to save or spend in life tends to be an important determinant of variation in wealth accumulation (investment) hence economic growth. This paper seeks to uncover the choices in savings behavior across individuals based on the influence of gender. The results of the study will enable the policy makers, in better understanding of how gender and savings interact and hence based on the results formulate policies that aim at boosting the low levels of savings and those that eliminate or at least narrow gender differences in access to economic opportunities to improve the route to economic growth and development.

Although plenty of research has been conducted in the field of household saving behaviour, only a limited number have applied the gender perspective. Most of the research used sex and gender interchangeably and just reported sex differences in respective findings. However, gender is a cultural concept, and it is expected to interpret differences based on social and cultural issues.

In Kenya, there are ongoing policy efforts that can benefit from the results of the study, for example, the Kenya Vision 2030. The Vision 2030, medium term plan (2008-2012) identify the need to address gender concerns for sustainable growth and development by ensuring equity in the utilization of social, political and economic opportunities.

The results and implications would also be adapted by other economies in formulating appropriate policies with far reaching impacts on the targeted groups that face similar problems to those of Kenya.

### **1.7 Outline of the project**

This paper is organized as follows: Chapter One deals with the introduction of savings and gender, their definition and brief background information. It also contains the statement of the problem, the objectives, research questions and justification of the study. Theories on determinants of savings behavior and their empirical tests both at micro as well as at macro level are discussed in chapter Two. Chapter Three focus on the model to be estimated, data sources and description of the variables. Results on estimated models and their analysis are discussed in chapter Four, while conclusions, recommendations and policy implications are in chapter Five.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

This study examines gender and savings behavior in Kenya. This chapter gives a review of the available literature considered relevant to this study. The literature is divided into two parts: theoretical and empirical. Theoretical literature looks at the various savings models that have been developed. Empirical literature concentrates on studies that have been done to test the models. The literature reviewed focuses on studies done in both developed and developing countries, both at macro and micro levels with a few focusing on saving behavior in Kenya. The final section presents an overview of literature review.

#### **2.1 Theoretical literature review**

There are several saving motives and models that have been developed. A review of the models has been done. They include; Keynesian absolute income hypothesis, Duensberry's relative income hypothesis, Friedman's permanent income hypothesis and Modigliani life cycle hypothesis.

##### **Keynesian Absolute income hypothesis**

It was recognized by J.M. Keynes (1936). It is also referred to as the Keynesian consumption function. In defining this concept, he said, individuals save out of their current income to smooth the expected consumption over time. The impact of the precautionary savings is realized through its impact on current consumption, as individuals defer their current consumption to be able to maintain the utility level of consumption in the future if income drops. The model therefore, only bases consumption on current income and ignores potential future income. Higher precautionary savings level would reflect on higher wealth of an individual or a growth in net worth.

Keynes's basic model of consumption was that current consumption expenditures are determined mainly by current disposable income. Thus, he links consumption(C) to

income ( $y$ ) levels. Thus according to Keynes, the Keynesian consumption function is written in linear form as:

$$C_t = a + bY_t.$$

The coefficient  $b$ , which Keynes called the marginal propensity to consume (MPC) and which was defined as

$$\frac{\partial C}{\partial Y},$$

where,  $dC$ =Change in consumption and  $dY$ =Change in income.

The saving function can be represented in a general form as:

$$S = f(Y)$$

where:  $S$  is saving,  $Y$  is income (national or disposable), and  $f$  is the notation for a generic, unspecified functional form.

The actual functional form of the equation can be linear, with a constant slope, or curvilinear, with a changing slope. The most common form is linear, such as:

$$S = c + dY$$

where:  $S$  is saving,  $Y$  is income,  $c$  is the intercept, and  $d$  is the slope.

It is often useful to state the saving function using parameters for the consumption function.

$$C = a + b Y$$

where:  $C$  is consumption expenditures,  $Y$  again is income,  $a$  is the intercept, and  $b$  is the slope.

In this case, the saving function can be specified as:

$$S = -a + (1-b) Y$$

Where:  $S$  is saving and  $Y$  is income. However, now the intercept is  $-a$  rather than  $c$  and the slope is  $(1-b)$  rather than  $d$ . This alternative specification shows the connection between the saving function and the consumption function. The intercept of the saving function ( $-a$ ) is the negative of the intercept of the consumption function ( $a$ ). The slope of the saving function  $(1-b)$  is one minus the slope of the consumption function ( $b$ ), meaning that the sum of the marginal propensity to consume ( $b$ ) and the marginal propensity to save  $(1-b)$  is equal to one, which means that a portion of additional income is consumed and the rest is saved.

In a closed economy, according to Keynes,  $MPS + MPC = 1$  since an increase in one unit of income will be either consumed or saved. Both the average and marginal propensities are generally believed to be between zero and one.

### **Lifecycle Saving Motive**

Developed by Modigliani it asserts that people save to finance their retirement and de-save during retirement. The model emphasized how saving could be used to transfer purchasing power from one phase of life to another. According to the model, the more young savers there are relative to old de-savers, the greater will be a nation's saving rate. It assumes that individuals attempt to spread their lifetime consumption evenly over their lives by accumulating enough saving during their earning periods to maintain their consumption standard during retirement. An individual is assumed to have relatively low income at the beginning and at the end of their life, so the conclusion in the model about saving is that it is dependent on age.

LCH emphasizes saving for retirement as a primary motivation for deferred consumption. Young households are expected to have negative saving since they typically have relatively low earnings and incur debt for education, home purchase, and other expenses. In the middle period of the life cycle, saving is expected to be positive because individuals pay their debts and begin to save for retirement. Upon retirement, households are expected to dissave (i.e., spend money previously saved). Thus, differences in consumption and saving among households are believed to be partly the product of age differences and the pattern of saving and dissaving creates an inverted U-shaped pattern across age categories and/or over time (Ando and Modigliani 1963; Modigliani and Ando 1957; Modigliani and Brumberg 1954).

### **Permanent Income Hypothesis**

Introduced by Milton Friedman in 1957 it shows that savings is negative when current income is lower than permanent income. It means that savings is high when current income is higher than permanent income. Friedman's formal definition of permanent income was the amount a household could consume "without reducing its wealth." Since the household lives forever, this means intuitively that the household can in each period



consume only the “interest” on its human and financial wealth and can never consume the principal. Thus, permanent income can be thought of as the annual return on households’ stocks of human and nonhuman wealth. Friedman made a distinction between permanent income and transitory income. He said that transitory income is the difference between actually received income and permanent income. In his argument he showed that the higher the transitory income the higher the saving rates among the individuals.

### **The Relative Income Hypothesis**

The earliest explanations were given by the Duesenberry (1949). It asserts that a household’s consumption depends not only on its current disposable income, but also on current income relative to past levels and relative to the income of other households. According to the model, at any point in time the propensity to save by an individual can be regarded as a rising function of his percentile position in the income distribution. A fraction of individual’s income devoted to consumption depends on the level of his or her income relative to the incomes of the neighbors. Again the aggregate savings ratio is independent of absolute level of income over time though it may depend on income distribution. Therefore the division of income between consumption and savings depend on the individual relative rather than absolute income.

The hypothesis also assumes that an individual’s consumption behavior will be influenced by his/her habitual consumption. If an individual has already attained a certain standard of living and his/her real disposable income falls below his/her previous peak income, he/she will not cut the current consumption but rather will spend more from the disposable income to the extent of de-saving, in an attempt to regain his previous consumption level. On the other hand, if his/her income raised higher than his/her peak income, the hypothesis assumes that he/she will not aspire for a higher standard of living than the one already attained thereby raising the saving ration.

To conclude from the above models, saving is a function of various factors including: wealth, income, interest rate and growth of the economy, income distribution, social and demographic factors. According to Browning and Lusardi (1996) there is heterogeneity in

the motives for saving and is unlikely that a single explanation will suffice for all members of a population at any given time. There are also some motives that will lead to behavior that will be difficult to rationalize with traditional economic models.

## **2.2 Empirical literature review**

Many researchers have analyzed the major determinants of household savings and have reached different conclusions. Some of these studies are discussed below.

Whitaker et al (2012) in their study on the Interactional Associations of Gender on Savings Behavior in the united states found out that Basic frequencies reveal non significant differences in savings participation across gender, but regression analysis including interactions of gender with other key variables reveals that multiple aspects of individuals' lives are influenced by gender to predict savings plan participation. Similarly Chowa (2006) using quantitative data and survey questionnaires concluded that gender in Uganda has a significant effect on the saving performance.

Falahati and Paim (2012) using cross sectional data on university students to determine gender differences in saving behavior found that gender significantly moderates the effect of childhood consumer experiences, primary and secondary socialization agents' influence, financial knowledge and financial skills on savings behavior.

In the context of traditional gender roles, Grossbard and Pereira (2010) established higher saving rates by young men and lower saving rates by young women than in less traditional countries, the opposite being the case with saving rates of married women relative to those of married men. They established the relevance of traditional gender roles and marital status to understanding cross-country variation in gender differentials in savings behavior.

Another study conducted in Ethiopia by Fafchamps and Quisumbing (2005), showed that the mean value of land inherited by husbands was ten times greater than that inherited by wives. In rural SSA, women's ability to accumulate assets is governed by family and community norms, which historically have favored men to the disadvantage of women. In

addition, the legal systems at the macro level in different countries determine how much control women can have over assets.

Chowa (2006) in his study on savings performance among rural households in sub-Saharan Africa (SSA), found that both women and men save successfully, however, women save better than their male counterparts across levels of education, marital status and type of work.

Lusardi and Mitchell (2007) found that women were generally less financially knowledgeable as compared with men, and financial literacy was found to affect both savings and portfolio choice. In their examination of the extent to which saving behavior differed among households in different marriage states, Lupton and Smith (2003) found that much of saving behavior was left unexplained even after controlling for demographic and socioeconomic characteristics of the household. Falahati and Paim (2012) also indicated men have a higher level of financial knowledge, financial skills, perceived earlier childhood consumer practices and better savings behavior than female students.

Past studies have demonstrated that remaining married results in greater wealth especially for men (Lupton and Smith 2003; Wilmoth and Koso 2002), yet this work suggests that previously married men are the most likely to participate in a savings plan. Women's willingness to save was more likely to be linked to a need for precaution, while men's was more likely to be linked to optimism about their own economic situation.

According to Sameroykina (2004) who studied saving behaviour among households in Russia and deduced that the marginal propensity to save out of income is positive. This concurs with economic theory where an increase in income is bound to lead to an increase in saving. A study of some Asian countries by Lahiri (1989) indicated that the rate of growth of personal disposable income determines private saving, while, Schrooten and Stephan (2005) showed that per capita income positively influences saving. This is in agreement with the Lifecycle Hypothesis.

Phipps and Woolley (2008) also found that an increase in male earnings had a much larger effect on total savings into a retirement plan than an equivalent increase in female earnings. Correspondingly, Kibet et al. (2009) adopted a microeconomic approach in investigating the factors that influence savings among teachers, entrepreneurs and farmers. Cross sectional primary data of 359 households for 2008 were collected through multistage sampling technique. The study concluded that income had positive effect on savings of teachers, businessmen and farmers. Also, Salam and Kulsum (2000) found determinants of savings by analyzing saving behaviour in India using time series data for the period 1980-89 for India. They concluded that an increase in income was bound to cause an increase in household savings, private savings, public savings and total savings.

Seguino and Floro (2002) analyzed a panel data set for semi-industrialized countries and showed that the higher women's income is relative to that of men, the higher is a country's gross domestic savings rate. Their study showed that shifts in women's relative income, which affects their bargaining power in the household, have discernible effects on household saving and by extension on aggregate saving due to differing saving propensities by gender.

It follows from gender differences in preferences for savings that the balance of bargaining power between spouses should matter in household saving decisions.

Along this line of thought a few studies have attempted to incorporate bargaining into the standard model of household savings. Browning (2000) using a two-period Nash bargaining model showed that when a wife is more concerned about future consumption, her husband's savings decrease as her relative bargaining power increases. However, he finds that household savings in total would increase because the wife's savings increase enough to offset the decrease in the husband's savings. Nargis (2003) tested for Browning's predictions using the Panel Study of Income Dynamics (PSID) and indeed found that household savings tend to increase with the wife's bargaining power (measured by relative earnings). Similarly, Lundberg and Ward-Batts (2000) show that wives with strong bargaining power accumulate more net wealth as they approach

retirement. They measure the balance of power by a spouse's relative control over income sources, relative age, and relative education.

Lee and Pocock (2007) in their study on Intra household allocation of financial resources: Evidence from South Korean individual bank accounts found that each member's share of household savings depends on the balance of bargaining power. They also found that the wife's bargaining power increases total household savings.

Phipps and Woolley (2008) estimated midlife men and women's probability of ever having contributed to a registered retirement savings plan, they found that greater female control was associated with a lower probability of having contributed to the plan, as well as lower contribution levels.

Similarly, Jianakoplos and Bernasek (1998) found that men are less risk averse than women. Thomas (1990) found that women are more concerned about children. It is then implied that, since children are an important motivation for household savings, women should prefer to save more. Anderson and Baland (2002) found that women prefer to purchase more durable goods than men and therefore to save more. Besides differences in preferences, yet another reason why women want to save more is biological; women have a higher discount factor because they usually live longer than men.

Kibet et al. (2009) also concluded in their study that, Credit access, age, and dependency ratio were found to have negative impact on saving of all household; while age and transport cost of teachers, age of businessmen, and credit access of farmers caused a reduction in savings.

Likewise, Bendig et al. (2009) analyzed impact of remittances, risk exposure, shock experience on household savings of rural Ghana in 2008. Authors selected 2 villages of Ghana and surveyed 350 villages. The results of household size, schooling, assets, remittances, death in family, and other shocks were significantly more likely to save. Female head, self-employed, not employed and risk assessment was negatively related to savings. It was also concluded that age, square of age, land and illness had no impact on

savings contrary to what Ahmed and Asghar (2004) found where square of age were revealed to have positive effect on saving rates

Ahmad and Asghar (2004) analyzed the household saving behavior due to different socio-economic and demographic factors in Pakistan using micro data collected by Household Integrated Economic Survey in 1998-99. The authors used Ordinary Least Square Method to estimate and choose data of 8933 rural households and 5374 of urban households. Results of the study revealed that income, employment status, square of age and Sex of household head were found to have positive effect on saving rates; wealth, dependency ratio, education levels and age of household head were negatively affecting household savings of rural as well as urban areas.

### **2.3 Literature Summary**

The existing research on gender and savings behavior demonstrates that gender effects are important and they shape individuals' decisions and actions. Hence gender is not only one of the statuses one occupies but also a foundational factor in life (Whitaker et al., 2012). Therefore, gender infiltrates identity formation, family roles, expectations and structural opportunity. These in turn help shape attitudes and behaviors related to saving behavior. This research is built upon the concepts relayed in previous literature by examining both the direct and indirect relationship of gender with other domains to predict saving.

Based on the empirical literature review, (Fafchamps & Quisumbing, 2005; Whitaker et al., 2012; Chowa 2006; LeBeau, Ipinge, & Conteh, 2004), has shown that gender, (Esson, 2003; Quisumbing & Hallman, 2003) education, (Sameroykina, 2004; Lahiri, 1989; Schrooten and Stephan, 2005) income, (Grinstein-Weiss, Zhan, & Sherraden, 2006; Waite & Gallagher, 2000) employment, and marital status are factors that influence savings behavior.

However, few studies tie these factors together and help us understand the interaction of gender with the other factors. Floro and Seguino (2002) note that literature on gender differences on savings behavior is sparse and concentrates on developed countries. In

addition, very few studies incorporating these factors have been conducted in rural SSA, which is the target of many social development policies that would benefit from apparent and well-built theoretical foundation.

## CHAPTER THREE

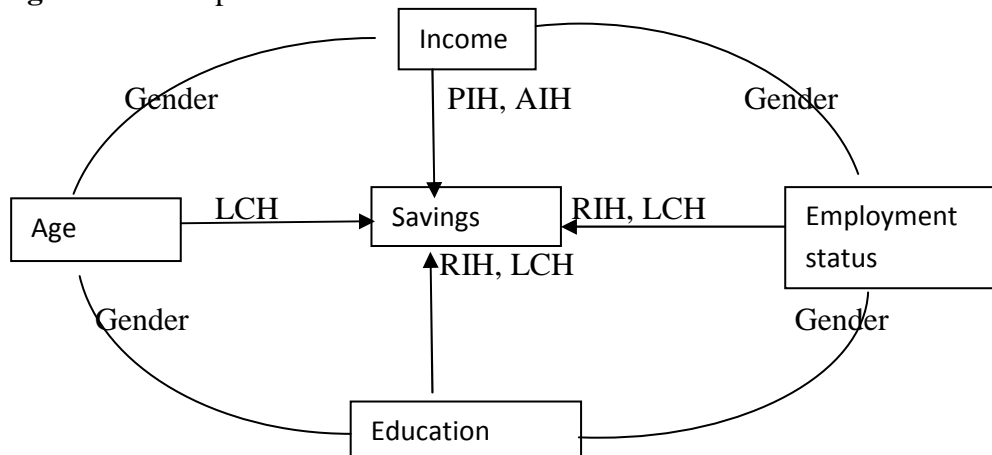
### METHODOLOGY

#### 3.1 Introduction

This chapter looks at the analytical framework for the effect of gender on household saving behavior and decisions. It presents the empirical research methodology to be used in the study. The first section presents the conceptual framework and the model specification. Section two outlines the method used to decompose the gender effect on savings behavior. Section three presents the definition of variables and section four discusses the data sources.

#### 3.1.1 Conceptual framework

Figure 3-: conceptual framework



**Source: Author's Computation**

Figure 3.1, shows, that there is a relationship between savings and income, as suggested by the theories of Absolute Income Hypotheses (AIH), Relative Income Hypothesis (RIH) and Permanent Income Hypothesis (PIH). Savings relate to employment status through the RIH and Lifecycle Hypothesis (LCH). Through the RIH and LCH, savings is dependent on age and education. Gender affects the choices individuals make in deciding on whether to spend or save in a household. It also affects the selection of employment



status, education goals that influence one on the process and importance of saving hence cuts across most factors that affect saving.

### 3.1.2 The model

This model attempts to reconcile some of the apparent contradictions in the empirical literature where there are mixed results on who saves more. For example, according to some studies, Lee and Pocock (2007), Anderson and Baland (2002) and Hungerford (1999) women save more than men, while in others like Phipps and Woolley (2008) men are perceived to save more with an increase in their earnings compared to an equivalent increase in female earnings. The model ties those factors that affect savings decisions as noted from the empirical literature together and help us understand their interaction with gender.

A linear savings function was adapted from Kibet et, al. (2009) and Rogg (2000). Linearity was assumed because the purpose of the study was to test whether there is any relationship between the variables in the study.

Thus savings function equation was written as;

$$S = f(y, gen, age, agesqd, empl, educ) \dots\dots\dots(i)$$

Where,

Household saving behaviors (S) in this framework are dependent on; gender of household head (gen), gross income (Y), age of household head (age),age squared(agesqd), employment status (empl) and Level of education (educ).

Specifically, the research estimated the following regression model;

$$S_i = \beta_0 + \beta_1 Y_i + \beta_2 dumgen_i + \beta_3 age_i + \beta_4 agesqd_i + \beta_5 educ_i + \beta_6 dumempl_i + \varepsilon \dots\dots\dots (ii)$$

Where,

$S_i$  = household savings defined as the total monthly income of a household minus total monthly expenditures in Kenya shillings (KShs)

$Y_i$  = sum of all monetary income received by the household regardless of the source

$age_i$  = age of household head in years

$agesqd_i$  = squared age of household head

empli = Employment status of the household head

dumgeni = gender of household head (male = 1, female = 0)

dumempli = Dummy for employment status (employed = 1, other = 0)

educ = completed years of education of household head

Subscript  $i$  stands for household  $i$ .

Education is a continuous variable measured by years of schooling. Gender is either male or female. Employment status was measured using the following categories: unemployed or employed. Age is a continuous variable used for years of age of household head.

### 3.1.3 Interaction Model

To test for interaction effect between gender and each of the other three independent variables, the model (iv) was used;

$$S_i = \beta_0 + \beta_1 Y_i + \beta_2 \text{dumgen}_i + \beta_3 \text{age}_i + \beta_4 \text{agesq}_i + \beta_5 \text{educ}_i + \beta_6 \text{dumempl}_i + \beta_7 \text{dumgen} * Y_i + \beta_8 \text{dumgen} * \text{age}_i + \beta_9 \text{dumgen} * \text{agesq}_i + \beta_{10} \text{dumgen} * \text{educ}_i + \beta_{11} \text{dumgen} * \text{dumempl}_i + \mu_i$$

..... (iii)

### 3.1.4 Analysis

Descriptive statistics were first generated to present characteristics across age, gender, education, and occupation. Analysis of covariance (ANCOVA) was conducted to compare means of savings performance across age, income, gender, education, and employment status. ANCOVA was also used to test for interaction effects between gender and each of the other four independent variables (income, age, education and employment status).

## 3.2 Definition of Variables

### Household Savings (S)

A household can be a person or a group of people living in the same compound, answerable to the same household head, and sharing a common source of food and/or income. Household savings are calculated by subtracting total monthly expenditures from

total monthly income of a household. It is measured in local currency (ksh). Household savings are used as the dependent variables in this study.

### **Total Income of Household (Y)**

Total Income of household is the sum of all monetary income regardless of the source (inclusive of all income from employment, businesses, rent etc). Absolute Income Hypothesis and Permanent Income Hypothesis both indicate positive effect of household income on savings. Overall, total income of household is expected to enhance saving level and it is the most important factor that augment the saving level of households (Ahmad and Asghar, 2004). Kibet et, al. (2009) found household income to be significant in explaining the level of household saving. Sameroynina (2005), also shows that income positively influences saving.

### **Gender (gen)**

Gender of the household head is an important variable that has an influence in the saving level of a household. According to, Lee and Pocock (2007), Anderson and Baland (2002) and Hungerford (1999) women are perceived to save more than men, while in a study conducted by Phipps and Woolley (2008) men are perceived to save more with an increase in their earnings compared to an equivalent increase in female earnings. One of the possible explanations for savings is the gender of the household head. A dummy variable was used where being a male took the value of 1 and 0 otherwise.

### **Age of Household Head (AGE)**

Household head is the person who is viewed to make decision and is the bread winner in the house. If only a single person is living in the household, he/ she were considered to be the household head. This study considered age of household head that is expected to be positively related with household savings (Bendig et al. 2009). While Kibet et al. (2009) and Hafeez-ur-Rehman et al. (2011) found this relationship negative. According to Life Cycle Hypothesis (LCH), as age of household head increases, his/her savings will increase in the middle age. As the household head becomes old, his/her savings would decrease.

### **Age Squared (AGESQD)**

LCH suggests that savings increase with age but decrease after retirement. Square of age was used to provide evidence on whether savings improve over time or decrease with age advancement.

### **Education of Household Head (EDU)**

In the study, Education was captured by completed years of education of household head. Education is considered as a main determinant of earnings and savings as well. It can have positive influence on household savings. On the contrary, educated parents pay more attention on the quality of education of their children. They tend to spend more on their education and save less. Household savings may also be expected to be negatively affected by education level of household head (Ahmad and Asghar 2004). A continuous variable is used to demonstrate the effect of education in this study.

### **Employment status (empl)**

A variable to capture whether the household head is employed or not employed was included in the model to test whether being employed increases or reduces the probability of savings. According to Kibet et, al. (2009) the reasons for saving varied from one employment status to another.

### **3.3 Data type and sources**

Cross-sectional secondary data from household level (Kenya Integrated Household Budget survey 2005/2006) was used in this study. Also data from various economic surveys and abstracts were used.

## **CHAPTER FOUR**

### **RESULTS AND DISCUSSION**

#### **4.1 Introduction**

This chapter analyses the Kenya Integrated Household and Budget Survey (KIHBS) 2005/2006 data on various variables as highlighted in the previous chapter. Regression results are provided showing the extent to which the dependent variable is influenced by the independent variables.

This includes a presentation of the trend observed from the data, various tests carried on the data and regression analysis outcome to determine gender effect on savings.

The KIHBS 05/06 data covered a total of 13,430 households across all districts in Kenya, both rural and urban. For the purposes of this project a sample of 1500 households was considered. The data is representative across all counties. Data cleaning and screening was done to come up with the final data that met the requirements of the study. Variables that were relevant to savings model were first selected and necessary transformation on the same were done. The study considered data for various individual characteristics like age, age squared, years of education, gender and employment status. The variable measured was saving as the dependent variable.

#### **4.2 Summary statistics**

Summary statistics include the mean, standard deviation, maximum and minimum values for each of the variables used in the study. They help us to analyze the measures for central tendency and measures of dispersion. Table 4-1 provides descriptive statistics for the variables of interest.

#### 4.2.1 Household characteristics summary

**Table 4-: Summary statistics**

Variable	Observations	Minimum	Maximum	Mean	Std. Dev.
Age of Household head	1500	30.00	70.00	50.6207	7.63
Income	1500	.00	229200.00	53639.46	28113.82
Expenditure on food	1500	500.00	50000.00	642.24	7723.14
Expenditure on non food	1500	11200.00	99200.00	30392.58	17436.56
Household size	1500	.00	25	.00	9.71 4.70
Savings	1500	.00	80000.00	13605.60	16499.05
Saving rate	1500	.00 0	.69	0.21	0.16

**Source: Author's Computation from the KIHBS 05/06 data**

Results on Table 4-1 reveal that the minimum age of household heads was 30 years while the maximum age was 70 years. The average age of the household heads was 50 years. This implies that the household heads were in their productive age. The average income earned stood at ksh. 53,639.46. The average expenditure on food and expenditure on non-food were ksh. 9,642.24 and 30,392.58 respectively.

#### 4.2.2 Effects of age on savings

**Table 4-2** Effects of age on savings

AGE IN YEARS	30-45		46-65		>65	
	freq	%	freq	%	freq	%
Saving rate (%)						
0.00-0.20	684	65.6	300	45.8	0	0
0.21-0.40	295	25	170	31.3	10	100
0.41-0.60	100	9.4	41	18.1	0	0
0.61-0.80	0	0	0	4.8	0	0
total	1073	100	407	100	10	100

**Source: Author's computation from the KIHBS 05/06 data**

The study further reveals that household heads within the age bracket of 45-65 years had the highest (65.6 percent) saving rate of 0.00-0.20 percent and the least (9.4 percent) saving rate of 0.041-0.60 (Table 4-2). The household heads within the age brackets of 45-65 years had the highest (45.8 percent) saving rate of 0.00-0.20 percent and the least (4.8 percent) of 0.61-0.80 percent. The household heads with age bracket > 65 years had the highest and least (0.9 percent) saving rate of 0.21-0.40 percent. The high savings of the 45-65 years households' age bracket was likely to indicate that the household heads were able to save more because they were in their economically active age bracket. This is consistent with life-cycle hypothesis that the individuals in their middle age save more than others while their savings decrease as they attain old age.

#### 4.2.3 Effects of gender on savings

**Table 4-3** Effects of gender on savings

GENDER	male		Female	
	freq	%	Freq	%
Saving rate (%)				
0.00-0.20	745	48.9	273	56.1
0.21-0.40	125	28.7	181	36.2
0.41-0.60	84	18.1	46	4.5
0.61-0.80	32	4.3	14	3.2
Total	986	100	514	100

**Source: Author's computation from the data set**

Table 4-3 reveals that a higher proportion of female headed households (56.1 percent) fell within the saving rate of 0.00-0.20 percent than male-headed households (48.9 percent). Also more female headed households (36.2%) saved at a rate of (0.21-0.40) than male headed households (28.7%). However, a higher proportion of male headed households fell within the saving rate of 0.61-0.80. This indicates that more male-headed households fall within the higher saving rate threshold than their female counterparts. This suggests that female-headed households that have lower saving rate are not likely to invest in their livelihood as their male counterparts.

#### 4.2.4 Effects of income on savings

**Table 4-4** Effects of income on savings

INCOME	0 -100000		101000-200000		>201000	
	freq	%	freq	%	freq	%
Saving rate (%)						
0.00-0.20	584	55.6	380	55.8	20	59.6
0.21-0.40	245	34	220	21.3	80	40.4
0.41-0.60	70	10.4	71	14.1	0	0
0.61-0.80	0	0	0	8.8	0	0
total	899	100	671	100	100	100

**Source: Author's Computation from the KIHBS 05/06 Data**

Table 4-4 reveals that a higher proportion of households heads who earned over 201,000 (59.6 percent) fell within the saving rate of 0.00-0.20 percent than households heads who earned between 101,000 to 200,000 (55.8 percent). However, a higher proportion of household's heads who earned between 101,000 to 200,000 fell within the saving rate of 0.61-0.80. This indicates that the more the income of the households head the more the likely hood of falling within higher saving rate threshold than their lower earning counterparts. This suggests that low income earning households have lower saving rate and are not likely to invest in their livelihood as their high earning counterparts. This concurs with the permanent income hypothesis and the absolute income hypothesis.



#### 4.2.5 Effects of employment status on savings

**Table 4-5** Effects of employment status on savings

EMPLOYMENT STATUS				
Saving rate (%)	Employed		Unemployed	
	freq	%	Freq	%
0.00-0.20	545	66.8	373	54.5
0.21-0.40	225	27.6	231	33.8
0.41-0.60	34	4.2	56	8.2
0.61-0.80	12	1.4	24	3.5
Total	816	100	684	100

**Source: Author's Computation from the KIHBS 05/06 Data**

Table 4-5 shows that a higher proportion of employed household's heads (66.8 percent) fell within the saving rate of 0.00-0.20 percent than unemployed household's heads (54.5 percent). However, a higher proportion unemployed households heads fell within the saving rate of 0.61-0.80. This indicates that more unemployed household heads fall within the higher saving rate threshold than their employed counterparts.

#### 4.2.6 Effects of education on savings

**Table 4-6** Effects of education on savings

EDUCATION						
Saving rate (%)	None-Primary		Secondary		College and Above	
	freq	%	freq	%	freq	%
0.00-0.20	384	87.5	580	61.1	25	22.5
0.21-0.40	45	10.3	320	33.6	86	77.5
0.41-0.60	10	2.2	50	5.3	0	0
0.61-0.80	0	0	0	0	0	0
total	439	100	950	100	111	100

**Source: Author's Computation from the KIHBS 05/06 Data**

Table 4-6 reveals that a higher proportion of households heads who had primary education or lower (87.5 percent) fell within the saving rate of 0.00-0.20 percent than household's heads who had secondary school education (61.1 percent) and those who had college or higher level of education (22.5 percent). However, a higher proportion of household's heads that had collage and above education fell within the saving rate of 0.21-0.40. This indicates that the more the years of schooling (level of education) of the households head the more the likelihood of falling within higher saving rate threshold than their counterparts who spend lesser years schooling.

### 4.3 Correlation analysis

The analysis tests for the degree of association between the variables. This shows the strength of the variables in the model.

**Table 4-7:** Correlation coefficient matrix

	Savings	Income	Gen	Age	Age- squared	Employe nt status	Education
Savings	1.0000						
Income	0.9985	1.0000					
Gender	0.0078	0.0078	1.0000				
Age	-0.0168	-0.0147	-0.0246	1.0000			
Age squared	-0.0187	-0.0165	-0.0224	0.9409	1.0000		
Employment status	-0.0030	-0.0047	0.0035	0.0274	0.0087	1.0000	
Education	0.0211	0.0221	-0.0242	-0.0193	-0.0317	0.0032	1.0000

**Source: Author's Computation from KIHBS 05/06 Data**

Table 4-7 shows that savings is positively related to total income, gender and education but negatively to employment status, age and age squared of the household head.

#### **4.4 Regression analysis**

The purpose of this study was to find out how significant gender is in explaining saving disparity between men and women and assess the relevance of gender differences to saving. Guided by these objectives and being careful that heteroskedasticity was a problem robust regression analysis was performed to answer the research objectives. The robust regressions lowered the standard errors hence correcting the problem of heteroskedasticity.

The first regression finds out how significant gender is in explaining saving disparity between men and women. Table 4-2 to 4-6 summarizes results from the univariate ANCOVA. Main effect results revealed that saving performance was significantly different between men and women. Savings performance was also significantly different for age and employment status of the household head, and for the different years of schooling represented. Household income was found to be significant in explaining the level of saving by the household. This concurs with the studies by Kibet et, al. (2009) and Sameroykina (2005), showing that income positively influences saving. Hence, low saving level is as a result of low income levels.

The results suggest that males and females have different levels of education, employment status and of different age, which resulted in different savings behavior. The results among male household heads revealed that income, age and employment status positively influenced savings behavior. Age squared and education negatively influenced household savings behaviour.(Table 4-8)

**Table 4-8** Male Saving Behavior

<b>Variable</b>	<b>Coefficient</b>	<b>T-Statistic</b>
Income	1.005609	149.74
Gender	2824.263	0.45
Age	364.1917	0.31
Age squared	-4.517682	-0.55
Employment status	4484.463	0.373
Education	-404.8689	0.40

**Source: Author's Computation from the KIHBS 05/06 Data**

Being a male household head indicate that the household saving would increase by Shs. 2,824.26. The coefficient of age is 364.1917 which implies that aging by one year will result in an increase in household saving by about Shs.364.19. Age was found to have a positive influence on saving.

It is expected that, saving by the adult population (especially above 30 years) would be diminishing with age as they grow towards and beyond retirement age. The coefficient of age squared is -4.518 which implies that aging by one year will result in a decline in household saving by about Shs. 4.518.

Education is negatively related to savings in male household heads and this agrees with (Ahmad and Asghar 2004) observation. The coefficient is -404.87 meaning that as the male household head adds a year of schooling, the amount to be saved would decrease by Shs. 404.90

The nature of employment (whether employed or not) of the household head significantly explains the level of household saving. The estimated coefficient of the dummy for employed was 4484.463, which means that employed household heads saving behavior is positive. Employed household heads save about Shs.4, 484.46 more than other unemployed household head. (Table 4-8)

**Table4-9** Female Saving Behavior

<b>Variable</b>	<b>Coefficient</b>	<b>T-Statistic</b>
Income	1.000709	0.42
Gender	13047.4	0.38
Age	99.44095	0.31
Age squared	-2.627606	-0.41
Employment status	2880.768	0.48
Education	149.1024	0.35

**Source: Author's Computation from the KIHBS 05/06 Data**

The results of Table 4-9 show that among female household heads being a female has the highest effect on predicting savings behavior. In addition, the results indicate that age squared is the unique predictor of savings among female household heads. These findings indicate that age, employment status and higher level of school years encourage female household heads to save more.

Unlike the male heads, where education reduces savings, education positively contributes to the prediction of female savings behavior. These findings indicate that an increase in one year of schooling for female household head has an increase of Shs. 149.1024. Being a female household head indicate that the household saving would increase by Shs. 13,047.4

The coefficient of age is 99.44095 which implies that aging by one year will result in a increase in household saving by about Shs.99.44. Age was found to have a positive influence on saving.

The coefficient of age squared is -2.627606 which implies that there will be a decline in household saving by about Shs. 2.63 as one gets older.

The nature of employment (whether employed or not) of the female household head significantly explains the level of household saving. The estimated coefficient of the dummy for employed was 2880.768 which mean that employed female saving behaviour

is positive. Employed household heads save about Shs.2, 880.77 more than other unemployed female household head. (Table 4-9).

#### **4.5 Interaction terms between gender and other factors that affect household savings**

Interaction terms indicate that the effect of one predictor depends on the value of another predictor. It shows whether any differences exist across variables.

The results of the effect of the interaction between gender to the household savings and the other factors that affect savings are presented in table 4-10

**Table 4-0:** Interaction Terms of Gender and other factors affecting savings behaviour

<b>variable</b>	<b>coefficient</b>	<b>t-statistic</b>
Gender*Income	-.0008981	-0.13
Gender*Age	-403.0317	-0.44
Gender*Age squared	5.116215	0.50
Gender*Employment status	3401.292	0.57
Gender*Education	109.2999	0.20

**Source: Author’s Computation from the KIHBS 05/06 Data**

The coefficients of the interaction term are insignificant. The interaction between gender and income to savings has a negative effect on savings. We also find the interactions between gender and age is negatively related to savings. The interactions of gender with employment status, age squared and education are positively related to savings.

The findings concurs with the findings of (Ahmad and Asghar, 2004), (Chowa, 2006) and (Whitaker et, al .2012) where their basic frequencies revealed non significant differences in savings participation across gender, but regression analysis including interactions of gender with other key variables reveals that multiple aspects of individuals’ lives are influenced by gender to predict savings.

#### **4.6 Discussion of the results**

The study reveals that household heads despite their gender roles are saving but at low rates. The results indicate that within the age bracket of 45-65 years had the highest (65.6 percent) saving rate of 0.00-0.20 percent and the least (9.4 percent) saving rate of 0.041-0.60 (Table 4-3). The household heads within the age brackets of 45-65 years had the highest (45.8 percent) saving rate of 0.00-0.20 percent and the least (4.8 percent) of 0.61-0.80 percent. The household heads with age bracket > 65 years had the highest and least (0.9 percent) saving rate of 0.21-0.40 percent. The high savings of the 45-65 years households' age bracket was likely to indicate that the household heads were able to save more because they were in their economically active age bracket.

The higher proportion of male headed households fell within the saving rate of 0.61-0.80. This indicates that more male-headed households fall within the higher saving rate threshold than their female counterparts. This suggests that female-headed households that have lower saving rate are not likely to invest in their livelihood as their male counterparts. Thus, there is need to improve the saving rate of women in the area. Results show that that the more the income of the households head the more the likelihood of falling within higher saving rate threshold than their lower earning counterparts. This suggests that low income earning households have lower saving rate and are not likely to invest in their livelihood as their high earning counterparts.

A higher proportion unemployed households heads fell within the saving rate of 0.61-0.80. This indicates that more unemployed household heads fall within the higher saving rate threshold than their employed counterparts. A higher proportion of household's heads that had collage and above education fell within the saving rate of 0.21-0.40. This indicates that the more the level of education of the households head the more the likelihood of falling within higher saving rate threshold than their lower educated counterparts.

Results shows that savings is positively related to total income, gender and education but negatively to employment status, age and age squared of the household head. The results suggest that males and females acquire different levels of education, employment status and of different age, which resulted in different savings behavior. The results among male household heads revealed that income, age and employment status positively

influenced savings behavior. Being a male household head indicate that the household saving would increase by Shs. 2824.26. The coefficient of age is 364.1917 which implies that aging by one year will result in a decrease in household saving by about Shs.364.19. Age was found to have a positive influence on saving.

The coefficient of age squared is -2.627606 which implies that aging by one year will result in a decline in household saving by about Shs. 2.63. The nature of employment (whether employed or not) of the female household head significantly explains the level of household saving. The estimated coefficient of the dummy for employed was 2880.768 which mean that employed female saving behavior is positive. Employed household heads save about Shs.2, 880.77 more than other unemployed female household head.



## CHAPTER FIVE

### CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter aims at summarizing the salient issues that have emerged from this study. It also makes recommendation on plausible policy measures and pin points areas for further research.

#### 5.2 Conclusion

This paper has examined the relationship between gender and savings behaviour in Kenya.

The results show that both male and female household heads save a portion of their household income in Kenya. However women are saving more than their male counterparts across education, growth in age and their gendered roles in the society. Women exhibit different saving behaviour from the men.

The results from the study have shown that women save better than men when they have the opportunity. These findings offer additional evidence for the role of gender in savings performance.

Income and age of the household head have direct effects on household savings behaviour in Kenya. Income has a significant effect on savings and this is explained by the income hypothesis and lifecycle hypothesis respectively.

The ANCOVA indicated no significant interaction effects between gender and the other four variables. This may be due to low association between the variables.

### **5.3 Limitation of the Study**

The study has been successful in obtaining its objective. However the use of aggregated data from Kenya National Bureau of Statistics and other government publications was noted to be giving conflicting figures for the same variable thereby making the data lack reliability. Different data sources gave different data for the same variable. To maintain consistency the study relied on the data published by the government press.

### **5.4 Recommendations and Areas for further research**

#### **5.4.1 Recommendations of the study**

Results indicate that the higher the level of education of the household's heads the more the likelihood of falling within higher saving rate threshold. Therefore the government should put up measures to increase its funding of the education sector not only to primary, secondary and tertiary institutions but also to the adult education program. Non-Governmental Organizations (NGOs) should also be encouraged to participate in the provision of education especially in training and acquisition of necessary skills for management of finances.

From the regression results it is seen that there is a positive relationship between gender, education and their interaction to savings. This concurs with previous literature that men and women saving behavior may differ due to economic vulnerability, gender roles and norms which make their interests to be different (Chowa, 2006). Thus there is need to adopt social policies that provide equal access to basic services for all Kenyans hence improve gender equity in the society.

Low income earning households should be sensitized on the importance of savings

#### **5.4.2 Area of further research**

This research covers savings among households in Kenya. More research is needed to investigate what are the perceptions of the household heads, with regard to saving scheme participation. In addition, the research uses cross-sectional data and cannot be generalized beyond the time frame in which they were collected. Longitudinal studies among households are needed to understand effective predictors of gender and household

savings behavior. The current study used secondary data hence future studies should use primary data so as to get a clear picture on gender and household saving behavior. Such findings will provide further understanding of the factors that encourage savings in the economy.

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**Appendix 1: Growth rate in Gross domestic product and savings in Kenya for the period (1980-2011)**

	GDP growth (annual %)	Gross savings (% of GDP)
1980	6	17
1981	4	20
1982	2	15
1983	1	18
1984	2	14
1985	4	20
1986	7	17
1987	6	18
1988	6	20
1989	5	19
1990	4	19
1991	1	19
1992	-1	15
1993	0	37
1994	3	33
1995	4	23
1996	4	16
1997	0	15
1998	3	18
1999	2	22
2000	1	14
2001	4	14
2002	1	14
2003	3	15

2004	4.6	17.2
2005	6	17.2
2006	6.3	16.8
2007	7	15.4
2008	1.5	12.8
2009	2.7	13.8
2010	5.8	15
2011	4.4	10.5
2012	4.7	12.5

**Source: Various Economic Survey Publications**