



ST. MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

INSTITUTE OF AGRICULTURAL AND DEVELOPMENT STUDIES

**DETERMINANTS FOR CHOICE OF SAVING INSTITUTIONS: THE
CASE OF ETHIOPIAN POSTAL SERVICE ENTERPRISE**

BY:

MILETETSGA TIGABU SEYOUM

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**A Thesis Submitted to the Institute of Agriculture and Development Studies of
St. Mary's University in Partial Fulfillment of the Requirements for the
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INSTITUTE OF AGRICULTURE AND DEVELOPMENT STUDIES

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June, 2017

DECLARATION

I truthfully declare that this MA thesis is my original work, and it has never been presented or researched for a degree in this or any other university and also all sources of materials used for this thesis has been properly acknowledged.

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ABBREVIATIONS

MINECOFIN	Financial Sector Development Secretariat	Ministry of Finance and Economic Planning
	Government of	Rwanda
MoFED	Ministry of Finance and Economic Development	
GDP	Gross Domestic Product	
n.d	No Date	
CBN	Cost of Basic Needs	
FAO	Food and Agriculture Organization	
EC	European Commission	
FEI	Food Energy Intake	
HH	Household Head	
NDP	National Development Plan	
UN	United Nations	
UNDP	United Nations Development Program	
USD	United States Dollars	
UNU	United Nations University	
VIF	Variance Inflation factor	
WHO	World Health Organization	

ABSTRACT

The growth of any economy depends on capital accumulation, which in turn depends on investment and an equivalent amount of savings to match it. Understanding the determinants of the aggregate savings rate is a crucial prerequisite in designing a number of policy interventions. The aim of this paper was to investigate the determinants for household choices for different saving institution the case of Ethiopian Postal Service Enterprise. The study used both primary data and secondary data to answer research questions. The primary data was collected from 120 respondents using random sampling technique. Both descriptive and econometrics analysis was used. Both logit and multinomial logit models applied including sampling method. From the descriptive analysis, the study found that, from the sampled respondents, 102 of them (85%) responded that they are saving in each month on average. The study found that people with lower education prefer to save their money with Equib and cooperatives while those with higher education prefers to save at bank, and those with average educational attainments prefer to save at MFI. Based on rank, banks are found to be the safest, efficient, liquid, and encouraging institution than others. On the other hand, Equib was found to be the most accessible, strength social relationships and having possibilities of getting loan than others. Regarding to challenges absence of incentives takes the lion share in their choice making decision of to save and where to save. The finding of the multinomial logit model shows that, income positively and significantly affects household choice of banks over others and possibilities of getting loan positively and significantly affect household choice of Equib, MFI and cooperatives over banks; and interest rate positively and significantly affect household choice of bank over Equib. Regarding to households decision to save or not, income and being married positively affect saving and increase in the number of dependent household members and having higher education negatively affect the decision to save. Finally, the paper recommends to governments, central bank and any other responsible bodies to create an arrangement to people for the possibilities of getting loan, incentives should have to be made by different saving institutions to increase saving deposit and expansion of outreaches of MFI would be highly relevant especially for the poor segment of the society.

CHAPTER ONE

1. Introduction

1.1 Back ground of the study

The growth of any economy depends on capital accumulation, which in turn depends on investment and an equivalent amount of savings to match it. Understanding the determinants of the aggregate savings rate is a crucial prerequisite in designing a number of policy interventions; from the design of the tax and social security system to the layout of financial markets regulations. It is therefore not surprising that the analysis of saving behavior has become one of the central issues in empirical macroeconomics and microeconomics. (MINECOFIN, 2008)

Saving can be considered as a portion of income not spent on current expenditures. Because a person does not know what will happen in the future, money should be saved to pay for unexpected events or emergencies. Without savings, unexpected events can become large financial burdens. Therefore, savings helps an individual or family become financially secure. Money can also be saved to purchase expensive items that are too costly to buy with monthly income. (Family Economics & Financial Education, 2010)

Savings mobilization is critical for individual and societal welfare. At the individual level, savings help households smooth consumption and finance productive investments in human and business capital. At the macroeconomic level, savings rates are strongly predictive of future economic growth. (Karlan *et al.*, Ratan & Zinman, 2014)

Household savings behavior is important in designing policies to promote savings and investment (Muradoglu & Taskis, 1996). Given the differences in the economic environment of the developing and industrial countries there should be substantial variation in the household behavior and analyzed cross-country savings behavior concentrated on aggregate savings due to the lack of consistent information on household behavior and possible differences in the household savings in developing versus industrial countries were

disregarded. The most important issues in development economics for developing countries are how to stimulate investment and increase the level of saving.

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 (Schmidt-Hebbel *et al.*, 1996; Bisat *et al.*, 1997; and Sinha, 1999).

According to Haile (2013) Ethiopia is among one of developing countries that needs fast and sustainable investment growth. Even though, her domestic saving rate was on the lowest for the past several decades. The average domestic saving rate was only 7.9% of the GDP during the past four decades (1970/71 to 2010/11). Moreover, World Bank report (2011) shows that the average saving rate of Ethiopia was very low by any standard.

Choices individuals and families make about their savings form one set of fundamental determinants of national savings. These saving decisions are intimately related to the nature and extent of the uncertainty and the borrowing constraints faced by individuals. National savings can be aggregated using individual savings by age and income level and then adding the different sectors such as government and corporate (Mark, 1988).

Customers are exposed to diversified choices, given competition and they are much concerned about the value for money. In other words this means there are unlimited switching choices. The competition in saving institutions has dramatically increased during the last couple of decades. (Randiwela & Fernando, 2015).

Increasing access to financial institutions, such as making it easier to open an account, or reducing the fees associated with maintaining an account, are particularly important for low-income account holders who may be unable to meet minimum balance requirements. Similarly, savings programs that provide facilitation, or simplify the savings process, such as automatic enrollment and direct deposit, are hypothesized to increase savings rates. Institutional theory also maintains that the more information individuals have on savings options the more likely they are

to save. Studies have demonstrated, for example, that employees who are provided with financial education have higher participation levels in pension plans (Bernheim and Garret, 1996).

Applied to matched-savings account programs, behavioral economic theory has been used to explain how creating rules for savings can help facilitate savings. For example, account restrictions such as a limitation on how often a participant can access his or her savings account have proven effective in increasing enrollment in matched-savings accounts among low-income households (Moore *et al.* 2001; Sherraden *et al.* 2005).

While individual and behavioral determinants play an important role in savings behavior, financial institutions play a key role in structuring access to savings programs for low-income households. Institutional theory maintains that an individual's asset accumulation is dependent upon the access, information, expectations, and incentives, afforded by institutions (Sherraden, 1991).

Institutional arrangements that offer incentives for savings, such as matched- savings accounts, are also thought to increase individuals' motivation for savings. Evidence has shown, for example, incentives such as the existence of a match increase savings account openings among low-income households (Beverly *et al.*, 2008). Institutional theory also states that the expectations communicated by savings programs, such as goals and targets, impact savings behavior. For example, research has demonstrated that participants in matched-savings account programs often see the match cap as a goal for savings, which increases their motivation to save (Sherraden *et al.* 2005).

Therefore, in this study, the researcher will investigate determinants for consumers choice of saving institution, that is the consumer ultimate choice among those saving institutions whether the consumers decided to save in Equib, Micro finance or Bank and factors affecting on their choice of saving institutions that can raise a question why they choice that specific saving institution in the case of Ethiopian Postal Service Enterprises. By doing so based on the findings, attempts will be made to provide recommendations in the context of consumers choice of saving institutions which enable to provide significant data and analysis to give response that could solve the problem.

1.2 Statement of the problem

Economic growth is one of the indicators for an economic progress. In this regard countries around the world are working to achieve higher economic growth; as a result economic growth is the common key target for the countries to raise their social welfare (Schmidet *al*, 1992). According to Harrod - Domar growth model, with insignificant domestic saving, a country should look for foreign aids and debt to increase economic growth (Todaro, 2000). In fact, the rate of domestic saving in developing countries is believed to be insignificant. However, reliance on foreign aid and debt is not always imperative due to different socio-economic and political reasons. Therefore, it is believed that the pattern of domestic saving, particularly individuals' saving, in the country should change if higher rate of saving is required.

Savings play a significant role in the economic growth and development progression by shaping the national capacity to invest and thus to produce, which in turn, affect economic growth prospective of the country. Saving mobilization and credit provision by financial institutions are considered as a proxy for economic growth (Todaro, 2000). The contribution of these institutions to economic growth designates them as leading players in the sector. In addition, different national and regional regulatory organs and the public at large have their own contributions to this sector.

However, there is a lack of adequate domestic savings in most developing countries and as a result, more reliance is placed on foreign savings in the form of capital flows into the country. The issue of low levels of domestic savings in developing states is due to high levels of unemployment, low wages, and the engagement of a large proportion of the population in the informal sector, and poor performance of the economy (Reddy, Naidu & Vosikdata, n.d.). On the other hand, choice of a financial institution is also considered as main determinants for low level of saving in developing countries. Choice of a financial institution directly implies a choice of saving, credit and transaction services therefore; this choice concerning financial modes selected by a household depends on the perceived utility that can be derived from the financial modes. The perceived utility depends on the attitudes or behavioral intention of the decision takers, which are a function of the institutions' and individual, attributes respectively (Hensher, 1979;

Shem, 2002). Many people in developing countries prefer to save their money in their home, in informal institutions or in the form of asset. Those types of saving are not mobilized in the economy and could not generate investment which affects the level of national saving and investment of the country.

The continent Africa has been identified as having unsatisfactory growth in saving rates, which slows down capital accumulation. Sub Saharan countries are also facing low saving rate which is below 17%, so Ethiopia is not unique to the region.

According to National Bank of Ethiopia survey study, Ethiopian's saving culture is still regarded as poor despite the performance improvement from 6% in 1998 to 9.5% in 2003 E.C. Currently in Ethiopia from the total population only six millions household saves money in financial institutions on average 875 Birr per year. Saving rate of Ethiopia to GDP is 9.5%. This amount is much lower than the sub Saharan Africa average saving rate, which is 16.5%. The percentage of saving to GDP is much lower to trigger up investment and economic growth. In order to realize this industry sector need to be promoted. The sector to be promoted, it needs among other thing adequate capital, readily available for investment in the form of domestic saving. Ethiopia knowing this fact has planned to promote saving habit among citizens so as to mobilize adequate saving. In the five year Growth & Transformation Plan of the country (2003 – 2007 E.C), it was planned to increase saving rate from 9.5% to 20% of the GDP (Aron *et al.*, 2013).

The low saving rate of Ethiopia is not only because of household's poor saving behavior and saving institutions performance, but also household's attitude to different saving institutions. Even though, low level of saving rate cited in Ethiopia, consumers save assets based on the level of income they earn but the major problem is choosing saving institutions. Household's attitude to different saving institutions such as to ROSCA or Equib, Banks and Microfinance would have a great implication on the general saving rate of the country and on investment. Hence, understanding determinant factors for choosing or not choosing different saving institutions is very necessary to increase the saving rate of the country.

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. Besides, previous micro level saving researches focused on determinants for only bank savings and excluded other types of savings and households choices for different saving institutions. To the best of the researcher knowledge there are no studies in Ethiopia on consumer choices for different saving institutions.

Therefore, this research focus is on examining different aspects of consumers choice of saving institutions empirically, using behavioral approach of individuals, taking the case of Ethiopia Postal Service Enterprise. The study will investigate the existing saving behavior of consumers and their choice of reliable saving institutions, the major possible factors which are expected to influence consumer’s choice of saving institutions and the role of saving institutions on facilitating better services.

1.3. Objectives of the Study

The general objective of the study is to investigate determinants for consumers’ choices of saving institutions (Equb, Microfinance or Bank) the case of Ethiopia Postal Service Enterprise

The specific objectives include:

- To identify what kinds of saving institution consumers (employee) of Ethiopia Postal Service Enterprise choose to save.
- To study the determinants for consumers choices of saving institutions (Equb, Microfinance or Bank) in Ethiopia Postal Service Enterprise.
- To determine the major challenges consumers are exposed to identify the best (formal or informal) saving institution that can satisfy their needs.
- To address how saving institutions are upgrading themselves to meet the consumers interest.

1.4. Research Questions

- ❖ What kinds of saving institution consumers (employee) of Ethiopia Postal Service Enterprise choose to save?
- ❖ What are the determinants for consumers' choices of saving institutions (Equb, Microfinance or Bank)?
- ❖ Why consumers (employee) of Ethiopia Postal Service Enterprise choose that specific institution?
- ❖ What are the challenges consumers faces on identifying the best saving institution considering the information they have about saving institutions?
- ❖ What mechanisms saving institutions use to promote saving behavior of households?

1.5. Significance of the study

The study will have the following significance. First, this paper will contribute to financial institutions about the information of saving institution selection by customers' choices. Saving institutions will know more about customer perspective and factors cause clients switching to others institutions. For example service quality and incentive are an important reason that causes customers switching to its competitors. When saving institution understands more about customers behavior it will help them in their management planning and indirectly enhance customer base by attracting customers from its competitors and overcome the problem of customers switching to others saving institution.

Second, researchers could view this research for their further reference as it would provide information regarding consumers choice of saving institutions from customer perspective as the information update from time to time.

Third, it could also provide information to customers; as this paper could provide essential information for them to consider which saving institution more essential services that could satisfy their needs. Furthermore, the priority of consumers choice of saving institutions is not only important for financial institution itself but also significant for policy makers. Lastly, as this paper will show that which factors will influence the decision of consumers for their choice of saving institutions and it will help policy makers in better decision making.

1.6. Scope and Limitation of the study

This paper is limited to the analysis of determinants of consumer choices to different saving institutions. The study considers only ROSCA, MFI and Bank saving institutions. To the best of the researcher knowledge this is the first paper which study consumer choices to different saving institutions in Ethiopia and to understand how saving choices affected by different factors the study will use the case of Ethiopian Postal Service Enterprise. This company is chosen due to the fact that it accommodates employees from different living standards and there is an expectation that people with similar living standards will have on average similar set of choices. However, care should have to be given while making generalization to macro level. To make the findings representative the study will consider all income groups in the sample population. Limitation of the study was to conduct further research there were a time constraint.

1.7. Organization of the thesis

This research is organized into five main chapters and each chapter comprises related sub sections. chapter one covers general introduction of the study comprising background of the study, problem statement, research questions, objective of the study, significant of the study and the delimitation of the study. Chapter two deals with the relevant literature of the study both theoretical and empirical literatures. Chapter three covers the methods that the study adopted, such as research design, sample and sampling techniques, source and tools/instruments of data collection, procedures of data collection and methods of data analysis.

Chapter four presented the results of the study along with the necessary discussion. Chapter five drives conclusion from the study and recommendation of the policy measures.

CHAPTER TWO

2. LITERATURE REVIEW

Under this chapter, definitions and concepts of saving and saving institutions (Equib, Microfinance or Bank), review of selected vital theories on consumers behaviors towards saving institutions, factors influencing consumers choice and some empirical studies of household's attitude to different saving institutions such as to ROSCA (Equib), Microfinance and Banks are going to be discussed. These theories and empirical findings are important to conceptualize the study and used as supportive ideas in line with the discussion of the findings in this study.

2.1 Theoretical Literature Review

The role of savings in the development process is well documented in the literature of economic growth. Low level of domestic savings is said to be one of the reasons for slow and stagnant economic growth in the developing countries (Agrawal *et al.*, 2010 and Bordoloi and John, 2011). Thus, the revival of growth in emerging economies can be expected to require more investable resources for sustainable growth. Though international capital flows (foreign savings) are encouraged for the additional resources, the primary contribution for investment in developing countries like Ethiopia comes from their own savings.

According to (Brown, 2008) saving means the act of freeing up resources for alternative use by refraining from the purchase of items with positive elasticities of production. Less spending for consumer goods and services, or equivalently, more saving apparently increases the relative return to employment of resources in the production of capital goods and thus catalyzes a shift in that direction.

There are some recent studies (see Loayza *et al.*, 2000; Elbadawi and Mwegu, 2000; Aryeetey and Udry, 2000; Sinha, 1998; Schmidt-Hebbel *et al.*, 1996; and Collins, 1991) on the determinants of savings behavior in pooled time series cross-section data on a large number of countries. However, saving behavior shows considerable variation across countries depending on their socio-economic structure. Therefore, it is important to study the determinants of savings and the direction of causality between household savings and growth as these have important

implications for development policy. Economic theory predicts that the absolute amount of savings will increase with income.

This is because people with more income have more resources available to save. Theory also predicts that savings relative to income, the savings rate, will increase with income (Deaton,1992b). This occurs because people with more income also tend to consume more. As they consume more, the marginal benefit from additional consumption decreases. The current cost of saving, in terms of foregone benefits from consumption, is lower for people who consume more, and this increases savings. Empirical evidence clearly indicates that higher-income households save a larger portion of their incomes, and accumulate greater wealth, than lower-income households. In fact, most low-income households have very low or negative saving rates and very limited or negative asset accumulation (Bernheim&Scholz, 1993; Bunting, 1991; Carney & Gale, 2001; Hubbard, Skinner, &Zeldes, 1994, Table 2; Wolff, 1998).

Like all theory, however, this ignores some important issues. For example, the level and rate of savings also depend on expected variation in income and subsistence requirements. The poor face greater risks, and this tends to increase their saving, both absolutely and relative to their income. Of course, the poor likely saved less in the past; if not, then they would not be poor. However, they may have saved at higher rates relative to resources available. Also, the poor may save at higher rates when they save, but dissave at higher rates when they dissave.

Theoretically, there are many factors that determine the saving performance of a country. The most important factors as shown in many studies are those related to income, fiscal policy, depositing interest rate, macroeconomic stability, the extent of financial sector development, and external variables. Life-cycle hypothesis (LCH) proposed by Modigliani (1986) advocated that saving is a positive function of income growth. Higher rate of income growth means the aggregate income of active workers will rise which in turn rises the lifetime resources of individual's on which consumption and saving depends. As a result, income growth will result an increase of aggregate saving.

2.1.1 Income Growth

The theoretical foundation regarding the relationship between economic growth and the savings rate is relatively vast; however, it offers no general conclusion about the relationship between

economic growth and the savings rate. The relationship can be traced back to the growth models of Harod and Domar. Their simplest model implies that the growth rate in the economy is proportional to the savings rate. It has then been further developed in the Solow model and in the endogenous growth model (Romer 1996).

Modigliani & Brumberg (1954) developed the life cycle hypothesis. The theory assumes no bequest motive and the individual aim at zero saving during the whole life; saving in one period of life will be matched with dissaving in another. With the assumption of rising income, individuals should borrow when young, save for retirement when middle aged and dissave when retired (Deaton, 1992). With the life cycle hypothesis, age of an individual has a role in consumption and saving. The life cycle hypothesis is supported by much empirical evidence. Thus financial institutions that target households for saving should focus on middle age and working groups. (Ohrstrom, 2008) mentioned that With income growth, the young will be richer than the old, resulting in a positive correlation between savings and growth. Another way to view the same issue is to assume that aggregate growth will make forward-looking consumers feel wealthier and thereby consume more and save less. That is to say the correlation between income growth and savings is negative. This shows the theory is ambiguous about the relation between income growth and the savings rate.

Freidman (1957) developed the permanent income changes. The theory states that permanent income changes (shocks) are consumed and temporary income changes are saved. However, the empirical evidence is contradictory with some studies support the permanent income changes and others reject it.

2.1.2 Consumers income level and saving performance

Various economic literatures identify a large number of motives for household savings, most of them derived from two consumption theories: the permanent income hypothesis and the life cycle hypothesis. Schmidt-Hebbel *et al.* (1996) discuss the saving determinants in each specific theory (which are opposed as far as the sign of some determinants is considered) and how they are related to empirical findings. Among these motives, the most often recurred are the

precautionary behavior, life-cycle considerations, investment opportunities, the preference for smooth consumption, the need to accumulate resources for large purchases and the bequest reason. 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.

Keynesian aggregate demand models assign an important role to final consumption spending in enhancing the current economic growth rate; growth theories having at their base on (Harrod-Domar, 1939).

Keynes (1936) developed the absolute income hypothesis. The theory posits positive relationship between absolute income and saving. Such proposition is supported by much empirical evidence. This finding is consistent with the view that saving rise after income exceeds subsistence consumption. This finding challenges the recent revolution of microfinance institutions to mobilize micro-saving from the poor. The implication of this finding is for Financial Institutions to target the middle and high income groups for saving mobilization and reduce the pressure to mobilize micro saving from the poor.

According to (Solow, 1956) Positive change in saving rate may promote the growth rate. For that reason saving is one of the factors for economic growth, accumulated saving is the source for capital stock which leads to increase investment, output and more employment these would enhance economic growth and he suggested that savings affected the economic growth because higher savings led to capital accumulation, which in turn led to economic growth, moreover, low rate of savings, are identified as a serious constraint to sustainable economic growth.

Also (Solow-Swan, 1956) models prove the critical importance of saving in generating future economic growth through investment. Therefore, excessive consumption spending can counter low economic growth in the short-run but in the long-run the growth solution for any country crucially resides in adequate saving.

While, economic theory says credit access is expected to have several influences on savings: impatient consumers will be tempted to borrow and consume more in the present, hence save less; some current savers will reduce their saving since future needs can be financed more easily through credit; no change in saving will occur for the very patient and highly risk-averse savers

(Rogg, 2000). This implies that improvement in credit access is expected to impact negatively on saving. However, the study by Rogg (2000), where binary choice model (Probit model) was used, showed saving to be positively related to credit access. According to the International Monetary Fund (IMF) survey by Terrones (2005), improvement in availability of credit is one cause cited for decline in saving in many industrial countries.

Meanwhile Shem (2002) stated that, personal attributes include: individual level of monthly income; individual level of education; individual's age; gender; size of household and; major source of income. Institutional characteristics are: interest rate on loans; distance from financial institutions; collateral for loan; time required to process a loan; minimum balance requirement; loan repayment method; restrictions on loan use; loan repayment period, and; loan amount.

2.1.3 Consumers choice of saving

Access to savings services enables consumers to protect their money from demands of family and friends, keep a reserve to smooth consumption, monitor their funds and be confident about their safety, and invest in new activities once they have built up their savings. Financial institutions benefit from mobilizing savings to the extent that deposits can constitute a significant and relatively inexpensive source of funds to finance lending and other financial services. Additionally, savings services can help institutions build a relationship with their customers, possibly leading to greater demand for credit and other products, such as insurance and payment services. (Martin, 2013).

(Aregbeyen, 2012) stated that, the relevant theoretical expositions underpinning the study are the rational choice theory and competition theory. The rational choice theory provides useful insights on the choice or selection behavior of individual customer, while the competition theory explains how firms try to win customers patronage and loyalty through service excellence, meeting customers' needs and providing innovative products.

The choice theory otherwise referred to as rational choice theory or rational action theory is a framework for understanding and often formally modeling social and economic behavior. Rationality, which basically expresses the idea of wanting more rather than less of a good, is

widely used as an assumption of the behavior of individuals in microeconomic models. The theory, therefore, posits that patterns of behavior in societies reflect the choices made by individuals as they try to maximize their benefits and minimize their costs. In other words, people make decisions about how they should act by comparing the costs and benefits of different courses of action. Consequently, patterns of behavior develop within the society those results from those choices.

One explanation for employees' contradictory savings behavior is the common preference for instant gratification, which undermines long-term savings plans. When given a choice, people usually prefer smaller payoffs now to larger payoff later. For example, the idea of a tasty hamburger today is often more compelling than the concern for long term cholesterol level. This tendency leads people to essentially disregard the future when it requires sacrifices from them now. With respect to retirement planning, people pursue short-term happiness at the cost of long term financial security. (2007 Massachusetts Mutual Life Insurance Company)

In a narrow sense, saving generally means putting money aside, for example, by investing in a pension plan or putting money at the bank. In a broader sense, saving is typically used to refer to economizing, cutting costs, rescuing someone or something. Savings, on the other hand, may be defined as accumulated money put aside by saving (Mensah, 2004).

2.1.4 Evolution of saving institutions

The level of financial sector development, choice and availability of financial assets to suit savers represents another important factor in promoting savings. The expansion of bank branches and improving the accessibility to banking facilities will result in reducing the cost of banking transactions, and thus motivate individuals' savings. If financial institutions are not well organized and stable, savings will be kept in non-monetary terms such as real estate.

2.1.4.1 Rotating Savings and Credit Associations RoSCAs(Equub)

Rotating Savings and Credit Associations (Roscas) is an important informal financial institution in many parts of the world. happens to be one of the oldest saving institutions in the world (Gugerty, 2007), are associations formed by a group of people willing to make a regular

contribution to a fund which will be given to each member in whole or part on rotation basis (Ardener, 1964). It is an institution that aims at goal directed and planned savings yet fits into the pattern of the community (Geertz, 1962; Gugerty, 2007).

In Ethiopia, a country where it is not uncommon to find cooperative activities among the people (Engdawork, 1995), informal self-help institutions have existed for long in their own version. The Ethiopian version of RoSCA is called equb. The small equbs could be started within a group based on strong ties like friendship, business associates, school mates, or within the neighborhood. In large equbs, individuals that do not have close relationship might become members though each member needs to be known by at least some other members in the group, and their moral standing should be known by the community (Mauri, 1987).

Characteristics and types of RoSCA The following are the major characteristics of RoSCAs:

Membership: The number of participants in a given cycle of RoSCA could range from handful to several hundred (Ardener, 1964).

Members could be selected based on age, ethnic affiliation, occupation, religion or educational background, political affiliation or any given social tie (Ardener, 1964; Sandsör, 2010).

Contribution: The contribution of members, sometimes known as hands or shares, could be in the form of cash or kind or a combination. For this study we consider only those with cash contribution.

Transferability: The transferability of the funds in a given RoSCA depends on the agreement and consent of the members at the time of establishment or in due course.

The fund: Even though all members contribute fixed and equal amount throughout the life of a given RoSCA cycle, the advantages that they enjoy is not equal. At some point in a given cycle, all members will switch from a position of net saving to net debt or except those who collect the pot at the beginning and end of the cycle that will make them a net debtor and net saver in the whole life of the cycle respectively (Callier cited in Dejene, 1993).

Enforcing mechanism: Different enforcing mechanisms are being used depending on the base by which the RoSCA is established. Even if there is a possibility of excluding defecting members from future RoSCA cycles as a mechanism for enforcement, Anderson et al.(2009) argue that RoSCAs could never be sustainable unless there is an external or social sanctioning mechanism.

Based on the pot allocations system RoSCAs are classified into bidding, random (Sandsör, 2010;

Dagnelie and Lemay-Boucher, 2008; Besley et al., 1994; Ambech and Treich, 2003); fixed or pre-deterministic (Sandsör, 2010; Ambech and Treich, 2003); and decision RoSCA (Dagnelie and Lemay-Boucher, 2008).

The bidding RoSCA is characterized by the allocation of pots in a bid format. Bids could be made at the beginning for the whole life of the cycle or at the beginning of each period in the cycle (Sandsör, 2010; Dagnelie and Lemay-Boucher, 2008). The bid could take a premium or a discount format (Bouman, 1995). In a random RoSCA, members put a fixed amount of money into a pot periodically and then pots will be allocated randomly to one of the members (Besley et al., 1994). A lottery could be drawn to choose the pot winner to stick with the norm of fairness in the institution (Sandsör, 2010).

Ardener (1964) compares the advantage of joining RoSCAs with becoming a customer of banks or private money lenders. Because of the information asymmetry (Hansmann, 1999), RoSCAs are able to provide small scale credits that banks are not interested in. For the banks, it is not easy to assess the reliability of new customers. The RoSCA organizers are in a more favorable condition to do that which will make the transaction cost much less. In the case of money lenders, the interest rate is very high, sometimes more than 100%. In RoSCAs, however, it is very low in case it exists. The justification behind could be the low risk of default since the social enforcement mechanisms are very strong making participants hesitant for a long period before they raise their reputation in the community. This keeps the transaction cost very low.

2.1.4.2 Microfinance

Microcredit and microfinance are relatively new terms in the field of development, first coming to prominence in the 1970s, according to Robinson (2001) and Otero (1999). Prior to then, from the 1950s through to the 1970s, the provision of financial services by donors or governments was mainly in the form of subsidized rural credit programmes. These often resulted in high loan defaults, high losses and an inability to reach poor rural households (Robinson, 2001).

In the literature the terms micro credit and microfinance are often used interchangeably, but it is important to highlight the difference between them because both terms are often confused. Sinha (1998) states "micro credit refers to small loans whereas microfinance is appropriate where NGOs and MFIs supplement the loans with other financial services (savings, insurance,

etc). Therefore micro credit is a component of microfinance in that it involves providing credit to the poor, but microfinance also involves additional non-credit financial services such as savings, insurance, pensions and payment services (Okio credit,2005).

Micro-Finance Institutions (MFIs) are often defined in terms of the following characteristics: targeting the poor (especially the poor women); promoting small businesses; building capacity of the poor; extending small loans without collaterals; combining credit with savings; and charging commercial interest rates. MFIs are often innovative and flexible in their design and implementation (Dejene, 1998).

According to the UNCDF (2004) there are approximately 10,000 MFIs in the world but they only reach four percent of potential clients, about 30 million people. On the other hand, according to the Microcredit Summit Campaign Report (Microcredit Summit, 2004) as of December 31st2003, the 2,931 microcredit institutions that they have data on, have reported reaching “80,868,343 clients, 54,785,433 of whom were the poorest when they took their first loan”. Even though they refer to microcredit institutions, they explain that they include “programs that provide credit for self-employment and other financial and business services to very poor persons” (Microcredit Summit, 2004).

Initially, micro credit started in Ethiopia as a government and non-government organizations motivated scheme. Following the 1984/85 severe drought and famine, many NGOs star started to provide micro credit along with heir relief activities although this was on a limited scale and not in a sustained manner (IFAD 2001). The Government also sporadically provided loans largely for the purchase of oxen through its Rural finance Department of the Ministry of Agriculture and cooperatives. But these loans were not based on proper needs assessment and no mechanism was in place to monitor their effectiveness. In many cases, these loans were not to be repaid and might have fostered a culture of not repaying loans. (Getachewand Yishak,2005).

In fact, Microfinance has been defined as: - the means by which poor people convert small sums of money into large lump sums (Rutherford 1999). Microfinance services may be seen in terms of four main mechanisms:

Loans: which allow a lump sum to be enjoyed now in exchange for a series of savings to be made in the future in the form of repayment instalments.

Savings: which allow a lump sum to be enjoyed in future in exchange for a series of savings made now.

Insurance: which allows a lump sum to be received at some unspecified future time if needed in exchange for a series of savings made both now and in the future. Insurance also involves income pooling in order to spread risk between individuals on the assumption that not all those who contribute will necessarily receive the equivalent of their contribution.

Pensions: which allow a lump sum to be enjoyed as a specified and generally distant date in future in exchange for a series of savings made now.

Efficiency and productivity indicators are performance measures that show how well the institution is streamlining its operations. Productivity indicators reflect the amount of output per unit of input. These indicators reflect how efficiently an MFI is using its resources, particularly its assets and its Personnel. The Most common efficiency and productivity indicators includes: Personnel productivity, Average Outstanding Loan Size, Operating expense ratio & Cost per borrower.

2.1.4.3 Banks

Since bank is a financial institution that deals money and it's very vital for the country economic development, which is why the bank selection criteria is playing a important role for the customer that provides a better necessity and explore the factors to motivate more customers to select their banks (Parvin and Perveen, 2012). The issue on how consumers select their banks has been investigated by many researchers (for example: Boyd et al.,1994), and says that the economic environment nowadays is rapidly changing and become one of the important factors for financial institutions to determine the factors which is applicable for customer bank selection process. Lastly, by understanding the customers' banks selection criteria help the banks in identifying the appropriate marketing strategies to attract more customers as well as retain the satisfied customers (Aregbeyen, 2011).

Bank selection criteria refer to the bank services or image where the customers are aware of their importance in their selection of a bank for themselves (Janian, Kamaruddin & Hoe, 1998). This focus and access on how customers perceive the banks and their competitors in comparison

with various variables and attributes such as happiness, joy, cheerfulness and delightfulness that derived from a banking services and avoid bringing emotions of sadness, enraged and deceit to them. The competition in banking industry has become fierce with the emergence of technology such as ATM and mobile banking electronic banking; consumers are expecting more demand for financial services (Hinson, Osarenkhoe and Okoe, 2013). The bank selection criteria are considered by the customer groups that having a positive impact on a bank's market share due to the fierce competition among the banks nowadays (Rashid, 2012).

In addition, some researchers shows that decision of selecting a bank by customers also can be explain by range and quality of services provided by bank (Poh, 1996).When the services offer by bank is wide will attract attention from customers in decision of selecting a bank. However Gerrard and Cunningham (1999) claim that even sometime a bank offer wider range of product services not necessary will influence the result of a customer selecting a bank because of some customers would like to become multiple bank users rather than single bank users.

According to Denton and Chan (1991) definition of multiple bank users is a user having more than 2 bankers handle it personal account. From customers view is become multiple bank users might have extra advantage such as wider range of ATM, and have a better deal on financial loan.

Moreover, some researchers found that service quality and satisfaction will influence the decision of a customer switching a bank (Bitner, 1990; Zeithaml, Berry, and Parasuraman, 1996). According to Clemes, Mollenkopf and Burn (2000) in orderto fulfill satisfaction of customer it is very important to know the customer character and its can be classified into five categories which are intangibility, inserarability, hetrogenerity, perishability and ownership. This is because the view of the service quality from each of the category from different with each other andit will indirectly influence a customer selecting a bank.

2.1.5 External Variables

The external variables that might be relevant to savings are the current account deficit and terms of trade. It is supposed that an increase in the current account deficit (foreign saving) is associated to a partial decline in private saving, as foreign saving may tend to act as a substitute to domestic saving (Özcanet *al*, 2003).

Also (Ozcanet *al.*, 2003) said that, interest rate is considered as one of the financial variables that have an impact on saving. The relation between interest rates and savings is ambiguous theoretically because interest rate changes are subject to Finance potentially offsetting positive substitution and negative income effects.

2.2 Empirical Literature

Many empirical literature in the area of saving show a number of factors that can determine domestic saving behavior both in developed and developing countries. However, taking into account data constraints, this study has tried to examine the significance of the growth rate of income, interest rate, financial depth, government budget deficit, inflation, and current account deficit in determining domestic savings in Ethiopia.

Economic theories of inter temporal choice generally assume exponential discounting that implies a constant marginal rate of substitution among future periods. In other words, deciding between consumption in one month versus two months from now should be no different than deciding between consumption in 20 months versus 21 months, all else equal. However, a long literature suggests that many individuals suffer from a time inconsistency problem and do not discount the future exponentially (O'Donahue and Rabin, 1999; Laibson, 1997; Thaler, 1992, 1990; Lowenstein and Thaler, 1989).

Experimental evidence indicates that many individuals have preferences that reverse as the date of decision making nears. Psychological experiments suggest that preferences are roughly hyperbolic in shape, implying a high discount rate in the immediate future, and a relatively lower rate over periods that are further away (Ainslie, 1992; Lowenstein and Prelec, 1992). Commitment mechanisms that bind an individual to future actions or restrict individual choice in the future can overcome these inconsistencies.

Behavioral economics also suggests that individuals do not treat the components of their wealth as fungible, as the life-cycle theory implies. Instead, individuals divide their wealth into broad mental accounts—such as current income, current assets, and future assets—with differing marginal propensities of consumption for each account (Shefrin and Thaler, 1988). For example,

data from Japan show that the marginal propensity to consume out of income from predictable semi-annual bonuses is substantially lower than for regular income (Ishikawa and Ueda, 1984). 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. Touhamiet *al.* (2009) also investigate 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.

Bacha (1990), Otani and Villanueva (1990), in order to analyze the relationships between savings and economic growth used the ordinary least squares method (OLS). Their research proved that the higher the domestic savings rate (share of domestic savings in GDP), the higher the economic growth rate. Also research carried out by Kriekhaus(2002) in 32 countries indicates that higher level of domestic savings led to higher investment levels and thus contributed to higher rate of economic growth in analyzed countries.

The direction of the impact of each of the above individual attributes with respect to a priori expectations would vary. Defining monthly income as the disposable income of the household from all sources of economic activity before deducting loan repayments, it is expected to be positively related to the choice of services in Formal Financial Systems (FFS) (Shem, 2002).

It is also expected on a priori grounds to be positively related to savings in the FFS. According to Sameroynina (2004) who studied saving behavior among households in Russia and deduced that the marginal propensity to save out of income is positive. This concurs with economic theory where an increase in income is bound to lead to an increase in saving.

A study of some Asian countries by Lahiri (1989) indicated that the rate of growth of personal disposable income determines private saving, while, Schrooten and Stephan (2005) showed that per capita income positively influences saving. This is in agreement with the LCH. Studies by Lahiri (1989), Edwards (1996), Dayal-Gulati and Thimann (1997) and Loayza, Schmidt-Hebbel and Serven (1998) have proven that the share of working population relative to that of retired persons is positively related to saving. A factor related to dependency in the family is child's income share cohabiting with parents. A study of Netherlands and Italy by Alessie *et al.* (2004)

showed that child's income share has strong positive effects on household saving rate. This is interpreted to mean that the lower the dependency in a family the higher the saving rate. We would therefore expect a member of the household over those employed. Individual level of education (EDUC) is measured in terms of the years an individual has spent in formal education and is expected to improve the understanding of the FFS by individuals and hence their choice of services in the FFS. Moreover, individuals with higher levels of education would feel less intimidated by the institutional environment within FFS relative to others with lower level of education. A study by Bernheim and Garrett (1996) showed that saving rates increase with education.

The importance of savings as a catalyst in the economic development of less developed Countries (LDCs) is widely recognized by development economists (e.g., McKinnon 1973; Shaw 1973). While other ingredients might be equally important (e.g., education, economic attitudes, resource management), sustained economic development is generally believed to be difficult to maintain without savings. Considerable literature attention has ' therefore focused on how savings could be mobilized in LDCs to aid economic development (e.g., Adams 1978; Gurley and Shaw 1967).

Kendall, Mylenko, and Ponce (2010) estimate that there are only 0.9 savings accounts per person in the developing world, compared to 3.2 savings accounts per person in the developed world. Several empirical approaches have shown that poor people routinely accept savings accounts when these products are offered. Aportela (1999) finds that an expanded network of bank branches in rural Mexico has led to significantly higher average household savingsrates across regions.

For individuals, a plethora of market research studies estimate market demand using attitude surveys (e.g., Devaney2006). Dupas and Robinson (2012a), for example, in studying a village bank supported by Kenya Rural Enterprise Development Agency (an affiliate of the Kenyan MFI K-REP), argue that demand for savings services in Kenya is highest for women, who typically face greater savings constraints than men. Chowa (2006) reports similar findings for Uganda with respect to a mobile banking vehicle pilot project operated by Stanbic Bank.

Despite these findings, many financial service providers have continued to observe low rates of usage of the savings products made available in poor communities (see Ramji 2009 for a study of a financial inclusion program in India that suffered from typical low usage rates). In response, Deshpande (2006) has argued that low usage does not mean low demand, especially when the only products available are in the formal sector (i.e., those that rely on government recognition to enforce contracts, as opposed to those that rely on trust; see Zenger, Lazzarini, and Poppo 2001). It may simply be that more formal institutions cannot compete with less formal ones that do not face the same delivery channel and localization challenges, including distance from the client, understanding the client's local context and the ability to help illiterate clients gain access to a product. (For additional details on mobilization challenges, see "Section V: Operations.") Further, the number of people who use a given program may be low, but they may demand services relatively more intensively than in contexts where there is higher uptake. In a recent study by Dupas and Robinson (2012a), for example, 40 percent of market women surveyed in rural Kenya enrolled in a savings program that the researchers offered, even though it actually paid a negative real return. The clients' willingness to lose money slowly over time indicates how badly they wished to avoid sudden, total losses that might occur if they attempted to save without the assistance of the offered product.

Beyond physical danger, family members may often exert social pressure to access an individual's savings. Though family and friends represent an important source of informal assistance for the needy throughout the world, researchers have shown that social and familial networks can also pose a threat to savings. In an illustration of the danger that women in particular face from their husbands' demands on their incomes, an experiment in Kenya by Jakiela and Ozier (2012) concluded that women are often willing to conceal their incomes from their husbands, even though they cannot use the hidden money. This strategy "reduces their expected earnings" overall (see also Anderson and Baland 2000). Further, a study based on field observations of credit cooperatives in Cameroon (Baland, Guirkinger, and Mali 2011) suggests that family members who feel particularly threatened by less cautious spenders within a household will even take out a loan to signal being cash constrained, thus warding off pressure from the latter. Individuals everywhere are often their own worst enemies. A substantial literature supports the notion that, as in the developed world, would-be savers in the developing world have difficulty committing to setting aside funds for future consumption. Similar findings

have been reported throughout the world in many empirical studies. For example, a study by Ashraf, Karlan, and Yin (2006) of a commitment savings product at the Green Bank of Caraga, a rural bank in Mindanao in the Philippines, indicates the universality of the human tendency to deplete financial stocks prematurely. Such evidence indicates the need for more intensive financial education efforts to build the capabilities of poor people to effectively utilize savings services when these services are offered. A recent study commissioned by the Citi Foundation refers to a “capability gap,” recognizing that of the 500 to 800 million low-income consumers who have received access to finance, only about 110 to 130 million have received financial capability training of some sort (Deb and Kuzansky 2012).

Following endogenous growth theory, education has been included as a proxy for human development which increases the human productivity and capabilities, thereby increasing personal income as well as savings (Zhang et al., 2003). This is the indirect positive effect of education on saving through increased income. On the contrary, Kulikov et al. (2007) found that education as a human wealth ensures employability and stability of income and, hence, it can have negative impact on saving. Education can affect saving directly through financial literacy. Higher financial literacy also will result in higher saving (Browning & Lusardi, 1996). Financial literacy enable people to know the risk and return characteristics of different financial products and it also enable them to understand the complex procedures used in accessing financial products.

An institutional perspective suggests that external factors other than income and preferences may influence saving behavior, and low savings and asset accumulation by poor people might be explained in part by limited institutional saving opportunities. From this perspective, “asset accumulations are primarily the result of institutionalized mechanisms involving explicit connections, rules, incentives, and subsidies”(Sherraden, 1991). For the non-poor, these occur through housing- and retirement-related tax benefits, including deductions for home mortgage interest and property taxes, deferment and exclusion of capital gains on sales of principal residences, exclusions for employment-sponsored pension contributions and earnings, deferments for Individual Retirement Accounts and Keogh Plans, and employer contributions to employee pension plans. Because these mechanisms receive preferential tax treatment,

individuals who have access and greater incentives are more likely to participate. For example, people with higher marginal tax rates are more likely to participate in tax-deferred savings programs (Joulfaian & Richardson, 2001). The poor do not have the same access or receive the same incentives from institutions that promote and subsidize asset accumulation (Howard, 1997; Sherraden, 1991, 2001a). For example, the poor are less likely to have jobs with pension benefits; even if they do, they receive few or no subsidies because they have low or zero marginal tax rates and the tax benefits are not refundable.

Institutional perspectives are not new (e.g., Gordon, 1980; Neal, 1987), but they are not well specified. If we are making any contribution it is in taking a small step toward specifying what “institutions” mean in practical application. We have four major categories of institutional variables: (1) *access*, (2) *information*, (3) *incentives*, and (4) *facilitation* (Beverly & Sherraden, 1999). The first three are common and we have offered the fourth term “facilitation” to describe institutional arrangements where depositing is actually done *for* the participant, as in automatic payroll deduction, or occurs with some other form of assistance. Facilitation is a key feature of most contractual saving systems. More research is also needed to evaluate the effect of financial *information*, which is typically provided through some type of financial education. However some evidence exists. Bayer, Bernheim, & Scholz (1996) find that more frequent corporate-sponsored retirement seminars were associated with both higher participation and higher levels of contributions to 401(k) plans. Bernheim & Garrett (1996) report that participation rates were 12 percentage points higher for companies that offered financial education, and in firms that offered financial education, participation rates were 20 percentage points higher for employees who chose to attend. Education increased new savings of all types as a percentage of income by 1.7 percentage points, which is a large effect. In all cases, effects were greatest for people who saved little before they received education. In another study, Bernheim, Garret, & Maki (2001) report that financial education for teens increases savings rates in adulthood.

The net effect of *incentives (rates of return)* on saving is the subject of much debate. Neoclassical economic theory does not predict that an increase in the rate of return will necessarily increase saving. There are two key issues. First, changes in the rate of return on savings may simply result in the “reshuffling” of the form of assets, with no new saving. Second, for net savers, an increase in the after-tax rate of return has two contradictory effects.

Individuals may choose to save more because the price of current consumption increases relative to the price of future consumption (the substitution effect). On the other hand, with higher rates of return, individuals can save less and still enjoy the same amount of future consumption (the income effect). Empirical evidence regarding the effect of incentives on saving is mixed (see Engen, Gale, & Scholz, 1996; Hubbard & Skinner, 1996; and Poterba, Venti, & Wise, 1996 for reviews), but several studies suggest that individuals save less in the face of saving disincentives (Feldstein, 1995; Hubbard, Skinner, & Zeldes, 1995; Powers, 1998). It is also important to note that reshuffling is less likely for low-income households because they are less likely to have savings and other assets to reshuffle.

Direct tests of the proposition that *facilitation* promotes saving are rare, but anecdotal evidence regarding the effectiveness of direct deposit and payroll deduction is strongly suggestive. Also, the fact that home equity which accumulates from contractual saving is the primary form of wealth for most Americans (Davern & Fisher, 2001) provides important indirect evidence. One recent study provides strong, direct evidence that facilitation affects saving behavior. Madrian & Shea (2000) studied 401(k) participation and contribution rates in a company that began automatically enrolling employees in their 401(k) plan.⁸ Although none of the economic features of the plan changed, participation was significantly higher under automatic enrollment. Participants were also quite likely to stay with the default contribution rate and the default fund allocation. Other evidence on the importance of facilitation is the common practice of using the income tax withholding system as a kind of saving plan. Millions of households withhold more than the taxes they owe, planning for a lump-sum refund, despite the strong economic incentive (the cost of foregone earnings on the money) in saving through this mechanism.

Turning to each of the six institutional variables listed above, there is little empirical evidence regarding the effects of *access* on saving and asset accumulation, largely because it is difficult to disentangle the effects of access from the effects of unobserved individual characteristics.⁶ However, some researchers (Cagan, 1965; Carroll & Summers, 1987) have concluded that the very availability of institutionalized saving opportunities promotes saving by calling attention to the need for and benefits of saving.

An experiment by Dupas and Robinson (2012b) shows that, for example, produced evidence on the importance of physical safety, as access to a safe place to keep money increased health

savings in rural Kenya by 66 to 75 percent (though there types of savings, such as group-based models, performed even higher in this regard). Once funds are safe, individuals must exercise self-restraint, or “commitment” defined most often as an individual’s voluntary separation from their stored liquidity (for a full definition of the commitment challenge and its proposed solutions, see Innovations for Poverty Action 2012) in order to accumulate useful savings. Even though such community-based, member-controlled institutions do not participate in prudential supervision and deposit insurance schemes, Dupas and Robinson (2012b), Gugerty (2007), and Dagnelie and LeMay-Boucher (2008) all cite savings groups as particularly effective in helping poor people save. This is because these institutions provide a reliable social framework for commitment in which group accountability helps members’ mitigate their self-control problems.

On the other hand, employees work status and saving performance in the longer life expectancy can change life cycle behavior which leads to the longer working life and possible higher saving for retirement (Sinha, 1998 and Mosk,2010). Some empirical studies such as Sinha (1998), Muradoglu and Taskin (1996) shows that self employed household has consistent saving because they have fear of work uncertainty in the future whereas other studies such as Mosk (2010) show that the employed household has consistent saving because of their constant income. Therefore, household work statuses are directly affect household saving in terms of income certainty.

Individual’s age (AGE) is expected to be negatively correlated with saving, such that, older people save less and the younger save more. Incorporating the fact that negative effect of dependency rate on household saving. Family size is however not a good proxy for dependency levels and this study prefers using ratio of unemployed younger people who earn little or no income save little or none (often net borrowers) implies that actual relationship between age and saving is non-linear. This is confirmed by a study of United Kingdom and United States of America by Attanasio (1997) that showed a curvilinear relationship (hump-shaped curve).

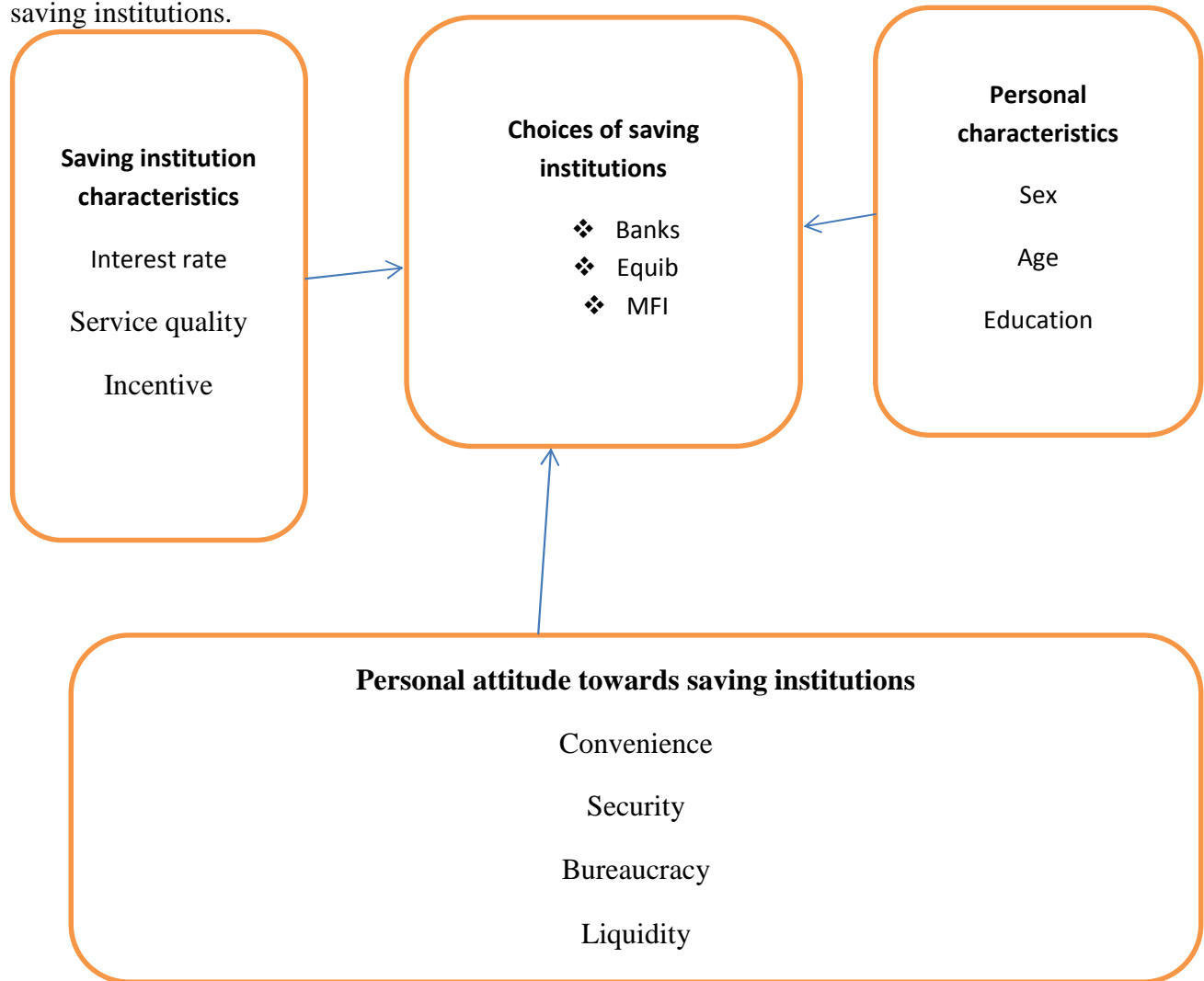
Besides, few studies assess the determinants of saving at the individual level generally due to the lack of data. Using recent econometric techniques, Carpenter and Jensen (2002) and Kulikov, et al.(2007) identify how household characteristics affect saving behavior, in Pakistan and Estonia respectively. 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 household income allows 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 markets have not significant effect on the household saving behavior; the durable goods possession (in particular cars) has a negative impact on the saving rate.

From the reviewed literature, there has been no research done to investigate the behavior of private saving in Ethiopia. Therefore, examining the macroeconomic factors that determine the private savings rate in Ethiopia by including the possible explanatory variables will provide policy makers to formulate policies that enhance private savings rate in Ethiopia.

2.3. Conceptual Framework

The study identifies three main saving institutions in Ethiopia. Based on the theoretical and empirical literature the study identifies that sex of the income earner, age of income earner and its education are personal characteristics which could affect consumer's choices to different saving institutions.



Source: Researchers own mapping

Figure 2.1. Conceptual framework

As the above figure shows, on the other hand saving institutions offers is also another determinant factor for consumer choices to differ rent saving institutions such as interest rate and incentives. Lastly, consumer's attitude toward different saving institutions such as on their convenience, security, liquidity and bureaucracy could affect on their choice decisions.

CHAPTER THREE

3. RESEARCH METHODOLOGY

3.1. Background of Ethiopian Postal Service Enterprise

Ethiopian Postal Service Enterprise was established on March 9, 1894 to give formal postal service throughout the country. Since it is governmental agency, from 2009 it's become an Enterprise under by proclamation number 165/2009 and performing as Governmental enterprise under proclamation number 25/1992. It's structured under Ministry of Communication and Information Technology and its subordinate to The Board. BPR implementation it established 7 cores and 11 support process. Currently EPSE has 1,194 permanent and 1,281 temporary workers. All over the country EPSE have 1,139 post office branches. Head office have around 590 employees around 300 are permanent (EPSE, 2010).

3.2. Research Design

In order to undertake this study, the researcher will employ cross sectional data which involve quantitative techniques. The intention is that the researcher feels that those which left from quantitative are triangulated with qualitative information. More specifically, descriptive survey design from the quantitative approach is going to be employed. In addition, qualitative data is going to be employed to substantiate the findings obtained via the quantitative survey.

The relevant data sources for this study both primary and secondary data sources. Structured questionnaire and interview were conducted to the selected sample individuals. The secondary data will be collected from MFI and commercial banks to understand households saving.

3.3. Sampling Technique and Sampling Size Determination

Purposely the study chooses people who are working at Ethiopia Postal Service Enterprise. The company is chosen due to the fact that it accommodates people who have different level of standard of living. Then, purposive snowball sampling technique was applied to select sample from employee of the enterprise which will be consider as consumers in this study who happened to save in different institutions . Thus, the data was collected from the consumers who have different level of income and works in Ethiopia Postal Service Enterprise, which is found in Addis Ababa. There are 300 people who are working at Ethiopia Postal Service Enterprise. To choose sample from the population, the study uses Yemane (1976) formula for sample selection:

$$n = \frac{N}{1 + Ne^2}$$

n is sample size, N is population and e is margin of error which is set to 5% with the above formula, the sample will be 120 individuals. And, the questionnaire will be distributed proportionally to the three income category (low, middle and high income earner) and within each income category the sample will be distributed randomly.

Table 3.1: Sample Selection

Income category	Sample Population	Sample selected
Low	200	68
Middle	80	42
High	20	10
Total	300	120

3.4. Method of data analysis

Available data of this research will be analyzed through different ways. The quantitative data will be analyzed using the descriptive statistics (frequency, percentage and mean) and using Multinomial logit model.

The non linear relationship between independent and dependent variable is given as follows:

$$Y_i = S_0 + S_i X_i$$

Where, Y_i is consumer choices for different financial institution: ROSCA, Bank, Home save and MFIs. Whereas X 's are independent variables: sex, age, income, education, interest rate, convenience, service quality, security and incentive.

Table 3.2: Variable description

Independent variables	Variable description	Expected sign to ROSCA	Expected sign to Banks	Expected sign to MFI
Sex	Dummy (1 for male 0 for female)	-	+	-
Age	continuous	+	-	-
Income	continuous	-	+	+
Education	continuous	-	+	-
Interest Rate	continuous	-	+	+
Convenience	Categorical	+	+	-
Service quality	Dummy	-	+	-
Security	Dummy	-	+	+
Incentive	Dummy	+	+	+
Bureaucracy	Dummy	+	+	-
Liquidity	Dummy	-	+	-

- Dependent variable: consumer choices for different financial institution: ROSCA (Equib), Bank, Corporation and MFIs.

CHAPTER FOUR

4. RESULTS AND DISCUSSION

This chapter discusses the main findings from the descriptive and econometrics analysis on the relationship between choices of saving institutions and its determinants. The paper used 120 respondents from Ethiopian postal corporation to answer the research question. The study used both descriptive and econometrics analysis to answer the research questions.

4.1 The descriptive analysis

This part presents main findings on the relationship between choices of saving institutions and some important variables which are supposed to affect household's choice decision at Ethiopian postal Service Enterprise. The following tables depict the descriptive statistics for the main variables used in the discussion part.

4.1.1 Summery statistics for continuous variables

The summery statistics for continuous variables for 120 respondents is presented in the following table. The result shows that the mean income of respondents is 3889, mean of number of dependent member of households is 3, average household sample size is 4, average saving is 1630. The result from the standard of deviation shows that, there is high deviation in standard of deviation for income variable, and which is followed by saving variable. This implies that there is high income inequality within the corporation.

Table 4.1: Summery statistics for continuous variables

Variables	mean	Standard Deviation	minimum	maximum
Income	3889.283	3387.18	0	12000
Saving	1630	1443.304	0	5000
Number of dependent	2.941667	1.317598	1	7
Household Size	3.725	1.57161	1	8

Source: Own computation

4.1.2 Summery statistics for categorical variables

Below, the study presents frequencies and percentiles for the categorical variables.

Marital status: From the sampled respondents 86% (104) of them are married and the rest 14% (16) are not married. From many studies it has been found that married people save more than unmarried people. The main reason for this assertion is that, those married people prefer to save to cover precautionary savings that they might face in the upcoming days.

Table 4.2: Summery statistics for marital status

Variables	Freq.	Percent %	Cum.
Single	16	13.33	13.33
Married	104	86.67	100.00
Total	120	100 %	

Source: Own computation

Education: From the total 120 respondents, 47% of them have degree and above qualification and those with a grade of less than 8 have a lower share (25%). This implies that people with more education tend to use bank more often than those with lower educational background.

Table 4.3: Summery statistics for Education

Variables	Freq.	Percent %	Cum.
Below 8 grade	30	25.00	25.00
Above 8 grade but below degree	33	27.50	52.50
Above degree	57	47.50	100.00
Total	120	100.00	

Source: Own computation

4.1.3 Saving characterization for the sampled respondents

Saving is very important for the development of a country. Without saving investment and hence growth of an economy is unthinkable. To this end, government and hence, commercial bank of Ethiopia engaged in an intensive promotion to increase the demand deposit of the bank.

Respondents were asked whether they are saving or not. From the sampled respondents, 102 of them (85%) responded that they are saving in each month on average.

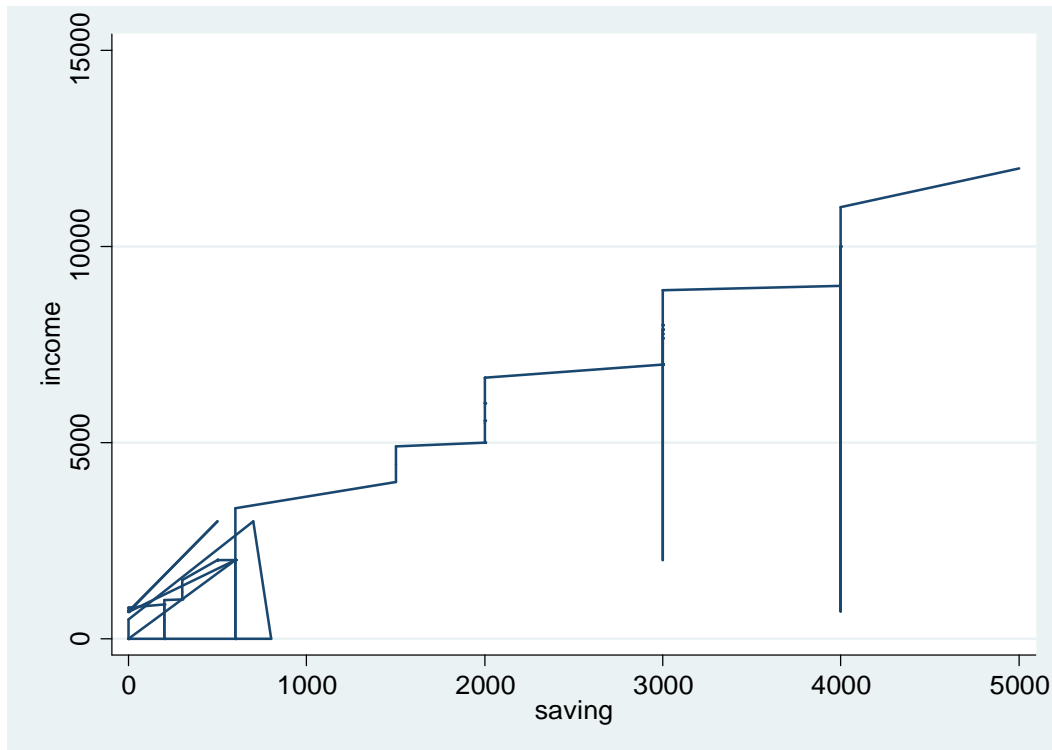
Table 4.4: Summery statistics for saving

Do you save	Freq.	Percent %	Cum.
No	18	15.00	15.00
Yes	102	85.00	100.00
Total	120	100.00	

Source: Own computation

It has also found that there is a positive relationship between saving and income. When household income increases saving is also increases. The following graph shows this relationship.

Fig: 4.1. Relationship between saving and income



Source: Own computation

Those respondents were also asked which institution they prefer to save their money. It is evidenced that, all respondents who chooses banks to save their money are active saver. Out of 59 respondents who choose Equib to save their money, only 52 of them are saving. For cooperatives 9 individuals chooses to save their money but only 2 of them are active saver.

Table 4.5: saving and decision where to save

Variables	Do you save		Total
	Yes	No	
Bank	34	0	34
Equib	52	7	59
MIF	14	5	19
Cooperatives	2	6	8
Total	102	18	120

Pearson Chi2(3) = 30.9514 Pr =0.000

Source: Own computation

4.2. The relationship between choices of saving institution and demographic and behavioral variables

4.2.1 Choices and Education

Generally speaking, it is clear that education matters for saving behavior of households. The result shows that from the total respondents 30 of them have a schooling of below 8 grade and 57 respondents have degree and above. Regarding to where to save, those with higher educational attainments prefer to save their money at bank while those with lower educational attainments prefer to save their money in Equib and cooperatives. Besides, those with middle educational achievements prefer to save at MFI. This relationship is significant at 99 percent of significant level as it can be evidenced by the chi2 test.

Table 4.6: choice and education

Variables	Below 8 grade	Above 8 grade below degree	Above degree	Total
Bank	1	4	29	34
Equib	23	19	17	59
MIF	2	8	9	19
Cooperatives	4	2	2	8
Total	30	33	57	120

Pearson Chi2(6) = 35.2662 Pr =0.000

Source: Own computation

4.2.2 Choices and Marital status

More married respondents prefer to use Equib than other financial institutions and followed by bank. This may be due to the fact that since married people have a number of commitments, they would prefer an institution which could give them a better loan offer. This relationship is significant at 90 percent of significant level as it can be evidenced by the chi2 test.

Table 4.7: Choices and Marital status

Variables	Marital status		Total
	Single	Married	
Bank	4	30	34
Equib	5	54	59
MIF	6	13	19
Cooperatives	1	7	8
Total	16	104	120

Pearson Chi2 (3) = 6.7562 Pr =0.080

Source: Own computation

4.2.3 Choices and Gender

The findings showed that, male prefer banks than female and female prefer Equib than male. Besides, female are also chooses MFI compared to males. On the other hand, males prefer cooperatives than female. This may be the case in our country situation as males engaged in cooperatives to strengthening their social relationship; and this relationship is also significant at 99% of significance level.

Table 4.8: Choices and Gender

Variables	Gender		Total
	Female	Male	
Bank	10	24	34
Equib	30	29	59
MIF	14	5	19
Cooperatives	1	7	8
Total	55	65	120

Pearson Chi2 (3) = 13.8074 Pr =0.003

Source: Own computation

4.2.4 Choices and Accessibilities

Out of 34 respondents who chooses banks 20 of them believes that bank is accessible and 14 of them is not. This implies that, most of them who believe that it is accessible are choosing bank to save their money. Similarly, out of 8 individuals who chooses cooperative to save their money, all of them believe that cooperative is accessible which implies that accessibility tend them to choose cooperative. The relationship between accessibility and choice has found to be significant at 95% significant level.

Table 4.9: Choices and Accessibilities

Variables	Accessibility		Total
	Accessible	Not Accessible	
Bank	20	14	34
Equib	37	22	59
MIF	8	11	19
Cooperatives	8	0	8
Total	73	47	120

Pearson $\chi^2(3) = 8.0926$ Pr = 0.044

Source: Own computation

4.2.5 Choices and Safety

Out of 34 respondents who chooses banks 26 of them believes that bank is safe and 8 of them is not. This implies that, most of them who believe that it is safest are choosing bank to save their money. Similarly, out of 8 individuals who chooses cooperative to save their money, all of them believe that cooperative is safest which implies that safety tend them to choose cooperative. However, the relationship between safety and choice has found to be insignificant.

Table 4.10: Choices and Safety

Variables	Safety		Total
	Safety	Not Safety	
Bank	26	8	34
Equib	39	20	59
MIF	11	8	19
Cooperatives	8	0	8
Total	84	36	120

Pearson $\chi^2(3) = 5.8592$ Pr = 0.119

Source: Own computation

4.2.6 Choices and Service quality

Out of 34 respondents who chooses banks 14 believes that bank has quality of service and 20 of them is not. This implies that, most of them who believe that it has no quality and they didn't choose bank. Similarly, out of 8 individuals who chooses cooperative to save their money, only 2 of them believe that cooperatives has good quality. This indicates that, for all saving institution quality is the major problem and which is discouraging saving. The relationship between service quality and choice has found to be significant at 99% significant level.

Table 4.11: Choices and Service quality

Variables	Quality of service		Total
	Quality	Not Quality	
Bank	14	20	34
Equb	13	46	59
MIF	15	4	19
Cooperatives	2	6	8
Total	44	76	120

Pearson Chi2(3) = 20.8330 Pr =0.000

Source: Own computation

4.2.7 Choices and liquidity

Out of 34 respondents who chooses banks 15 believes that bank is more liquid and they can get there many whenever they need it and 19 of them is not. This implies that, most of them who believe that it is not liquid and they didn't choose bank. Similarly, out of 8 individuals who chooses cooperative to save their money, 6 of them believe that cooperatives has good liquidity. This indicates that, for all saving institution liquidity is the major problem and which is discouraging saving. All in all, it is possible to say that bank is more liquid than others. The relationship between liquidity and choice has found to be significant at 99% significant level.

Table 4.12: Choices and liquidity

Variables	Changing asset to cash easily		Total
	More liquid	Less liquid	
Bank	15	19	34
Equb	7	52	59
MIF	5	14	19
Cooperatives	6	2	8
Total	33	87	120

Pearson Chi2 (3) = 21.0104 Pr =0.000

Source: Own computation

4.2.8 Choices and interest rate

Out of 34 respondents who chooses banks 27 believes that bank has good interest rate and 7 of them is not. This implies that, most of them who believe that it has good interest rate tend to choose bank to save their money. Similarly, out of 8 individuals who chooses cooperative to save their money, only 2 of them believe that cooperatives has good interest rate. The relationship between interest rate and choice has found to be significant at 99% significant level.

Table 4.13: Choices and interest rate

Variables	Interest rate		Total
	There is interest	No interest	
Bank	27	7	34
Equb	1	58	59
MIF	15	4	19
Cooperatives	2	6	8
Total	45	75	120

Pearson Chi2 (3) = 72.2143 Pr =0.000

Source: Own computation

4.2.9 Choices and Prizes

Out of 34 respondents who chose banks 27 believed that bank prize incentive and 7 of them is not. This implies that, most of them who believe that it has prize incentive tend to choose bank to save their money. Similarly, out of 8 individuals who chooses cooperative to save their money, only 2 of them believe that cooperatives has prize incentive. The relationship between prizes and choice has found to be significant at 99% significant level.

Table 4.14: Choices and Prizes

Variables	Prizes		Total
	Yes	No	
Bank	27	7	34
Equb	1	58	59
MIF	7	12	19
Cooperatives	2	6	8
Total	37	83	120

Pearson Chi2 (3) = 61.5610 Pr =0.000

Source: Own computation

4.2.10 Choices and possibilities of getting loan

Out of 34 respondents who chooses banks 10 believes that they are choosing bank since they believe that they will get loan and 24 of them is not. This implies that, possibility of getting loan is not a reason for them to choose bank. Similarly, out of 8 individuals who chooses cooperative to save their money, 6 of them believe that cooperatives will give them loan. The relationship between possibilities of getting loan and choice has found to be significant at 99% significant level.

Table 4.15: Choices and possibilities of getting loan

Variables	Possibilities of getting loan		Total
	Yes	No	
Bank	10	24	34
Equb	43	16	59
MIF	15	4	19
Cooperatives	6	2	8
Total	74	46	120

Pearson Chi2 (3) = 21.1048 Pr =0.000

Source: Own computation

4.2.11 Choices and strengthening friendship

Out of 34 respondents who chooses banks all of them are not choosing bank to strengthening their friendship. However, this comes true for Equib where 43 out of 59 are engaged or choose Equib to strengthening their friendship. The relationship between strengthening friendship and choice has found to be significant at 99% significant level.

Table 4.16: Choices and strengthening friendship

Variables	Strengthen friendship		Total
	Yes	No	
Bank	0	34	34
Equib	43	16	59
MIF	4	15	19
Cooperatives	6	2	8
Total	53	67	120

Pearson Chi2 (3) = 53.8236 Pr =0.000

Source: Own computation

4.2.12 Choices and friend pressure

Out of 34 respondents who choose banks 7 of them preferred by friend pressure and this number is much higher for Equib (38). The relationship between friend pressure and choice has found to be significant at 99% significant level.

Table 4.17: Choices and friend pressure

Variables	Friends pressure		Total
	Yes	No	
Bank	7	27	34
Equib	38	21	59
MIF	10	9	19
Cooperatives	6	2	8
Total	61	59	120

Pearson Chi2 (3) = 18.6875 Pr =0.000

Source: Own computation

4.2.13 Choice and culture

Out of 34 respondents who choose banks for 13 of them choosing bank is like a culture and this number is much higher for Equib (45). The relationship between culture and choice has found to be significant at 99% significant level.

Table 4.18: Choices and culture

Variables	Cultural		Total
	Yes	No	
Bank	13	21	34
Equib	45	14	59
MIF	5	14	19
Cooperatives	2	6	8
Total	65	55	120

Pearson Chi2 (3) = 23.7654 Pr =0.000

Source: Own computation

4.2.14 Choices and summary of saving

Those people who choose bank have the highest average saving and the lowest one is for MFI. Those who are saving at the bank are also the higher income earner as it is depicted in the following table. Even though, there is saving by people who are saving at bank, the variation or standard of deviation is lower than Equib.

Table 4.19: Choices and summary of saving

Variables	Summary of saving		
	mean	Standard Deviation	Freq.
Bank	3500	564.07607	34
Equib	1240.678	900.21427	59
MIF	100	179.50549	19
Cooperatives	187.5	348.20971	8
Total	1630	1443.3039	120

Source: Own computation

4.2.15 Choices and summary of income

Average and deviation income for those who are using banks are higher than those who are choose other financial institutions.

Table 4.20: Choices and summary of income

Variables	Summary of income		
	mean	Standard Deviation	Freq.
Bank	7321.2941	3162.5979	34
Equib	3396.8814	2342.6188	59
MIF	730.21053	726.07886	19
Cooperatives	437.50	1050.085	8
Total	3889.2833	3387.1798	120

Source: Own computation

4.3 Ranking institutions based on factors

Respondents were asked to rank saving institutions with different criterion which are presented here follows:

4.3.1 Ranking of saving institutions by Accessibility

Equib is the most accessible saving institution with a response of 35% and bank followed with a second rank. The smallest one is MFI with 2.5%.

Table 4.21: Ranking of saving institutions by Accessibility

Rank for safety	Freq.	Percent %	Cum.
Bank	109	90.83	90.83
Equib	11	9.17	100.00
Total	120	100.00	

Source: Own computation

4.3.2 Ranking of saving institutions by Safety

Regarding to safety, bank is the most safety one with 91% and followed by Equib.

Table 4.22: Ranking of saving institutions by Safety

Rank for safety	Freq.	Percent %	Cum.
Bank	109	90.83	90.83
Equib	11	9.17	100.00
Total	120	100.00	

Source: Own computation

4.3.3 Ranking of saving institutions by Efficiency

Based on efficiency, bank has the largest response rate (62%) and followed by Equib (36%).

Table 4.23: Ranking of saving institutions by Efficiency

Rank for Efficiency	Freq.	Percent %	Cum.
Bank	75	62.50	62.50
Equib	45	37.50	100.00
Total	120	100.00	

Source: Own computation

4.3.4 Ranking of saving institutions by strengthening friendship

In terms of strengthening friendship and social closeness, Equib takes the lion share (80%) and followed by cooperatives. The rest financial institutions have not a vote with this criterion.

Table 4.24: Ranking of saving institutions by strengthening friendship

Rank for strengthening friendship	Freq.	Percent %	Cum.
Bank	97	80.83	80.83
Equib	23	19.17	100.00
Total	120	100.00	

Source: Own computation

4.3.5 Ranking of saving institutions by Liquidity

Based on liquidity, or the ability to change your deposited money in cash form, a bank has the lion share with 95% responses and followed by cooperatives. For the case of Equib and MFI, you need to wait certain amount of periods.

Table 4.25: Ranking of saving institutions by Liquidity

Rank for liquidity	Freq.	Percent %	Cum.
Bank	114	95.00	95.00
Equib	6	5.00	100.00
Total	120	100.00	

Source: Own computation

4.3.6 Ranking of saving institutions by Interest rate

In this criterion, bank has full response and the rest institutions do not have response. Hence, this implies that bank is preferable for its interest bearing deposits.

Table 4.26: Ranking of saving institutions by Interest rate

Rank for interest rate	Freq.	Percent %	Cum.
Bank	120	100.00	100.00
Total	120	100.00	

Source: Own computation

4.3.7 Ranking of saving institutions by Prizes

Based on prizes, respondents responded that, bank takes the full responses with 100%.

Table 4.27: Ranking of saving institutions by Prizes

Rank for interest rate	Freq.	Percent %	Cum.
Bank	120	100.00	100.00
Total	120	100.00	

Source: Own computation

4.3.8 Ranking of saving institutions by Possibilities of getting loan

Based on the criterion of possibilities of getting loan, respondents gave the highest share for Equib(38) and followed by MFI(24%). The lowest with this criterion is bank, this may be due to its collateral requirement.

Table 4.28: Ranking of saving institutions by Possibilities of getting loan

Variables	Rank for possibilities of getting loan		
	Freq.	Percent %	Cum.
Bank	9	7.50	7.50
Equib	46	38.33	45.83
MIF	29	24.17	70.00
Cooperatives	36	30.00	100.00
Total	120	100.00	

Source: Own computation

4.4 Challenging factors

Respondents were also asked to list the challenging factors in their saving decision and saving institution choices. The following are some of the factors identified from the survey.

4.4.1 Interest rate

Around 70% of respondents replied that, low interest is not a challenging factor for their decision to save or not or for the choice of financial institutions.

Table 4.29: Interest rate

Low interest rate is a problem	Freq.	Percent %	Cum.
No	84	70.00	70.00
Yes	36	30.00	100.00
Total	120	100.00	

Source: Own computation

4.4.2 Accessibility

Similar with the case of interest rate, accessibility is not a challenging factor for their decision to save or for decision to choose financial institutions.

Table 4.30: Accessibility

Accessibility is a problem	Freq.	Percent %	Cum.
No	96	80.00	80.00
Yes	24	20.00	100.00
Total	120	100.00	

Source: Own computation

4.4.3 Liquidity

Around 80% of respondents replied that, liquidity is not a challenging factor for their decision to save or not.

Table 4.31: Liquidity

Liquidity is a problem	Freq.	Percent %	Cum.
No	98	81.67	81.67
Yes	22	18.33	100.00
Total	120	100.00	

Source: Own computation

4.4.4 Absence of incentives

Unlike the previous suspected challenging factors, absence of incentive is one of the challenging factors that inhibited in financial institutions for their saving and choice of saving institution decision making behavior. About 85% of respondents believe that, absence of incentives like prizes is the major challenging factor in their decision.

Table 4.32: Absence of incentives

Absence of incentives is a problem	Freq.	Percent %	Cum.
No	17	14.17	14.17
Yes	103	85.83	100.00
Total	120	100.00	

Source: Own computation

4.5 Correlation analysis

The correlation analysis is aiming to see the extent of strength or weakness relationship among variables. A correlation approach to 1(-1) shows a strong correlation and the one approaches to 0 shows weak relationship. Correlation analysis could have three important advantages. First, it tells whether the relationship between the dependent variable is positive or negative. Second, it tells whether the relationship is strong or not. Third, it tells about whether there is multicollinearity problem or not.

4.5.1 Correlation between choice and saving specific variables

The interpretation of correlation for multinomial logit is a bit tricky as the choice variable is categorical (where bank=1, Equib=2, MFI=3 and cooperatives=4). Hence, the positive values are in favour of the largest number (MFI or cooperatives) and the negative value is in favour of the lowest number (bank). The correlation table below shows that prizes and interest rate are negatively related with the choices of cooperatives, Equib and MFI. However, for all the correlations are very weak .

Table 4.33: Correlation between choice and saving specific variables

Variables	Choice	Accessibility	Safety	Qs	Liquidity	Interest	Prizes	PGLL
Choice	1.0000							
Accessibility	0.0688	1.000						
Safety	0.0065	-0.1527	1.0000					
Qs	0.095	-0.0272	-0.1057	1.0000				
Liquidity	0.0383	0.0354	-0.0041	0.1510	1.0000			
Interest	-0.1713	-0.1190	0.0563	0.1250	0.1012	1.0000		
Prizes	-0.3497	-0.0558	0.0827	0.1286	0.2758	0.6010	1.0000	
PGLL	0.3337	0.0345	-0.0299	-0.0403	-0.2054	-0.2036	-0.2901	1.0000

Source: Own computation

4.5.2 Correlation between choices and demographic variables

A higher correlation has been detected between saving and income with choices. This implies that, for those households who choose bank have a higher income and saving, which was also already discussed in the descriptive statistics of section 4.1.5. For other variables, the correlation is weaker.

Table 4.34: Correlation between choices and demographic variables

Variables	Choice	Gender	Age	Income	Saving	Number d.	h h size	Education
Choice	1.0000							
Gender	-0.1101	1.000						
Age	-0.5034	0.5144	1.0000					
Income	-0.6809	0.0263	0.5144	1.0000				
Saving	-0.7973	0.1169	0.7086	0.8260	1.0000			
Number d.	0.3023	-0.0409	-0.1570	-0.1831	-0.2699	1.0000		
h h size	-0.2197	-0.0334	0.0907	0.1209	0.0344	0.2925	1.0000	
Education	-0.3042	0.0687	0.2930	0.3680	0.4476	-0.2972	-0.1140	1.0000

Source: Own computation

4.6 Econometrics Analysis

This paper is aiming to see the determinant variables for households choices of different saving institutions by taking the case of Ethiopian postal corporation using 120 sampled respondents. The study has done two regressions: the first regression is to identify major determinants for household's decision to save or not using logit model and second regression households decision where to save their money using multinomial logit model.

4.6.1 Determinants of saving

Here, the dependent variable, saving, is a dummy variable and hence, the study uses logit model since it has two advantages over the probit model. First, the odds ratio interpretation of logit model makes more interesting than probit model (Green, 1998). Second, probit model is more appropriate for latent variable while our dependent variable is not latent by its nature. The study uses income, number of dependent, hhsz, marital status and education as independent variables. The regression result is presented below.

Table 4.35 Logit regression for the determinants of saving

Iteration 0 : log likelihood = -81.822553
 Iteration 1 : log likelihood = -40.05545
 Iteration 2 : log likelihood = -38.579382
 Iteration 3 : log likelihood = -38.549647
 Iteration 4 : log likelihood = -38.549579
 Iteration 5 : log likelihood = -38.549579

Logistic regression

Number of obs = 120
 LR chi2 (6) = 86.55
 Prob > chi2 = 0.0000
 Pseudo R2 = 0.5289

Log likelihood = -38.549579

Save	Coefficient	Std. error	Z	P > Z	[95% Conf. Interval]	
Income	.0005297	.0001337	3.96	0.000	.0002678	.0007917
Number of dependent	-.959276	.3281061	-2.92	0.003	-1.602104	-.3159514
Household Size	-.1821165	.2574811	-0.71	0.479	-.6867702	.3225372
Marital status	2.369921	1.178772	2.01	0.044	.0595703	4.680271
Education						
2	-1.519387	.9463404	-1.61	0.108	-3.37418	.3354064
3	-2.828704	.9217251	-3.07	0.002	-4.635252	-1.022156
_Cons	1.401414	1.464289	0.96	0.339	-1.468539	4.271367

Source: Own computation

As we can see from the above regression table, all independent variables together are significantly affects the dependent variable which is represented by Prob> chi2 which is less than 1% and concluded that all independent variables together are determinant factors. The PesudoR2 measure is around 52% which is higher than the standard value of 50% and it implies that independent variables have the power to explain the dependent variable. Regarding to individual significant level, income, number of dependent, marital status and education are significant. The above regression model can be written as follows:

$$\frac{P(\text{saving} = 1)}{P(\text{notsaving} = 0)} = S_0 + S_1 \text{income} + S_2 \text{Numdep} + S_3 \text{MS}_3 + S_4 \text{ED}_1 + S_5 \text{ED}_2, \dots \text{Eq (1)}$$

Before the discussion part, post estimation test is presented to be sure that the selected model is consistent and efficient. The study undertakes post estimation tests of multicollinearity test.

Table 4.36 Multicollinearity test

Variables	VIF	1/VIF
Income	3.65	0.273662
Number of dependent	6.09	0.164150
Household Size	7.96	0.125646
Marital status	5.89	0.169730
Education		
2	1.78	0.562998
3	2.61	0.383245
Mean VIF	4.66	

Source: Own computation

multicollinearity test which checks if there is correlation among independent variables or not. The VIF test result shows 4.36 which is much lower than the standard value of 10. Hence, there is no multicollinearity problem.

4.6.2 Discussion and interpretation of coefficients

The econometrics result on table 4. 36 Shows that four independent variables affect the decision to save or not: income, number of dependent, marital status and education.

4.6.2.1 Income: affects saving decision positively and which is significant at 1% of significant level. The interpretation of the coefficient is, for a one birr increase in income, the log odds of saving (versus not saving) increases by 0.0005. Income is obviously has a positive effect

on saving. However, the increase in saving due to increase in income is marginal is due to the fact that the increment in income is also marginal and which is not enough to push saving.

4.6.2.2 Number of dependent: affects saving negatively and which is significant at 1% of significant level. The interpretation of the coefficient is, for a one person increase in dependent household member, the log odds of saving (versus not saving) decrease by .9590276.

4.6.2.3 Marital status: affects saving decision positively and which is significant at 5% of significant level. The interpretation of the coefficient is that being married increase the log odds of saving by 2.369921 (relative to defaulting). Married people save more than unmarried since they have a number of commitments to lead their family.

4.6.2.4 Education (3, above degree): having more than first degree education versus schooling below 8 grades, decreases the log odds of saving by 2.828704. Those who are more educated are not saving more may be because of the fact that, they give more value for leisure as well.

4.7 Determinants for choices of saving institutions

The aim of this regression is in order to see the major determinants for household's choices of different saving institutions, specifically Banks, Equib, MFI and Corporations. Due to the nature of the data, the paper used multinomial logit model since independent variables are not choice variant both conditional logit and mixed logit model didn't fit with our data. The regression result is presented below.

Table 4.37: Households choices for different saving institution:

Multinomial Logistic regression

Number of obs = 120

LR chi2 (15) = 181.75

Prob > chi2 = 0.0000

Pseudo R2 = 0.6425

Log likelihood = -50.57444

	Save	Coefficient	Std. error	Z	P > Z	[95% Conf. Interval]	
1	Choice	(base outcome)					
2	Safety	-1.326429	1.032624	-1.28	0.199	-3.350334	.697477
	Accessibility	.8890685	.9284444	0.96	0.338	-.9306491	2.708786
	Interest rate	-5.311929	1.381746	-3.84	0.000	-8.020101	-2.603757
	Possibilities of getting loan	3.650471	1.013844	3.60	0.000	1.663372	5.637569
	Income	-.0004073	.0001705	-2.39	0.017	-.0007414	-.0000731
	_Cons	2.389464	1.405432	1.70	0.089	-.3651316	5.144059
3	Safety	.2379	1.374157	0.17	0.863	-2.455398	2.931198
	Accessibility	.0198879	1.150187	0.02	0.986	-2.234436	2.274212
	Interest rate	1.254389	1.592198	0.79	0.431	-1.866262	4.375041
	Possibilities of getting loan	5.218697	1.597069	3.27	0.001	2.088498	8.348895
	Income	-.0025383	.0007787	-3.26	0.001	-.0040645	-.001012
	_Cons	.5520964	2.21754	0.25	0.803	-3.794201	4.898394
4	Safety	-.4691003	1.428534	-0.33	0.743	-3.268975	2.330774
	Accessibility	.91454	1.199204	0.76	0.446	-1.435856	3.264936
	Interest rate	-1.78031	1.620694	-1.10	0.272	-4.956811	1.396191
	Possibilities of getting loan	4.537232	1.574668	2.88	0.004	1.450939	7.623525
	Income	-.0021934	.0007243	-3.03	0.002	-.0036129	-.0007739
	_Cons	1.612474	2.130639	0.76	0.449	-2.563502	5.78845

Source: Own computation

NB: Base outcome is Bank, 2 is Equib, 3 is MFI and 4 is Cooperatives

As we can see from the above regression table, all independent variables together are significantly affects the dependent variable which is represented by Prob> chi2 which is less than 1% and concluded that all independent variables together are determinant factors. The PesudoR2 measure is around 64% which is higher than the standard value of 50% and it implies that independent variables have the power to explain the dependent variable. Regarding to individual significant level, for Equib, interest rate, possibilities of getting loan and income are significant variable. On the other hand for MFI and cooperatives, income and possibilities of getting loan are significant.

$$\ln\left[\frac{\Pr[\text{Choice} = \text{Equib}]}{\Pr[\text{Choice} = \text{Bank}]}\right] = S_0 + S_1 \text{Safety} + S_2 \text{accessiblity} + S_3 \text{int erestrate} + S_4 \text{Posloan} + S_5 \text{income}$$

$$\ln\left[\frac{\Pr[\text{Choice} = \text{MFI}]}{\Pr[\text{Choice} = \text{Bank}]}\right] = S_0 + S_1 \text{Safety} + S_2 \text{accessiblity} + S_3 \text{int erestrate} + S_4 \text{Posloan} + S_5 \text{income}$$

$$\ln\left[\frac{\Pr[\text{Choice} = \text{Cooperatives}]}{\Pr[\text{Choice} = \text{Bank}]}\right] = S_0 + S_1 \text{Safety} + S_2 \text{accessiblity} + S_3 \text{int erestrate} + S_4 \text{Posloan} + S_5 \text{income}$$

4.7.1 Discussion and interpretation of coefficients

The econometrics result on table 4.35 shows three out of five independent variables affect the decision where to save.

4.7.1.1 Banks VS Equib

Interest rate: affects choice making decision negatively and which is significant at 1% of significant level. The interpretation of the logs odd or the coefficient is, the multinomial logit of possibilities of getting interest rate relative to not getting interest rate is 5.3 units lower for preferring Equib to banks, given all other predictor variables in the model are held constant. In other words, possibilities of getting interest rate tend people to choose banks to Equib.

Possibilities of getting loan: affects choice making decision positively and which is significant at 1% of significant level. The interpretation of the logs odd or the coefficient is, the multinomial logit of possibilities of getting loan relative to not having a possibility of getting loan is 3.6 units higher for preferring Equib to banks, given all other predictor variables in the model are held constant. In other words, possibilities of getting loan tend people to choose Equib to banks.

Income: affects the decision for where to save negatively and which is significant at 5% of significant level. The coefficient is the multinomial logit estimate for a one unit increase in income for Equib relative to banks, given the other variables in the model are held constant. If a person income increase by one birr, the multinomial log-odds for preferring Equib to banks would be expected to decrease by 0.0004unit while holding all other variables in the model constant.

4.7.1.2 Banks vs MFI

Possibilities of getting loan: affects choice making decision positively and which is significant at 1% of significant level. The interpretation of the logs odd or the coefficient is, the multinomial logit of possibilities of getting loan relative to not having a possibility of getting loan is 5.2 units higher for preferring MFI to banks, given all other predictor variables in the model are held constant. In other words, possibilities of getting loan tend people to choose MFI to banks.

Income: affects the decision for where to save negatively and which is significant at 5% of significant level. The coefficient is the multinomial logit estimate for a one unit increase in income for MFI relative to banks, given the other variables in the model are held constant. If a person income increase by one birr, the multinomial log-odds for preferring MFI to banks would be expected to decrease by 0.0025unit while holding all other variables in the model constant.

4.2.1.3 Banks Vs cooperatives

Possibilities of getting loan: affects choice making decision positively and which is significant at 1% of significant level. The interpretation of the logs odd or the coefficient is, the multinomial logit of possibilities of getting loan relative to not having a possibility of getting loan is 4.5 units higher for preferring cooperatives to banks, given all other predictor variables in the model are held constant. In other words, possibilities of getting loan tend people to choose cooperatives to banks.

Income: affects the decision for where to save negatively and which is significant at 5% of significant level. The coefficient is the multinomial logit estimate for a one unit increase in income for cooperatives relative to banks, given the other variables in the model are held constant. If a person income increase by one birr, the multinomial log-odds for preferring cooperatives to banks would be expected to decrease by 0.0021 unit while holding all other variables in the model constant.

CHAPTER 5

5. CONCLUSION AND RECOMMENDATION

5.1 Conclusion

The aim of this paper was to investigate the determinants for household choices for different saving institution. The study used both primary data and secondary data to answer research questions.

From the sampled respondents, 102 of them (85%) responded that they are saving in each month on average. The study found that people with lower education prefer to save their money with Equib and cooperatives while those with higher education prefers to save at bank, and those with average educational attainments prefer to save at MFI.

Based on rank, banks are found to be the safest, efficient, liquid, and encouraging institution than others. On the other hand, Equib was found to be the most accessible, strength social relationships and having possibilities of getting loan than others. Regarding to challenges absence of incentives takes the lion share in their choice making decision of to save and where to save.

The finding of the multinomial logit model shows that, income positively and significantly affects household choice of banks over others and possibilities of getting loan positively and significantly affect household choice of Equib, MFI and cooperatives over banks; and interest rate positively and significantly affect household choice of bank over Equib. Regarding to households decision to save or not income and being married positively affect saving and increase in the number of dependent household members and having higher education negatively affect the decision to save.

5.2 Recommendation

Following the findings, this paper recommends the following:

- ❖ Creating an arrangement for the possibilities of getting loan would attract people to save more money. So, government and hence banks should arrange such systems .
- ❖ Incentives should have to be made by different saving institutions.

- ❖ Government and other responsible bodies should work more to increase the accessibilities of MFI as lower income group people are using such institutions than others.
- ❖ Encouraging Equib and making them more safety and legally binding would make the sector more efficient.
- ❖ On the other hand, finding of the multinomial logit model shows that, income positively and significantly affects household choice of banks over others so there should be upgraded facilities among others which has not been chosen and possibilities of getting loan positively and significantly affect household choice of Equib, MFI and cooperatives over banks; so banks should make same arrangements to make getting loan easier and interest rate positively and significantly affect household choice of bank over Equib, as it mentioned in the above making Equib more safety and legally binding would make the sector more efficient .

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Appendices

Appendix

1 Data collection techniques

Questionnaire

St Mary's University

Institute of Agriculture and Development Studies

Survey questionnaire

This is an interview questionnaire prepared to undertake a study entitled Determinants for consumers' choice of saving institutions the case of Ethiopian Postal Service Enterprise. The research conducted is purely for academic purpose and all the information given are confidential.

Dear Respondents:

I am a graduate student in the department of development economics. Currently, I am undertaking this research in partial fulfillment for M.A in Development economics given by St Mary's University. 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 no personal identity will be published or transferred to third party.

Part I. Interviewer's Information

Interviewer Name_____ Date interviewed_____

Part 2: Instruction

Please use mark for Choice Questions and write on the blank spaces on open ended questionnaires.

Part 3: Interview Questionnaires for Employees of Ethiopia Postal Service Enterprise

Code_____

1. Gender:

Male Female

2. Age group:

3. Marital status

Married Single

4. What is your highest educational level?

Below 8 Between 8 and below degree Above degree

5. Your field of study

Business Social science Natural science Other

6. How many individuals depend on your salary? -----

7. How much birr do you earn per month?

8. How much birr do you spend per month?

100-500 500-1000 1000-1500 =1500

7000 and above

9. Do you save money from your Earnings? Yes No

10. If yes, how much birr do you save per month? _____

11. What kind of saving institution do you choose to save?

Bank kept at home Informal financial institution (Equib) Micro
finance Association corporative in working place

12. What are the major reasons that forced you to choose that specific saving institution?

A. Accessibility

B. safety

C. quality of the service or efficiency

D. liquidity (the possibilities to have the money in cash whenever in need)

E. interest rate

F. prizes

G. possibilities of getting loan

H. to strengthening friendship with others

I. friends pressure

J. absence of information about other saving institutions

K. culture or tradition

If you have other reasons please write them

13. Can you rank different saving institutions based on the following criterion one to five

	Banks	MFI	Equib	Cooperatives	Home saving
Accessibility					
Safety					
quality of the service or efficiency					
Strengthening friendship with others					
Liquidity					
interest rate					
Prizes					
possibilities of getting loan					

14. Have you faced challenges (been discouraged to save) when you think about saving your money? Yes No

15. What are the challenges you faces on identifying the best saving institution for you considering the information you have about saving institutions?

A. low interest rate

B. accessibility issues

C. liquidity issues

D. absence of incentives

E. others, please specify them

Motives of savings

16. People save for different reasons. What are your personal reasons to have made savings?

Motivation	Ranking					
	1	2	3	4	5	
For unexpected expenses						
For retirement						
To get income in the form of interest, increased market value of assets, etc.						
To leave something for children to inherit						
To increase my living standards in the future						
I like saving rather than spending money						
To be independent and be able to make choices						
No particular reason						
For another reason can not specify						
I find it difficult to answer this question						
No answer						

17. When selecting your financial institution, which one of the following had the most influence in your decision? (Select only one.)

Recommendation from a friend or associate
 Location of the facility
 Quality of the Service
 Reliability
 None of the above

18. In your opinion does your financial institution provide any or all of the items listed below?

(Select all that apply.)

Convenient location(s) Good service Incentives package All of the above

19. How do you usually manage your revenues?

I try to save something and spend the rest of the money on the everyday needs I spend money on the everyday needs and save the rest I spend all the money on everyday needs and do not save anything I find it difficult to answer this question

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

Yes No

21. Will you decide to save in bank more if the current interest rate increases?

Yes No

22. Possibility of getting credit from any source?

Very Easy Easy Very Difficult Difficult

23. Saving is important for the country growth

Yes it's important Not necessarily

