SAINT MARY'S UNIVERSITY
SCHOOL OF GRADUATE STUDIES
INSTITUTE OF AGRICULTURE AND DEVELOPMENT STUDIES

THE DETERMINANTS OF HOUSEHOLD SAVINGS IN ETHIOPIA: THE CASE OF GURAGE ZONE GUMER WOREDA IN SOUTHERN REGIONAL STATE

BY

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JUNE, 2018

ADDIS ABABA, Ethiopia

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A THESIS SUBMITED TO THE SCHOOL OF GRADUATE STUDIES OF St. MARY'S UNIVERSITY IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTERE OF ARTS IN DEVELOPMENT ECONOMICS.

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APPROVAL OF BOARD OF EXAMINERS

As a member of the Board of Examiners of the Master Thesis open defense examination, we testify that we have read and evaluated the thesis prepared by Wolde Gebre and examine the candidate. We recommended that this thesis be accepted as fulfilling the thesis requirements for degree of Master of Arts in Development Economics.

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DECLARATION

Student ID: SGE/0503/2009A

I declare that this research report 'Determinants of Household Savings in Ethiopia: The Case of Gurage Zone Gumer Woreda in Southern Regional State' my own original work with assistances and guidance from my advisor and not submitted before for any institution and any purpose. I further declare that all the sources used in this research report have been properly recognized and acknowledged as in- text- citation and reference list.

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ENDORESEMENT

This Thesis has been submitted to St. Mary's University, School of Graduate Studies for Examination with my approval as a university master's student's advisor.

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TABLE OF CONTENTS

3. CHAPTER THREE: DATA AND METHODOLOGY

LIST OF FIGURES

LIST OF TABLES

LIST OF ABREVATIONS

APC: Average Propensity to Consume

CSA: Central Statistical Agency

Ct   : Consumption expenditure in the given period

GDP: Gross Domestic Product

GDS: Gross Domestic Savings

LCH: Life Cycle Hypothesis

OECD: The Organization for Economic Cooperation and Development

OLG: Over Lapping Generation

OLS: Ordinary Least Square

MPC: Marginal Propensity to Consume

PIH: Permanent Income Hypothesis

SD: Standard Deviation

ST: Saint Marry

t: Consumption period

WDI: World Development Index

Y : Income

Yp : Permanent Income

YT: Transitory income

Yt: Current income

ABSTRACT

The study investigates the determinant of househ̲   in the study area. Household saving is one of the key components in any developmen̲t an̲d i̲t is believed to be the surest way of increasing income and reducing poverty. Understanding the determinants of saving at household heads level helps to visualize appropriate response strategies in terms of targeted savings packages. The study had two specific objectives, namely to identify the practice of household savings, and to investigate the major determinants of household saving. The data of 147 households have been collected from rural households by using interview schedule. The research has involved both qualitative and quantitative method. Purposive and random sampling techniques were employed in order to select the study sites within Gumer Wereda and study respondents, respectively. To collect the required primary source of data, instruments of data collection which include questionnaire was used. Secondary source of data were also carefully examined. This study used descriptive analysis and censored regression such as Tobit model. The result of the descriptive analysis showed that almost all of the sample households practiced saving and the common reasons for households not to save was low income. The econometric analyses showed that income, age, family size, marital status, access to saving institution and location used for saving are significant determinants of household savings in the study area. Based on the results, it is recommended that institutions concerned should emphasize on livelihood interventions targeted to improve the household income which have a round effect on savings and income growth, socio economic saving barriers, gender and education on the importance of saving and saving modalities, planning and expenditure controlling habit, investment and the economic growth.

CHAPTER ONE: INTRODUCTION

This chapter provides the general overview of the study. It is dealing with background of the study, statement of the problem, research questions, and research objectives, significance of the study, and scope and limitation of the study are presented. They provided the intuitive impression of the issues under investigation to identify as to how the study is conceptualized, motivated and reaches on the intended outcomes.

1.1 Background of the Study

Households saving play an important role in the economic development of both developed and developing nations, due to its significance influence on the circular flow of income in the economy (Iyoha et al 2003). Savings are key means of improving well-being, insuring against times of shocks, and providing a safeguard to help people cope in times of crisis (Rutherford, 1999; Zeller and Sharma, 2000). At household level the benefits of saving include backup against unforeseen circumstances, accumulation of assets, funds available for household investment, provision for retirement, savings can help the purchase of homes and housing, improve debt settlement, achieving dreams goals, security in old age, protection from disaster and the acquisition of social services. The sustenance of household savings increases the possibility of future investment both at the micro and macro- levels in the economy.

Economic theory postulates that households' saving is the difference between households' income and consumption. Household income is the aggregate income that a household earns from all sources in a particular period. Consumption on the other hand, is the total amount of goods and service consumed by households during a particular period (Rutherford, 1999). Solow (1956) has suggested that savings growth of the economy, as higher savings lead to capital accumulation and hence economic growth. Keynes (1936) stated that savings depend upon disposable income.

1

Duesenberry (1949) proposed that consumption/ saving was a function of ratio of current income to previous level of income. Friedman (1957) hypothesized that household savings was based on permanent income. Ando and Modigliani (1963) postulated that households were net dis-savers in their early and old age but they saved more in their middle age. Apart from income, other variables might be responsible for household to sufficiently save part of their remuneration

Saving is an important macroeconomic variable to be studied under the purview of the economic ground on an individual as well as household basis. According to (Abhinav, 2013) saving means surrendering the current consumption in order to increase the living standard and satisfying the daily desires in future time. While according to classical economists like Litiche et al, (1960) and Kumar,(2016) "saving is a key determinant of economic growth". As for an individual saving becomes the moderate for the future's interaction of the unforeseen and upcoming as well as the uncertain circumstances of life. Saving is the part of the income earned by the individuals (Husain, and Baharali, 2016). To save means to useless resource in the present, so, even for the non-poor, saving is difficult. There are a number of institutional variables that encourage asset accumulation and impact on saving, including, access to purposefully develop saving opportunities, financial education, appropriate incentives and mechanisms towards facilitating saving (Sherraden, 2007). There are different methods of saving mechanisms. These are formal sector (banks, insurance…), semi formal sector (microfinance institutes, saving and credit co-operatives…) and informal sector ("eqube", rotating saving, "iddir", save at home, "mahbber"). Other scholars stated that suitable saving is important for capital formation and have direct impact on economic growth, and as such is vital for succeeding macroeconomic stability. Low level of domestic savings is said to be one of the reasons for slow and stagnant economic growth in the developing countries (Sherraden, et al., Children and Youth Services Review, 2007, Agrawal, Pravakar, and Dash, the Singapore economic

review, 2010,). Saving is a necessary engine of economic growth in Africa but it is very low. Gross Domestic Savings as a percentage of GDP in eastern Africa has been low compared to many African countries. GDS (%GDP) of Zambia, Tanzania, Ethiopia, Uganda, and Kenya are 34.72%, 21.51%, 20.06%, 15.46%, and 8.42% respectively,(WDI, 2018).

In developing countries, economic fluctuations and climate risk lead to important income variations and leave the households vulnerable to severe hardship. Moreover, their social coverage is restricted and the credit and insurance markets are not well developed. Thus, these countries often face saving allocation problems and have difficulties to develop productive investments. According to Deaton (2005) and Rogg (2006), serious problem confronting poor countries including Ethiopia is savings and investment gap. Because of this gap, these countries faced challenges to finance investments needed for growth from domestic saving. It is also common to see these countries to finance their investment in the short run partly through domestic government borrowings and/or foreign loan and grants but this can significantly increase debt burden and cannot be a solution in the long run. The average gross saving rate as percentage of GDP of Ethiopia is 20.06% (WDI, 2018).Thus, saving is away to smooth income and to face shocks. Hence, a better understanding of households saving behavior is important. Most saving researches done yet in developing countries in particular in Ethiopia are at macro level. However, a large body of empirical macroeconomic work ignores consumer heterogeneity by assuming a representative household agent. According to Touhami et al. (2009), these macroeconomic studies cannot deal with "real-world" features that reflect the diversity of saving behavior. On the other hand, micro econometric analysis allows estimating the importance of economic variables and the role of households features in the saving behavior. Cognizant of this fact, this study attempts to analyze the main determinants of household saving in Ethiopia giving special emphasis to Gurage Zone Gumer Woreda.

1.2 Statement of the Problem

Saving is essential for the economic growth and development of any country. Even though saving essentiality is well known, saving in Ethiopia is rather low even by the standard of developing countries. As a result, there is very little domestic capital available for investment in the country (Aronet al 2013; Girma et al, 2013; Haile, 2013). Data from the World Bank (2018) also revealed that gross domestic saving as percent of the country's GDP is only 20.06% resulting in a huge resource gap as compared to gross domestic investment (Gross Capital formation) which is 39.84% of the GDP. Moreover, as stated in summary and statistical report by the National Bank of Ethiopia (2011), an Ethiopian household, on average saves 875 Birr per annum in financial institutions. This is low to support viable economic growth and development in the country. Different theoretical explanation can be inferred to explain the situation but most of the theoretical enlightenments were produced with developed nations realities and macro level perspective underperform to show ground realities in developing countries (Girma et al, 2013). More ever, empirical studies to test and understand the determinants of household savings are little and come up with controversial results to shape our knowledge of the dynamic saving environment.

Recently, administrative data shows that the amount of saving generated through financial institutions has increased over the years due to the recent expansion of financial sector in the country. Yet the volume of saving (including household saving in both urban and rural areas) is minimal by any standard and the financial resources hold by household is largely remained unexploited (Ebsa et al., 2012). This indicates that the economic potential of a household are not yet fully utilized. In order to increase the contribution of household sector to the national economy, one needs to explore and understand the reason behind household saving.

Microeconomic empirical studies attempted to identify and examine the determinants of saving at the level of household. For instance Girma et al. (2013) identifies determinants of rural household savings in East Hararghe Zone in the Oromia Regional state of Ethiopia. The study indicated that household head educational level, livestock holding, access to credit service, income, investment, training participation and participation to extension program were the major factors affecting household saving in the study area.

Tsega et al, (2014) also studied the determinants of household saving in the North Gondar Zone in the Amhara Regional State of Ethiopia. The study found out that income, age, sex, marital status, participation in saving institutions are the major determinants of household saving in the Zone. This studies show that both economic and demographic variables do affect household saving in the respective study area.

Studies indicate that different economic, social and demographic factors determine the household decision to save and their amount of saving (kibet et *al*, 2009; Abid and Afridi, 2010; Rehman et al, 2010; Tsega and Yemane, 2014). Better understanding of what determines saving process helps institutions concerned to envisage appropriate promotion and mobilization strategies. In fact, several studies have been conducted. Empirical evidences done at the micro level identified income, credit access, occupation, employment status, consumption, age, gender, family size, dependency ratio, educational level and preference of saving institutions to be major determinants of saving decision at household level (Kibet et al, 2009; Abid and Afridi, 2010; Rehman et al, 2010; Tsega and Yemane, 2014). However, the findings of these studies come up with inconsistent results on the variables direction and level of influence on household saving. For instance, according to Rehman et al (2010) and kibet et al, (2009), the effect of education on household saving is negative. But it is presented to have a positive and insignificant influence on

household saving in a study by Tsega and Yeman (2014). Likewise, results do not tally when it comes to variables factors of household saving.

The above mentioned gaps necessitate the need for further investigation and understanding about the factors determining saving decisions of households. The findings of such studies not only create new insights into the matter but also help identify mechanisms to mobilize local resources there by meet domestic investment capital requirements. Against the backdrop of the above mentioned problems, this proposed research intends to fill what is an important gap. To the best of the researcher's knowledge, there is no empirical research done to assess the determinants of household saving in the case of Gurage ZoneGumer Woreda. Therefore, this study was conducted to carry out through empirical research to determine the factors affecting household saving in the case of Gumer Woreda.

1.3 Research Questions

The research pursues to answer the stated questions. The research questions have two important questions considered in a way that enables to seek the economic, social and demographic variables contributing as a factor for the decision of rural households on saving and the general saving conditions.

    i.   What is the Household Saving Practice and conditions of Gumar Woreda Looks like?

    ii.   What are the major determinants of household saving in Gummer Woreda?

1.4. Objectives

1.4.1 General Objective

The general objective of this study is to investigate the basic determinants of household saving in Gurage Zone Gumer Woreda, Southern Regional State.

1.4.2 Specific Objectives

The specific objectives are to:

  i.   to identify the practice of household savings,

  ii.   to investigate the major determinants of household savings,

1.5 Significance of the Study

This research was conducted to identify the major determinants of household saving in Gurage Zone Gumer Woreda, with purposefully to create awareness about the important determinant of saving. Understanding the importance of saving and the policy makers come up with a suitable policy at ground. As saving is a background for growth and investment. The study helps to understand the determinants of household saving.

1.6 The Scope of the Study

This research has focused on addressing determinants of household saving pursued female and male headed households in Gumer Woreda of Gurage Zone. The study mainly relied on the perception of household heads to assess the determinants of household savings. Objective

measurement approach has not been part of the analysis in this respect. The research is also restricted to identifying the major determinants of households savings adopted by the households in the study area, where as the determinant factors for using a specific saving strategy by households is not fully covered in the analysis part of the research. Moreover, the study focused only on the microeconomic variables that govern saving and ignores the macroeconomic determinants of saving (i.e national level determinants of saving). This research deals with the determinants of household saving under rural socioeconomic conditions. The study was limited to Gurage Zone, particularly to Sebat Bet Gurage Gumer Woreda residents. Hence results from this study may be representative for rural parts of the country. The study aims to provide a better understanding of the variables that determinate household saving. The research has used cross-sectional household survey to collect the relevant information for the study.

1.7 Limitation of the Study

The study was also limited, because specifically I selected only three kebeles out of 19 Kebeles in the Woreda. The researcher has encountered a number of shortcomings during the course of the study. One of the major drawbacks was the inaccessibility of some of the areas of the study sites and suitable rural transportation system in the selected Kebeles. The other constraint was lack of willingness of most of the surveyed respondents to disclose real information about their savings has also rendered some limitations to the findings of the research. Therefore, the researcher has relied on other secondary sources as government officials of the Woreda, Microfinance institute and other informants. The major challenge of the researcher faced was willingness of the respondents to give the appropriate responses to the questions during data

collection. Despite all these challenges, the researcher did his level to best capture reliable information explaining the purpose of the study and the benefits it contributes to their wellbeing.

1.8 Organization of the Study

This paper is organized in five chapters. Chapter one introduces the research idea and establishes the reason for conducting the study. Chapter two discusses both theoretical and empirical literature and exposes the gap in previous research. Chapter three presents data, data collection, and data analysis techniques applied in the research. Chapter four reveals the major findings of the study and presents detailed interpretation and analysis of the findings. Finally, Chapter five concludes the results, and forwards recommendations.

CHAPTER TWO: REVIEW OF LITRATURE

2.1. Theoretical Framework

2.1.1. The Concept of Saving

Theoretical explanation to saving characteristic of economic agents has long been established and developed by different scholars. Many theoretical enlightenments of factors and motives of household savings exists, but a well-known compilation of theories for determining factors that affect the behavior and decision of consumers in relation to saving is developed by Keynes (1936) and latter presented with an addition and modification by Browing and Lausardi (1996).

Frank (2003) in his book the principles of Economics defines saving as the part of disposable income (after direct taxes are deducted) which is not consumed or transferred for future consumptions. In this definition, saving includes current payment made to household liabilities such as repayment of loans. By contrast, any portion of the current expenditure not financed by current income but rather by the use of credit represents as negative saving. In this definition, any capital gains and losses is excluded from the concept of saving.

The Eurostat defines household saving as "the total saving of a household which is remained after consumption expenditure is made and adjusted for change in net equity of households in pension fund reserves from disposable income". The Organization for Economic Cooperation and Development (OECD, 2016) also defines household saving "the residual of disposable income after household consumption expenditure plus the change in net equity of households in pension funds". Saving means putting aside money for future use (Saving = Income – Expenditure). This can be in the form of investments, bank deposits and policies (Old Mutual

Saving Monitor, 2010). However, 'saving' for the purpose of this paper refers to money set aside to create future value or wealth. This includes holding back on spending and using that money to pay debt faster, for example putting extra money into a home loan (Old Mutual Saving Monitor, 2010). Saving can further be defined as that part of after-tax income that is not used for current consumption (Cronje, 2010).

Browning and Lusardi(1996) defined savings as the residual between income and current consumption. This is similar to the definition provided Horioka and Wan (2007) where household saving is determined by subtracting household consumption from disposable income. Gross savings in the national accounts refers to the portion of total income generated during a certain period, which is not consumed during that period (Prinsloo, 2000). It consists of private household saving, corporate saving and general government saving, with household and corporate savings being classified as private saving (Prinsloo, 2000). Dis-saving occurs when current consumption exceeds current income (Prinsloo, 2002).

Saving is a long-term or short-term decision about what to do with residual income after expenditure. Planned saving is a conscious decision regarding how much to consume today, what future consumption requirements will be and at what rate one must put aside money to finance future consumption. Once individuals have money they have to do one or a combination of spend now, save for either the long term or short term or invest for either the long term or short term (Vanguard, 2006). The following figure sets out these options.
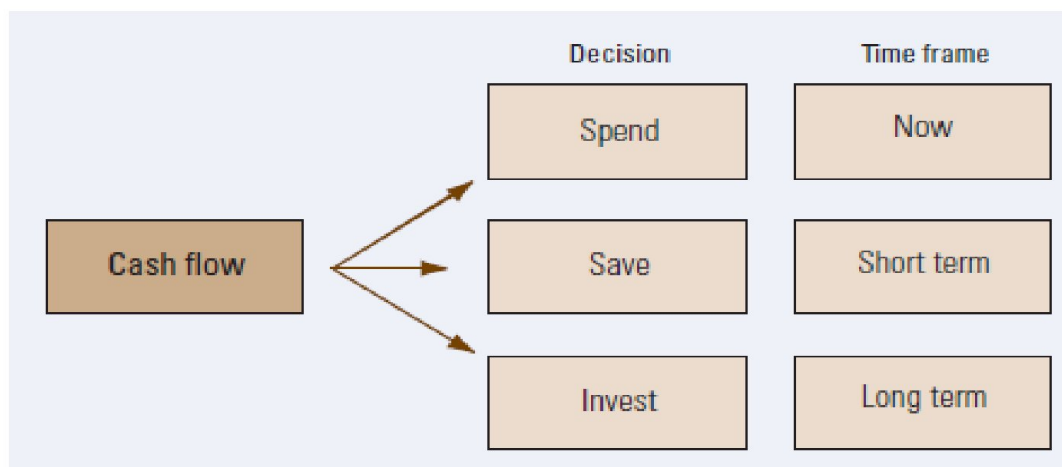
Figure 2.1: Options for cash-flow management

Source: Vanguard's Investment Philosophy, 2006

2.1.2 Life Cycle Hypothesis

The Life-Cycle Hypothesis (LCH) is an economic theory that pertains to the spending and saving habits of people over the course of a lifetime. The concept was developed by Franco Modigliani and his student Richard Brumberg. LCH presumes that individuals base consumption on a constant percentage of their anticipated life income. An example supporting the hypothesis is that people save for retirement while they are earning a regular income (rather than spending it all when it is earned). This simple theory leads to important and non-obvious predictions about the economy as a whole, that national saving depends on the rate of growth of national income, not its level, and that the level of wealth in the economy bears a simple relation to the length of the retirement span. , the life-cycle hypothesis remains an essential part of economists' thinking. With population growth, there are more young people than old, more people are saving than dis-saving, so that the total dis-saving of the old will be less than the total saving of the young, and there will be net positive saving. If incomes are growing, the young will be saving on a larger scale than the old are dis-saving so that economic growth, like population growth, causes

positive saving, and the faster the growth, the higher the saving rate. The most fundamental challenge to the life-cycle model has been directed at its basic underlying assumption, that people make rational, consistent, inter-temporal plans, that they act as if they are maximizing a utility function defined over the periods of life, according to "the received theory of consumer choice over time *à la* Fisher" (1975) Economists behavioral assumptions about consumer choice have long been challenged by psychologists and others but, until recently, these critiques have not had much effect on mainstream economic analysis. Many anomalies and paradoxes have been identified over the years, often associated with the way that people deal with the uncertainty that is inevitable when making choices that involve comparisons of consumption today with consumption in the future. Even if behavioral economics manages to replace the lifecycle theory in providing a successful empirical description of the way that people actually behave and it is still some way from having achieved that aim the life-cycle model will still be the baseline to which people aspire. The role of behavioral perspectives is to help make people better-off by making life-cycle behavior a better description of behavior. The Life Cycle Hypothesis has provided economic researchers with a wide range of possible determinants of household saving which can be tested empirically. The LCH can be explained using the Over-Lapping generations model (OLG) developed by Allais (1947) and Samuelson (1958).

2.1.3 Relative Income Hypothesis

Relative income hypothesis states that the satisfaction (or utility) of an individual derives from a given consumption level depends on its relative magnitude in the society (e.g., relative to the average consumption) rather than its absolute level. It is based on a postulate that has long been acknowledged by psychologists and sociologists, namely that individuals care about status. In economics, relative income hypothesis is attributed to James Duesenberry, who investigated the implications of this idea for consumption behavior in his 1949 book titled Income, Saving and the Theory of Consumer Behavior. At the time when Duesenberry wrote his book the dominant theory of consumption was the one developed by the English economist John Maynard Keynes, which was based on the hypothesis that individuals consume a decreasing, and save an increasing, percentage of their income as their income increases. This was indeed the pattern observed in cross-sectional consumption data: At a given point in time the rich in the population saved a higher fraction of their income than the poor did. However, Keynesian theory was contradicted by another empirical regularity: Aggregate saving rate did not grow over time as aggregate income grew. Duessenberry argued that relative income hypothesis could account for both the cross-sectional and time series evidence. Duessenberry claimed that an individual's utility index depended on the ratio of his or her consumption to a weighted average of the consumption of the others. From this he drew two conclusions: (1) aggregate saving rate is independent of aggregate income, which is consistent with the time series evidence; and (2) the propensity to save of individual is an increasing function of his or her percentile position in the income distribution, which is consistent with the cross sectional evidence. Relative income hypothesis has also found some corroboration from indirect macroeconomic evidence. One of these is the observation that higher growth rates lead to higher saving rates, which is inconsistent

with the lifecycle/permanent-income theory since the lifetime resources of an individual increases as growth rate increases. Contrary to the theoretical explanation to saving given by the permanent saving hypothesis which emphasized that the saving decision is not solely dependent on absolute income level rather it is an interplay of positional reference of the households' with other similar groups expenditure and consumption. It implies that the percentage saved by the households out of a given income independent of the absolute level of income.

This theoretical view tries to incorporate social aspects of individuals in the level of saving experience. But it was later rejected to be replaced by the permanent income hypothesis in the view that it failed to consider or ignores the essential temporal nature of the consumption saving choice (Buiter, 2003).According to relative income hypothesis, a households consumption expenditure is a function of the relative income of the household. The relative income can be the average income of households in the neighborhood where the household resides, or it can be the highest income that the household has attained in the near past. When a household's income falls, the household dis-saves or borrows in order to prevent a large fall in their living standards and also to maintain their standards at par with their peer groups. This is an important distinction between absolute income hypothesis and relative income hypothesis. The short run APC is greater than the long run APC according to relative income hypothesis. This implies that the short run average propensity to save is smaller than the long run average propensity to save.

According to the relative income hypothesis an increase in income is always proportional to the increase in household consumption expenditure irrespective of whether the increase in income is small or large. However, empirical evidence suggests that exceptionally large and unexpected

increases in incomes are often associated initially with a less than proportionate increase in consumption. According to the relative income hypothesis, consumption standards are irreversible in the short run, but not in the long run because people cannot go on dis-saving or borrowing to maintain their living standards, as it is not sustainable if incomes continue to decrease. According to this consumption theory, incomes and consumption change in the same direction, which implies that recession is always accompanied by decreases in aggregate consumption expenditure. The relative income hypothesis was a significant improvement over the absolute income hypothesis.

2.1.4 Permanent Income Hypothesis

The permanent income hypothesis was formulated by the Nobel Prize winning economist Milton Friedman in 1957. The hypothesis implies that changes in consumption behavior are not predictable, because they are based on individual expectations. This has broad implications concerning economic policy. Under this theory, even if economic policies are successful in increasing income in the economy, the policies may not kick off a multiplier effect from increased consumer spending. The permanent income hypothesis predicts that an unanticipated increase in the future income relative to the current income reduces current savings in contrast to the Keynesian point of view. Most of the empirical studies (Hall, 1978 and Flavin, 1981) found that consumption exhibits "excess sensitivity" to a change in income.

Friedman (1957) proposed the permanent income hypothesis, which lays emphasis on the importance of long term income as the main determinant of household consumption (Strydom, 2007). The theory distinguishes between two sources of income, namely permanent income and

transitory income. Permanent income is the long-term expectation over the planning period and steady rate of consumption maintained over a lifetime given the present level of wealth, whilst transitory income constitutes the difference between actual and permanent income. The difference arises as a result of "temporary influences" such as a "windfall" gain or loss (Samuelson and Nordhaus, 1995). Friedman (1957) assumed that individuals do not consume from transitory income and that transitory income is immediately channeled into savings with the result that marginal propensity to save on transitory income will approach unity. A worker will save only if his or her current income is higher than the anticipated level of permanent income in order to guard against future declines in the income.PIH divides income into permanent income and transitory income:

$$Y = YP + YT$$

According to this theory, current income could not explain a household's current consumption decisions due to lag effects; hence there was need for a better measure of income. The permanent income was considered as the average income of all the incomes expected by a household in the long run. It is estimated by approximating all the incomes expected from all human (labor) and non-human wealth (capital). The theory assumes that household's objective is to maintain a perfectly stable or smooth consumption path by allocating its lifetime resources equally among each period of life. The amount consumed by the household in each period is equivalent to its permanent income, which is the annuity value of the sum of assets held by households and the discounted present value of expected future income. The permanent income is the level of income that gives the household the same present value of its lifetime resources as that implied by its actual inter-temporal budget constraint. The difference between the current income level and the present value of the permanent income is the transitory income that can be positive or

negative. Savings is the transitory component of current disposable income. The transitory income can be positive, negative or zero, hence in the long run, the expected transitory income is zero.

In the permanent income hypothesis, permanent income is the primary determinant of a household consumption. The consumption levels of a household respond to changes in permanent income but not to transitory income. There is no correlation between transitory and permanent incomes. Saving and borrowing is therefore used for consumption smoothing purposes. The differences in household savings reflect differences in relative shares of permanent and transitory income (Friedman, 1957).

Although the time pattern of income is not important to consumption, it is critical to savings in that a household savings in period t is the difference between current income (Yt) and current consumption expenditure (Ct). Consumption is determined by the expected lifetime resources; hence savings over short periods of time reflect departures of current income from the average life's resources. Transitory short term changes in income have little effect on consumers spending patterns. Households consume a constant proportion of permanent income. This implies that the low income earners have a higher MPC as compared to the high income earners. This indicates that the marginal propensity to save is higher among the high income earners.

The theory assumes that APC is equal to the MPC throughout the time periods. For cross sectional data, this would mean that the rich and the poor consume the same proportion of income. This has been questioned by researchers such as Friends and Kravis (1957), who have noted that low income households have got higher APC than the high income households. The

MPC reduces as permanent income increases. The theory assumes that the transitory income and transitory consumption are not related, meaning that MPC is equal to zero for transitory income and equal to one for permanent income. This contradicts the notion that MPC and APC are constant. Permanent income hypothesis has been considered a better policy guide to achieve economic goals than both absolute income hypothesis and relative income hypothesis in that any government policy to reduce taxes that is viewed as permanent by households would spur consumption immediately and would increase national income over a longer period through the multiplier effects (Modigliani and Steindel, 1977).

2.1.5   Random Walk Hypothesis

According to permanent-income/life-cycle hypothesis, the shape of a consumer's time path of consumption should be independent of the shape of his or her time path of income. That means that the trend of individual current consumption does not depend on the trend of consumer's current income. Rather, the consumption path depends only on the present value of lifetime income. When there is uncertainty on income flows, there is need for modification on the standard life cycle hypothesis and permanent income hypothesis to incorporate the uncertainty.

If a household's income in period "t" is higher than it was expected to be, this would change the household's expectation of the present value of its lifetime wealth, so that it would cause the household's planned consumption path from that time forward to shift upward or downward to reflect that change.

Consumption in period "t" is the first part of the higher or lower anticipated consumption path, but it is the only one that is actually observed. It is only the unexpected changes in income that

would cause the consumption path to shift. Changes in income at time "t" (relative to "t-1") that are correctly anticipated at "t-1" would not cause changes in consumption at time "t" relative to the anticipated path formulated at "t-1". According to the random walk hypothesis, consumption changes are independent of expected changes in income. The random-walk hypothesis is not a separate theory of consumption; rather it is an implication of the neoclassical model that was first explored in a seminal study by Hall, (1978).

Assuming rational expectations, the expected value of consumption in all future years equals the level of consumption in period one. This simple result implies that the consumer chooses a perfectly flat consumption path from years "1" through "*T*". It is so simple because of the assumptions that both the interest rate and the rate of time preference are zero. But even when this assumption is relaxed, the main idea still holds: changes in consumption from one period to the next do not depend on correctly anticipated changes in income. Changes in expectations of income (even if they are changes that are expected to happen in future periods) cause the household to revise its consumption path and make second period consumption differ from first-period consumption. Change in consumption occurs only because of unanticipated change in income. The random walk hypothesis does not say anything about the relationship between household savings and consumption level.

2.1.6 Precautionary Motives for Saving

The desire to keep extra money in case an unforeseen situation requires a capital outlay. For example one may wish to save extra money to pay for medical bills in case of an accident. According to John Maynard Keynes, people keep savings accounts, as well as some stocks and commodities, with a precautionary motive in order to cover unexpected events. Households do

save in order to recover from uncertain shocks by making adjustments to present consumption or expenditure patterns. The economic literature describes this situation as precautionary motive for saving (Browing and Crossely, 2001). The theory predicts that the expected risks reduces consumption and enhance the accumulation of wealth as a type of self-insurance through saving (Kinnickel and Lusardi, 2005). This shows that households with higher probability of risk and expecting high uncertainty tend to save more than their counter part. Browning and Lusardi (1996) explains that the households save to build up a reserve against unforeseen contingencies as a precautionary motive to explain saving decision of households. This consideration emphasizes saving as an emergency response mechanism and this expectation tends to influence individuals to save more rather than consuming what they get today.

2.1.7 Katona's Theory of Savings

Katona's (1975) theory of saving is based on the assumption that saving/ consumption is dependent on the ability to save/ consume and the willingness to save/ consume. This theory is based on a combination of economic and psychological variables. Saving is not only benefit for the individual but also to the economy (Katona, 1975; Bernheim, 1991). Someone's ability to save/ consume would be equal to disposable income and someone's willingness to save/ consume would depend on financial expectations and attitudes. This theory is based on a combination of economic and psychological variables. While income is important, willingness to save should be considered as well when predicting saving. In other words, those who are able to save still need to choose to do so, that is, they have to make a decision that requires some degree of willpower. According to Katona, willingness is determined by the economic environment and people's perceptions of it. Consumer expectations and consumer sentiment influence saving

decisions, as well as pessimism and optimism with regard to a general and one's personal evaluation of the economic situation. While people save for different reasons, Katona assumes that a person's evaluation of the economic situation influences contractual as well as discretionary saving decisions. Viewing pocket money and allowances to be discretionary spending money, young people's saving should mostly depend on their willingness. Yet, considering the context of child and adolescent development, ability to save is probably best understood taking into account a combination of economic and psychological variables (such as skills and capabilities, see Figure2.2). Willingness to save is assumed to depend on saving motives, attitudes towards saving, and perceived likelihood of being successful at it.

Figure2.2. Saving in childhood and adolescence: Demographic, social, and psychological determinants

(Katona, 1975, adapted)

SAVING = Ability   ×   Willingness

Income / perceived need for money	Attitudes towards saving
Bank accounts / institutional structures	Savings motives
Self-control (delay of gratification)	Self-efficacy
Future orientation	

2.1.8   Saving and Economic Growth

Economic growth has many definitions. Schumpeter (1939) suggests that economic growth is created through a higher saving rate. According to Kindleberger, economic growth means more than production. He believes that economic growth is not only producing more but also

improving productivity and raising the ratio of output to input. Saving is maintaining part of current income for use in the future. It is the accumulation of financial and non-financial assets. In national income accounting we face two separate concepts in this regard: Net Savings and Gross Savings.Net Savings is generated when disposable personal income is more than personal expenditure; firms have profit that is not divided among shareholders; or current government expenditure is less than current government receipts. Gross Savings includes Net Savings and depreciation allowances for replacement of real assets in the future.

Classical economists believed that saving is a necessary and sufficient condition for securing investment and that the interest rate is the price that equates them. They believed that if savings go up, investment increases, and then economic growth follows. Keynes, on the other hand, did not believe that investors and savers are the same group, but they save or invest for the same reason (that is to maximize utility/income). According to his theory saving is a direct function of national income whereas investment is an indirect function of interest rates.

Economic growth has been of particular interest to many economists in recent decades and a new set of ideas, called the new economic growth theory, have been generated. We review these theories that relate savings and economic growth below. Early economic growth theories go back to the studies of Harrod and Domarin 1939 and 1946 where economic growth was assumed to be determined mostly by the equilibrium path for an economy. Their model focused on the limited role of government in the economy and the role of savings as the main determinant of investment. They assumed that interest rates moved to an equilibrium level over time and then remained unchanged. Due to these unreasonable and limiting assumptions, efforts were made by neo-classical economists, such as Solow and Swan in 1950, to study the relationship between

economic growth and savings using a less limiting platform. The Solow model is based on a constant return to scale production function with two inputs, labor and capital, substitution possibilities between inputs, and decreasing marginal productivity. In this model, growth takes place through capital accumulation and the stable growth rate is determined by the rate of technology progress, which is an exogenous variable. (Solow Model December, 2014)

Although changes in the population growth and savings rates can alter the growth path, they have no effect on the long-run growth rate. Increases in the savings rate causes an upward shift in the long-run growth path instead of an increased growth rate (Branson, 2008).Endogenous economic growth theory predicts that an increase in the savings rate leads to an increase in economic growth through its positive effect on investment and capital accumulation (Barro and Sala-i-Martin, 1995). Ramsey's Optimal Growth Model posits that saving increases cause increases in national income and accelerate the investment process (Romer, 2006). Saving is not exogenous in this model; it is determined endogenously by the optimization behavior of households and firms (Singh, 2010). Increases in the capital stock can only cause economic growth in the short-run but its effect is negligible in the long-run (Romer, 2006).Growth rate of the country is jointly determined by saving rate and incremental capital output rate in the dynamic model of Harrod-Domar. The role of saving is very critical in capital accumulation and economic development that is recognized in the "two gap" and classical growth models. In Neoclassical growth model, savings do not affect economic growth in steady state but there is high association between higher saving rate and more rapid growth of the economy in its movement towards long run equilibrium. In representing the evolution of developing countries, the transitional path is more meaningful than alternative steady states (Gersovitz, 1988).

A major factor impacting economic growth in a given society is the level of savings. Classical economists believed that the existence of savings is a necessary and sufficient condition for investment creation. They believed that if savings go up, investment increases because the interest rate and economic growth will be imminent. Even though there is an obvious relationship between savings and economic growth, the direction of causality is not assured. Economic growth theories like the Solow growth model explain why our national income growth, and why some economies grow faster than others, by making broaden analysis so that is the changes in the economy overtime. The Solow growth model shows how saving, population growth and technological progress affect the level of any economies output and its growth overtime (Mankiw, 2009). Here in the Solow growth model the roll of saving in economic growth is clear.

2.2 Empirical Literature

2.2.1 Determinants of Household Saving

The economic literature has vast empirical evidences that examine the determinants of saving at macro and micro level. Most of the studies concentrate on the macro level determinants of saving and a relatively fewer micro level evidences exists. According to Tsega and Yemane (2014) in developing countries empirical researches using micro data to study determinants of household saving is far beyond satisfactory as compared to advanced nations. Besides, there is no study conducted on microeconomic level on the determinants of household saving in southwest Ethiopia and limited studies are found in the country. Therefore, this paper attempted objectively identifying some micro level social, economic and demographic determinants of household savings. The study is also intended to contribute to the existing research gap through a better

exploration of its determinants. Some of the studies with related area of emphasis are discussed and summarized in this section.

2.2.1.1 Economic Determinants of Household Saving

Econometric research on the determinants of household saving based on micro data drawn from the less developed countries has lagged far behind the pace set in advanced nations. It would appear that there has been limited hypothesis testing in the LDC's beyond macro formulations of the consumption function. Furthermore, very little of the development literature attempts to isolate the impact of structural change on aggregate personal saving, since few studies provide meaningful disaggregation (Kelley and Williamson, 2009). This state of affairs seems paradoxical, given the currency of W. A. Lewis's remark that the central problem in development theory is to explain an increase in domestic saving from 4 or 5 percent of national income to 12 or 15 percent (Lewis, 1954). Besides, few studies assess the determinants of saving at the individual level generally due to the lack of data.

Using recent econometric techniques, Carpenter and Jensen (2002) and Kulikov, et al. (2007) identify how household characteristics affect saving behavior, in Pakistan and Estonia respectively. Carpenter and Jensen (2002) focus on the role of institutions which collect saving and stress on the role of formal (banks) and informal institutions (savings committees). They found that increased income leads to a greater desire to participate in some form of savings institutions but as income increases more individuals shift to the formal sector. They also found evidence that the urban rural differences in bank use is negligible which suggests that formal finance is not primarily restricted to urban households in Pakistan. As opposed to Carpenter and Jensen (2002) who focus on the savings supply side, where as Kulikov et al. (2007) analyze the

saving determinants on the demand side. Making a distinction between regular and temporary households income allow the authors to put forward the role of income variability and the different forms of household assets (financial and non-financial) in a transition economy (Estonia). Their analysis is based on data from household budget surveys. As in many empirical studies, they found that the saving rates depend more on the transitory income than regular income. Among the other variables, the labor market status or the non-financial assets ownership (real estate for instance) and credit access have not significant effect on the household saving behavior; the durable goods possession (in particular cars) has a negative impact on the saving rate.(International Journal of Development and Economic Sustainability, October 2014)

Among the few researches done in developing countries; Klause et al. (1992) studied households saving in developing countries and found that income and wealth variables affect saving strongly. Touhami et al. (2009) also investigates the micro-econometric determinants of households saving in Morocco. They concluded as income significantly explains the cross-sectional variation of the saving behavior of households in Morocco.

2.2.1.2 Demographic Determinants of Household Saving

Among the determining factors of household saving in any given place demographic factors are one which has a great theoretical support as discussed in the first part of the theoretical literature review of this paper. The average saving rate can be thought of as the sum of the savings rate of the different age groups in a population weighted by their income shares. This decomposition suggests that the age structure of the population matters. In absence of a bequest motive, theory asserts that the de saving of the old should offset the saving of the young so that in a stable

population there will be no aggregate saving. However, as argued by Bloom, Canning and Graham (2002), if the age structure of the population is unbalanced, which happens during a demographic transition, the saving behavior of the various cohorts does not cancel out and aggregate saving (or dis-saving) is expected. 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.

The importance of saving reveals that it is important for children's education, children's marriage, medical expenses, scarcity of grains, social security purpose, precaution for natural calamity like flood, drought etc. Various studies have been conducted in developed economy to understand the effects of socio-demographic variables on saving behavior of households. According to Gedela (2012); Callen and Thimann(1997), males have better saving behavior than females because males have a higher level of financial knowledge, financial skills, and perceived earlier childhood consumer practices than females. To the contrary, Abdelkhaleket al., (2009) concludes Moroccan women were more savers than Moroccan men were. Aktaset al., (2012) suggest that female labor participation on household's working activities can significantly affects the household's saving rate and a household with greater share of working female has higher saving rate. Regarding education status an individual with a higher education level is twice more likely to be saving money than an individual with a secondary education level (ACT Research, 2011). According to Tarekegn and Geremew (2015), variables such as age of the household and marital status have no significant statistical effect on the decision to save or not to save. In

contrast, Gedela (2012), concludes the saving behavior of household is not affected by educational status of the household head.

In addition to the above demographic variables, personal saving habits of households were also studied. Personal saving habit of a particular household can be positive or negative. Positive personal saving habit by far includes manner of regularly managing income by putting money aside from the monthly income, spending money in systematic manner through planning, designing the means of managing unexpected expenses, and feeling about family future and shield him/her-self from adduction and so on. Whereas negative personal saving habit includes not regularly manage money or earned income, spending the major part of income as it is obtained, not taking in account of unforeseen expenses, spending money without plan, not feeling about family future and so on. These concepts reflect the personality of individual household head. Personality refers to the characteristics of a person that account for consistent patterns of feelings, thinking, and behaving Pervinet al., (2005). In this study, personality was used in terms of saving habit. Action Research (2011) suggests unsystematic and unplanned saving behavior significantly hinders the motive to save.

Beckmannn et al (2013) using a double hurdle model on secondary data to identify household saving determinants suggests that age derives the propensity to save and reveal the hump shaped relationship between age and saving is found to be as predicted by the life cycle hypothesis which hold true for the saving practice of Central, Eastern and Southern Europe.

Rehman et al (2010)conducted a study to understand the households saving behavior in Multan District of Pakistan using primary field data from 293 observations .Education of household

head, children's educational expenditures, family size, liabilities, marital status and value of house were significantly and inversely affecting household savings. Like most other studies it used OLS estimation mechanism as an econometric tool. The result is found to be in the theoretical explanations of life cycle hypothesis where age has a positive significant effect and square of age is negatively related to the household saving.

2.2.1.3 Social Determinants of Household Saving

This theory assumes that the people are not always rational to decide their preference and as the result social norms and instructions have a capacity to shape their preferences. Moreover, it assumes that people do not always know to establish their own goals and even the choice they make. For instance, people who get a chance to see family or friends save may tend to prefer saving as a choice those they themselves might make (Lusarid, 2000 cited in Mark, et al, 2001). Moreover, according to Bernheim, (1994) in the same material indicated that different culture, familiar norms and experiences may lead to have various saving goals. For example, the American dream of home ownership is the goal that U.S citizens expect of married people more than single people. Broad social norms could mold saving expectations and as the result American learns that Benjamin Franklin was wise and advised that a penny saved was a penny earned. So ,the American IDA builds a social/psychological theory in several ways like mere existence of IDAs can send message that poor(and perhaps should) save , people not assumed to know how to save nor the consequences of choosing saving etc (Marl, et al, 2001).

Studies also examine the determinants of household saving in relation to different social factors. One among is that the educational status of individual and household heads. In most of the empirical evidences its effects sows a considerable variability in the level of significance and

direction of influence. This is associated by the findings of Tsega and Yemane, (2014), Abid and Afridi (2010) and Kibet et al (2009) in which education is found to be insignificant to determine the level of saving with positive sign in the first study and negative influence in the latter two. Rehman et al (2010) on the other hand states this variable to have a negative effect on household saving due to the fact that educated households' tend to spend more on the living standard and Children's educational advancement. Another indicator in the inconsistency of the estimation the results is the one presented by Beckman et al (2013) it indicated that individuals university degrees or medium education are more likely to save due to income effects of better education and increased financial literacy.

Soharwardi et al (2014), Rehman et al (2010) and Tsega and Yeman (2014) also present another prominent social determinant of household saving behavior that is marital status. In all this studies it influences the level of saving negatively and the result is expected to be endorsed to the presence of additional social costs to married individuals. While an empirical evidences from Obi Egbedi et al (2014) found it to influence the level of saving positively.

Other social factors like perceived distance from financial institutions and social prestige seeking are also considered as social determinants of household saving but found to be insignificant in there predicting ability.

Mostly, the economic literature on determinants of household saving thought as different economic, social and demographic variables are found to determine the households' decision on saving. The results of the studies show inconsistency in the level of significance determining factors have on households' saving decision especially in the case of variables education, age and family size. In the other variables as well, the direction of influence the factors exert shows a

considerable level of dissimilarity which still need to be addressed through a serious of studies. Moreover, in most of the studies on saving determinates the researchers apply OLS, Panel Discussion, Multiple Regression Analysis, Logistic Regression Model and Tobit models to understand the determining factors. This includes decision of households' to participate in the saving practice and their second level decision on the amount of money to save. Hence, studies that will give a way to handle and understand these situations helps to better identify the determining factors on the independent saving decisions. The findings of the Tobit Model confirm the central role of income in determining household saving in Ethiopia particularly in the Gurage Zone Gumer Woreda.

CHAPTER THREE: DATA AND METHODOLOGY

3.1 Descriptions of the Study Area

Gumer Woreda is situated in the Gurage Zone of the Southern Nations, Nationalities, and Peoples' Region of Ethiopia. Gumer woreda is one of the fifteen woredas of the zone. The capital city of the Woreda, Arekit town is located around 220 kilometers south of Addis Ababa. This woreda is named after one of the sub group of the Sebat Bet Gurage, the Gumer. Part of the Gurage Zone , Gumer is bordered on the southeast by the Silt'e Zone , on the southwest by Geta, on the northwest by Cheha, and on the north by Ezha .The woreda has a total area coverage of 234.04 square kilometers .The population density of the woreda is 419.55 people per square kilometer. The geographical location of this woreda's is approximately $8° 2' 17"N, 38° 19' 30" E$ (maphill.com accessed in June 2016), with altitudinal range from 2700–3078 meter above sea level. (Gumer woreda report 2014). Based on the information from Central Statistical Agency 2017 report, Gumer had a total population of 98,192, of this total population 45,858 were males and 52,334 were females. The rural population was 91,963 (i.e. male = 42,978 and female = 48,985), and urban population was 6,229 of which 2,880 were males and 3,349 were females. The majority of the inhabitants are reported as Muslim , with 59.98% of the population reporting that belief , while 29.81% practice Ethiopian Orthodox Christianity , 9.27% are protestants , and the least 0.86% , 0.06% , 0.01% are catholic ,traditional, and other kind of belief respectively (Census 2007 Tables: Southern Nations, Nationalities, and Peoples' Region).

Table3.1 Number of Population in Percentage and Sex in Rural and Urban Area

Locatio n	Yea r	M	%	F	%	Total	%
Rural	201 7	42,97 8	43.77 %	48,98 5	49.89 %	91,96 3	93.66 %
Urban	2017	2,880	2.93%	3,349	3.41%	6,229	6.34%
Total	2017	45,85 8	46.70 %	52,33 4	53.3%	98,19 2	100%

Source: CSA, 2017 Report

Figure: 3.1 Map of the study area
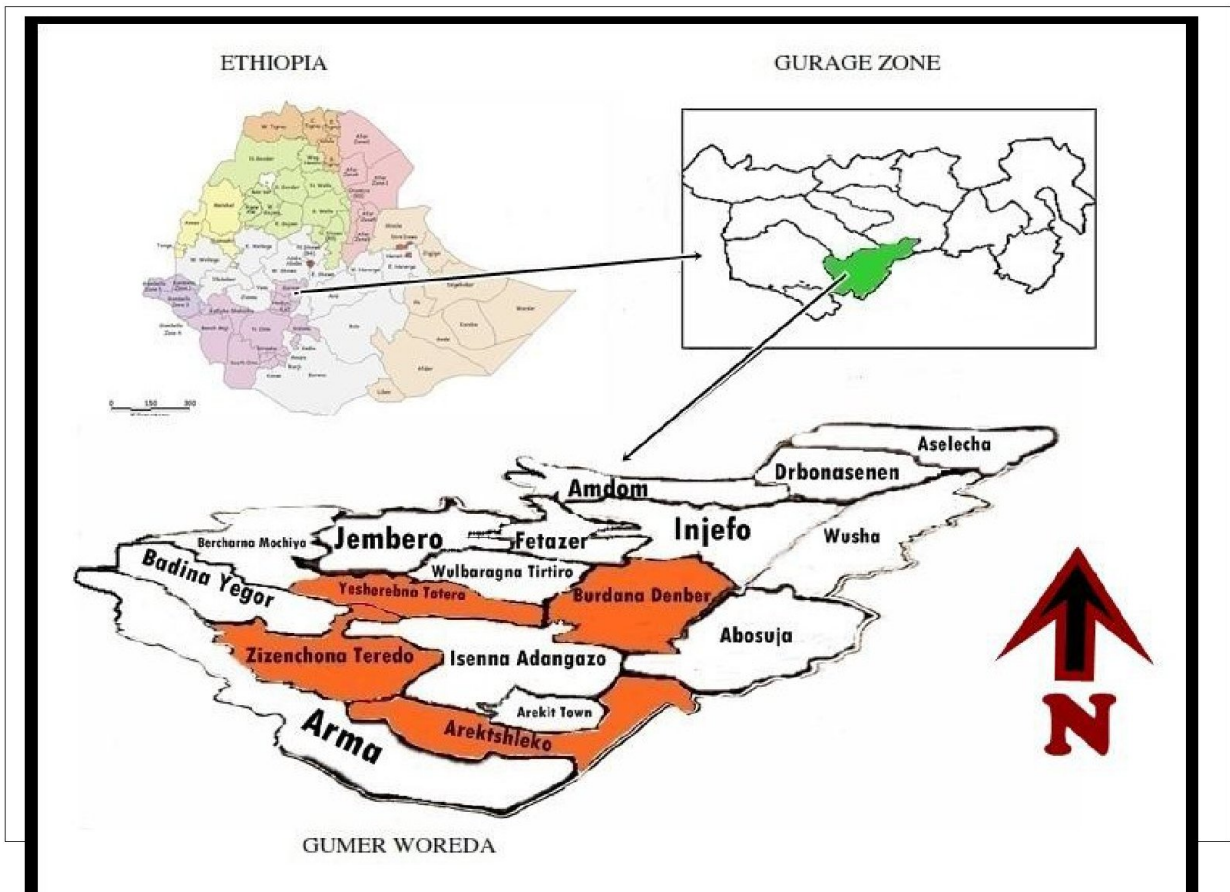
The woreda is completely Dega which accounts for 100% and average rainfall of 1,275mm with the minimum and maximum levels of 1,150mm and 1,400mm, respectively. The average temperature is 18.5°c with minimum and maximum temperature of 16°c and 21°c, respectively. Whereas duration of high rainfall lasts for two months from June to July, duration of high temperature is for three months from January to March (Gumer woreda Report, 2016). Population of the sample Kebeles ranged from 5,134in Jemboro, 4,361 in Arekitsheleko, and 6,320 in Zizenchona Teredo. The three of these kebeles share similar climatic zone that is Dega. There are 19kebeles out of which 3 kebeles were selected as the study area. The total number of target population in the study area is 2,767of which 2,330 are males and 437 are females. Livelihood of the people in the Woreda is also dependent on agriculture and livestock production. Gumer Woreda is one of the major Potato, barely, bean and Enset producing Wored as in the Zone.

3.2 Research Approach and Design

A research approach can broadly be classified into: quantitative, qualitative, and mixed research.

In the study, to achieve the general objective of investigating the determinants of household savings, quantitative research approach was used. In attempting to meet the specific objectives descriptive and explanatory research design were adopted. Descriptive statistics such as mean, standard deviations, percentage and censored regression, that is, Tobit model been used. The research attempted to examine the major determinants of household saving in Gumer Woreda.

3.3 Population and Sampling Design

Gumer woreda has 19 kebeles of which 18 are rural and 1 is town kebele.3 Kebeles were selected by simple random selection. The total number of household heads of the three kebeles was 2,767. The observed socioeconomic characteristics target population almost homogeneous. On behalf of this, there is a tight similarity in cultural practices of the households. Considering the homogeneity of the population, time and cost constraints, three of the kebeles were made to be the sampling frame for this study which has a total of 2,767household heads out of which the sample households were drawn. The households were the smallest sampling units of the study to be considered and the heads of these units serves as the target population of study on saving determinants in Gumer Woreda Kebeles. It employed probability sampling method, both multistage and sample random sampling, in selecting 3 kebeles from the total of 19kebeles found in Gurage Zone Gumer Woreda. Thus, out of 19kebels', Arekitsheloko, Zizenchona Teredo, and Jemboro has been selected through the stated sampling method. This analysis has been carried out for the entire sample of 147 interviewers. The study selected eight independent variables such as age, sex, family size, income, education, location, marital status, and access to saving institutions are regressed with one dependent variable which is households heads saving.

➢ Arekitsheleko = 829 → 44 sample respondents.

➢ Jemboro = 941 → 50 sample respondents.

➢ Zizenchona Teredo = 997 → 53sample respondents.

➢ Total (ΣN) = 147total respondents of all sample Kebeles.

According to population census commission population of the sample kebeles, the total households are listed under in the table 3.3.

Table 3.2 Distribution of populations per each kebele

Name of sample kebeles	Total number of population of sample kebeles			
	Male	Female	Total	%
Arekitsheleko	1,960	2,401	4,361	27.58
Jemboro	2,422	2,712	5,134	32.46
Zizenchona Teredo	2,220	4,100	6,320	39.96
Total	6,602	9,213	15,815	100

Source: Gumer Woreda Report, 2015

Table3.3: Distribution of sample respondents per each kebele.

Name of sample kebeles	Total number of households of sample kebeles				Sample respondents			
	Male	Female	Total	%	Male	Female	Total	%
Arekitsheleko	684	145	829	30	36	8	44	30
Jemboro	819	122	941	34	43	7	50	34
Zizenchona Teredo	827	170	997	36	44	9	53	36
Total	2,330	437	2,767	100	123	24	147	100

Source: Gumer Woreda Report, 2015

According to data obtained from Gumer woreda 2015 report the total households are:

Arekitshelecko kebele   = 829 = N_1

Jemboro kebele   = 941 = N_2

Zizenchona Teredo   = 997 = N_3

Tota   [Σ (N_1, N_2 and N_3)]   = 2,767

Based on table3.3, the required sample household (n_1, n_2 and n_3) are taken from each sample kebele (Arekitshelecko, Jemboro and Zizenchona Teredo) resulting 44, 50 and 53 Sample respondents, respectively.

3.4 Data Collection Procedure

37

A cross sectional survey method was employed by using among selected representative households in the Woreda. The primary data were collected through interview, and also reviewing related literature obtained from various sources, including the internet. The questionnaire contain, among others, household characteristics, monthly and/or annual income, wealth in its various forms, location (area of residence) of the interviewees, interest rate, absence or presence of financial institutions/intermediaries, financial management habit and knowledge of respondents, which are considered to be important variables that affect household saving behavior on a priori theoretical grounds. Moreover, secondary data which collected from different sources gave as a highpoint and understand the overall condition of saving environment.

3.5 Data Analyses Method

The data collected from primary sources by using questionnaire were analyzed by employing quantitative technique of data analysis. For the proper investigation of the research objectives, for analysis purpose, the study employed both descriptive and econometric method of data analysis. Descriptive statistics were used to define the features of household and the overall savings environment by using percentages, mean values and standard deviation and Tobit model was used to test the hypothesis.

So as to analyze the raw data and to clearly see the relationship between the explained variable and explanatory variables, this study used the so called STATA software package. Thus, to estimate the consequence of main determinants of household saving and to differentiate the factors that results in low rate of saving, the following model is used. The explained variable in this study is household saving. Household saving takes the values zero for the considerable

portion of the population and positive nonstop values for the rest of the population. Thus, Tobit model is appropriate for such types of dependent/explained variable. The Tobit model that the research employed is shown below.

The form of the Tobit model following Verbeek (2000) is:

$$Y_i{}^* = X_i\beta + u_i \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \quad (1)$$

i = 1, 2, 3, 4, 5 … n

$$Y_i = 0 \quad\quad \text{If} \quad Y_i{}^* = X_i\beta + u_i = 0 \text{ or } Y_i{}^* = 0.$$

$$Y_i = X_i\beta + u_i \quad \text{If} \quad Y_i{}^* = X_i\beta + u_{i>0} \text{ or } Y_i{}^* > 0$$

Where; Y_i = is saving of the ith household head.

$X_i\beta$ = is the independent or explanatory variables affecting household savings. These were; sex, age, marital status, family size, education level and average monthly income.

β = is vector of unknown parameters.

u_i = is the error term where, $ui \ N \ (0, \sigma^2)$

$Y_i{}^*$ = is the latent variable which is not observed.

$$X_i\beta = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots\dots\dots\dots\dots\dots\dots + \beta_k X_k \dots\dots\dots\dots\dots\dots\dots \textbf{(2)}$$

The dependent variable in this model is Yi = the household saving, calculated as, household disposable income (net household income in the case of rural households minus total household consumptions).

Thus, the model for the main determinants of household saving can be specified as follows;

Yi $= \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + Ui$

α = The constant term.

β_1 to β_8 = the coefficients of the independent variables which is mentioned above (i.e β)

X_1 = the household sex (It assumes 1 for male of the household head, 0 for female)

(Measurement – Dummy) +

X_2 = Age of the head of the household (measurement-continuous) +

X_3 = the year of schooling (measurement-continuous) +

X_4 = Number of family size (measurement-continuous) –

X_5 = Income of the head of the household (measurement-continuous) +

X_6 = Marital status–

X_7 = Location

X_8 = Access for credit and saving institutions +

3.6 Variables and their Expected effect

i. Sex of a Household Head

Sex of the household head is measured as a significant variable to decide the saving behavior of a household. Sieminska et al (2008) found that, female held many savings account but males saved more than females. We use 1 if the head of household is male, and 0 if not. This paper believes a positive connection between male household head and saving.

ii. Age

Age refers to the age of the household heads measured in years. The age of the household head is believed to affect and determine the saving decision of household. Burney and khan (1992) found that savings increase with the age crossing a certain limit. This study thinks a positive impact on household head savings.

iii. Education

The variable educational rank is contains as independent variables to guess the influence of the educational position of the household head on saving. Education is a vital factor in determining the chance of being a saver or a depositor. Therefore, education is estimated to have a positive impact on the household saving decision.

iv. Number of Family Size

This is the size the household family measured in terms of overall number of elements spouse and children. Since food supplies rises with the number of persons in the household, food and non-food expenditure, rise in increase household size and this could decrease the saving of the household. The predictable effect of family size on saving is negative.

v. Income

Income is an important determinant of the saving behavior of the rural households. Income is a positive factor that analyses the savings of a household. The rural households experience is a very low level of income as many of the rural families earn their livelihoods from the agriculture, many are daily wage workers, petty traders and other self-employed activities. So, the saving rate of those households is very low or many people do not save at all. I expected a positive impact.

vi. Marital status

The marital status of the respondents and the head of the households also determine the saving behavior of the rural households. The married population is subjected to more liabilities which discourage them to save more as the income of the individuals is spent on the family's consumption. The unmarried or the widowed population saves a significant amount from their

income. The saving behavior of this group plays an important role in the model of saving pattern. Hence, I expected negative value.

vii.   Location

Location represent whether the household lives in urban or rural areas, this variables are expects to have positive effect

viii.   Access to saving institutions

Access to saving institutions represent whether there is or not saving institution in nearest of the households

CHAPTER FOUR: REASULTS AND DISSCUSSION

4.1.   Descriptive Analysis

4.1.1.   Respondents Characteristics

The following ages, 45, 60 and42of the respondents found in the age group were between [19 and 25], [26 and 45], [46 and 66] years old respectively. The mean household size of the total sample households is 5.5. The sample households are with a minimum of 1 and a maximum of 12 household members. Of the 147 household heads about 20.4% of them cannot be read and write and the balances are literate. Out of the total literate households 36% of them did attend their primary education (from grade1-8) which including those household heads who were attending informal education those can read and write, 25.9% did attend their secondary education (from grade 9-12).

Table 4.1 below further shows that the mainstream of the respondents are male and married household heads and both accounts the same percent which is 83.7% from the total sampled 147 respondents respectively. The category of occupation the respondents' involved 17.7%originates from government sector, 15.6% originates from private sector, and 66.7% originates from self- employed and 0% from non-business out of the total respondents. Table 4.2 outcomes told that the respondents have comparatively higher inclination of informal savings institution for the saving practice. Only, 19.7% of them favor to use formal institutions and the rest 80.3% of the respondents prefer the informal institution structures. The respondents' type of occupation is a factor touching the saving gaps between households. Occupation has to be a necessary variable for predicting permanent income. In old-style study, income is divided on the

basis of occupation into two bases, specifically profit and wages. Profits and marginal saving rates may be positively connected with levels of permanent income. The least situation in this case is experienced by the self-employees. Furthermore, the analysis shows 97.3percent of the respondents save money from their monthly income; on the other hand 2.7 percent of the respondents didn't save from their monthly income.

Table 4.1: Summery statistics of respondent characteristics

Respondents characteristics	Frequency	Percentage
Sex		
Male	123	83.7
Female	24	16.3
Total	147	100
Age		
Age [19-25]	45	30.61
Age [26-45]	60	40.81
Age[46-66]	42	28.57
Total	147	100
Marital status		
Married	123	83.7
Unmarried	10	6.8
Divorced	6	4.1
Widowed	8	5.4
Total	147	100
Education		
Can't be read and write	30	39.87
Primary education	53	101.80
Secondary education	38	159.93
Tertiary education (Diploma, Degree, and Masters)	26	346.65
Total	147	
Family Size		
Family size [1-3]	32	410.83
Family size[4-6]	75	111.17
Family size[7-9]	27	87.15
Family size[10-12]	13	39.10
Total	147	100
Preference of saving institution		
Formal	29	19.7

Informal		118	80.3
Total		147	100
Location			
Urban (Town)		87	59.2
Rural		60	40.8
Total		147	100
Do you save from your monthly income		Yes (143)	97.3
		No (4)	2.7

Although, majority of the respondents had saving habit; the findings further shows, the sample households earn an average income Birr 3432.64 which ranges from a minimum of Birr 600 to maximum of Birr 3900 and save an average of Birr 276.16, and average consumption 104.28 ranges from a minimum consumption of Birr 98.14 to a maximum of Birr 144.5.The family size is an important determinant of household savings. Large family size leads to low savings, because the maximum part of the income is spent on the family's consumption. On behalf of this small family size leads to more inclination of the family members towards savings. The results also show that the family size of the respondents' range from one headed household to that of a family size with twelve members living together. The average family size is 5.5. This is an indication of a relatively larger family size for most of the respondents interviewed

Table 4.2: Descriptive statistics of Households' Socioeconomic attributes.

Variable	**Number**	**Mean**	**Std. Dev**
Age of household	147	37.06	13.546
Income	147	3432.64.	2327.424
Year of schooling	147	4.19	1.454
Number of family size	147	5.50	2.511
Saving	147	276.00	557.868

| Consumption | 147 | 1051.36 | 1769.556 |

In addition to the above statistics the researcher conducts the analysis that compares the family size, the income and saving of respondents. Accordingly, those households who have one additional family member had the income and saving of 438 and 105, respectively; and the household that had two family member had income of 877 birr with saving rate of 210; apart from this, those households that had an income of 1571 had a family member of three and their saving were 376; in line with this those households who had 4 family size had an income and saving of 4514 and 851, respectively

Table 4.3: Average Income and Savings

Number of family income earner	Household head average saving	Household head average income
1	105.03	438.46
2	210.27	877.78
3	376.44	1571.43
4	851.38	4514.28

4.1.2 Determinants of Household Saving

Table 4.4 below showed that, household heads who are in the mid age [26-45] save more than household heads that are in the initial age of [19-25] and last age of [46-66]. The mean saving of mid age, initial and last age household heads is about Birr 316.55, 136.20 and 195.50 in each month respectively. Another vital determinant of household saving is educational level of household heads. This is because of the datum, as the level of education raise the knowledge of households about saving also increase. Table 4.4, confirmed that tertiary educational level on average save more than households with no or primary educational level. The mean saving of a person those could not be read and write household heads is Birr 39.87, where us household

heads with primary education, secondary education and higher level education on average saves Birr 101.80, Birr 159.93 and 346.65 in each month respectively. Hence, as the level of education increases, the mean household saving also raises, this is based on the table 4.4. But I couldn't conclude that the educational level increase the awareness of household level increase at the same time, sometimes we observed that the lower education level save more than the higher. Therefore, this finding is consistence with the empirical outcomes of other researchers.

Gender is also as an essential variable in the household saving behavior. The finding told that women do not save more than men. But usually we expected that women save more disposable income than men. The average saving of women is Birr 259.46 in each month but, the mean saving of men is Birr 388.79 in each month. Even if the average saving of men is greater than the average saving of women, it is not consistent to generalize as totally men save more than women by simply detecting at the quantity of average saving. This is because, we have to reflect other saving measurement mechanisms like average propensity to save (APS) and marginal propensity to save (MPS). Average propensity to save is expressed as the ratio of total saving (S)

to total personal disposable income(Y), that is $APS = \frac{S}{Y}$ whereas change in savings (ΔS) divided by change in income (ΔY) is called MPS (i.e $MPS = \Delta S/\Delta Y$). Here, to measure the average propensity to save of men and women household heads, it is must to measure the average income of both household heads. Hence, the average income of men and women households is Birr 3889.25 and 2,354.7, respectively

Table 4.4: Socio-economic and demographic characteristics of households

Variable		observation	Average Saving(Birr)	Minimum	Maximum
Sex	Male	123	388.79	0	4,000
	Female	24	259.46	0	500
Age	Age [19-25]	45	136.20	0	500
	Age [26-45]	60	316.55	0	3,000
	Age[46-66]	42	195.50	0	1,000
Education	Can't be read and write	30	39.87	0	600
	Primary education	53	101.80	0	400
	Secondary	38	159.93	0	1,000

47

	education				
	Tertiary education (diploma, degree& masters)	26	346.65	0	3,100
Income	[300-500]	13	16.11	0	200
	[501-1000]	36	100.71	0	350
	[1001-2000]	28	125.20	0	650
	[2001-10,000]	70	406.23	0	3,300
Family Size	[1-3]	32	410.83	0	2,600
	[4-6]	75	111.17	0	1,000
	[7-9]	27	87.15	0	600
	[10-12]	13	39.10	0	300
Marital Status	Married	123	59.35	0	350
	Unmarried	10	402.00	0	3,050
	Divorced	6	97.90	0	600
	Widowed	8	89.00	0	500
Location	Rural	60	184.52	0	1,800
	Urban	87	463.73	0	2,700
Access for credit and saving institu…	Formal	29	218.24	0	1,800
	Informal	118	430.01	0	2,700

Source: Own Survey June, 2017

4.1.1. 4.2 Econometric Analysis: Result of the Tobit Model

While we use cross-sectional data we may come across problem of hetero-scedasticity (Greene, 2008). To accurate the hetero-scedasticity problem we can estimate the robust standard errors instead of the usual standard errors (Wooldridge, 2002). Therefore, the Tobit model which is used in this paper is corrected for hetero-scedasticity problem using the robust command in Stata (robust standard errors are estimated for the Tobit).The problem of multi-collinearity was also tested using Correlation matrix and it is detected that there is no multi-collinearity problem among explanatory variables. According to (Gujarati, 2004) rule of thumb, multi-collinearity is a serious problem, when a pair wise correlation coefficient between two independent variables is greater than or equal to 0.8. Thus, from correlation matrix it is displayed that there is no series multi-collinearity problem in the data.

A total of eight explanatory variables were considered in the econometric model out of which six variables were found to be significantly influence the saving rate of the households. Econometrics Tobit analysis shown that household saving in Gumer woreda is significantly (p <0.001) and positively associated to household age. The coefficients of the age indicate that as the age of the household increases by 1 year the saving rate of the household increases by 30 birr. The same as this finding Obayelu (2013)found out that age and saving rate had positive association. Furthermore, the role of income in stimulating saving stems were also the other significant variable in the analysis, accordingly, income of the household also had positive and significant (p <0.001) effect on saving rate of the household; whenever the households income increased by 1 birr the saving of the household increases by 0.56 birr. The study conducted by Abera, (2016) around Dirdawa area had the same finding with this study; which argues higher rate of income can increase the probability of saving. According to him, the possible justification is that marriage and use of planning for consumptions are expected to manage the individuals' income in appropriate manner whereas it is theoretically justifiable that probability of saving has the tendency to increase as the level of individuals' income increases. However, in contradict to the above statements Mirach and Hailu, (2014) said that frequency of money getting negatively and significantly affects household savings. This might be because individuals fail to go to saving institutions repeatedly when they get the money which exposes them to spend more.

The other important and significant variable was family size of the household; this particular variable was negatively and significantly (p<0.001) affects the saving rate of the house hold. As the family size of the house hold increases by 1 the saving rate of the household would decrease by 21 birr. In line with this study Sinning, (2007) found out that large family size reduce the saving rate of a household. In contrast of this; family size didn't affect household savings which is in line with Klaus et al. (1992). I addition to this, the marital status had a positive and significant effect on saving rate of households. Although, theoretically in most literature had marriage had significant and positive effect, however unlike to those studies under this research marriage had significant and negative effect on saving rate of a household. The analysis showed that single households had a better saving rate than the married one by 68 birr. This might be because of since the household income is low, therefore whenever they married the probability of saving money also reduces, since the house hold spend more money on his houses. In addition

to those mentioned important variables, the analysis further shows that, access to saving institutions had a significant effect on saving of households; accordingly, those households that has access to credit had better saving rate, this indicate those household that had the access of saving institutions had a better saving rate of 45.24 birr than those who doesn't have the access. Location of the household also another variable that significantly affect saving rate of households, those households who live in urban area had a better saving rate by 38 birr than those who live in rural areas.

Table 4.5: Tobit model estimates for the determinants of household savings

Tobit regression				Number of obs =147 LR chi2(5) =326.47 Prob> chi2 =0.0000 Pseudo R2 =0.6434		
Log likelihood = -974.90831						
Saving	Coef.	Std. Err.	T	P>t	(95% Conf. Interval)	
Age	30.0837	2.076	14.49	0.000	25.97908	34.18831
Income	.568743	.0105	5.38	0.000	.0359942	.0777544
education	7.235353	14.77	0.49	0.625	-21.96984	36.44055
Family Size	-21.2253	7.983	-0.27	0.000	-17.90357	13.65849
Marital Status	-68.2794	8.894	-0.77	0.024	-24.41032	10.75443
Gender	3.421	2.145	2.152	0.791	1.23245	3.215600
Access to saving institutions	45.24	7.143	9.32	0.021	39.432	53.4103
Location	38.24	4.248	4.18	0.042	34.174	43.5436
_cons	-37.2955	83.35	-7.65	-802	.080500	-472.5105
/sigma	183.6608	10.71			162.4872	204.8345

Source: Own calculation, 2018

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1. Conclusion

In Ethiopia, the rural population is large as compare to urban population and the contributions of this rural population were not that much needed for economic development. The household saving is one of the most important elements of house hold economic activities. Thus, in order to understand factors that affect household heads savings it is better to study the response of households saving to different social, economic and demographic factors.

This research recognized the fact that the determinants of the household heads saving are influenced by demographic and economic factors based largely on income, i.e, income is the most crucial factor of the household saving in the entire study. In the households, a one percent increase in income leads to 56.87percent increase in household savings. This indicates that large and rapid increase in income tends to raise the rate of household saving because households capacity to save increases with household income.

Family size of household heads has negative relationship with household head savings. Number of family size increased by one leads to 21.22birr decrease the household savings. When the age of the head of household increases by one year, saving had increased by about 30.08birr on the average month.

The marital status of household heads has a negative relationship with household saving. The number of marital status had increased by one leads to 68.28birr decrease the household savings.

The number of access to saving institutions of the household heads increases by one percent, the household heads saving had increased by 45.24 percent.

In general, the analysis showed that among the hypothesized explanatory variables, except the two variables the other all variables had a significant effect on saving habit of households; accordingly, age, access to saving institution, location and income had shown a positive influence on saving, conversely, family size and marital status had negatively influence the saving rate of households. Thus, this study may contribute knowledge on determinants of the household heads saving in rural areas of the country and enhance-evidence based interventions.

5.2. Recommendation

It is obvious that the level of saving in Ethiopia is very low. Saving contributes a lot for economic growth and development. Therefore, Ethiopia in general and Gumer Woreda in particular has taken to improve their savings.

Based on the findings of the study the researcher forwards the following recommendations:

i. The government and concerned body should try to shape livelihood interventions to improvement of household income and diversification of income streams for the households which will have a round effect on savings, investment and income growth.

ii. Given the study is insufficient to explain all the systematic variance, future studies are recommended to comprise mediating factor to better explain the relationship between independent variables and dependent variable. Hence, behavioral intention is suggested to be included as a mediating variable in future study as it can explain a person's readiness to perform a given behavior (Ajzen, 1991). For instance, the saving behavior is established only if the intention to save is formed, and the intention to is typically affected by other independent variables such as financial literacy and self-control. Therefore, mediating variable can ensure the future researchers to certainly conclude upon the relationship between independent and dependent variables.

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APPENDIX

Formal Survey Questionnaire on the Determinants of Household Savings

This is an interview questionnaire prepared to undertake a study entitled Determinants of Household Savings in Ethiopia: The case of Gurage Zone Gumer Woreda Southern Regional State. This research will be submitted to St. Mary University as a partial fulfillment of a Master's Degree in Development Economics. The main objective of this study is to identify the determinants of household savings in the above selected Woreda's and this questionnaire is prepared to supplement this research aim to identify the major determinants of household savings in Gumer Woreda. Therefore, you are selected to be one of the participants in this study and I request you to give your genuine answer voluntarily. I assure you that your responses will not be shared with other party or be used for other purposes and I strongly believe that my success highly depends on your meaningful and relevant information.

INSTRUCTION: Put a"√" mark on the responses you choose from the given alternatives and write a **short** and **brief** responses on the blank spaces for the open ended questions. If you have any question regarding on this survey please contact the owner of this research with the following address:

Name: Wolde Gebre

Tel: **+251-9-02-66-29-70**

Part I: Respondent's Information

Respondent's Full Name _____   Study Area   <u>Gumer Woreda</u>

Date of Data Collection _____   Kebele   _____

Signature _____

Part II: Interview Questionnaires for Households'

1. Sex of respondent's

    Male □   Female   □

2. Age of respondent in years _____

3. Marital Status

    Unmarried □   Married □   Divorced □ Widowed □   Separated□

4. Are you the head of households?   Yes   □   No   □

5. Sex of the household head   Male   □   Female□

6. What is the level of educational performance of the head of the households?

    Literate □ Can-not be read and write□ Primary level (1-8) □ Secondary level (9-12) □

    Diploma□   Degree□   Masters□   Above□

7. How much is the size of house households? (including household head)

_____

8. Does a dependent live in the household?   Yes   ☐   No   ☐

9. If your response is'' yes'' in question number 8 how many dependents live in the household? _____

10. What is the current occupation (or employment status) of the household head?

   Government employed ☐   Private employed ☐

   Self-employed ☐   Non business   ☐

11. What is your major source of income? _____

_____

12. What is the total:

   A, monthly income of the household? _____

   B, annual income of the household?_____

13. How many of your family are employed (number of earners)? _____

14. How much birr do you earn per month on average? (approximation) _____

15. Do you save money from your earnings?   Yes   ☐   No   ☐

16. If your answer is "yes" in question number 14, how much birr do you save on the average

   per month?_____

17. If your answer is "no" for question number 14, please justify your major reason.

_____

18. What is the rate of your saving performance?

Poor ☐   Satisfactory☐ Good☐ Very good ☐ Excellent☐

19. If your response for question number 18 is "poor", please justify your reasons.

_____

_____

_____

20. How much birr do you spend per month on average? _____

21. Do you have saving access in your area? Yes ☐   No ☐

22. Where do you prefer to save your money?

Formal institution (or modern) ☐ Informal institutions (like Equb, Edir…) or traditional ☐

23. If your response for question number 20 is informal/traditional, why? Justify your answer.

_____

24. What is your reason if your answer for question number 20 is modern or formal institution?

Please list your reasons. _____

25. How long is the formal institution far from your home? _____

Is it appropriate? Yes ☐   No☐

26. How was your money management plan?

Usually☐ Most of the time☐ Occasionally☐ Seldom☐ Never ☐

27. Are you aware that you can earn interest on your saving accounts?

  Yes ☐   No☐

28. Will you decide to save more if the current interest rate rises?

Yes ☐   No☐

29. Do you have access to credit facilities?   Yes ☐   No☐

30. If your answer is "yes" for question number 28, what is your source of credit?

Private money lenders ☐   Micro finance institutions☐ Commercial Banks☐

Friends or relatives☐   not applicable ☐   others (specify) ☐

31. If "no" for question number 28, what is your reason?

Lack of credit facilities☐   Have never heard of credit facilities ☐   Others' (specify) ☐

32. Pease write if there is anything that you think would be important in analyzing household
saving.

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Thank you in advance for your kind cooperation!!!