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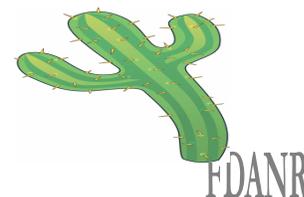
Faculty of Dry land Agriculture and Natural Resources

Members' Savings Behavior and Determinants of Savings in Rural Savings and Credit

Cooperatives in Alamata and Ofla Woredas of Tigray Region, Ethiopia

By

Teka G/Tekle Tekle

A Thesis

Submitted In Partial Fulfillment of the Requirements For The

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Major Advisor: Dr. G. B. Pillai (Prof.)

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MEMBERS' SAVINGS BEHAVIOR AND DETERMINANTS OF SAVINGS IN RURAL SAVINGS AND CREDIT COOPERATIVES IN ALAMATA AND OFLA WOREDAS OF TIGRAY REGION, ETHIOPIA

MSc. Thesis

By

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DEDICATION

I dedicated this Thesis manuscript to my wife Kidist Berhanu and my son Kelebet Teka for their partnership in the success of my life.

DECLARATION

This is to certify this thesis entitled **"Members' savings behavior and determinants of savings in rural savings and credit cooperatives"** in Alamata and Ofla Woredas of Tigray Region submitted in partial fulfillment of the requirements for the award of the degree of M.Sc., in Cooperative Marketing to the School of Graduate Studies, Mekelle University, through the Department of Cooperatives, done by Mr. Teka G/Tekle, ID.No. FDA/PR0021/99 is an authentic work carried out by him under my guidance. The matter embodied in this project work has not been submitted earlier for award of any degree or diploma to the best of my knowledge and belief.

Name of the student: <u>Mr. Teka G/Tekle</u>   Signature and date_____

Name of the Supervisor: <u>Dr.G.B.Pillai (Prof.)</u> Signature and date_____

ACKNOWLEDGMENT

BIOGRAPHY

The author was born in November 1966 in Addishu town, at Alaje Woreda, Tigray Regional State. He started his education at Addishu Junior Secondary School and completed his senior secondary education at Maichew town Tilahun Yigzaw senior Secondary School. After he completed his high school he escaped from the 'Derg' regime and joined to the Tigray People Liberation Front (TPLF) and served in different areas as public worker and organizer.

After years of work, he joined the Ethiopian Civil Service College in September 1996 and graduated with B.A. degree in economics in June 1999. Upon completion of college education he was employed as a civil servant in Tigray National Regional State cooperatives office southern zone cooperatives promotion department, at Alaje woreda agriculture and rural development office, in Tigray National Regional State cooperative promotion office and then he joined the school of graduate studies of Mekelle University in September 2006 to specialize in Cooperative Marketing.

ACRONYMS AND ABBREVIATIONS

ADLIS	Agricultural Development Led Industrialization Strategy
ACCOSCA	African Confederation of savings and Credit Association
AIDB	Agricultural and Industrial Development Bank
APRACA	Asia Pacific Rural and Agricultural Credit Association.
BOARD	Bureau of Agriculture and Rural Development(Tigray Region)
BOFED	Bureau of Finance and Economic Development (Tigray Region)
CADU	Chilallo Agricaltural Development Unit
CBE	Commercial Bank of Ethiopia
CC	Contingency Coefficient
CGAP	Consultative Group to Assist the Poorest
CSA	Central Statistical Authority
DBE	Development Bank of Ethiopia
DECSI	Dedebit Credit and Saving Institution
EEA	Ethiopian Economic Association
FAO	Food and Agricultural Organization
FCA	Federal Cooperatives Agency
GDP	Gross Domestic Product
GM	General Assembly
ha	Hectare
H.I.M	His Imperial Majesty

ICA	International Cooperatives Alliance
Km	Kilo meter
MFIs	Microfinance Institutions
MPSCS	Multi Purpose Service Cooperative Societies
NGOs	Non-Governmental Organizations
NBE	National Bank of Ethiopia
No.	Number
OLS	Ordinary Least Square
PA's	Peasant Associations
RUFIP	Rural Finance Intermediation Program
RUSACCO	Rural Savings and Credit Cooperatives
SACCO	Savings and Credit Cooperatives
SACCOL	Savings and Credit Cooperative League of South Africa
S.No.	Serial Number
TLU	Tropical Livestock Unit
TNRS	Tigray National Regional State
VIF	Variance Inflation Factor
WADU	Wolayta Agricultural Development Unit
WOCCU	World Council of Credit Union

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ABSTRACT

Ethiopia's Agriculture Development led industrialization strategy (ADLIS) has the basic objective of reducing rural poverty, increasing agricultural production and productivity. Though agriculture is the crucial sector in the national economy, its production and productivity is unsatisfactory. There are different types of banking and non-banking financial intermediaries in the world, and they differ in the services they offer to their clientele. In Ethiopia, there are two types of non-banking financial intermediaries: share company microfinance institutions, and savings and credit cooperatives. The delivery of financial products and services through microfinance institutions in Ethiopia is one of the policy instruments used to enable rural and urban households to increase their output and productivity, induce technology adoption, increase input supply and increase income thereby helping them to reduce their poverty and attain food security. The specific objectives of the study were to examine savings behavior of members in rural savings and credit cooperatives, to identify factors that influence the magnitude of savings of members of RUSACCOS and to suggest strategies to improve the savings behavior of members of RUSACCOS. This study was undertaken in Alamata and Ofla woredas of the Tigray Region. From ten RuSACCOs, 130 member respondents and 50 officials were selected respectively. Both primary and secondary data were collected. Descriptive statistics of the study showed that between the dependent and independent variables of the study, all selected variables except educational

level of respondents influenced the savings behavior of members. To identify factors that influence the magnitude of savings, the second stage of estimation (OLS regression) was used to ascertain the variables which significantly influence members' annual savings magnitude in RUSACCOS. Seventeen variables were hypothesized that significantly influence the members' savings magnitude in RUSACCOS, by removing the most insignificant variables the OLS result shows that only eight variables (members age, land holdings, livestock holdings, distance of the respondent's residence from RUSACCOS office, the amount of on-farm income, expenditure on social/religious ceremonies, amount of loan received from savings and credit cooperatives and access to training) were significantly related to the magnitude of members' annual savings in the RUSACCOS. The study concluded that RUSACCOS are becoming appropriate options for the rural households which are providing financial services and products to the rural community. Hence, to promote these financial institutions in the rural areas in a sustainable manner, the study suggested some measures to be taken by the concerned organizations. The government and non government organizations may encourage savings and credit cooperatives first *rather than spreading the resource over all the cooperatives in the region, because savings and credit cooperatives societies are the surest ways of increasing savings and lowering the cost of living, mobilize rural finance and create investment in rural area of the region.*

CHAPTER ONE

1. INTRODUCTION

1.1 Background

Ethiopia's Agriculture Development led industrialization strategy (ADLIS) has the basic objective of reducing rural poverty, increasing agricultural production and productivity. Though agriculture is the crucial sector in the national economy, its production and productivity is unsatisfactory. For instance, at the national level, the average of all cereal grain productivity is about one ton per hectare; annual increase in cereal yield is only 0.5 percent where as population increase is estimated at 3 percent per annum (Ethiopian Economic Association 2000).Consequently, with the current trend of productivity and population growth, the country is not in a position to meet the demand for agricultural products.

According to Wolday (2002) poverty in Ethiopia is a multi-dimensional problem, and owing to poverty's large scope and multiplicity of participants, there is no single guaranteed approach to its eradication. The solutions to poverty are multifaceted as its causes. Microfinance is not a panacea for poverty and related development challenges, but rather an important tool in the poverty reduction programs. Thus, microfinance alone cannot improve roads, housing, water supply, education, and health services. However, it can play an important role in making the above interventions realized. It also empowers the poor and provides them the confidence, self-esteem and financial means to increase income and access to social services.

On the other hand, historical records indicate that no country has moved from chronic stagnation of development into take off stages of economic development with out raising first agricultural

productivity. Improvement in the production and productivity of the agricultural sector must be given due attention and agriculture should be organized on business lines. Crops and livestock production should be increased to maximize cultivator's nutritional status and profit in particular and society welfare in general. This in turn will necessitate the availability of adequate capital to enable the farmers to use modern agricultural technologies.

A system of financial intermediation is necessary to channel the flow of funds from suppliers to users. An effective and smoothly functioning financial system will increase the mobilization of savings, lower transaction costs, disperse risks and direct the allocation of resources to the most productive use (FAO, 2001).

The delivery of financial products and services through micro-finance institutions in Ethiopia is one of the policy instruments used to enable rural and urban households to increase their output and productivity, induce technology adoption, increase input supply, increase income thereby helping them reduce their poverty and attain food security (Wolday, 2002).

Micro finance is one part of the larger finance sector. The goal of meeting the needs of the disadvantaged part of the population, who in many cases do not have access to formal financial service, as well as the small amount involved in both savings and credit transactions are characteristic features of micro finance. These features require specific expertise to meet the demand due to the high cost of each transaction. There are various types of banking and non-banking financial intermediaries in the world, and they differ in the services they offer to clientele. In Ethiopia, in general there are two types of non-banking financial intermediaries,

share company micro finance intuitions and savings and credit cooperatives, which are much more numerous.

However, as compared to the demand for the services, their coverage is very small. Specifically in the Tigray national Regional State, the Dedebit Credit and Savings Institution (DECSI) covers the larger portion of the region. In addition to DECSI, there were 232 rural savings and credit cooperatives (Tigray RUFIP Coordination Unit), which are established based on cooperatives proclamation of No. 138/1978 and No.147/1998.

Although these rural savings and credit cooperatives are newly emerging institutions, most of them have started providing at least savings and then credit services to their members. This study focuses on the underlying factors of rural household's savings behavior and the magnitude of savings in relation to rural savings and credit cooperatives.

1.2 Statement of the Problem

It is an accepted saying that the future economic growth inter alias, is largely a result of current investment activities. These investments could be expended in the development of human resources to increase efficiency as well as in building up productive capacity to exploit its natural resources. Investment, in turn, is mainly a function of savings from current income. It is there fore instructive to look at the trend of savings (Befekadu and Birhanu 2001).

In recent years in Ethiopia, the over all economy is marked by impressive performances. Preliminary estimates of real GDP, for the year 2007/08 registered a 10.1 percent growth indicating a complete recovery from sluggish performances of the recent past (Birritu, 2005).

Nevertheless, Domestic savings has been estimated to be 0.1 percent of the GDP in 2004/ 05/while investment expenditure is estimated to reach 23%, (Birritu,2005).The declining domestic savings rate in the economy necessitates reliance on foreign savings and aid to finance the investment requirement of the country. During the period 1960/1-1974/5, the average saving rate was 14 percent, during the Dergue regime the average saving was nearly 7%, and during the period of 1991/2-2002/3 it was mere 3.6% of GDP, Abu, (2004).

Under the circumstances of minimal or negatives savings, investment in the short run could be financed partly though domestic government borrowings and /or foreign loan and grants but this would significantly increase the country's debt burden and would not be a solution in the long run.

Research findings have demonstrated that excessive and easy credit for the poor has often done more than good. Evidences indicate that; such over-emphasis on easy credit policy and under attention to savings promotion has tended to weaken the capacity of the rural poor to mobilize and manage their own resources. The growth of strong and financially self –reliant small farmer organization and rural financial intermediation institutions are viewed by many as essential vehicle for achieving rural development objective. In spite of these widely shared views on the importance of savings and saving-led polices, however little is actually known about the savings motives; savings preferences and savings norms of different categories of the rural poor and their –co-villager. Such knowledge is viewed as a necessary first step towards developing more efficient methods for savings accumulation and investment, which can assist the poor in breaking out of poverty trap.

In Tigray regional State, the existing non-banking financial intermediaries are few in number and cover only small number of household as compared to the total demand for the services in the region. Due to various reasons including legal ones, formation of rural savings and credit cooperatives in the region has started lately and it is a new phenomenon.

Every financial intermediary needs injections of capital or funds, which may be owner's money or a loan. When a loan is used, it is someone else who has done the savings. The main objective of this study is to assess how members of savings and credit are mobilizing cash savings and make use of their savings though the institution that is owned and managed by them. To the researcher's knowledge, till date no such study has been undertaken in the areas of rural member's savings behavior in relation to rural savings and credit cooperatives in the study areas. Therefore, this research has made an attempt to answer the following questions; why savings and credit cooperatives are involved in economic growth? What are the main factors that determine the mobilization of substantial amount of cash savings from rural households with rural savings and credit cooperatives (RUSACCOS)? How the savings behaviors of members of RUSACCOS look like? What looks like the products of RUSACCOS? What looks like the institutional status of RUSACCOS? What constraints are faced by the savings and credit cooperatives? What are the suggestions and recommendations of respondents to improve the savings behavior of members?

1.3. Purpose of the study

The purpose of the study is to assess the savings behavior of the members of rural savings and credit cooperatives in Alamata and Ofla woredas.

1.4. Objectives of the Study

The overall objective of this study is to assess the status of savings mobilization of rural households through savings and credit cooperatives and the types of benefits they obtained. **Specific objective are:**

1. To examine savings behavior of members in rural savings and credit cooperatives in the study area.

2. To identify factors those influence the magnitude of savings of members of RUSACCOS.

3. To suggest strategies to improve the savings behavior of members of RUSACCOS.

1.5. Hypotheses of the Study

1. The member's savings behavior in relation to rural savings and credit cooperatives is not significant.

2. The magnitude of rural savings is not significantly affected by any of the selected variables.

1.6. Significance of the Study

In the current economic liberalization, there is a vital need to promote private initiative and innovative self-help. This transformation process involves a redefinition of the interaction between market, State and civil society of which the articulation of self-help organization vis-à-vis emerging market and public bodies is an integral part. Such articulation is of great significance to the poor. One of the most important 'Weapons of the weak' is collective action which brings them two major benefits:

1) Greater efficiency particularly through economies of scale and economies of scope- in accessing public and private infrastructure at lower transaction cost; 2) Greater equity through advocacy and increased bargaining power and; thus grater socio-political stability, which is a wealth sharing are essential tools which the poor can do use to improve their socio economic condition and market bargaining power.

Households in any community may have different income flows and investment needs. Some households find that they produce more in a given period than wish to consume. They may find other available production opportunities unappealing. To such people, the intermediary provides financial instruments to hold their surplus, which would otherwise have either consumed or put to low return activity.

Promotion of rural savings benefits both rural households and the financial institutions. The availability of savings opportunity discourages unproductive household consumption for the poor while savings increase their capital and resource base and consequently their bargaining power. For the financial institutions, savings increase the funds available for loaning.

Based on the above general truth, in addition to other attention points, the study pointed out, how RUSACCOS members' savings behavior are associated with savings and credit cooperatives' working environment. The study identified factors influencing households' savings magnitude in the rural community with available financial intermediaries and Rural Savings and Credit Cooperatives (RUSACCOS). The study will be made available to the responsible organizations for the promotion and regulation of rural savings and credit cooperatives, to cooperatives themselves, to cooperative members and other beneficiaries. In this way, the researcher hopes to

contribute to the development of rural savings behavior by identifying lessons from positive-and less positive-experience.

Since this area is not investigated in depth before, the study results might also initiate other researchers to conduct different research works from different perspectives, which will again contribute for strengthening of Rural Savings and credit Cooperatives and members' savings behavior.

1.7. Scope and Limitation of the Study

This study has covered demographic, socio-economic, and institutional factors that influence the behavior and magnitude of member's savings in relation to savings and credit cooperatives in the Southern Tigray Regional State. In particular, he considered Alamata and Ofla woredas purposively selected from five respective administrative woredas of the zone, because Alamata woreda is the project area of the ILRI/*IPMS* (International Live stock Research Institution/ Improving Productivity and Market Success); which is the researcher's sponsoring organization.

Since the study was conducted only based on financial savings, it couldn't represent the aggregate savings behaviour of farm households. Moreover, farmers did not keep records of their farm operation, income, expenditures and savings; the information provided by farm households primarily depends on the recalling ability of the households. Thus, computations based on such data are likely to have some inherent errors. Another shortcoming of this study originates from the use of unequal sample size the two sample groups (Alamata and Ofla members of RUSACCOS). When the survey has been conducted, the size of RUSACCOS of Alamata woreda members was very small compared to the size of the Ofla woreda members.

1.8. Organization of the Thesis

The thesis is organized into five main chapters. The first chapter focuses mainly on the background, statement of the problem, objectives, significance and scope of the study. Relevant literature related to the study is reviewed in chapter two. Chapter three focuses with the description of the study area, materials and methods of the study. In chapter four, the results obtained from the descriptive statistics and econometric models are presented and discussed. Finally, chapter five presents the conclusion and recommendations and implication for future research.

CHAPTER TWO

2. LITERATURE REVIEW

This section discusses the basic concept of savings and credit cooperatives, brief history of cooperatives in Ethiopia, a brief history of rural finance interventions in Ethiopia, a brief history of savings and credit cooperatives in Ethiopia, review of Financial Products of rural savings and credit cooperatives in Tigray region, the nature and need for finance intermediaries, rural savings mobilization, the role of rural savings and credit cooperatives determinants of members savings behavior and constraints of rural savings and credit cooperatives.

2.1. Basic Concept of Savings and Credit Cooperatives

Germany was the first country in the world to apply the principles of cooperation in the field of credit. According to Winfred John A. and V.Kulandaiswamy 1986; in 1849, Raiffeise and Union in Aid of Impoverished Farmers' organized savings and credit cooperatives. The funds for this union were raised on the security of the rich persons of the locality (Ghislain, 2001).

The first savings and credit cooperative society in Ethiopia is the Ethiopian Air Line civil servant saving and Credit Cooperative Societies (SACCOS). It established in 1964/65. Until the year 2001, there was no a rural savings and credit cooperative society in rural Ethiopia. The first rural savings and credit cooperative society in Ethiopia is *Hidu* primary savings and credit cooperative society. It is found in Oromiya Regional State, East Shewa Zone, 'Errer' Woreda at 'Hidu' farmers association (kebele). And the first rural savings and credit cooperative society was established in Tigray Regional State is '*Tembien Tere*e' primary savings and credit cooperative society it is found in South East Zone of Tigray Region in 'Degua Tembien' Woreda at 'Addi Gezaeti' farmers association or Kebele (unpublished RUFIP' annual report, 2006).

Savings and credit cooperatives are user-owned financial intermediaries. They have many names around the world, including credit unions, SACCOs, etc. Members typically share a common bond based on a geographic area, employer, community, or other affiliation. Members have equal voting rights, regardless of how many shares they own. Savings and credit are their principal services, although many offer money transfers, payment services, and insurance as well. Sometimes savings and credit cooperatives join together to form second -tier associations for the purposes of building capacity, liquidity management, and refinancing. Savings and credit cooperatives provide financial services to millions, including poor and low-income people in many countries. Thus, donors who want to increase access to financial services, especially savings, often support savings and credit cooperatives. Working with these cooperatives offers many advantages, but, to be effective, donors must learn how to overcome several unique challenges (CGAP).

2.1.1 Brief history of cooperatives in Ethiopia

Cooperation is the way of life of Ethiopians and has a long year of experience. This cooperation may be cultural or religious organizations that make the population a close tie. For example, *Iddir* /focuses on funeral celebration/, *Ikuib* /which helps for saving money and self help to the members/, and *Debo* / which is focused on the cooperation on labor peak times like in the time of harvest, wedding etc./.

However, a modern cooperative in Ethiopia was started at the time of emperor Hileselasie first in 1961. During this time the first cooperative legal action was made and it is known by Decree number 44/1961. Cooperative movements in Ethiopia started in the late 1960s with the launching of the comprehensive agricultural development projects such as the Chilalo Agricultural

Development Unit (CADU). The main reasons for this decree was the increase in number of unemployment, the fast increase of migration from rural area to urban, the increase in number of students who drop out of their education, and finally the disarmament of the military without proper compensation and pension (Wolday, 2003).

The second attempt towards legal cooperatives was in 1964, and the time was the end of first Five Year Development Plan. Based on the evaluation of this plan, the need for cooperative form of organization for the development of the nation was considered to be inevitable. Therefore, the first cooperative organization legal proclamation known as proclamation number 241/1964 was declared. The main objective of this law was to decrease the amount of interest paid for credit, to minimize the risk of individual in case of bankruptcy, and to increase the implementation of innovation in practical life. Based on this proclamation 158 cooperatives were established with 33, 400 members and 9, 970, 600 Birr total capital.

Nevertheless, the focus was only on those areas that can cultivate economically importance crops and it demanded the land ownership as a criteria. So it was unable to meet the demand of all Ethiopian poor.

In 1974 Emperor Haileselasie government fall and was replaced by a socialist type of government. This government proclaimed cooperative organization proclamation in 1978, and it is called proclamation number 138/1978. The main objective of this proclamation was to transform rural parts of Ethiopian agriculture to socialistic type and to have socialistic marketing relation between the rural and urban area. Up to 1990 there were 10,524 different types of

cooperatives with 4,529,259 members and combined capital of Birr 465,467,428 throughout the country. From these cooperatives 80% were rural cooperatives. At that time the then government gave due attention for the cooperatives. Therefore, based on the day-to-day technical and other support of the government, they served the society by supplying agricultural input, consumer goods at fair price, etc(Wolday, (2003); sited by Degu(2007).

However, the government intervention was beyond the level of support. So their benefits were masked over by the harmful effect and the society become reluctant even to hear and talk about the cooperatives. Cooperatives in this period suffered because they were coerced to serve other political purposes than the purpose they were established for. In this respect, the farmers regard to the primary societies in the past was manifested in damaging the property of cooperatives by the members themselves at as the existing type of cooperatives were not meeting the interest of the farmers. As the result of their bad reputation in the past and due to other factors such as lack of proper training and capital, the cooperatives credibility was undermined and it made them vulnerable to mismanagement. The lack of trust of the farmers in the cooperative system was due to exposures of embezzlement, corruption and depravity in the state run cooperatives sector. Nonetheless, the cooperatives failed to survive the collapse of the Military government: the farmers themselves largely viewed them as the creation of the Government with no genuine and voluntary participation. There was no direct participation by farmers and individuals with close association with the ruling party managed the cooperatives. The FMSCs served as an instrument to impose and collect grain quota from farmers for the government. During the 1991 change of the government, the negative view towards cooperatives was manifested in the actions of the farmers of looting and destroying FMSCs property and records. The FMSCs themselves became

notorious for waste and mismanagement. According to Dessalegn (1994) more than 24 million Birr was misappropriated by those FMSCs, which the ministry of agriculture had audited. That was almost certainly just the tip of the iceberg, given that audits were carried out on fewer than 25% of cooperatives.

From 1991- 1994 there was no any visible activity taken by the government to strengthen the cooperatives. The present Government, which was not very sympathetic to cooperatives initiated by the former government, issued a proclamation in 1995 to reactivate cooperative movement in the country. Member-led co-operatives are thought to be necessary to reduce transaction costs and enhance the bargaining position of small farmer. However, in 1994 there was an attempt to strengthen the rural cooperatives. Among the basic action the government took in this time was the proclamation of agricultural cooperatives, proclamation no 85/1994. This proclamation tried to incorporate the international cooperative principles; however, its focus was only to solve the rural cooperatives problem. In addition, there was no separate entity to support these cooperatives both at federal as well as regional level (Wolday, 2003).

A new proclamation was issued in 1998 to provide a better policy framework to set up cooperatives based on an individual membership and voluntary basis. Members buy shares to become members and receive dividends at the end of the year depending on their contributions (value of their shares) and profit earned. The Cooperative Promotion Office has been established in every woreda (district) to provide technical assistance. Cooperative societies now provide a wide range of services, including the supply of inputs, output marketing and distribute consumer goods. But bad experiences in the past, insufficient capital, lack of managerial skills and

inadequate support from CPB/ offices have not helped the cooperative movement. In 2006, the total number of cooperatives reached 19,147 with 4,076,323 members and total capital of Birr 316,140,725. The number of savings and credit cooperatives was 22% of the total cooperatives (unpublished annual report of FCA, 2006).

2.1.2 A Brief History of Rural Finance Interventions in Ethiopia

2.1.2.1   The imperial period

Purposeful government effort at accelerating socio-economic development in Ethiopia may date back to the immediate post-Italian occupation period: the establishment of the Ministry of Agriculture in 1943 (entrusted with the responsibility to take measure to promote the development of agriculture) and the Agricultural Bank of Ethiopia in 1945 "to assist small landholders whose farms had been devastated during the Italian occupation through loan for purchase of "seeds, livestock and implements and to repair or reconstruct their homes and farm buildings (Assefa, 1987 cited by Assefa *et al*. 2005,).

However, a clearer, more comprehensive and systematic articulation and integration of the development goals, objectives and priorities of the Imperial regime as well as the policy and other measures adopted to achieve these is to be found in the three successive Five years Development plans implemented, namely the First (1957-1961), Second (1962-1967), and Third (1968-1973) Year Plans.

Cognizance, at the government level, of the role of popular participation in the development of the nation and the role of small borrowers' credit in realizing this dates back to the early 1960s.

"A nation can make rapid economic growth …if the people make every effort towards the proper exploitation of their natural resources" (H.I.M. Haileselasie I Address to the Nation, October 11, 1962 cited by Assefa *et al.*, 2005). Accordingly, one of the main objectives, as stated by Emperor, was "to encourage every citizen…to be a participant in the endeavors for the economic and social development of this country, as much as his capacity and ability can allow". The Second Five Year Development plan states: "the idea to progress implies a conscious contribution of all citizens to various development programs, according to their physical, intellectual and economic capacity. In fact, the fulfillment of the Second Five Year plan requires a national awareness of the task and obligations and a planning mindedness (Imperial Ethiopian Government, 1962 cited by Assefa *et al.*, 2005).

In line with the dominant development approach of the period, the Imperial Ethiopian Government intervened in the allocation of resources in order to accelerate national development. The intervention took various forms including: allocation of credit according to coordinated investment plans, use of differential interest rates, establishment of public commercial as well as specialized banks (development and investment banks), and giving priority to productive projects in the use of foreign credits. Public banks were supposed to mobilize resources and channel them in accordance with the plan.

Flow of bank credit (both to private and public undertakings) was supposed to be in accordance with the priorities set in the plan, which identified (i) agriculture as the leading economic activity, and (ii) mining, manufacturing and power as "the most propulsive sectors". The plan made a distinction between credit for investment and current transactions and gave priority in investment

credits to "direct productive" economic activities such that they were to take over 90 percent of the total long-term credit. Regarding short term credit, "undertakings which promote exports and contribute to production" ranked high in the priority list. In addition to discriminatory access to credit by purpose of loan, the plan also allowed for interest rate discrimination between borrowers favoring businesses that are in conformity with plan. Interestingly, credit access was not to be discriminated by ownership. Instead the plan explicitly recognized the private and public sectors as equally important: "Neither the private nor the public sector will have priority, both of them should have equal rights, obligations, and facilities. There will be no limitation to the private sector either in kind of business or in the size of enterprises (Imperial Ethiopian Government, 1962 cited by Assefa *et al.*, 2005).

Regarding rural/ agricultural finance, the share reflected the importance attached to it in the plan. Subsistence and large scale & mechanized agriculture together were to receive about half of the bank credit. Subsistence agriculture was to be transformed through (a) the introduction of improved tools and implements, modern techniques and improved seeds; (b) credit, price and tax policies; and (c) land reform and agricultural services. Accordingly, farmers were to be assisted to produce more marketable surpluses, and thereby develop the subsistence agriculture sector into a monetized one. Credit for farm tools and implements was to be extended (by the then Development Bank of Ethiopia) not directly but through the then Grain Corporation or Farmers' Cooperatives. These institutions were to receive credit funds and then buy the implements and supply them to farmers on credit (to be repaid in kind) or lease or sell them on credit if they are expensive- such as selectors, threshing machines, winnowers, etc (to be repaid in cash). It was

explicitly stated that credit was to be provided only in goods and services, the reason being to ensure that it is used to productive purposes.

The plan also gave emphasis to the importance of promotion and mobilization of domestic savings. Cooperatives, in addition to marketing, farmers' products supplying credit to agriculture, were envisages to be involved in collection of surplus funds from farmers (i.e. savings mobilization).

Pre- five year development plan (1945-1951) efforts to support agriculture and small farmers through credit were not a success for a number of reasons including the collateral requirement involved, the landlord-tenant relationship which made it difficult to produce certificate of ownership, diversion of loans to non-agricultural uses, etc. Neither did the efforts under the Five Year Development Plans succeed. High collateral (as high as 200 percent of the loan), mainly in the form of real property and machinery, and guarantor requirements, in the face of widespread tenancy, land title problems (e.g. communal land, *rist*[1] system), etc., proved effective hindrance (Assefa *et al.*, 2005).

The comprehensive and minimum package programs, which were intended to support small farmers by, among other things, organizing them in a way that makes it easier and less costly for the AIDB to provide credit, did not achieve much in terms of reaching small farmers partly due to the stringent requirements involved such as high down payment (25 to 75 per cent), two reputable guarantors (one of whom should be the landlord in case of tenant borrowers), and signed lease

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[1] *Rist* is the land tenure system in Ethiopia before 1975 which is characterized by use right and transfer rights with out land alienation and the right to inherit land from father's and mother's line of descent.

agreement and partly due to incentive problems associated with the share cropping arrangement that prevailed and marketing problems. Overall, the extent of exclusion was well recognized by the AIDB board so much so that in 1974 it decided to introduce a small farmers credit program on pilot basis but was not implemented as it was overtaken by events of the revolution (Assefa *et al*., 2005).

2.1.2.2 The Dergue period

The *Dergue* regime recognized the financial sector (dominated by state owned financial institutions following the 1975 nationalization) in a manner that reflects its declared ideology of Ethiopian Socialism and its economic thinking as stated in the Declaration on Economic Policy of Socialist Ethiopia. The financial sector was reduced to a mechanism for "channeling resources in accordance with the national plan and as subservient to the total sector …" credit policy was driven by ideology and gave absolute priority to the socialized sector (public enterprises, state farms and cooperatives).

The result was marginalization of the private sector, forcing it to depend on self-financing and non institutional credit. The share in domestic credit outstanding during 1986-90 of the private sector and cooperative averaged 4.7 and 1.1 per cent, respectively (the rest going to the government and public sector) (World Bank, 1991 cited by Assefa *et al*.,2005).

There were many NGOs involved in the provision of micro-finance services, in rural areas in particular. However, NGO credit schemes were fraught with lots of problems resulting in a bad credit culture so much so that several studies recommended the need to standardized rural

financial service providing schemes, make microfinance services be business-like (rather than aid) (Assefa *et al.,* 2005).

As an option of empowering farm households through the promotion of rural savings and credit cooperatives was the forgotten dimension of rural financing in the country. Therefore, the outcome with regard to reaching small rural and urban borrowers with financial services was disappointing both during the Imperial and *Dergue* regimes.

Serious repayment problem was not limited to NGO loans though. Repayment problem of the AIDB was so severe (highest 68 per cent in 1988 and lowest of 11 per cent in 1993) that it had to terminate its agricultural inputs loan to rural households just as predecessor, the DBE (Development Bank of Ethiopia), did in 1996 (Wolday, 2004).

2.1.2.3 The post (1992) reform

Financial liberalization in Ethiopia began at the end of 1992. The financial reform undertaken in Ethiopia includes elimination of priority access to credit, interest rate liberalization, restructuring and introduction of profitability criteria, reduced direct government control on financial intermediaries and limits bank loans to the government, enhancement of supervisory, regulatory and legal infrastructure of the NBE, allowing private financial intermediaries through new entry of domestic private intermediaries (rather than privatization of the existing ones) and introduction of treasury bills markets (Assefa, 2004).

The lending approaches of banks to target beneficiaries are both a direct type and a two tier system. The direct type is in which the Bank extends credit directly to the end users. This could

be an individual person or organization such as cooperatives, government or private enterprises which have legal entity. In the two tier approach, the bank transfers its financial resources to end users through other bodies such as cooperatives and peasant associations.

In the case of rural Ethiopia, regional governments act as intermediaries between banks and farmers. These governments use their federally allocated budget as collateral to borrow from banks and on lend these funds to farmers for the purchase of agricultural inputs. This procedure has enabled banks to lend a great deal of money to farmers. Nevertheless, there have been cases of default, which have necessitated repayment out of the budget allocations of the regional administrations.

Despite some success of post liberalization policy in shifting the direction of the flow of financial resources (mainly credit) from public enterprises to private sectors, the economic reforms have failed to make the agricultural sector more attractive and suitable for long term investments. As compared to other economic sectors the share of agricultural sector in the total credit disbursed by the banks has been marginal. It is believed that almost all of the agricultural credit is short term nature, which will have little impact on long term investment and transformation of agriculture. The financial resource that flows to the sector is in general low when compared to the sector's actual and expected contribution to the economy.

Because of the inability of the banks to meet the credit needs of small farmers, the post reform period also witnessed the mush rooming of the MFIs in the country through considerable support from both government and foreign as well as local NGOs. As Assefa *et al.* (2005) stated, at the

end of March 2004, there were 23 MFIs (with paid up capital of Birr 51.6 million) that were registered with the NBE in accordance with proclamation No. 40/1996 and became operational. Moreover, according to Federal Cooperatives Agency (2006) report, there are 4178 savings and credit cooperatives with 357,079 members and Birr 1037.62 million mobilized savings in the country.

2.1.3 A Brief History of Savings and Credit Cooperatives in Ethiopia

Savings and credit cooperatives in Ethiopia have no very long origin. The first savings and credit cooperative in Ethiopia was established in 1964 by employees of Ethiopian Airlines by the initiative of interested individual Ethiopians who have foreign countries exposure and peace core workers of foreign origins. During the same period, savings and credit cooperatives were established by employees of Ethiopian Road Authority and the Telecommunication Agency (Dejene, 1993).

Since cooperatives societies' proclamation Act No. 241/66 was passed in 1966, the existing cooperatives were registered under this proclamation by the Ministry of Community Development and Social Affairs. In order to promote savings and credit cooperative in the country, in 1970 a national savings and credit cooperatives promotion committee, known as the Ethiopian Thrift and Credit Cooperatives Development Committee was organized. This committee was able to host the ninth African Conference on the mobilization of local savings and facilitated Ethiopia's affiliation with ACCOSCA. It contributed to the increase in the number of savings and credit cooperatives in Ethiopia, and it was able to secure assistance from a number of international donor agencies towards the development of SACCOs.

However, this committee was not granted legal status. That was one reason why it was succeeded by the Ethiopian National Thrift and Credit Society in 1973. This society was established by the already existing credit unions under the 1966 Cooperative Societies Proclamation Act No. 241. It was administered by a board of directors elected by the general assembly of the representatives of each affiliated society. This national society was able to contribute to the further development of savings and credit unions in Ethiopia until its liquidation with the passage of the 1976 Monetary and Banking Proclamation No. 99 and the 1978 Cooperative Societies Proclamation No. 138.

By 1978, there were 60 savings and credit cooperatives in the country comprising 13,020 members with savings amounting to Birr 4 million. The annual rate of growth of membership over the 1974-78 period averaged 12 percent and the average savings per member over the same period was Birr 268. The average annual rate of growth in the number of SACCOs was slightly higher than 14.7 percent (Dejene, 1993).

The legal framework of the SACCOs in Ethiopia was provided by the Cooperative Societies Proclamation No.138/1978. Although the contents of the proclamation was socialist oriented, it provided ground for the establishment of savings and credit cooperatives along with three other cooperatives, namely, the producers' cooperative societies, service cooperatives and housing cooperatives. For these different types of cooperatives, different governmental institutions were assigned for promotional and regulatory activities.

Since 1978, the responsible governmental institution for SACCOS's promotion and regulatory activities was the National Bank of Ethiopia, through establishing an office called Savings and

Credit Cooperatives Development Office. Among other shortcomings proclamation No. 138/1978 was urban SACCOS biased.

Until 1998 the cooperatives proclamation No. 147/98 was passed, the SACCOs movement in Ethiopia was not only urban based but also the technical and regulatory services were offered only from one center- Addis Ababa, where the office was located. This new proclamation is full-fledged with internationally accepted cooperatives principles and also it institutionalizes the technical support and regulatory activities for different types of cooperatives by establishing a governmental institution with branches up to woreda level.

Although there was difference in attention and the establishment of the responsible organization, at present there are independent institutions which are responsible for promotional, capacity building and regulatory activities of different types of cooperatives through out the country in each Administrative region and city councils including the federal cooperative Agency. In line with this, there are more than 21 different types of cooperative Unions, 19147 primary cooperatives with 4.62 million members and 1475.25 million Birr capital and there are 9 different types of 124 secondary level cooperatives (unions) with 149.42 million Birr capital and 2495 affiliated primary cooperatives in the country (FCA, 2006).

Based on the national cooperative proclamation No.147/98, the Tigray National Regional State established an institution, initially called Cooperatives Promotion office and currently Cooperatives Promotion Department, which is responsible for cooperatives promotion, capacity building, and regulatory activities. When the office was established it had zonal level

cooperatives promotion department and woreda level promotion office. Following the restructuring of the government sector offices in 2003, the zonal level Cooperative Promotion Departments were abandoned and woreda cooperatives promotion office was scaled-down to a desk/team level.

2.1.4 Review of Rural Savings and Credit Cooperatives in   Tigray Region

Evidences show that different financial products are designed for different purposes. A financial product is defined by its characteristics. For example defining characteristics for loan products include minimum and maximum loan size, minimum and maximum loan terms, regular savings requirement, interest rate and method of calculation, and lending methodology. Savings products are defined by minimum balance requirements, types of savings, time length of savings, mandated liquidity requirements, and the rate of interest.

One of the major objectives of RUSACCOs is providing different financial products and services to the members and also to the rest of the community. The various products that RUSACCOs offered are most often member driven. For the last couple of years RUSACCOs had provided savings and loan products to their members. In RUSACCOs resources are built up beforehand by collecting deposits. Loans are awarded from deposits. When a new RUSACCO is established, savings are generally mobilized over a period of 12 months before the first loans products are availed to the members. After a year following the establishment of a cooperative, an individual member should save at least for six months consecutively to claim and get a loan. This principle generally allows loans to be partially or totally guaranteed by the collateral of the savings and also allow identifying members' weakness, strength, ownership feelings, financial capacity, and commitment.

Formation of rural savings and credit cooperatives in the region did start in 2001 in South -East Zone in Degua Tembien woreda in one PA called Adi Gezaeti. The total progress of membership, number of RUSACCOS in the region, and mobilized savings were 12,090; 232 and Birr 6,258,200 in number and in Birr respectively. The progress of RUSACCOS in the region is summarized in Table2. 1.

Table 2.1Summary of RUSACCOS progress in Tigray Region

Year	Number of RUSACCOS	Membership size	Total paid up share capital (birr)	Mobilized savings (birr)
2007	232	12,090	1,553,722	6,258,200
2006	147	7,401	952,740	3,810,959
2005	102	3737	137,961	551,843
2004	34	1124	62,715	239,039
2003	28	1496	48,625	168,332
2002	15	332	39,161	74,924
2001	3	132	5,494	14,503

Source: Annual reports (2001- 2007) of RUFIP regional coordination unit.

2.1.5. Savings products

For the rural population, their savings are perhaps the most precious asset. The safety of these assets is their primary concern. Many people would not entrust their savings to the financial institutions unless they are assured that they are safe there (Azhar, 1995). Since RUSACCOS members are owners' of the institutions, they have saved regular savings, to some extent irregular savings and have purchased shares. Rural SACCOS are active in promoting savings, since members' deposits are the principal sources of loan able funds. Rural SACCOS have two classes of clients: members and customers. Customers' have access to only limited financial products

(irregular savings for adults and minor or children savings)-saving accounts-and are excluded from loan products.

Share: every potential member must purchase the specified minimum share(s) as determined by the RUSACCO making each member as owner of the cooperative. Purchasing shares is carried out not only by new members but the existing members are also expected to purchase additional shares from the RUSACCOs in proportion to their savings that would enable to maintain at least 3:5 to 1 and 4:1 savings/share leverage ratio.

Regular savings (compulsory savings): It is the main part of savings in RUSACCOS. This type of savings is the predetermined amount of savings, which is saved regularly every month without interruption by RUSACCOS-members. The amount of monthly regular savings is decided by the saver him/herself within the saving range decided by the cooperative general assembly. Members can not withdraw this type of savings from the cooperatives unless they decide to terminate their membership. Every six months, members receive interest for the saved amount of cash. Regular savings are required as a precondition of membership and are used as collateral of loan when members request and get loan. Although regular savings in RUSACCOS are preconditions for receiving loans, unlike savings made in other types of microfinance, they are not targeted only for loan receiving. It is a continuous financial product, which would improve savings culture and built financial and physical capital for the savers. By insisting on regular savings, RUSACCOS could screen out some potential defaulters, increase funds available for lending, and develop among members a degree of identification with the financial health of the institution.

Irregular savings (voluntary savings): This type of savings is allowed not only for members but also for non-members. As far as they are interested, non-members can use this product. Irregular savings products can attract idle resources from some clients (both members and non-members) and channel them to others (members and cooperatives, which are established under the same proclamation) in the form of loans for investment in productive activities. Unlike regular savings, savers are not obliged to save every month and its amount is not predetermined. Moreover, this savings bear interest and the saver can withdraw his/her savings at any time on demand. From such type of savings savers do benefit only from interest payment.

2.1.5. Credit products

In RUSACCO, in addition to other objectives and incentives members are encouraged to save towards loans. Loans are ratio based on member's savings and shares (at present 3:1 or 3 folds of a member's share and savings balance is offered - which is the ceiling level). The loan products offered by RUSACCO are categorized into production, provident and consumption loans. When members face bad situation, consumption loans are also allowed in the RUSACCO loan policy. Until this study has been conducted no any RUSACCO offered consumption loans to the beneficiaries. The major loan products which are practiced in a flexible way are production and provident loans. Rural SACCOs made loans to members only in cash.

Every RUSACCO has an approved loan guideline which enables the RUSACCO to offer the loan product to members in a proper and smooth manner. When RUSACCO members request loan they are expected to present the type of activity they are going to do (practice to develop a type of business plan). Based on members' loan request, after loan committee critical evaluation usually loans are disbursed to members every two weeks. The loan duration vary from six months to two

years. The repayment modality of the loan depends on the type of the activity the loans are allocated. The loan disbursed for petty trading (grain trade, livestock trade, local drink and food preparation, etc.), creditors are expected to repay the loan every month to the RUSACCO (equal installment) on the saving day along with their monthly regular savings. The loan disbursed for livestock development (fattening, sheep/goat raring, bee keeping, etc.), after six months grace period creditor are expected to repay the loan every month to the RUSACCO (equal installment) on the saving day along with their monthly regular savings. The loan disbursed for annual agricultural production inputs, creditors are expected to repay the loan to RUSACCO at the time of harvesting (lump sum on due date).

2.1.6. The Nature and Need for Finance Intermediaries

Financial services include loans, savings and insurance services and other related service. These institutions, which provide financial services, regarded as financial institutions. Financial institutions are either private or governmental organizations, which carry out the vital function of facilitating the flows of savings from those businesses and households with surplus funds to businesses and households with insufficient funds to meet immediate needs or carry out a central role in the supply of money and credit. Savers are providing with financial assets and borrowers with the type of financing assistances needed to purchase goods and services. Financial institutions sometimes called financial intermediaries, which are primarily engaged in bringing together ultimate providers and ultimate users of finance. Financial institution can be put either formal or informal according to the licensing, regulations and supervision of the national monetary and financial laws (FAO, 2002).

Finance is one of the most crucial inputs for economic activity, growth and development. If finance through own accumulates resources or equity is neither available, nor sufficient either external debt will assumed a major significance or productive investment will severally restricted. Financial institutions play an important role in this regard by channeling funds from surplus sector (savers) to deficit sectors (investors). However, these institutions do not show much enthusiasm to put their resources in rural and background areas for the benefit of poor people, as these are commercial organization and are interested in profitability and sustainability for two reasons: a)/ incentive for functioning b) for safeguarding the interest of stakeholders (Rajarm, 2001).

Micro finance institutions have emerged as popular mode of finance for the poor and small –scale produces in many countries. Small loan from a micro finance institution generate employment for the poor and women. With an easy access to a micro finance Programme, the poor save regular to build financial and physical capital (khandker, (2000).

Financial services integrate markets encourage savers to hold lager production of their wealth in the form of financial assets than unproductive inflation hedges, and allocated ingestible resources more efficiently. Financial depending is achieve by reducing risks and minimizing transaction costs through exploitation economies of scale and scope, professional portfolio management and diversification, systematic collection of information, and fostering a better lender-borrower relationship (Padmanabhan, 1987).

Formal micro finance institutions are regulated by the financial authorities of a country-with special micro finance windows, semi formal micro finance institutions (savings and credit

cooperatives, village banks etc) are under the control of non-financial authorities and informal micro financial institutions are controlled by customary law and peer pressure (Rajaram, 2001).

The various micro finance institutions differ among themselves in the service they offer to their clientele with consumer credit and offer deposit services to safeguard savings. In some cases, micro financial institutions also offer services other than savings and credit. Certain micro finance institutions provide consulting services to member entrepreneurs, while others take a more minimalist approach limiting themselves to financial activities. The factor which most distinguish micro finance institutions from each other are with out a doubt their credit methodologies condition for access, interest rates, types of guarantees, and utilization of credit vary from one micro finance institutions to another (CGAP, 2001).

Many micro finance Programme are involved in both lending and savings mobilization. To be self sufficient, micro finance Programme ought to depend on mobilized savings rather than donor resources for on lending. However, micro finance Programme mostly mobilizes involuntary savings from members.

Micro finance borrowing can increase the informal borrowing if the micro credit borrower is unable to repay micro finance loan and take resort to informal sources to repay the micro credit loan. On the other hand, micro credit borrower may tend to borrow from informal sources if the economic activity demands higher loan than is provided by micro credit organizations; Khandker, (2000).

2.1.7. Rural Savings Mobilization

According to Orazio and Migule, (2000), Household savings in developing countries, Stated as:
Funds for investing in agriculture in developing countries come from three major sources: public
investment, private investment, and foreign aid. The share of public investment would be roughly
70 percent in a typical developing country, private investment at around 10-15 percent, and the
balance of 10-15 percent from foreign aid. To meet these investment commit men's, government
mobilizes resource, partly through land revenue, agricultural income tax betterment. The shortfall
in the mobilization of domestic shavings, both public and private, is met by foreign aid and
investment. Although the share of these different sources varies from institution to institution and
from country to country, two general trends have been visible in the structure of these resources,
Firstly a heavy reliance on concession funds from central banks or aid agencies and secondly, a
relative neglect of savings mobilization from the public. Due to the absence of efficient credit and
insurance market, household savings are a crucial determinate of welfare in developing countries.
On the one hand, with out savings, households have few other mechanisms to smooth out
unexpected variations in their income and so; shocks may leave permanent scars, such as
interrupting the process of human capital accumulation at early ages. On the other hand, since
savings are one of the only means to accumulate assets in the absence of credit and insurance
markets, the capacity to save becomes one if the most important vehicles of social mobility and
of enhancing future income-earning possibilities.

Savings is a mechanism by which economic agents make deliberate choice to allocate a portion
of their current income for the purpose of making investment and their increasing their future
earning capacity. Theory suggests that household total savings depend on the rate of return on

savings, on uncertainty of future incomes, on risk aversion of household, on lifetime or permanent income or wealth, on family characteristics (FAO, 2001).

Economic theory tells that saving represents the difference between income and consumption. Income includes earning from all sources during a year and is net of all costs incurred in producing that income. Consumption is the total amount of goods and services consumed by the rural household during a year and include expenditure on food, clothing, housing, travel, health care, social ceremonies, etc. Saving may be made in kind such as jewelry, livestock, grain, or some other commodities or may be in form of currency notes deposited in a bank (Azhar, 1995).

Savings in form of assets has limitations. Grain can deteriorate in storage or be lost to pests, animals require looking after and can die; moreover, when they are held as insurance against crises such as drought, they are often sold at a loss if the crisis occurs, because of deteriorating terms of trade or for a quick sale. Finally, holding a visible and available form of savings, such as grain or assets, can make it hard to resist demands and claims from other relatives (Johnson and Ben, 1997).

In low-income communities, most people prefer to save their cash undisclosed places. This may be ion the roof, pot, walls, underground, or under a bed. This encompasses risk of theft, damaging by termites and loss in case of fire (Phil Bartle, 2006).

The experience with micro finance all over the world has belied the myths that the poor do not save, and that they are not creditworthy. Despite having low paid jobs, the poor save, and the

savings rate among the poor are not as one would contemplate. Similarity; in contrary to the belief that the poor are bad credit risk, it is now established that the poor can be creditworthy that in some countries, the loan repayment rate is even higher among the poor than the non-poor (Khander, 2000).

A common feature of economic growth theories is the premise that capital accumulation is a prerequisite of economic growth, and that the savings of individual and households are an essential part of the process of capital accumulation. Savings determine, largely, the rate at which productive capacity and income grow. An effective smoothly functioning financial system will increase the mobilization of saving, lower transaction costs, disperse risks and direct the allocation of resources to the most productive uses. Evidence suggests that there is far more liquidly in rural areas than is generally assumed. This is partly due to seasonality in agricultural production. Moreover, rural people are responsive to interest rate changes and appropriate financial services. Hence, mobilization of voluntary financial savings in rural areas should be the first priority of financial institutions. Contrary to this, there is another approach, which is stated as follow; in the rural areas, a vicious circle of low capital, low productivity, low income, and low savings could break by an instrument called credit (FAO, 2001).

2.1.8. The Role of Rural Savings and Credit Cooperatives

There are different types of financial institutions in the world. A single institution model suitable to all countries does not exist-no one structure could say to be clearly preferable to others. What is important is that these institutions should be able to adapt to local conditions and financial flow. As a short-term solution to the lack of savings by the households, governments of

developing countries are embarking on micro financing schemes to enable the households to venture in to small business activities. However, these measures are not only costly but also not sustainable in the longer run if the societies are not empowered to save by themselves (Orazio and Miguel, 2000)

Savings and credit cooperatives are voluntary financial organizations owned and operated by members. Their purpose is to encourage savings by creating local deposit activities and then using the pooled funds to make loans for productive, consumer or social purposes to their members. Rural savings and credit cooperatives operate as farmers' grassroots organizations, aimed usually at meeting the seasonal financial needs of their members, which other financial institutions do not satisfy (FAO, 2001).

Cooperative creates the opportunity for people to take responsibility for their cooperative and encourages people to take control of their own financial affairs. Among the many advantages of savings and credit cooperatives are savings mobilization locally and returned to members in the form of loans; interest rate on both savings and loan are generally better than rates given by banks and the reason for this is that savings and credit cooperatives have very low overheads compared to banks; educate their members in financial matters by teaching prudent handling of money; how to keep track of finances; how to budget and how keep away from hire purchases and loan sharks; and pay dividends on share to their members once they re established profitable. Members there fore take pride in owning their own savings and credit cooperative. Cooperatives have the feel of the local areas, reflecting the rural ethics and culture. Farmers feel at easy with loan agents of cooperatives, unlike in the case of commercial banks. Despite the potential advantages of the system, effective cooperatives for financial services delivery have been face

difficult in many countries. The major problems of cooperatives in Africa are absence of experienced management, uneconomic base level units, lack of supporting infrastructure like extension, training etc., poor member participation, insufficient supervision and auditing of cooperatives, and too much political disturbance (SACCOL, 2003).

2.2. Empirical Studies Determinants of Savings

2.2.1. Theory

Economic theory states that savings represents the difference between income and consumption. Income includes earning from all activities during a year and is net of cost incurred in producing that income (imputed costs, however, constitute income of the farm family). In a two sector economy consisting of households and business sector, income is either spent or saved. When this occurs, one can explain the behavior of savings if one knows about consumption. Consumption is the total amount of goods and services consumed by the rural household during a year and include expenditures on food, clothing, housing, heat, lighting, travel, education, health care, social ceremonies, and recreations, litigation and charity, etc. Savings may be made in kind, such as jewelry, land, livestock or some other commodities, or may be in the form of currency notes deposited in financial institutions and savings are fundamental to sustainable economic development.

The theoretical literature groups households savings motives into four such as to provide resources for retirement and bequests; to finance large lifetime expenditure; to finance

unexpected losses of income; and to smooth the availability of financial resources over time to maintain a more stable consumption profile.

Household savings literature is based on two major hypotheses; Griffiths and Stuart, (1986). Following the pioneering work of Keynes which defines savings as a linear function of income, the first major breakthrough in savings literature is the permanent income hypothesis of Friedman. This hypothesis differentiates permanent income and transitory income as determinants of savings. Permanent income is defined in terms of the longtime income expectation over a planning period and a steady rate of consumption maintained over lifetime given the present value of wealth. Transitory income is the difference between actual and permanent income and since individuals are assumed not to consume out of this income category, marginal propensity to save on transitory income will be unity.

The second major contribution to savings literature comes from Ando and Modigliani's stated by Degu (2007), lifecycle hypothesis, whose basic assumption is that individuals spread their lifetime consumption evenly over their lives by accumulating savings during earning years and maintaining consumption levels during retirement.

The life cycle theory suggests that age has an impact on savings. The young and the retired people are not saver. Therefore the higher the dependency ratio of a nation, the lower will be the saving rate thus implying what is called the level of effect of the life-cycle theory. Macroeconomic and political stability affect expectation and thus, also the saving rate. The services provided by government, such as social security, the availability and the quality of financial services can affect saving rate.

There are two sides of mobilization of rural savings. The supply side- the circumstances under which rural clientele are most likely to entrust their savings to financial institutions- and the demand side- the effort and range of services of financial intermediaries to institutionalize surplus funds. Confidence is the basis of any financial transaction. Safety, continuity, and secrecy are some of the factors that foster confidence. Some government intervention may help in creating a sense of safety and confidence. When deposits are covered by insurance, it increases savers' confidence (FAO, 2001).

Rural people are rational in their approach to financial matters and they do take advantage of attractive interest incomes on deposits, if offered. In effect, an increase in interest rates makes current consumption more expensive than future consumption, and consequently promotes deferment of consumption.

Accessibility to the financial institutions is an important factor in the promotion of savings. When financial institutions/banks are opened near market centers and operate at convenient hours, rural people opt to institutionalize their surpluses. When they are confident as in its liquidity, they would prefer to earn something on the surplus other than keeping it idle. Stipulating low minimum transaction and balance limits would attract smaller depositors. Provision of financial services like money transfer from one center to another can encourage depositors. Similarly, non-financial services like payment for purchase of crops, payment of bills, etc, can increase deposits. Payment for crops presents an opportunity for intermediation because the buyer could establish an account payable in favor of the farmer. When there is a linkage between savings and lending,

rural households will be prompted to hold deposits with a view to availing a loan when needed (Padmanabhan, 1987).

2.2.2. Empirical Studies

Empirical evidences of household savings in Pakistan (Azhar, 1995), indicated that methods of savings are categorized as savings in cash, saving in bond holding, saving in agricultural products and saving in livestock. Saving in agricultural products is preferably practiced because of its higher flexibility. Saving in livestock represents the most practiced form. It has dual impact on the household economy, firstly, as a source of extra income and, secondly, by acting as cash which is always available at home. Factors that influence the form and extent of saving are divided into four categories. These are: economical, psychological, socio-cultural, and institutional factors. Some of the results from Azhar (1995) study are presented as follows.

Income determines the extent as well as the form of savings. Landholding, especially the size of citrus orchards, strongly influence the rate of total saving, since the size of land holding influences income and income influences savings positively. A large family size exerts a negative influence on saving in kind. Cash savings remains neutral but livestock keeping is proved to be positively influenced by the availability of household labor.

The age of the household members exerts an uncertain impact on savings; if they are productive, the influence is positive. Underemployed or unemployed members are a burden on the household income and have a negative impact on savings. Empirical evidences proved that education is quite an uncertain factor in the case of savings. In most of the cases, better education gave better exposure which induced a demonstration effect and increased the propensity to consume.

The empirical survey of gender- specific savings aptitude indicated that women are found to be financially conservative and try to hold money for the family's security, whereas men prefer to concentrate upon the accumulation of social capital.

The results of the study conducted by Rich and Olive (2005) entitled savings habits, needs and priorities in rural Uganda indicated that hindrance of rural savings were: low income level of rural households was the most significant factor; high fee charged by the financial institutions was the second most significant factor; the third most important impediment to savings was low personal interest in savings. Low interest rate paid on savings was a relatively insignificant impediment of savings. Though clients find interest rate too low, they nonetheless remain clients as this is not enough of a disincentive to cause them to exit.

According to FAO studies (2001), indicated that on average; rapidly growing countries have higher savings rates than slower-growing countries. These rates are influenced by many factors: the level of income per capita, the rate of income growth, the age composition of the population and attitude toward thrift.

The results of the study conducted by Muradoglu and Taskin (1996) indicated that demographic variables such as age groups, birth rates, dependency ratio and financial variables such as interest rates, inflation rates, available financial instruments and initial wealth levels affected the decision of household savings significantly. Similarly, models simulation results of Quo Qin (2003) studies revealed that income uncertainty has positive impact on household savings.

The result of the study conducted by Degu Addis (2007) indicated that socio economic variables such as age, family size, dependency ratio, resource ownership and expenditure pattern affects the decision of household savings significantly.

2.2.3 Constraints of Rural Savings and Credit cooperatives

Savings and credit cooperatives provide financial services to millions, including poor and low-income people in many countries. According to CGAP, (2001), the constraints of saving s and credit cooperatives are:

1. Governance weaknesses: Savings and credit cooperatives are usually governed by a volunteer board of directors elected by and from the membership. Small, young savings and credit cooperatives are also often staffed entirely by volunteers. As they grow, more sophisticated and risky operations require professional managers. Problems occur when volunteer board members continue to make operational decisions, after professional managers have been recruited, instead of focusing on monitoring operations; it is difficult for board members to balance the contradictory interests of net borrowers and savers. Borrower domination is unhealthy because net borrowers have few incentives to ensure prudential discipline or profitability, unlike net savers who are most interested in protecting their deposits and earning an attractive rate of return. Although "one person, one vote" decision-making is meant to ensure equality of user rights and responsiveness of service, many members do not exercise their control because they exercise little individual influence. As a result, in some cases, community elites or net borrowers are able to dominate the structure for their own benefit.

2. Inadequate regulation and supervision: Savings and credit cooperative systems in developing countries have a history of instability. Competent external regulation and supervision can identify, avoid, and resolve many common problems. Savings and credit cooperatives are often supervised by the same government agency that is responsible for all kinds of non-financial cooperatives, including agricultural and marketing. Such agencies do not have the financial skills and political independence needed to oversee financial intermediaries effectively.

3. Limited menu of products: In traditional savings and credit cooperatives, only one type of loan product is offered, with no variation according to risk levels (borrower repayment capacity, type of activity financed, and other risk factors). These types of loans are not flexible enough to meet members' diverse credit needs, including short-term working capital for micro entrepreneurs and agricultural inputs for smallholder farmers.

4. Damage done by external credit: Donors have channeled funds through savings and credit cooperatives to target specific types of clients. Experience shows that this practice tends to harm participating savings and credit cooperatives. External funds decrease the incentive to mobilize deposits and are not managed as carefully as the members' own money. External funding does have the advantage of being a resource for longer-term loans, but it should be limited in relation to members' deposits and the internal capacity for managing a larger loan portfolio.

2.3. Conceptual Frame work

The conceptual frame work of the study is given in (Fig2.1)

Fig.2.1: the conceptual frame work of the study
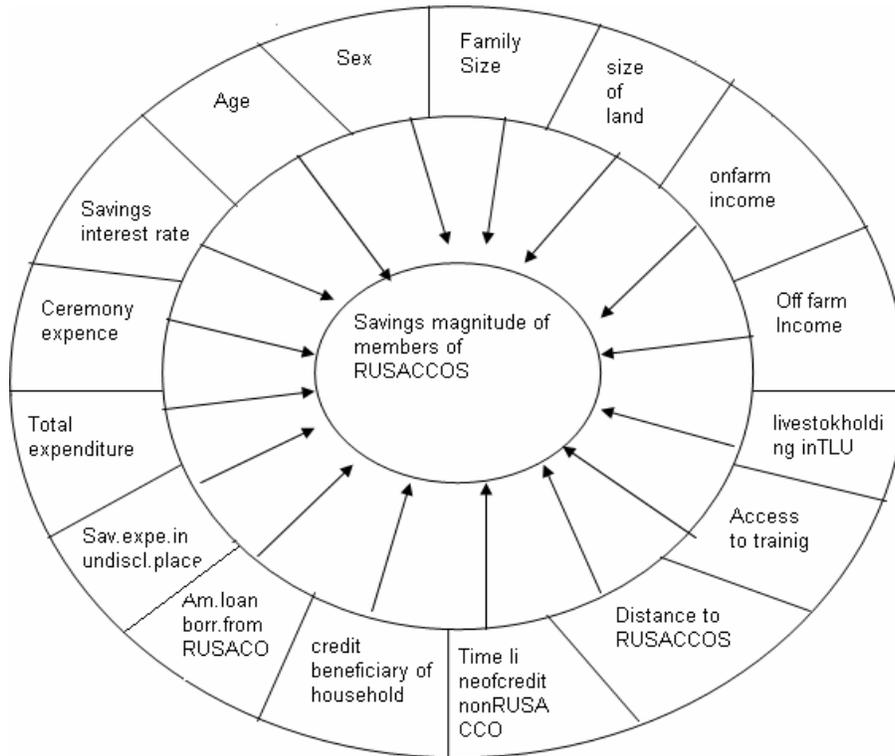
CHAPTER THREE

3. MATERIALS AND METHODS

3. 1. DESCRIPTION OF THE STUDY AREA

3.1.1. Tigray National Regional State

3.1.1.1 Location

Tigray National Regional State is situated between 12º 15' and 14º 57' N latitude and 36º 27' and 39 º 59' E longitudes. It is also bounded to the North by Eritrea, to the South by Amhara National Regional State, to the East by Afar National Regional State and to the West by Sudan. The actual area of the region is not computed but it has about 53,638 square kilometers flat surface area. Its altitude ranges 500 to 3900masl (meter above sea level).

Tigray National Regional State is one of the regional states in the Federal Democratic Republic of Ethiopia. There are 4 levels of administration in the region. They are from top to bottom:- Region, Zone, Woreda and Kebele (Tabia) administration levels. The region is divided into 7 administrative zones, which are further divided into 34 rural woredas and 12 urban administrations, and into 624 rural and 45 urban Kebeles (Tabias).

3.1.1.2. Climate

Considering the mean annual rainfall, it has been revealed that western Tigray, particularly Wolkaite woreda is the area of heaviest rainfall. The maximum mean annual rainfall for this area is about 1600mm. The amount of rainfall is moderate (700-1200) in the highlands of southern and western Tigray, specifically the former Dima woreda, and in very few parts such as Atsbi in the highlands of Eastern Tigray. Though there are pockets like the highlands of Ahferom woreda,

which receive not less than 800 mm, the mean annual rainfall is less than 600mm for most of north and northeastern parts of the region (BoPED, 1998).

Generally, rainfall increases as one move from east to west and from north to south. The distinguishing characteristic of rainfall in the region is that most of it falls within three months and in high intensity. It was estimated that 75 percent of the precipitation falls at a rate of more than 25mm/hour. No strong correlation was found between number of rainy days and amount of rainfall. In addition, rainfall in the region was found to be variable between years. For instance, an examination of 27 year average rainfall data showed that rainfall variability is high in absolute terms and that it is much higher than the corresponding national figure (Berhanu, 1998).

There are areas characterized by bimodal pattern with small peak in April /May and maximum peak in August. The eastern and most parts of southern zones are subject to these patterns of rainfall whereas most parts of western and the whole central zones experience a mono modal type of rainfall. In general, these latter areas have a wet period running from June /July to August/September. In the areas with bimodal type of rainfall pattern the wet period extends from April/May to October/November. Generally, the wet period of the region can be taken as April/May to August/September (BoPED, 1998).

3.1.1.3. Topography

Tigray has variable land forms with different altitude. The topography of the region is mainly the extension of the central Ethiopian high land and the associated Western low lands. A few portion of the region lies in escarpments of the rift valley. The highest pick in Tigray is the Tsibet Mountain which is 3900masl (meter above sea level) high. It is in found southern administrative

zone, Endamehoni Woreda. The lowest which is below 500masl is found in Eastern part of Erob Woreda. Due to the variation of the annual rainfall distribution, temperature, topography, and other factors the region enables to grow and harvest varieties of food crops.

3.1.1.4. Population

According to July 2007 Central Statistical Agency (CSA) population projection, the population size of Tigray is estimated (rural+ urban) to reach 4,449,000 people of which 2,193,000 male and 2,256,000 female. The share of male is 49.29% and the share of female is 50.71%. The female population was slightly more than the male population. The rural population of the region has been 3,595,000 representing 76.31 percent of the total. When viewed in terms of age group, the proportion of population outside the working age, that is, persons aged between 0 and 14 years as well as 65 years and above constitute 48.8 percent of the total population. The dependency ratio for the region is 94.9 percent. The population density is calculated to be 82.9 persons per square km (CSA, 1995; population projection for 2007).

3.1.1.5. Financial Institutions

In Tigray National Regional State there are formal and informal financial institutions. The formal institutions include the public and private Banks. In addition to the public banks such as Commercial Bank of Ethiopia, Development Bank of Ethiopia and Construction and Business Bank of Ethiopia, there are7 private formal financial institutions (Wegagen Bank, Dashen Bank, Anbessa International Bank, Hibret Bank, Awash Bank and Nib International Bank). Commercial Bank of Ethiopia, Development Bank of Ethiopia and Construction and Business Bank of Ethiopia have14, 2, 1 branches respectively. Where as private banks have 14 branches and sub branches.

In addition to the formal financial institutions, there are numerous informal microfinance institutions in the region such as Dedebit Credit and Saving Institution (DECSI) and Savings and Credit Cooperative Societies (SACCOS). According to the regional RUFIP coordination unit and DECSI head office June 2007 annual report; there are 232 primary RUSACCO societies and 1 RUSACCOS union as well as 65 urban primary SACCOS' 9 main branches and 103 sub branches of DECSI in the region. The formal financial institutions are located in bigger towns and the informal financial institutions are located in urban and rural areas of the region.

3.1.1.6. Rural (Farmers') Cooperatives

Cooperatives can also be classified based on their organizational level. The smallest individuals set up in the cooperative organizational level are primary cooperatives. They usually cover a limited area of operation. They have individuals as members. Their working capital is obtained from paid up shares of each member of the cooperatives. The other organizationally higher cooperatives work in the interest of these cooperatives. The status of farmers cooperative is reported in table 3.1.

Table3.1 Number, membership and capital of Cooperatives in rural area of Tigray Region (2007)

S.N	Type of Cooperatives	Numbers	Membership	Amount of Capital(Birr)
1	Multipurpose	580	606,350	25,808,164.00
2	Savings and Credit	251	13,742	9,890,258.00
3	Irrigation	225	15,508	918,841.00
4	Dairy	100	2,045	970,000.00
5	Non-Agricultural	198	3,268	1,145,797.00
	Total	**1,354**	**640,913**	**38,733,060.00**

Source: Bureau Agriculture and Rural Development Department of Cooperatives Promotion Quarter r Report (Nov.2007)

As mentioned in table 3.1.there were 580 multipurpose, 251 saving and credit, 225 irrigation, 100Dairy and 198 non -agriculture cooperatives in the region. The multipurpose cooperatives are involved in merchandising consumption goods, input provision, credit service (production and consumption), grain purchase from members, grain mill service, etc.

Saving and credit cooperative are involved in resource (savings) mobilization from members and provision of credit and banking services to their members. The irrigation cooperatives are currently involved in credit services for pumps and inputs and provision of market information to members. Dairy cooperatives provide marketing service for the dairy products and by-products. The non farm cooperative societies provide different activities and services to their members as well as to the community such as providing electricity to the rural community, provide their construction skills, provide wood work and metal work products… etc. Since 2007 there were 22 multipurpose cooperative Unions and 1 Savings and credit cooperative Union.

3.1.2. Alamata Woreda

Alamata Woreda is located at a distance of 183km far away from Mekelle and 600km far away from Addis Ababa in the main high way leading from Mekelle to Addis Ababa. It is divided in to 10 rural administrative 'Kebeles' and 38 'Kushets'. Alamata woreda is bounded to the North Raya and Azebo and Ofla Woreda, to the South Amhara National Regional State, to the East Raya and Azebo woreda and Afar National Regional State and to the West Amhara National Regional State.

According to the July 2007 Central Statistics Agency (CSA) population projection, the population of Alamata Woreda is estimated (rural +urban) to reach 141,554 people of which 70,112 are male and 71,442 female. The rural Alamata population is estimated to reach 82,777 people of which 40,954 are male and 41,823 female. The share of male of the rural Alamata woreda is 49.47 percent and the share of female is 50.53 percent.

The total area of the woreda is 72,500 hectares. It is characterized by the 'Kola' type agro ecology with altitude from 1178 to 3148 m and 75 percent of the woreda is low land (1500 masl or below) and only 25 percent is found in intermediate highlands (between 1500 and 3148 masl). The small undulating mountains surrounding the woreda are very steep and with low vegetation cover. These mountains cover a large area and drain to the Alamata valley. The mountains surrounding Alamata cover a large area and have a series of dissected gullies which serve as a source of runoff water to the Alamata valley. The gullies join together and form rainy season rivers down the foot of the mountains.

The woreda is characterized by production of annual food crops and livestock rising. The land use and land utilization plan of the woreda in1999/2000EC production year is portrayed in table 3.2 below. About 45.8 percent of the total area of the woreda was devoted for crop production while 11.4 percent was used as pastureland for livestock grazing. Besides to this, crop land after harvest as well as crop residue is also used as a source of income when sold (Table3.2).

Table3.2: the land use and utilization of Alamata woreda (2007)

S.No	Land category	Land cover and utilization In hectare	% share of the total	
1	Total land	72,500	100	
2	Cultivable land	38,089	52.5	
2.1	Cultivated land	33,199		(87.2)
2.2	Fallow land	4,890		(12.8)
3	Grazing land	8,244	11.4	
4	Forest land	18,897	26.1	
5	Residential	4,348	6	
6	Others	2,922	4	

Source: *Alamata woreda land use and management office annual report (2007)*

The farming practice in the Woreda is characterized by crop and livestock integration where both crops and livestock's play the dominant in terms of contribution to farmers' income. In mixed farming system, livestock production plays a crucial role in providing subsistence requirement and assisting crop production. Livestock production takes different forms such as providing traction power land preparation, threshing and transportation as well as using manure to fertilize the soil for production and the livestock products are used as a source of food for the family. Similarly, crop production can contribute to the livestock production by supplying feed in the form of residuals and stalks. Animal dung is also an important source of energy for house holds and can be used as a source of income for the farmers in the vicinity of the town.

The total livestock population of the woreda during the 1999/2000EC production year was estimated to 361,310. Table 3.3 shows the type of livestock kept, their number and average number per farmer in the woreda.

Table3.3: Livestock population and ownership (Head per farmer) of the woreda (1999/2000)

S.No	Type of livestock	Number	NumberInTLU	% of the total
1	Cows	40,607	40,607	11.2
2	Oxen	30,326	30,326	8.5
3	Bull	13,111	13,111	3.7
4	Heifers	1,805	1,353.75	0.5
5	Calves	18,129	4,532.25	5.1
6	Sheep	59,514	7,736.82	16.6
7	Goats	38,347	4,985.11	10.7
8	Horses	44	44	0.1
9	Mules	679	679	0.2
10	Donkeys	6,618	4,632.60	2.0
11	Poultry(Chicken)	141,795	1,843.335	39.3
13	Camels	7,452	11,178	2.1
Total		**361,310**	**121,029.863**	**100**

Source: Alamata Woreda office of Agriculture and Rural Development Report (June 2007).

Oxen are the only source of traction power in the area, they are owned by most of the farmers. In general farmers give priority to have Cows ownership relative to ownership of other forms of livestock. As a result, the number of cows per farmer is second to that of poultry. The area is also well potential in dairy production.

With in the Woreda there are 11 farmers' multi-purpose cooperative, 2 Dairy cooperatives, 2 Irrigation cooperative, 12 rural savings and credit cooperatives. 7 Construction coops, 1Multi purpose cooperative union, 1 Weavers cooperative. Totally, there are 8 types and 34 cooperatives in the woreda.

Rural Savings and Credit Cooperative Societies are new emerging societies in the Region. The growth of savings and credit cooperatives in the woreda increases from year to year in terms of membership, share and savings. The growth of RUSACCS, members, share and savings of the savings and credit cooperative in the woreda is shown in the tables below:-

Table3.4: Cumulative growth of RUSACCOS and their members in the woreda (2003-2007)

Year	Number of RUSACCOS	Numbers of members			% growth	
		Male	**Female**	**Total**	**SACCOS**	**Members**
2003	1	24	7	33	-	-
2004	4	71	28	99	300	200
2005	6	138	34	172	50	73.7
2006	6	168	52	211	0	22.6
2007	12	307	173	480	100	127.5

Source: *Alamata Woreda office of Cooperatives promotion annual reports (2007)*

The promotion of savings and credit cooperative societies started in 2003. Zelallem Hiwot was the first primary savings and credit cooperative organized in the woreda. The cumulative growth of RUSACCOS and their members were 300 and 200 percent, 50 and 73.7percent, 0 and 22.6 percent and 100 and 127.5 percent for the year 2004, 2005, 2006 and 2007 respectively.

The expansion of savings and credit cooperatives in 12 Peasant Association (PA) was satisfactory. Those SACCOS organized in woreda interms of membership expansion were not satisfactory. To convince the demand of members for credit, develop the member's savings

behavior and build up confidence among members of the savings and credit cooperatives membership should be enlarge to the maximum.

Since RUSACCOS members are owners' of the institutions, they have saved regular savings, to some extent irregular savings and have purchased shares.

Table 3.5: Savings mobilization of the total SACCOS in the woreda (2003-2007)

	Total		% Growth of	
Years	Share	Savings	Share	Savings
2003	2,012	7,042	-	-
2004	4,932	19,075	145.1	170.8
2005	9,414	32,548	90.8	70.6
2006	14,144	50,420	50.2	54.9
2007	38,924	113,495	175.2	125.1
Total	69,426	222,580	-	-

Source: *Alamata Woreda office of Agriculture and Rural Development Cooperatives Desk annual reports (2007)*

Based on the secondary data of the woreda, the cumulative growth of share and savings were 145.1 and 170.8percent, 90.8and 70.6 percent, 50.2and 54.9 percent and 175.2 and 125.1 percent for the year 2004, 2005, 2006, and 2007 correspondingly.

Fig 3.1: Savings Mobilization of Alamata Woreda (2003-2007)
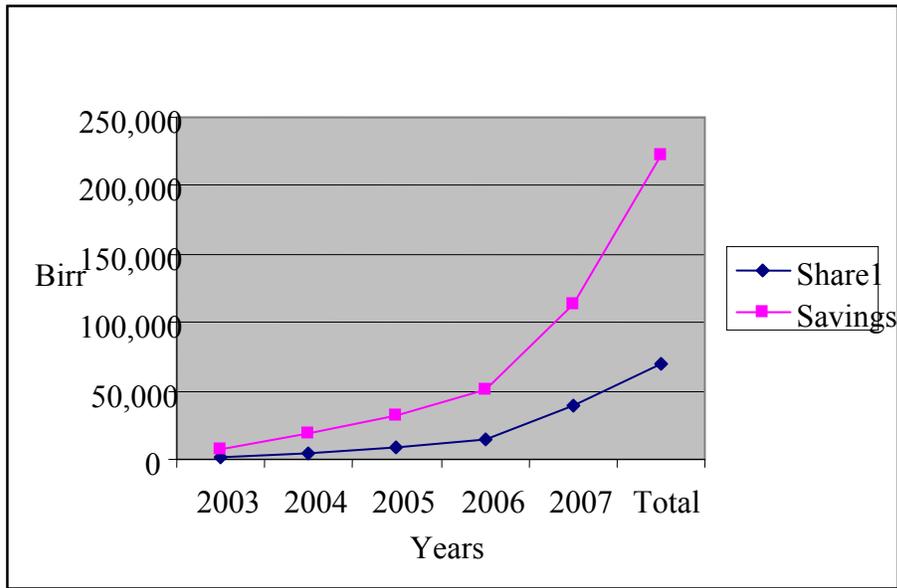
(Fig3.2)

Source: *Alamata Woreda office of Agriculture and Rural Development Cooperatives Desk annual reports (2007)*

Table 3.6: Loan disbursement and recovery rate of RUSACCOS (2003-2007)

Years	Amount of loan disbursed	Amount of loan repaid	Amount of loan Defaulted	Recovery rate
1995	0	0	0	100%
1996	6,886	7,574.60	0	100%
1997	26,074	28,681.40	0	100%
1998	26,604	29264.40	0	100%
1999	47,175	51,892.50	0	100%

Source: *Alamata Woreda office of Agriculture and Rural Development Office Cooperatives promotion Desk annual reports (2007)*

The major diseases that affect the production and productivity of the rural house holds are listed below.

Table 3.7: the major disease (top ten diseases) in Alamata woreda   (2007)

S.No.	Type of disease	Number of patient	% share of the total
1	Malaria	6,344	29.1
2	Respiratory infections	3,148	14.4
3	Diarrhea	2,683	12.3
4	Intestinal parasite	2,389	11
5	Acute fever	1,654	7.6
6	Infection wounds	1,455	6.8
7	Eye inflammatory	1,123	5.1
8	Rheumatic pain	1,060	4.8
9	Other wounds	977	4.5
10	Anemia	969	4.4
	Total patient	**21,802**	**100%**

Source: *Alamata woreda Health office Annual report (June2007).*

Health problem is the main barrier which affects the farmers. Malaria is high ranked which affects large number of people in Alamata.

3.1.3 Ofla Woreda

Ofla woreda is located at a distance of 164km far away from Mekelle and 619km far from Addis Ababa in the main high way leading from Mekelle to Addis Ababa. The woreda is bounded to the North Endamehoni woreda to the South Alamata woreda, to the East Raya Azebo woreda and to the West Amhara National Regional State. The woreda has 19 rural Tabia (Kebele) and 72 Kushet (village) administrative levels.

According to the July 2007 Central Statistics Agency (CSA) population projection, the population of Ofla Woreda is estimated (rural +urban) to reach 175,815 people of which 85,770 male and 90,045 female. The rural Ofla population is estimated to reach 144,645 people of which

71,047 male and 73,594 female. The share of male of the rural Ofla woreda is 49.1 percent and the share of female is 50.9 percent.

Agro ecologically the woreda can be characterized in to three climatic zones, namely 'Degua', 'Weinadegua' and 'Kola.' Which constitute 42, 29 and2 9percent of the total area respectively.

The topography of the woreda is described in to hills, plane and gully which represent 60, 25and15 percent of the total area respectively. The woreda is characterized by production of annual food crops and livestock rising. The land use and land utilization plan of the woreda in1999/2000Ec production year is represent in table 3.8 below. About 19.1%, 18.4%, 33.7%, 1.2% and 27.6% of the total area the woreda was used for crop production, pastureland for livestock grazing, forest land, water covered land and others respectively. Besides to this, crop land after harvest as well as crop residue is also used as a source of income when sold (Table3.8).

Table 3.8 The land use and land utilization plan of the woreda in 2006/2007 production year

S.No	Land category	Land cover and utilization In hectare	% share of the total
1	Total land	132,500	100
2	Cultivable land	25,275	19.1
2.1	Cultivated land	22,708	(89.8)
2.2	Fallow land	2,722	(10.2)
3	Grazing land	24,346	18.4
4	Forest land	44,635	33.7
5	Water covered land	1,570	1.2
6	Others	36,519	27.6

Source: *Ofla woreda land use and management office annual report (June; 2007).*

The farming practice in the Woreda is characterized by crop and livestock integration where both crops and livestock play dominantly in terms of contribution to farmers' income. In mixed farming system, livestock production plays a crucial role in providing subsistence requirement and assisting crop production. Livestock production takes different forms such as providing traction power land preparation, threshing and transportation as well as using manure to fertilize the soil for production and the livestock products are used as a source of food for the family. Similarly, crop production can contribute to the livestock production by supplying feed in the form of residuals and stalks. Animal dung is also an important source of energy for house holds and can be used as a source of income for the farmers in the vicinity of the town. The total livestock population of the woreda during the 2006/2007 production year was estimated to 361,310. Table 3.8 shows the type of livestock kept, their number and average number per farmer in the woreda.

Table3.9: Livestock population and ownership (Head per farmer) of the woreda (2007)

S.No	Type of livestock	Number	Number in TLU	% of the Total in TLU
1	Oxen/Cows	69,784	69,784.0	71.08
2	Sheep	79,292	10,308.0	10.5
3	Goats	60,763	7,899.2	8.05
4	Horses	623	623.0	0.63
5	Mules	585	585.0	0.60
6	Donkeys	10,208	7,145.6	7.28
7	Chicken	140,055	1,820.7	1.86
	Total	361,310	98,165.5	100%

Source: Ofla woreda Agriculture and Rural Development Office Report (2007).

Oxen are the only source of traction power in the area, they are owned by most of the farmers. In general, farmers give priority to have cows as compared to ownership of other forms of livestock.

According to annual report of Bureau of Agriculture and Rural Development department of Cooperatives, June (2007), with in the Woreda there are 15 farmers' multi-purpose cooperative, 5 Fruit and vegetables marketing cooperatives, 5 Irrigation cooperative, 19 rural savings and credit cooperatives, 17 Construction cooperatives, 1 Multi purpose cooperative union, 1 Savings and credit cooperatives, 4 Artesian cooperative. 3 Mining cooperatives, 1 Fishery cooperative, 3 consumer cooperatives, 1 Blocket producer's cooperative and 1 Rural electrification cooperative. Totally, there are 13 types and 71 cooperatives in the woreda.

The introduction of savings and credit cooperatives in Ofla woreda were initiated in 1995Ec. the first primary savings and credit cooperative organized in the woreda was 'Endedo' primary SACCO. With in The last 3-5 years, the cooperatives promotion office of the woreda achieved the promotion of SACCOS effectively. The status of SACCO societies in the woreda is point up in the tables below.

Table3.10: Cumulative increase of RUSACCOS and their members in the woreda (2003-2007).

Years	Number of SACCOS	Members growth			% Growth
		Male	Female	Total	
2003	2	52	20	72	-
2004	6	101	43	144	100
2005	12	687	188	875	508
2006	16	1187	519	1706	95
2007	22	1565	685	2250	32

Source: Ofla woreda cooperative promotion Office annual report (2007).

Fig.3.2 Yearly increase in SACCO and their members of Ofla woreda (2003-2007)

SACCOS and Members growth
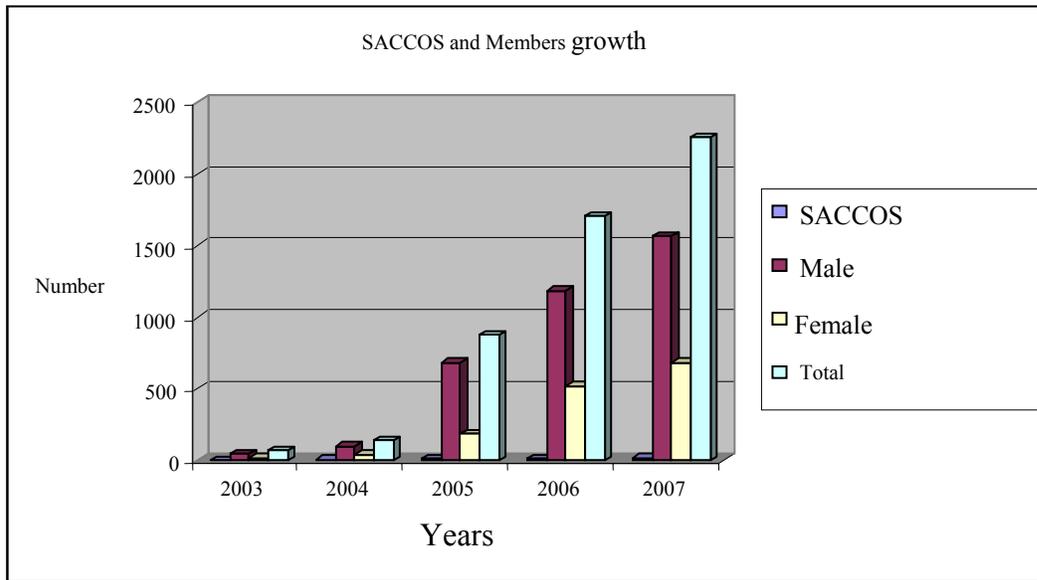
Source: Ofla woreda cooperative promotion Office annual report (2007).

Promoting of savings and credit cooperatives in Ofla woreda started in 2003. The first cooperatives were Endedo and Lemlemitu Korem. The initial members were 72 of which 20 were women members. At the end June 2007 the number of members of SACCOS has grown from 52 to 2250 and the number of SACCOS also increased from 2 to 22.

The Savings trends of the societies in Ofla woreda grows at an increasing rate of members. But the leverage ratio of SACCOS and the number of share purchased by members were equal. These would not encourage to the poorest of the poor to save. Because the general annual meetings decided all members should save on the leverage ratio 4:1. At least Birr 20was the minimum monthly requirement to save.

Table 3.11: Savings mobilization of the woreda SACCOS (2003-2007)

Years	Share (Birr)	Compulsory Savings(Birr)	Percentage Growth of	
			Share	Savings
2003	3,664	14,657	-	-
2004	8,175	33,207	123.12	126.56
2005	38,138	152,549	366.52	359.38
2006	238,387	953,550	525.06	525.06
2007	283,121	113,2484	18.76	18.76

Source: Ofla woreda cooperative promotion Office annual report (2007).

The major diseases that influence the production and productivity of the rural house holds was reported by the Woreda Health Office as follows:

Table 3.12: the major disease (top ten diseases) in Ofla woreda   (2007).

S.N	Level (Type of disease)	Count(Number of patient)	Prob.
1	Acute fever	2110	0.10616
2	Arthritis	1373	0.06908
3	Diarrhea	2922	0.14701
4	Eye inflammatory	1356	0.06822
5	Gastritis	1036	0.05212
6	Infection wounds	1602	0.08060
7	Intestinal parasite	2749	0.13831
8	Malaria	2691	0.13539
9	Respiratory infections	2656	0.13363
10	Tonsillitis	1381	0.06948
	Total	**19876**	**1.00000**

Source: Ofla woreda health office (2007)

The major top ten disease in the woreda (10.6%, 6.9%, 14.7%, 6.8%, 5.2%, 8.1%, 13.8%, 13.5%, 13.3% and 6.9%) were Acute fever, Arthritis, Diarrhea, Eye inflammatory, Gastritis, Infection wounds, Intestinal parasite, Malaria, Respiratory infections and Tonsillitis respectively. These were influence the production and productivity of farmers in terms of time and financial cost.

3.2. Criteria of Selection of the Study Woredas

The study was conducted in Alamata and Ofla Woredas of the Tigray National Regional State in the Southern Administration Zone (Development Corridor) of the region. The two Woredas were selected purposively because: -

 most of the established rural savings and credit cooperatives are found in the Southern Zone of the region;

 most of the cooperatives in these woredas have relatively longer duration being established and at least they have already started providing savings and credit services to their members; 3) they represent different agro-ecologies in the region;

 Alamata Woreda is the project area of the International Live stock Research Institution (ILRI); which is the researcher's sponsoring organization.

Southern Administrative Zone was purposely selected for the study; major reason being that, Alamata Woreda is the pilot project area of the International Livestock Research Institution (ILRI). Where, ILRI is the sponsor of the research work. Relatively in Southern Zone, cooperatives have longer duration of being established and at least they have already started providing savings and credit services to their members.

3.3. Sources and Methods of Collection Data

In this study, both primary and secondary data were collected. The primary data were collected from the sample farmers who are members of rural savings and credit cooperatives in the sample peasant associations (Kebeles) by using a structured interview Schedule prepared for the study purpose. All demographic and socio-economic variables that were expected to determine members' savings behavior and the magnitude of savings were collected. The interview schedule included the following points:

  General Description of the sample farmer; education status, age, social or administrative responsibility, social participation;

  Demographic data of the members; size and composition of family (household head, spouse, son/daughter) age, sex and other;

  Economic status;

  Land holding , ownership , and utilization;

  Types of crops cultivated;

  Livestock holding : type and number of animals;

  Other sources of income of the farmer ; types of work, amount obtained , duration income shocks;

  Market accessibility for inputs and out puts;

  Expenditures (consumption, healthcare, social ceremony, entrainment);

  Traditional saving habits(types of saving, places of saving and associated risks)

  Exposure to different formal and informal financial institutions;

  Pros and cons of becoming a member of savings and credit cooperatives;

  Agricultural produces and money utilization behavior;

Sources of credit, reason for credit, amount of loan borrowed, interest rate, benefit from the credit, utilization of credit;

 Indebtedness;

 Owner ship perception and confidence on savings and credit cooperative;

 Training and exposure for savings and credit services;

 Types of product and services obtained from savings and credit cooperative societies (SACCOS);

 Types of activities expanded or exposure to new activities;

 Services delivery system of saving and credit cooperative to members;

 Work relationships of savings and credit cooperative with other financial intermediaries.

To gather data from official respondents, a semi structured interview schedule were used. Besides, group discussions with the key communicators of the study area were also employed. Focus group discussions with cooperatives management committees were conducted using check list. Hence, five management committee members from each sample cooperative were participated in the discussion. The discussion schedule covered issues such as: (1)General Description of management committee; education status, age, social or administrative responsibility, social participation; (2) Amount of Capital and progress of members from establishment of the SACCOS up to now (2007); (3) Organizational status of the SACCOS; (4) Women's Participation; (5) Type of Services provided by the SACCOS to the members; (6) Loan Policy of the SACCOs; (7) Pros and cons of savings and credit cooperatives;

Secondary data were gathered from the different records of rural savings and credit cooperatives; woreda Cooperatives Promotion Office; Woreda Agriculture and Rural Development Office;

Woreda Health Office; Regional Cooperatives Promotion, Regional Rural Development and Agricultural Bureau; Finance and Economic Development Bureau…etc.

The interview schedule was first pre-tested among farmers in the nearby areas and essential amendments were made based on the feedback .To collect the data in the proper manner, enumerators who were responsible and familiar to the culture were assigned and three days training was given. The training was focused on how to approach the respondents and how to collect data using the schedule.

3.3.1. Interview Procedure

The researcher made use of an interview schedule which was prepared in English and then translated in to Tigrigna, the language of the study area, in order to ease the communication and not to miss relevant information. Seven enumerators were hired for collecting data for this study. They were cooperative promoters and development agents (DA) and fluent speakers of Tigrigna. The enumerators were trained on the techniques of data collection including how they should approach farmers, conduct interviews, and encourage the members of SACCOs to give relevant figures on economic, social and institutional factors. Furthermore, they were made aware of the objectives of the study and the content of the interview schedule was explained point by point. Thereafter, the interview schedule was pre-tested under the supervision of the researcher. Depending on the results of the pre-test, some modifications were made on the final version of the interview schedule. The researcher was supervising and guiding the enumerators throughout the data collection process.

3.4. Sampling Techniques

Taking in to consideration the time for the particular study out of 31 primary Rural Savings and Credit Cooperatives (RUSACCOS) only 10 savings and credit cooperatives from 10 Kebeles were selected. The selection of the sample Kebeles and the saving and credit cooperatives was based on the lifespan of their activity. Therefore, those cooperatives that have three years and above duration since establishment were taken in to consideration. Sample size was determined using the random sampling method based on probability proportionate to size. To select sample SACCOS from the sample Woredas the researcher has used random sampling proportionate to size.

From Alamata woreda 4 SACCOS and from Ofla woreda 6 SACCOS were selected at random which fulfilled the requirement of the sampled SACCOs. Sample Woredas, RUSACCOS and members of RUSACCOS are presented in Table 3.13and Table .14. The sample size of the respondents was 130.

Table3.13: Sample Woreda and primary savings and credit cooperative Societies (2007)

S.NO	Woreda	No. of SACCOs	Sample SACCOs
1	Alamata	12	4
2	Ofla	19	6
	Total	**31**	**10**

Source: Tigray Region RIFIP coordination unit annual report (2007).

The study requires a two stage random sampling procedure. In the first stage, 10 SACCOs were selected by using simple random sampling method from the list of SACCOS in the Woredas. In the second stage, members of the selected SACCOS were selected by using probability proportionate to size (PPS) Ten percent were randomly drawn out of the members of the selected RUSACCOS.

Table3.14: Sample members of the SACOOS (2007) 10% of the total members

Woreda	S.No	Name of the SACCOs	Total Members of the SACCOs	Sample size
Alamata	1	Zelallem Hiwot	72	7
"	2	Jehane	50	5
"	3	Alembrhan	53	5
"	4	Hadash Birhan	33	3
Ofla	1	Endedo	234	23
"	2	L/korem	212	21
"	3	Emba Hashenge	152	15
"	4	Alembrhan	123	12
"	5	Gereb Weini	200	20
"	6	Hiwot	192	19
	Total		**1321**	**130**

Source: Tigray Region RIFIP coordination unit annual report (June, 2007)

The sample members were randomly selected from members' entry documents of the cooperatives. The members' list were updated and arranged in a chronological order. The total sample size was 130. Besides, data were collected from a sample of official respondents who were members of the management committee of the cooperatives from the study area. The sample size of officials of RUSACCOS was 50.

3.5. Techniques of data Analysis

Based on the objectives of the study, appropriate tools and techniques of analysis such as descriptive statistics and linear regression statistical models were employed.

3.5.1. Descriptive Analysis

In order to have clear understanding about the result of the study, it is important to be familiar with demographic, socio-economic and institutional characteristics of the sample members of RUSACCOS households heads. To draw some important conclusions on the member's savings behavior and to suggest strategies to improve the savings behavior of members of RUSACCOS, descriptive statistics like mean, standard deviations, percentage, t-test, and χ^2-test were used in the analysis.   Further more, the potential variables hypothesized to increase savings magnitude and the determinants of Savings magnitude of members of RUSACCOS were tested for statistical difference using t-statistics and chi-square (χ^2) tests.

3.5.2. Linear Regression Analysis

In order to achieve the second objective of the study i.e. to identify factors that influences the magnitude of savings of rural members based on the hypothesized variables linear regression analysis was employed. The issues to be addressed in the study area, both qualitative and quantitative data were used. Besides statistical tests such as test of significance and correlation; were used for interpretation of data and drawing conclusions. To analyze the data JMP5 Computer Software of Statistical package program was employed for data analysis.

Linear regression model is employed to account for (predict) the variance in an interval dependent, based on linear combinations of interval, dichotomous, or dummy independent variables. Multiple regression can establish that a set of independent variables explains a

proportion of the variance in a dependent variable at a significant level (through a significance test of R^2), and can establish the relative predictive importance of the independent variables (by comparing beta weights). Power terms can be added as independent variables to explore curvilinear effects. Cross-product terms can be added as independent variables to explore interaction effects. One can test the significance of difference of two R^2's to determine if adding an independent variable to the model helps significantly. The estimates (b coefficients and constant) can be used to construct a prediction equation and generate predicted scores on a variable for further analysis (Gujarati, 2004).

Regression analysis can also be applied to study how a response variable Y is dependent on more than one regressor variables. For this purpose a model is adapted to the observations, which can explain Y from all the regressors together. If there are 'm' regressors x_1, x2... xm, then the linear regression model for the observations is as follows:

$$Y = \beta_o + \beta_1 x_1 + \beta_2 x_2 + ... + \beta_m x_m + E. \text{-------------------------------------- (1)}$$

In this model $\beta_0 + \beta_1 x_1 + b_2 x_2 + ... + \beta_m x_m$ is the systematic (or explanatory) part of the model and E is the random (or unexplained) part of the model. The residual term E is again assumed to be normally distributed with expectation 0 and variance 0^2 .The unknown parameters $\beta_0, \beta_1, ..., \beta_m$ are called the regression coefficients.

Multiple regression model shares all the assumptions of correlation: linearity of relationships, the same level of relationship throughout the range of the independent variable ("homoscedasticity"), interval or near-interval data, absence of outliers, and data whose range is not truncated. In

addition, it is important that the model being tested is correctly specified. The exclusion of important causal variables or the inclusion of extraneous variables can change markedly the beta weights and hence the interpretation of the importance of the independent variables (Gujarati, 2004).

The regression coefficient, b, is the average amount the dependent increases when the independent increases one unit and other independents are held constant. Put another way, the b coefficient is the slope of the regression line: the larger the b, the steeper the slope, the more the dependent changes for each unit change in the independent.

Dummy variables are a way of adding the values of a nominal or ordinal variable to a regression equation. The standard approach to modeling categorical variables is to include the categorical variables in the regression equation by converting each level of each categorical variable into a variable of its own, usually coded 0 or 1.

Regression coefficients and variance are usually unknown and need to be estimated from observations carried out on various n experimental units. In fact, this is done in the same way as the simple regression analysis, i.e. using the least squares method.

In general, the model estimates β_0, β_1... β_m with those values, for which the sum of squares of deviations E_i of the measured values Y_i and the expected values $\mu_i = \beta_0 + \beta_1 x_1 + ... + \beta_m X_m$ the following sum is minimal:

$$\sum_{i=1}^{n} E_i^2 = \sum_{i=1}^{n}(Y_i - \mu_i)^2 = \sum_{i=1}^{n}(Y_i - \beta_0 - \beta_1 x_1 -,...,\beta_m x_m)^2 \quad \text{-----------------------------} (2)$$

The estimators are noted as b_0, b_1,..., b_m, $\hat{\mu}_i$, $\hat{E}_i$

The observation Y_i is split up into the estimated expected value $\hat{\mu}_i = bo + b.x_{i1} + ... + b_m x_{im}$ and

the individual, estimated deviation $\hat{E}_i = Y_i - b_0 - b_1.x_{i1} -, ..., -b_m X_{im}$. ------------ (3)

3.5.3. Statistical tests of multicolinearity problem

Before executing the econometric model, all the hypothesized explanatory variables were checked for the existence of multicollinearity problem. The problem of multicollinearity may arise due to a linear relationship among explanatory variables. Multicollinearity problem might cause the estimated regression coefficients to have wrong signs, smaller t-ratios for many of the variables in the regression and high R^2 value. Besides, it causes large variance and standard error with a wide confidence interval. Hence, it is quite difficult to estimate accurately the effect of each variable (Gujarati, 1995, 2003).

Different methods are often suggested to detect the existence of multicollinearity problem. Among them, variance inflation factor (VIF) technique was employed in the present study to detect the existence of multicollinearity in continuous explanatory variables (Gujarati, 1995) and contingency coefficient (CC) for dummy variables (Healy, 1984 cited in Paulos, 2002).

According to Gujarati (1995), VIF (Xi) can be defined as

$$VIF\ (X_i) = \frac{1}{\left(1 - R_i^2\right)}$$

Where:

R_i^2 is the multiple correlation coefficients between X_i and other explanatory variables.

Selected continuous explanatory variables, (X_i) were regressed on all other continuous explanatory variables, and the coefficient of determination (R_i^2) was constructed for each case.

The larger the value of R_i^2 results in higher value of VIF (X_i) which causing higher collinearity between variables. For continuous variables, as a rule of thumb, values of VIF greater than 10, are often taken as a signal for the existence of multicollinearity problem in the model (if the value of R_i^2 is 1, it would result in higher VIF (∞) and cause perfect multicollinearity between the variables) (Gujarati, 1995).

In the same line, the contingency coefficients (CC) were computed for dummy variables from chi-square (χ^2) value to detect the problem of multicollinearity (the degree of association between dummy variables). According to Healy (1984), the dummy variables are said to be collinear if the value of contingency coefficient is greater than 0.75 (cited in Paulos, 2002).

$$C.C = \sqrt{\frac{\chi^2}{n + \chi^2}}$$

Where:

C.C is contingency coefficient,

n is sample size,

χ^2 is chi-square values.

3.6. Definitions of variables and working hypotheses

After the analytical procedures are clearly defined, it is necessary to identify the potential explanatory variables that would influence member's savings behavior and the magnitude of savings in Savings and credit cooperatives. Review of literature, past research findings, experts and author's knowledge of rural household's savings behavior of the study areas were used to identify potential determinants of savings and the magnitude of savings. Therefore, by assigning members decision to save cash and the magnitude of savings as one dependent variable, the

following variables are selected to analyze whether they explain RUSACCO members' decision to save cash and the magnitude of savings or not.

1. **Y_1:** The magnitude of members' annual savings in RUSACCOS in Eth Birr. It is a continuous dependent variable in the model.

3.6.1. Definition of Variable

1. Age of the member head (MHAGE): It is a continuous variable and defined as the number of completed years from the time of birth till the time when the survey was conducted. In this study it is assumed that as age increases farmers would acquire knowledge and experience through continuous learning and the level of responsibility to manage the family and the need to accumulate assets for tomorrow becomes high. Therefore, they prefer to save cash. On the other hand, due to past bad experiences those who were the members of the then cooperatives may hesitate to be members of the RUSACCOs and they may also hesitate to deposit substantial amount of savings in RUSACCOs. De Serres and Pelgrin (2003) found age of the household heads negatively related to savings magnitude. In light of this, it is hypothesized that the age of the members is negatively or positively related to the magnitude of annual savings in the RUSACCOS.

2. Sex of the Members' head (MHSEX): This is a discrete variable that takes a value of "1" if the member of RUSACCOS is male and "0", otherwise. In this study in one hand, it is assumed that male household heads have more exposure and access to information and new interventions than female household heads, which might enable them to participate in the RUSACCOS movement as early as possible. On the other hand, once female headed households have got information about savings programs and related financial products/services they are strong

participants in all aspects of the financial system. Based on this assumption it is hypothesized that sex of the household affects the magnitude of annual savings.

3. Member's family size (MHFS): It is a continuous explanatory variable represented by positive integer values. As the members' family size increases, the number of mouths to be fed obviously increases, which share available income to consume. On the other hand, if the majority of the RUSACCOS members are productive, the level of income at household level will be increased. Oliveira *et al.* (2003) found family size to be related negatively to annual savings magnitude. Hence, it is hypothesized that the household's family size is directly or inversely related to the members' decision to the magnitude of annual savings

4. Education level of the Member head (MHEDUC): This represents the level of formal schooling completed by the household head. It is a continuous variable in terms of the household head grade level. On one hand, educated farmers are expected to have more exposure to the external environment and accumulated knowledge through formal learning which might enable them to pursue livelihood strategy that leads to better income through making use of available opportunities, and on the other hand, due to an exposure effect educated farmers prefer 'modern' lifestyles which lead to increased household consumption level. Oliveira *et al*. (2003) also found that education level of the household heads related the magnitude of savings. Therefore, it is hypothesized that education level of the members' head is positively or negatively related to the magnitude of annual savings.

5. Members Farm land holdings size (LANDH): This is the total farm size cultivated by the household given in hectare. Since it reflects ownership of an important asset, it is expected to affect production positively. The theory of factors of production implies that, land is one of the important factors of production. Therefore, farm size, as a variable, was hypothesized to have

positive relationship with agricultural production and thereby increased farmers' income. It is a continuous variable. If the member has large land size, he would gain more income. It is assumed that the larger the total area of the farmland the farmer owns, the higher would be the output. Thus, increase in size of land is expected to have direct influence on savings magnitude of members of RUSACCOS

6. Livestock resource of members in number (LIRTLU): It refers to total livestock of the members of RUSACCOS measured in number, and it is a continuous variable. Livestock are the farmers' important sources of income, means of transportation, source of food and draught power for crop cultivation and it is a proxy for the wealth status of the households in the study area. Livestock are also used as an insurance of rural livelihoods in case of crop shortfalls and they are means of saving. It is expected that livestock resource in number is positively or negatively related to the magnitude of annual savings.

7. The amount of on-farm income in Birr (ONFARI): It represents the amount of farm household members of RUSACCOS annual income generated from on-farm activities. It is a continuous variable. The higher the amount of annual income might reflect households' strategy of improving its agricultural production and productivity to secure the household basic needs and gradually to change the household members' life style. Wener and Earnst (2003), Oliveira *et al*. (2003) found income of the households positively related to the magnitude of savings. Hence, it is hypothesized that on-farm income is positively related to the magnitude of annual savings.

8. The amount of income generated from off - farm activities in Birr (OFFFAR): It represents the amount of annual income generated from different non-farm activities of the household. It is a continuous variable. The higher non-farm income might reflect household's strategy of diversifying its income sources with the view to decrease the household income risk.

Hence, it is hypothesized that the amount of annual non-farm income is positively related to the magnitude of annual savings.

9. Total annual expenditure on social/religious ceremonies (CEEXP): It is a continuous variable. In the rural setting there are different social and religious ceremonies celebrated occasionally such as, wedding, burial/funeral, circumcision and others. The expenses related to these ceremonies are sometimes too large relative to farmers' income levels. As this variable can be a proxy for use of income for non-productive purposes, it is expected to have a negative impact on the magnitude of farm household annual savings. Based on this assumption, expenditure on social/religious ceremonies are assumed to be inversely related to the members' decision to save and the magnitude of annual savings.

10. Access to training (TRAIN): It is a discrete variable, which takes a value of "1" if yes and "0", otherwise. Training would increase the awareness level of farmers and exposure to new ideas, information, activities, opportunities, working environment, and different sources of income, prudent handling of cash, etc. Usually the trainings programs focus on organization, management, objectives, operation system, savings mobilization, etc. of RUSACCOS. Therefore, access to training would have positive impact on the amount of member's annual savings.

11. Distance to RUSACCO office (DIRU): It is a continuous variable and distance is measured in terms of Kilo meters. The close nearness of RUSACCO to the beneficiaries would save farm resources (time, labor) which otherwise would have been spent to access different financial products and services and it might also motivate farmers to join the institution. Rural SACCOs which are located at far distant areas, on the other hand, might discourage members' participation in the cooperative and it becomes difficult to follow up and control the operational system of the

cooperatives. Therefore, it is hypothesized that distance to RUSACCOS' office is negatively related to the member's Of RUSACCOS magnitude of annual savings.

12. Timeliness of credit from non-RUSACCO financial institutions (TCNORU): It is a discrete variable, which takes a value of "1" if yes and "0", otherwise. It is expected that timely availability of credit from non-RUSACCOS financial institutions to the beneficiaries would decrease both implicit and explicit costs of the beneficiaries and RUSACCOS members' participation and membership to the RUSACCOS. It is hypothesized that timeliness of credit from non-RUSACCO financial institutions is negatively related to the amount of member's annual savings.

13. Credit beneficiaries of household heads (BECR): It is a discrete variable that takes a value of "1" if the household head was a credit beneficiary for the last three consecutive years and "0", otherwise. It is assumed that those households who were the beneficiaries of credits over the last few years might have developed experiences on how to use loan purposefully and how to make money easily from the available resources. Therefore, it follows that they desperately need financial products in their day to day activities. Since one of the major objectives of RUSACCOs is to offer loan products to the members, those who have credit use experience are expected to be pioneer in the RUSACCO movement. In line with this, it is hypothesized that credit beneficiaries of household heads is directly related to the magnitude of savings.

14. Amount of loan borrowed from RUSACCOS (AMLON): It is a continuous variable that the members of RUSACCO borrowed loan from their societies. Amount of loan is positively or negatively associated with savings magnitude of members. Increasing savings will develop confidence and increases the amount of loan to be borrowing, then it influences positively with amount of savings. On the other hand if members of RUSACCOS have limited capital to save

regularly and have the commitment of to repay the loan, they can't increase their savings, then it is associated negatively with the savings magnitude of members.

15. Savings experiences in undisclosed places (SAUN): It is a continuous variable that the number of years experience gained by the households through savings money in undisclosed places. It is hypothesized that households' savings experiences in undisclosed places is directly related to the magnitude of savings of the members of RUSACCOS.

16. Total expenditure (EXPEND): It is a continuous variable that refers to the sum of household expenses on food item, clothing, education, health, etc. The household, which spends more, is expected to be wealthier. The wealthier household is expected to spend more not only consumption items but also production items. The household, which spends more out of its capital, is expected to spend more on farm inputs, which again increases his capital later. Therefore, it is hypothesized that this variable has a positive relationship with savings magnitude of member of RUSACCOS.

17. Savings Interest Rate (SAV-INR): It is a continuous variable in rate of interest. The expectation is that the members preferred to save his/her cash where savings interest rate of RuSACCOs is fair. Therefore, it is hypothesized that this variable has a positive relationship with savings magnitude of member of RUSACCOS.

3.6.2. Dependant and Independent variables

The dependant variable (continuous variable) and independent variables (continuous and dummy variables) are presented below: -

Table3.15: the dependant and independent or explanatory variables

S.N	Description of variables	Types of variables
A	**Dependant**	
1	Savings magnitude (Yi).	Continuous
B	**Independent**	-
1	Age of the member of SACCOS(X1)	Continuous
2	Sex of the member(X2)	Discrete
3	Members' family size(X3)	Continuous
4	Education level of the members head(X4)	Continuous
5	Farm size of members head (X5)	Continuous
6	Livestock resource own in TLU (X6)	Continuous
7	Annual income from on farm activities of the member(X7)	Continuous
8	Annual income from off-farm activities(X8)	continuous
9	Annual expenditure on social/religious ceremonies(X9)	Continuous
10	Access to training (X10)	Discrete
11	Distance to RUSACCOS office (X11)	Continuous
12	Timeliness of credit (X12)	Continuous
13	Credit beneficiaries of household heads (X13)	Discrete
14	Amount of loan borrowed from RUSACCO(X14)	continuous
15	Savings experience in undisclosed place(X15)	Discrete
16	Total expenditure (X16)	Continuous
17	Savings interest rate(X17)	Continuous

Administrative Map of Tigray Region and the location of the of Alamata and Ofla woredas

Fig.3.3 administrative map of Tigray

CHAPTER FOUR

4. RESULTS AND DISCUSSION

This part presents the findings of descriptive statistics and econometric analysis in line with members' savings behavior and determinants of savings in rural savings and credit cooperatives. Univariate and multivariate statistical techniques were employed to analyze the collected Primary data. The results of the analysis are presented in two categories. First, univariate statistical methods were employed to assess the demographic and socio-economic characteristics of the respondents. Second, linear regression analysis was employed to discover the most important variables which enabled to identify factors that influences the magnitude of savings of members of RUSACCOS.

4.1. The Results of Discussion with Focused Group of RUSACCOS

In this section of the Thesis, demographic characteristics of the focused groups (Management committees), amount of capital, progress of memberships, organizational status, women's participation, type of service provided, loan policy and recommendation of the focused groups of the sample RUSACCOS were discussed. To gather data from officials i.e. management committee of the ten sample RuSACCOs, semi structured interview schedule and discussion were used.

4.1.1. Focused Groups Demographic Characteristics

The sex distribution of the management committee members were 45(90 percent) and 5(10 percent) male and female respectively. The participation of women in management committee in the study area was very minimal.

Table4.1: Sex distribution of management committee of the sample SACCOS (N=50)

S.No	Distribution of sex of officials		
	Level	Count(number)	Percent
1	Male	45	90
2	Female	5	10
	Total	50	100

Source: Computed from the field survey data (2007)

The average, standard deviation, minimum and maximum age of the sample officials was about 40.3, 7.76, 22 and 58 years respectively. The age distribution of the focused group was summarized in Table 4.2 below.

Table 4.2: Age distribution of the focused group (N=50)

	Distribution of Age				
Description	Unit	Mean	Std.Dev	Minimum	Maximum
Age of the Respondents	Year	40.3	7.76	22	58

Source: Computed from the field survey data (2007)

Among the sample focused group members of the management committee, 66 percent are able to read and write. The remained 34 percent attended from elementary to high school level. More specifically, 28percent and 6 percent of the sample officials had attended elementary school and junior secondary, respectively. The sample officials' educational status elaborated in Table 4.3 below.

Table 4.3: Distribution of educational status of the sample officials

| S.No | Educational Level | Educational status (N=50) | |
		number	percent
1	Read and write	33	66
2	Grade1-4	0	0
3	Grade 5-8	14	28
4	Above Grade 8	3	6
	Total	50	100

Source: Computed from the field survey data (2007)

4.1.2. Members Growth of the sample RUSACCOS (2003-2007 December)

The savings behavior of the rural people can be improved through increasing the memberships of SACCOS and strengthen the financial structure of the societies. According to WOCCU (2002), to measure the year-to-date growth in membership of the savings and credit cooperatives the following formula is used: -

a. Current Number of Members.

b. Number of Members as of Last year-end.

Formula: a/b -1 x 100 Goals: > 12%.

From the total sample RUSACCOS 4 were established during 2003. Beginning from RUSACCOS establishment in the study area, the numbers of total members' were181; 420; 82; 1118 and 1327 in the year 2003; 2004; 2005; 2006and2007 respectively. Based on the growth formula and the given goals, the member's growth of the sample savings and credit cooperative societies in the study area were reported by the sample officials of RUSACCOS.

Table 4.4: Percentage growth of members in RUSACCOS (2003-2007)

RUSACCOS	Total members of RUSACCOS(2003-2007) N=10									
	2003	%G	2004	%G	2005	%G	2006	%G	2007	%G
Z/Hiwot	46	-	55	25	70	27.3	85	21.4	102	20
H/Brhan	0	-	22	-	28	27.3	42	50	68	61.9
A/Brhan	0	-	25	-	40	60	52	30	62	19.2
Jehan	14	-	17	21.4	45	164.7	44	-2.2	43	-2.2*
L/Korem	55	-	64	16.3	138	115.5	210	52.2	240	14.3
Endedo	66	-	80	21.2	128	60	165	28.9	226	36.9
Hiwot	0	-	39	-	64	64	95	48.4	111	16.8
G/weini	0	-	36	-	123	241.6	175	42.3	200	14.3
Brhan	0	-	38	-	70	84.2	120	71.4	125	4.2*
E/Hash.	0	-	44	-	115	161.4	130	13.1	150	15.4
Total	181	-	420	-	821	95.5	1118	36.2	1327	18.7

Source: Computed from the field survey data (2007)

Note: %G= Percentage Growth

According to The World council of Credit Unions (Toolkit Series, 2002), the tools and methodologies developed in the field of savings and credit cooperatives and credit unions the sign and goals of membership growth declared, the membership growth of the sample RUSACCOS in the study area particularly "Jehan" from Alamata woreda and "Brhan" from Ofla woreda were -2.2 and 4.2 percentage growth respectively which was below the goals of the growth.

4.1.3. Growth of Savings and Share of sample RuSACCOs

With the new emphasis on savings mobilization, savings deposits are the new cornerstones of growth. The growth of total assets is dependent on the growth of savings. The rationale for maintaining aggressive marketing programs is that it stimulates growth in new savings deposits that in turn, affect the growth of other key areas. The growth rate is calculated as:

a. Total Current Savings Deposits or Share

b. Total Savings Deposits or Share as of the Last year-end

a/b -1*100

Goals: Savings 70 -80 percent andShare10 -20 percent

Table4.5 The growth of share and savings of the sample RUSACCOS in Birr (2005-2007)

SACCOS	2005		2006		2007		Percentage growth	
	Share	Savings	Share	Savings	Share	Savings	Share	Savings
Z/Hiwot	2364	8288	2604	9114	4408	16128	69	77
H/Brhan	932	3262	1044	3654	1148	4018	10	10*
A/Brhan	1384	4844	2024	7084	2224	7784	10	10*
Jehan	1480	5180	938	6565	1390	8599	48	31*
L/Korem	9480	28440	15560	51420	27195	86505	75	68*
Endedo	11000	42432	17496	68832	30560	101247	75	47*
Hiwot	3560	12230	7555	22665	15460	87050	105	284
G/weini	5945	17825	11580	39300	22535	72165	95	84
Brhan	5515	16450	8295	22635	14633	39990	76	77
E/Hash.	6490	19450	12950	38850	20065	60195	55	55*
Total	48150	158401	80046	270119	139618	483681	74	79

Source: Computed from the field survey of the sample RuSACCOs (2007).

Note: * is below the standard growth of RUSACCOS in share and savings.

Fig.4.1: The growth of share and savings of the sample RUSACCOS in Birr (2005-2007)
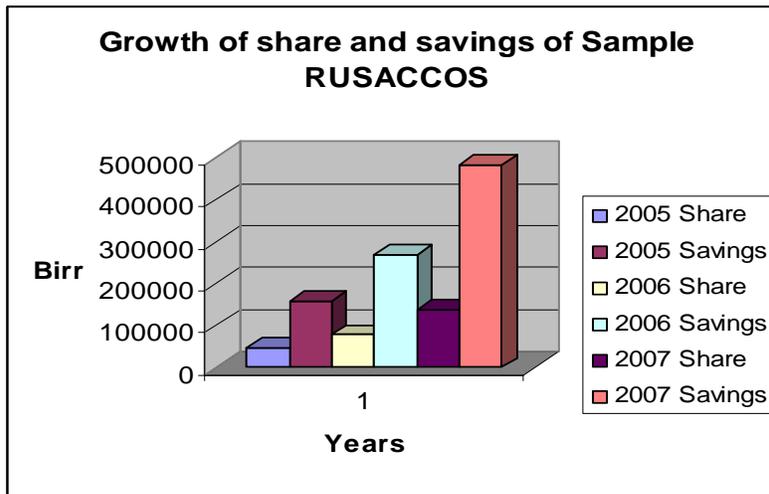
Source: Computed from the field survey of the sample RuSACCOs (2007).

According to WOCCU (2002), to measure the year to date growth of share and savings of the members of RUSACCOS point out above 10-20percentand 70-80 percent growth for share and savings respectively. Based on the standard growth rate "H/Brhan" 10 percent, "A/Brhan''10 percent and "Jehan" 31 percent SACCO societies from Alamata woreda were below the standard growth rate in savings of members. Besides "L/Korem"; "Endedo" and "Enbeba Hashenge" from Ofla woreda were below the standard growth in members savings. There for out of the 10 sample savings and credit cooperatives, all SACCOS in share and only 4 SACCOS were fulfills the goal of growth rate in share and savings respectively. In both the growth of share and savings, SACCO societies in Alamata woreda were frail than the SACCO societies in Ofla woreda.

4.1.4 Organizational Status of the Sample RUSACCOS

It is true that SACCO Society is member owned; member controlled and run its service by members' leadership and wise decision. However, it is not possible for members to perform

directly all service activities of the Society. Therefore, The SACCO Society needs a key position to be held in between the members and hired management, which represents the members as user and owner of the SACCO Services. The Boards of directories have the power and duties of managing and controlling the affairs of the SACCOS in transparent way. The primary responsibilities of the directors are to hire the manager, other employees, establish operating environment and direct the SACCOS to wards its overall objectives.

All the sample savings and credit cooperative societies in the study were managed by Board of directories elected by the General Assembly (GA) of the societies. As the same time, the researcher discussed with the focused groups of RUSACCOS on the types of sub-committee and whether the SACCOS have official employee or not.

The official respondents replied that, every sample societies have control committee, savings committee, loan committee and education, information and training committee. From the sample SACCOS five savings and credit cooperatives had official accountant employees. Based on the organizational structure each society has specific roles and responsibilities in the over all operation of the SACCO Society. The general assembly is the over all superior governing body of the SACCO society.

4.1.5 Service Offered by RUSACCOS

The official respondents reply that all sample RUSACCOS offered savings (Compulsory and Voluntary Savings) and loan only to their members.

Compulsory savings is a saving that a member is forced to save on regular basis; it is a membership savings i.e. must be saved on weekly, monthly, seasonally basis depending on the income of the member. It is collected to on lend to members. If members fail to save on time they will get penalized based on the savings policy of the society. Unless the member quits from membership, he should save on regular basis. If a member wants to with draw from the SACCO society, he has the right to take this compulsory saving with one-month prior notice to the Board of directors or the Manger. The society will provide interest for this savings & it is advisable to pay higher saving interest than the Banks to encourage member's savings mobilization.

Voluntary savings is very important to farmers since they don't have regular income they can save as voluntary saving during harvest time, and transfer monthly to their compulsory saving accounts. Members are desired to save this saving based on their interest. Voluntary savings are deposited and withdrawn as the member interest. Farmers, and other individuals, can save the full amount for the coming year's compulsory savings in advance with the SACCO by depositing 12 months worth of saving in a voluntary account.

Loan is having some one's money for productive purpose to solve Social problem and that will pay back at agreed period with additional agreed interest. It can be expensive because borrower will have to pay the loan it self with additional interest more than or equal to what they produce. It can be risky because may be exposed to risks caused by weather, income fluctuations, disease and death, that may create a problem for repayment. It can be difficult that the poor has more difficulties in obtaining loans than the rich. Local moneylenders, friends, even families and Banks are unwilling to lend to people they think will have problems to repay. It can be stressful because loan involves promise to repay to the lender. Failure to repay loan may mean losing of

valuable property or losing good reputation and resections. Therefore, loan must be examined and treated carefully and honestly in the SACCO society. The SACCO society should assign members as a loan committee. All the sample savings and credit cooperatives ask savings of the members and savings of guarantors (the guarantors should be members of the society) as collateral for loan.

4.1.6 Loan Policy of the Sample RUSACCOS

With respect to the criteria of that qualify a member for a loan, the official respondents have reported based on the societies loan policy approved by the general assembly as follows: 1)Saving regularly, 2)Being a member for required period, 3) Fulfilling his duties and responsibilities: - having minimum share and compulsory savings, active in promoting new members,4)Personal integrity of the business owner(s) and family, 5)Honest and trustworthy, honorability to agreements with the SACCO Society 6)Ability of the business to repay the loan, the profitability and viability of the business for which the borrower applied.

All loan applications must have one or more forms of guarantee attached to them, in order to be approved. The first and best form of guarantee is savings, either for the client individually or from a guarantor, however, savings will never be sufficient to cover the full value of the loan. The savings, which is pledged as guarantee, must be locked away (made unavailable to a member) during the full term of the loan. Other forms of collateral can then be used to guarantee the remaining portion of the loan. The maximum and minimum loan provided by the RUSACCOS, maturity period of loan, leverage ratio and interest rate of the sample savings and credit cooperative are reported in Table 4.6.

Table 4.6 Maximum and minimum loan and interest rate of RUSACCOS (2007)

SACCOS	Loan provided (Birr)		Maturity of loan in years		Leverage and amount of interest rate		
	Max	Min	Max	Min	Leverage ratio	savings interest	Loan interest
Z/Hiwot	2000	300	1	0.5	3.5:1	2	12.5
H/Brhan	4000	500	1	0.5	3.5:1	2	12.5
A/Brhan	1500	500	1	0.5	3.5:1	2	12.5
Jehan	1500	600	1	0.5	3.5:1	2	10
L/Korem	5000	100	1	0.5	4:01	3	14.5
Endedo	5000	200	1	0.5	4:01	3	14.5
Hiwot	5000	100	1	0.5	4:01	3	14
G/weini	1000	100	1	0.5	4:01	3	13
Brhan	3000	200	1	0.5	4:01	3	13
E/Hash.	6000	500	1	0.5	4:01	3	14

Source: Computed from the field survey of the sample RuSACCOs (2007)

From Table 4.6, the maximum and minimum loan in both the study area was 3400Birr and 310 Birr. The maturity of loan was declared by annual general meetings maximum one year and minimum six months. The leverage ratios, interest rate for loan and savings deposit of members differ from woreda to woreda and from SACCOS to SACCOS.

The leverage ratio (savings to share ratio) was 3.5:1 and 4:1 in Alamata and Ofla woreda respectively. Indicating the interest rate of the sample RUSACCOS the savings interest for members deposit is very low but the interest for loan is very high. The difference between savings interest and loan interest has broad range and the loan interest is very expensive compared to other formal and informal financial institutions. The higher interested rate should discourage members to participate in activities of RUSACCOS and potential members of RUSACCOS can't motivate to be membership savings and credit cooperatives.

4.1.7 Participation of Women in RUSACCOS

Women represent greater than 50 percent of the total population of the study area. Savings and credit cooperatives will become a stronger economic and more influential in political force if more women are actively involved in cooperatives movement. Through awareness creation, gender sensitization, education and training can remove the obstacles to women's equal participation in RUSACCOS.

In this study in one hand, it is assumed that male household heads have more exposure and access to information and new interventions than female household heads, which might enable them to participate in the RUSACCOS movement as early as possible. On the other hand, once female headed households have got information about savings programs and related financial products/services they are strong participants in all aspects of the financial system. Based on this assumption it is hypothesized that sex of the household affects the magnitude of annual savings. Involving more women (in membership; decision making, different committee, general meeting of the SACCOS) in savings and credit cooperative societies will broaden the scope of

RUSACCOS and improve their social standing. The positions of women's participation in the study area were reported in Table 4.7 below.

Table4.7 The status of women participation in different committees (2007)

| | | | | | | | Women's participation in different committee of SACCOS | | | | | | |
| | Membership | | BD | | CC | | SC | | LC | | EC | | |
SACCOS	F	M	F	M	F	M	F	M	F	M	F	M
Z/Hiwot	44	58	1	4	0	3	0	3	1	2	1	2
H/Brhan	20	48	0	5	0	3	2	1	1	2	1	2
A/Brhan	18	44	0	5	1	2	1	2	1	2	1	2
Jehan	11	32	1	4	0	3	1	2	0	3	1	2
L/Korem	90	150	1	4	1	2	0	3	1	2	1	2
Endedo	83	143	1	4	0	3	0	3	1	2	0	3
Hiwot	29	83	0	5	1	2	0	3	1	2	1	2
G/weini	68	132	1	4	1	2	0	3	0	3	1	2
Brhan	16	109	0	5	0	3	0	3	0	3	0	3
E/Hash.	45	105	1	4	0	3	0	3	0	3	1	2
Total	424	904	6	39	3	24	4	23	5	22	7	20
Percent	32	68	13	87	11	89	15	85	19	81	26	74

Source: Computed from the field survey of the sample RuSACCOs (2007).

Note: BD = Board of Directory, **CC** = Control Committee, **SC** = Savings Committee, **LC** = Loan Committee, **EC** = education Committee, **F** = Female and **M** = Male

In both the study area the participation of women in management committee and sub committees was very low. Thus participation of women in membership and leadership (board of directory, controlling committee, savings committee, loan committee and Education committee) were 32, 13, 11, 15, 19 and 26 percent respectively.

4.2. Descriptive Results of Selected Demographic, Socio-Economic and Institutional Characteristics of Sampled members of RUSACCOS

In this section, results obtained using statistical tools such as mean, percentage, standard deviation and frequency distributions are presented and discussed to examine savings behavior of members in rural savings and credit cooperatives societies in the study areas.

4.2.1 Distribution of sample heads by age and family size

In this study it was assumed that as age increases farmers would acquire knowledge and experience through continuous learning and the level of responsibility to manage the family and the need to accumulate assets for tomorrow becomes high. But the study disproved the above assumption that is as age increases the amount savings become decreases. In this study the age group is classified as (14 - 40), middle age group (40 – 60) and above 60 years age. There were 98(75.4 percent) young, 31(23.8 percent) middle and 1(0.8 percent) old age member respondents. The mean and standard deviation of the respondents age was 36.5and 8.63years respectively. The mean annual savings amount of younger, middle and above 60 years age group was Birr 411.469, 344.519 and 168.01 respectively.

Table4.8 Distribution of sample respondents by age group (N=30)

S.No	Age group In years	Number	Mean annual Savings
1	14 - 40	98	411.469
2	41 - 60	31	344.519
3	Above 60	1	168.01
	Total	130	393.63
	Mean age	36.5	
	Std.Dev.	8.636	
	t- value	1.97***	

Source: Computed from the field survey data (2007)

   Note: *** is statistically significant at less than one percent probability level.

The average age of the household heads (the respondents) was 36.5 years with the minimum and maximum ages of 15 and 66 years respectively.

With regard to the family size, the average family size of the sample members was 5.67 persons, with maximum and minimum family size of 11 persons and 1 person, respectively. This was above the national average which was only 5 family members. This fact depicts that the study area is densely populated. To determine the savings behavior of members of RUSACCOS the researcher grouped the family size of members in to 3 groups (Table 5.9) and the mean annual savings difference between the three groups is statistically significant.

Table 4.9: Distribution of sample respondents by family size (N=130)

S.No	Family size group	Distribution of family member		Mean Annual Savings
		Number	Percent	
1	1 - 4 family	40	30.7	423.000
2	5 - 8 family	81	62.3	392.840
3	9 -12 family	9	8.0	270.222
	Total	130	100	393.63
	t - value	1.99***		

Source: Computed from the field survey data (2007)

 Note: *** is statistically significant at less than one percent probability level.

The mean annual savings of members of RUSACCOS who have family size from 1 to 4, from 5 to 8 and from 9 to 12 were reported Birr 423, 392.84 and 270.222 respectively.

As the members' family size increases, the number of persons to be fed obviously increases and the amount of savings decreases by Birr 30.16 and 152.75 for the second and third family size groups in that order, which share available income to consume. On the other hand, if the majority of the RUSACCOS members are productive, the level of income at household level will be increased.

4.2.2 Sex distribution of respondents

Of the total respondents 44(33.85 percent) and 86(66.15 percent) were female and male accordingly. The t - test (t - value) of sex distribution members of RUSACCOS the difference

between women and men savings magnitude is statistically significant at 5 percent confidence level (p-value= 0.0369). The mean annual savings of female and male members of RUSACCOS were Birr 421.91 and Birr 379.16 respectively. Even though the members of women are low in number, the mean amount of savings of women exceeds by Birr 42.75 than men.

Table4.10: Sex distribution of respondents with annual average savings (2007)

S.No	Level	Distribution of sex		Mean annual
		Count	Percent	Savings(Birr)
1	Female	44	33.85	421.91
2	Male	86	66.15	379.16
	Total	130	100	393.63
	t - value	2.185**		
	P-value	0.0369		

Source: Computed from the field survey data (N=130)
Note: * is statistically significant at five percent probability confidence level

In this study in one hand, it is assumed that male household heads have more exposure and access to information and new interventions than female household heads, which might enable them to participate in the RUSACCO movement as early as possible. On the other hand, once female headed households have got information about savings programs and related financial products/services they are strong participants in all aspects of the financial system. In this study gender (sex) difference influences the savings behavior of members of RUSACCOS, because the result of the relationship between sex and savings magnitude of members of RUSACCOS is significant.

4.2.3 Educational status of sample respondents

Sample members' education status helps them not only to understand how to make money but also to prudently and profitably handle cash in financial institutions, which are found in nearby areas. The survey results revealed that 31 (23.8 percent) of the sample members were illiterate while 99 (76.2 percent) were literate at different levels of school grade and those who are able to read and write. The number of literates in RUSACCO members at three school grade levels and those who are able to read and write (able to read and write, less than grade 5, grade 5-8, and above grade 8) was 18 (13.8 percent), 27 (20.8 percent), 28(21.5 percent) and 27 (20.8 percent), respectively(Table 5.2).

Table 4.11 Distribution of sample respondents by their educational status (N=130)

S.N	School levels	Distribution of education		Mean annual
		Number	Percent	Savings (Birr)
1	illiterates	31	23.8	360.25
2	Able to read and Write	21	16.1	391.25
3	Grade 1- 4	27	20.8	413.5
4	Grade 5 - 8	27	20.8	381.75
5	Above grade 8	24	18.5	429.85
	Total	130	100	393.63

Source: Computed from the field survey data (2007)

Educated farmers are expected to have more exposure to the external environment and accumulated knowledge through formal learning which might enable them to pursue livelihood strategy that leads to better income through making use of available opportunities. But in this study, educational level is found statistically insignificant to determined savings behavior of

members of RUSACCOS. The most important reason educational level of respondents not significant is due to the educated and uneducated respondents savings was similar.

4.2.4 Distribution of respondents by land holding

The low land part of the study (Alamata) area has flat plane type surface suitable for cultivation of crops and rearing of animals. The farm size of sample members varies from land less to 4.5 hectares land holdings. The average farm size was 1.15 hectares with a standard deviation of 0.819. Because of the heavy population pressure in the study area, land is a very compulsory constraint for farming.

The survey results indicated that 30 percent of the respondents have a farm size of 0.5 hectare or less, 21.5 percent of the respondents have a farm size of 0.51 to 1 hectare, about 33.1 percent of the respondents have a farm size of 1.01 to 2 hectare, 15.5 percent of the respondents have a farm size of greater than 2 hectare and 3.9 percent of the respondents were land less. The difference between land holding and savings behavior of respondents is significant. The survey result reported as the annual savings of the members of RUSACCOS were Birr 300,342, 359, 435 and 507 for land less, less or equal to 0.5 hectare, 0.5 to 1 hectare, 1.01 to 2 hectare and greater than 2 hectare respectively.

Having enough land increases the income of members' savings and credit cooperatives. As the income of the members increases, members tend to save money today for future use. As indicated in Table 4.12, the average farm size holding of the farm households in the study areas including

Leasing in land is 1.15 hectare. So, rural households are often faced with shortage of cultivable land, through which they can increase their output.

Table4.12: Distribution of sample households by cultivated land holding (2007)

S.No	Land size in hectare	Respondents distribution of land		Mean annual savings in Birr
		Number of respondents	Percent	
1	Land less	5	3.9	300
2	≤0.50 hectare	39	30	342
3	0.51-1hectare	28	21.5	359
4	1.01-2 hectare	43	33.1	435
5	>2hectare	15	15.5	507
	Total	130	100	393.63
	Mean in hectare	1.15		
	Std.Dev in hectare	0.819		
	ChiSquare	42.8195***		

 Source: Computed from the field survey data (N=130)

  Note: *** is significant at one percent probability level.

Households have different informal arrangements to acquire additional land whenever the need for more land arises. Leasing in and leasing out of land is a common practice among farmers in most parts of Ethiopia (Assefa *et al.* 2005). Such informal land transactions entail some payments either in cash or in kind. Sampled households were requested to indicate whether they have leased in or leased out land. The result indicates that only 4 (3 percent) of the sample households leased out land to other farmers. Farmers did not only lease out land but also rent-in land whenever possible. Renting-in land tends to be more common than renting-out (partly due to the small average farm size). About 37 (28.5 percent) of the respondents had rented-in land during the 1999/2000 Ethiopian crop season.

4.2.5. Livestock holding of the sample households

Livestock is one of the major assets for an Ethiopian farmer. Often the number of livestock owned by a household is considered as a measure of wealth. In a mixed farming system the contribution of livestock to crop production cannot be undermined. Due to the multifunctional nature of livestock in the study area, they provide draught power; they are an alternative source of income, and serve as a store of wealth. Livestock products are also important contributors to household food. As to the livestock, calculated in Tropical Livestock Unit (TLU) adopted from Storck, et al. (1991) and ELCA (1993) (cited in Freeman et al 1996), (See Appendix 2 for livestock conversion factors).

Table4.13: Livestock resources of sample farmers in TLU (2007)

S.No	Category Livestock	No.of respondents	Percent	Amount of annual Savings in Birr	Total annual Savings in Birr
	Distribution of livestock in TLU(N=130)				
1	0	16	12.3	258.25	4132
2	0.01- 5	65	50	406.77	26440.05
3	5.01- 10	38	29.2	414.95	15768
4	10.01 - 15	8	6.2	460	3680
5	>15	3	2.3	384	1152
	Total	130	100	393.63	51172.05
	Mean in TLU	4.42			
	Std.Dev.	3.86			
	ChiSquare	33.92***			

Source: Computed from the field survey data (n=130)
Note: TLU= Tropical Livestock Unit
   : *** Significant at less than one percent probability level (p= < 0.0001)

The total respondents were owned 576.65 TLU. The average livestock in TLU owned per respondent was 4.42 with Standard deviation of 3.86 with minimum zero and maximum 19.53 owned in TLU.

Livestock are the farmers' important sources of income, means of transportation, source of food and draught power for crop cultivation and it is an alternative for the wealth status of the members of RUSACCOS in the study area. Livestock are also used as an insurance of rural livelihoods in case of crop shortfalls and they are means of saving.

4.2.6. Household income sources and expenditure pattern

The major source of income for the sample farmers was on-farm activities (from crop production, livestock production, forest and perennial crop production). The amount of income generated from on-farm activities varied from one sample farmer to another ranging from Birr 172 to a maximum amount of Birr 34,832 per annum.

Table 4.14. Member s' income sources and expenditure pattern in Birr (N=130).

Indicators	Total inco. And expen.	The Distributions of inco. and Exp.				
		Mean	SD	Mini.	Maxi.	t-value
On-farm income	612,292	4700	5979	172	34832	4.42***
Off-farm income	572,749	4406	5157	200	36320	3.39***
Total income	1185041	9106	11136	200	36320	3.45**
Total expenditure	635051	4885	2836	1486	20683	2.76***

Source: Computed from the field survey data (2007)

Note: ***, ** is statistically significant at one and five percent probability level respectively.

The second source of income for the sample farmers was non-farm activities. Of the total sample members, all respondents reported that they have got income from off-farm activities. The minimum and maximum income from off-farm activities is ranging from Birr 200 to a maximum

amount of Birr 36,320 per annum. The total amount of income generated from on-farm, and off-farm activities and expenditure was Birr 612,292.00; Birr 572,749.00 and 635,051 respectively. The mean annual on-farm income, off-farm income and expenditure of sample respondents were Birr 4,700; 4,406 and 3,148 similarly.

In this study, member's expenditures were summarized into three main expenditure components (consumption, provident and production). The survey results revealed that the sample respondents' consumption expenditure amount to 68.94 percent, provident and production expenditure constituted 27.85 and 3.21 percent, respectively.

The annual savings of the sample respondents indicated the differences between total production and total expenditures of the members of RUSACCO. Economic theory tells that saving represents the difference between income and consumption. Income includes earning from all sources during a year and is net of all costs incurred in producing that income. Consumption is the total amount of goods and services consumed by the rural household during a year and include expenditure on food, clothing, housing, travel, health care, social ceremonies, etc. Saving may be made in kind such as jewelry, livestock, grain, or some other commodities or may be in cash. The total amount of annual savings was calculated as savings interms of kind and cash.

To increase the agricultural production and productivity of the farm, utilization of improved agricultural inputs and modern technologies are very important in increasing income and save cash in RuSACCOs.

Table 4.15: Sample members' annual expenditure pattern for the year (2007)

Kinds of Expenditure	Total expenditure	Distribution of Annual Expenditure of members				
		Mean	Std. Dev	Maximum	Minimum	%
Consumption	437804	3367.72	2006.30	13230	392	68.94
Provident	176862	1360.47	1304.35	8776	0	27.85
Production	20385	156.80	277.28	2070	0	3.21
Total	635051	4885.99	3587.9	24076	392	100

Source: Computed from the field survey data (2007)

The mean annual expenditure, standard deviation, maximum and minimum expenditure of respondents were Birr 4885.99, 3587.9, 24076 and 392 respectively. The percentage distribution of consumption, provident and production were 68.94 percent, 27.85 percent and 3.21percent in that order. The above survey result members of RUSACCOS do not give much emphasis on production expenditure. Most of the respondents do not demand farm inputs.

4.2.7. Savings Trend of Respondents

Savings mobilization is becoming a crucial factor of many micro finance institutions. Savings is important for an institution that offers financial services. It provides a source of funds and income. The members of RUSACCOS can receive a market interest rate on savings and dividend from profit of the SACCOS. The study presents Savings experience and the savings experience of respondents in different financial institutions. The trend of savings exhibited by the sample members of RUSACCOS over the last three years (savings made through different means's from 2005 - 2007) shows that there was an increasing trend of members' savings in RUSACCOS. The last three years average annual savings of the sample members was Birr 183.27, Birr 239.61 and

Birr 393.63.58 in 2005, 2006and 2007 respectively. From the sample members of RUSACCOS only 5 respondents were save their cash in DECSI. The average savings trends of members of RUSACCOS were Birr 4.61, Birr 3.07 and Birr 41.53 in 2005, 2006 and2007 respectively.

Table 4.16 Summary of Respondents' savings experiences in Birr (2005 -2007)

Type of Savings Institution	Years	Savings Distributions of values in Birr (N=130)			
		Mean	Std. Dev	Maximum	Minimum
RUSACCOS	2005	183.27	161.77	720	120
	2006	239.61	137.84	720	240
	2007	393.63	110.81	720	168
	Total	709.74	382.08	2400	90
DECSI	2005	4.61	52.62	600	0
	2006	3.07	35.08	400	0
	2007	41.53	258.43	2400	0
	Total	49.23	276.25	2400	0
CBE	2005	10.69	637.9	5000	0
	2006	50.76	373.8	3000	0
	2007	127.69	752.46	6000	0
	Total	293.07	1723.6	14600	0

Source: Computed from the field survey data (2007)

Due to several reasons RUSACCOS members do not save cash in Commercial Bank of Ethiopia. Those who are near by to the CBE can save their money in CBE. From the total sample respondents, only 5 respondents saved their money in CBE. In the study areas, the major savings

schemes available to farm household are RUSACCOS, CBE, DECSI, traditional associations, and undisclosed places. The experiences of savings and the amount of savings made in each savings means/ institution are discussed in the following sub sections.

Fg4.2: Respondent's Average Savings experience in RUSACCO, DECSI and CBE (2005 – 2007)
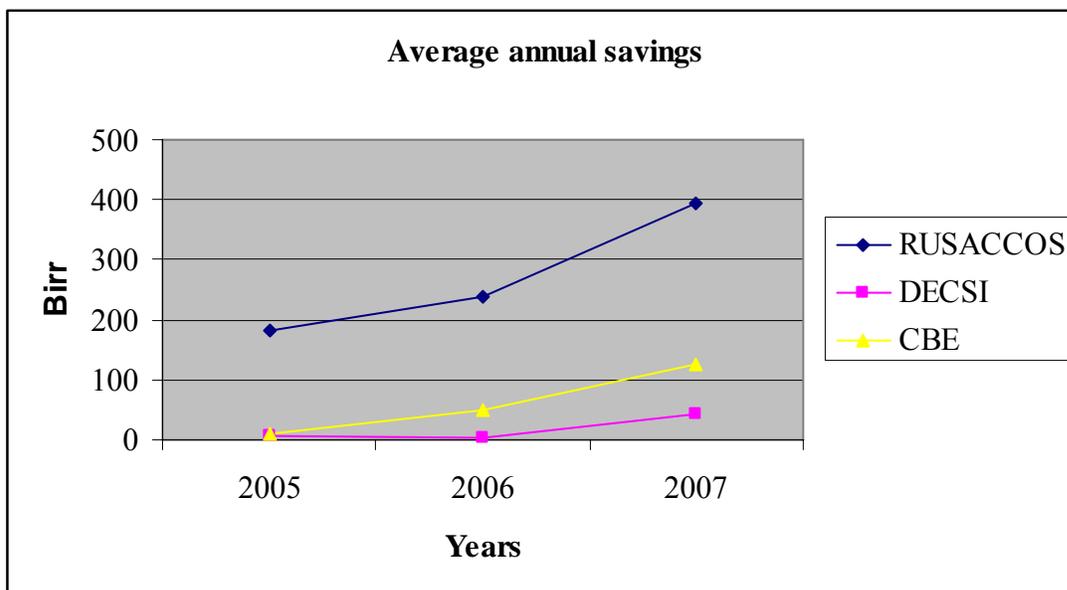
Source: Computed from the field survey data (2007)

4.2.7.1. Households cash savings experience in RUSACCOS

The role of RUSACCOS is to provide financial assets that will satisfy the tastes and preferences of potential savers and thereby induce them to increase their propensity to save. At the same time, an increased inducement to save may lead to a desire to increase income to make additional savings possible.

RUSACCOS have provided to their clients both regular savings products (only to their members) and irregular savings (to both members and non-members). As stated in the by-law of RuSACCOs, non-member clients could be household heads, adults, children, and organizations.

For the last three consecutive years the average amount of annual savings per member was Birr183.27, Birr 239.61 and Birr 393.63 in 2005, 2006 and 2007 respectively.

Members of rural savings and credit cooperatives have regularly deposited their monthly regular savings. The amount of monthly regular savings made by members in RUSACCOS is predetermined by the general assembly ranging from Birr 3.5 to 1(Birr 3.5 for savings and Birr 1 for share) leverage ratio to Birr 4 to 1(Birr 4 for savings and Birr 1 for share) leverage ratio it depends based on the societies. Based on the leverage ratio decided by the general assembly (GA) every member of the SACCO society should purchase 5 shares. According to the proclamation No.147 (1998) the amount of each member monthly regular savings can differ from individual to individual but not exceeds 10% of the total share. This might be due to their savings habit, consumption habits, sources of earnings, socio cultural obligations, personal ambitions, capacity to save and accessibility of the facility of the members.

4.2.7.2. Households cash savings experience in CBE

The survey result revealed that 3.84 per cent of the respondents have had savings experiences in Commercial Bank of Ethiopia. Five respondents reported that they opted for deposit whenever they had cash on hand to be saved. Generally, this result depicted that rural households savings through Commercial Bank of Ethiopia is not common in the study areas. With respect to rural households' savings mobilization in the study areas, Commercial Bank of Ethiopia branch officers have assured that there are no preferential mechanisms or strategies put in place to encourage/ motivate rural households to save cash in the institution.

4.2.7.3. Households cash savings experience in DECSI

As computed in table 4.16 the members of RuSACCOs savings experience in DECSI, the survey result discovered that the average savings in DECSI in the past 3 consecutive years (2005, 2006 and 2007) was Birr 4.61, Birr3.07 and Birr 41.23 correspondingly. The results of savings experiences of sampled respondents in DECSI for the last three years showed that the annual average savings rate from the first year to the second year has not increased. But only 3.84 percent of the respondents have had savings experiences in DECSI. The participation rate of RUSACCO-members savings in DECSI was insignificant.

Dedebit credit and savings institution is providing two types of savings (compulsory savings and voluntary savings) for individual clients, which are common for many micro financial institutions in many countries of the world. Microfinance institutions calculate compulsory savings in several ways. Up-front compulsory savings required before or at the time a loan is disbursed can be calculated as a percentage of the amount of loan requested. Alternatively, compulsory savings can be calculated as a percentage of the cumulative loan received. Compulsory savings are sometimes made as on-going deposits, calculated as a percentage of the monthly principal payment (based on the effective loan term). The most common type of DECSI offering savings product is the compulsory savings which is made as up-front deposit and on-going deposit and it is a requirement for receiving a loan. When clients request loan in addition to up-front and ongoing compulsory savings, they are expected to have group collateral. Most borrowers in the study areas stopped the compulsory savings after they repaid the loan to the lender. Unlike savings made in other financial institutions, it is directly related only to loan products. Some clients also made savings in the voluntary savings products.

4.2.7.4. Households savings experience in undisclosed places

Farmers usually make savings in undisclosed places like in roof, wall, underground, pots, bottles, boxes, underneath their clothes, under bed, etc. Savings can not be converted into investment when it is under the bed (Rich and Olive, 2005). The survey result revealed that 22.31 percent of the respondents have had savings experiences in undisclosed places. The reasons why they preferred to save in undisclosed places were: The respondents didn't have clear awareness about the importance of financial institutions (the first most important reason), Unavailability of financial institutions in the nearby distance and savings made in undisclosed places are more readily available(the second most important reasons) the third most important reason was even though they are aware of what financial institutions are doing, they didn't develop confidence on them.

4.2.7.5. Households savings experience in traditional associations

The rural community practices some indigenous traditional savings arrangements on the basis of cooperative-like traditional associations. The most common one in Ethiopia is called *Iqqub*. *Iqqub* is a form of savings association in which every *Iqqub* member is expected to contribute equal amount of money either weekly (usually for those who receive their income on daily or weekly basis) or monthly (usually for whose who receive their income/salary monthly) and a fixed sum are exchanged for the privilege of receiving a large sum at some point on rotational basis through a lottery system. The survey result revealed that 44 (33.84 percent) members of RUSACCOS have had savings experiences in traditional associations and they saved weekly.

4.2.8. Access to financial institution

The distance (in km) that the beneficiaries have to travel to get financial products and services from different financial institutions (RUSACCOS, CBE, and DECSI) was assessed. In line with this, the survey results indicated that the average distances traveled by the respondents to reach

RUSACCOS, CBE, and DECSI branch offices were about 1.82km, 19.30 km and 7.125 km respectively. Distance to RUSACCOS is statistically significant then it influences the savings behavior of members of RUSACCOS (table 4.17).

Table4.17. Average distance of financial institutions from the residence of respondents

| S.No | Description | Distribution of Distance in Km | | | | t-values |
		Mean	SD	Max.	Mini.	
1	Distance to RUSACCOS	1.82	12.68	12	0	2.3**
2	Distance to CBE	19.30	12.906	48	0.1	0.44
3	Distance to DECSI	7.125	7.383	36	0	1.16

Source: Computed from the field survey data (N=130), 2007

Note: ** is statistically significant at five percent probability level respectively.

The close nearness of financial institutions to the beneficiaries would save farm resources (time, labor) which otherwise would have been spent to access different financial products and services

4.2.9. Loan beneficiaries by lending institutions

The major formal sources of credit in the study areas are RUSACCOS, CBE, MPSC and DECSI. Results of the survey revealed that about 89 members of RUSACCOS (68.46 percent) were credit beneficiaries from either of the stated lending institutions. Of the total credit beneficiaries, 76 (85.39 percent), and 1(1.12 percent), 7 (7.87 Percent) and 5 (5.62 percent) RUSACCO-members were loan beneficiaries from RUSACCOS, CBE, DECSI and MPSCs in that order.

The maximum duration of loan provided by CBE and MPSC is usually only for one crop season (one year), whereas loans provided by RUSACCOS and DECSI are extended over two production years. Interest rate charged by each lending institution is not similar based on their working policies. Summary of the results depicted in Table 4.18.

Table4.18: Access to credit by lending institution and RUSACCO membership (N =130)

S.No	Lending institutions	Beneficiaries of credit		Loan duration(months)		Interest rate
		Number	Percent	Minimum	Maximum	
1	RUSACCOS	76	58.48	6	12	10 -14.5%
2	CBE	1	0.76	12	12	8.5%
3	DECSI	7	5.38	12	24	15%
4	MPSC	5	3.84	6	12	12.5%
	Total	89	68.46	6	24	10 -15%

Source: Computed from the field survey data (2007)

There is no direct contact between CBE and farmers. It is carried out through the collateral arrangement made by the Regional Government, which is not encouraging to develop smooth relationship between borrowers and lender in a sustainable manner. The loan interest rate of rural informal financial institutions is very high compared to the loan interest rate of CBE.

4.2.10. Purposes of loan by beneficiary groups

The type of loan products available for the beneficiaries in the study areas are categorized into four broad types: production loan which is provided by all the four lending institutions; investment loan provided by DECSI and RUSACCOS, and consumption loans provided only by RUSACCOS. The major loan product in the study areas was production loan, which accounts for 97.2 percent, 100 percent, 50 percent and 100 percent of loans disbursed by, RUSACCOS, CBE, DECSI and MPSC respectively.

Production loan of CBE was provided not only for agricultural inputs loan purpose, but also made available to beneficiaries through the guarantees of Regional Government budget Production loan of DECSI and RUSACCOS has been provided not only for input purchase but also for livestock enterprise and engagement in non -farm activity. DECSI practiced group collateral system, whereas RUSACCOS used member savings available in the cooperative as the first collateral and if this savings amount is not satisfactory the second collateral is the savings of other volunteer members of that RUSACCOS.

Loan products of RuSACCO were more flexible than the other two institutions. The survey results indicated that 12.3 percent of the loan was for agricultural inputs, 54.5 percent are for livestock development, 30.5 percent for non-farm activities and 2.7 percent for human capital development. With respect to the use or reason for loan 92.23 percent, 5.62 percent and 2.25 percent was for production, investment and consumption loan respectively. Summary of the results depicted in table 4.19.

Table4.19: Intended use of loans disbursed by different financial institutions (N=89)

S.No	Source of Loan	Loan beneficiaries	Use of loan (Reason for loan)		
			Production	investment	Consumption
1	RUSACCOS	73	71	2	0
2	CBE	1	1	0	0
3	DECSI	10	5	3	2
4	MPSC	5	5	0	0
	Total	89	82	5	2

Source: Computed from the field survey data (2007))

4.2.11. Adequacy and timeliness of loan products and recovery rate by financial institutions

In the past five years (2003 – 2007), out of the total respondents, 108 (83.07) respondents received loan from savings and credit cooperative societies. The survey results indicate that 103 (95.37percent) of the beneficiaries of loan disbursed by RUSACCOS societies were adequate and timely. On the other hand 5 (4.63 percent) revealed that, the loan disbursed by RUSACCOS societies were inadequate and not timely. With regard to the loan provided by non savings and credit cooperatives by the respondents 28 (25.93 percent) and 20(20.37 percent) of the borrowers stated that loans disbursed by none-RUSACCOS financial institutions (CBE, MPSCs and DECSI) were adequate and timely, respectively. From the total loan beneficiaries 80 (74.07percent) of respondents and 86(79.63percent) respectively reported that the loan disbursed by non RUSACCOS financial institution were inadequate and not timely. The response of respondents are summarized in table 4.20

Table 4.20: Responses of farmers about adequacy and timeliness of credits provided by various financial institutions (2005-2007)   **N=108**

Financial Institutions	Adequacy and time lines of credit	Respondents response	
		Number	Percent
RUSACCOS	Adequate	103	95.37
	Inadequate	5	4.63
	Total	108	100
	On time	103	95.37
	Not on time	5	4.63
	Total	108	100
None-RuSACCOs (CBE and DECSI)	Adequate	28	25.93
	Inadequate	80	74.07
	Total	108	100
	On time	22	20.37
	Not on time	86	79.63
	Total	108	100

Source: Computed from the field survey data (2007)

The survey results also showed that the loan repayment rates were100, 100, 84.11 and 77.07 percent for RUSACCOS, CBE, MPSCs and DECSI respectively.

The reasons for non-existence of default on loan provided by RUSACCO and CBE is basically due to clear rules and regulations of the financial institutions; ownership conditions of financial institutions; relatively benefited from better market price for agricultural commodities; and

follow up and motivation made by the lending financial institutions. The responses of sample respondents on reasons for timely repayment of loans are summarized in Table 4.21.

Table4.21: Reasons for timely repayment of loans disbursed by RUSACCO (2005-2007)

II	Response for timely repayment of loans (N=108)						Total		
	Very Important		Important		Less important		number	Percent	Rank
	number	percent	number	percent	number	percent			
A	84	77.7	20	18.5	4	3.8	108	100	1
B	75	69.2	19	23.1	8	7.6	102	94.4	2
C	72	66.9	22	30.7	3	2.3	97	89.8	3
D	66	60.7	20	30.7	9	8.5	95	87.9	4

Source: Computed from the field survey data (2007)

Code for Column (2), II= Reasons for timely repayment; A= RUSACCOS are owners Institution; B= Follow-up and motivation by RUSACCO was Strong; C= Rules and regulations of RUSACCOS are tight; D= Market price for Agricultural commodity was encouraging.

From the total loan beneficiaries (108) of the sample members of RUSACCOS 84(77.7 percent), 75(69.23 percent), 72(66.92 percent) and 66(60.77 percent) reported the reasons for timely repaid the loan disbursed by RUSACCOS were: - RUSACCOS are owned by the members, follow-up and motivation by RUSACCOS was strong, rules and regulations of RUSACCOS are tight and market price for agricultural commodity was encouraging respectively.

Regarding to loan disbursed by MPSCs and DECSI, the loan was not recovered on time and there were loan defaulters. Respondents who are defaulters pointed out why the reason for not repaid

was reported as: - crop failure due to natural hazards; poor follow-up of the financial institutions; the loan was beyond the capacity of borrowers; due to misuse of the loan and due to low price of agricultural commodities accordingly.

4.2.12. Access to Training

The survey results show that about 47(36.15 percent) of the respondents confirmed that they were trained about organization, management, objectives, operation system, savings mobilization, etc. of savings and credit cooperatives. About 64 percent of the respondents were not aware about savings and credit cooperatives management, objectives, operation system, savings mobilization and building members' confidence on RUSACCOS. Trained and untrained members saved Birr 424.6 and Birr 338.89 respectively. Therefore, a comparison between trained and untrained members is statistically significant in savings amount and it determines the savings behavior of members of RUSACCOS.

Table 4.22: Sample members' response about training (N=130)

Description	Response of members (N=130)		Mean annual Savings/ member
	Number	Percent	
Trained	47	36	424.65
Not-trained	83	64	338.89
Total	130	100	393.63
χ^2 value=18.86	P-value =0.0004		

Source: Computed from the field survey data (2007).

   Note: *** is statistically significant at less than one probability level

Training in an organization has for long been recognized as one of the significant contributors to organizational development. It is now recognized as an integral component for development of human resources. In general, cooperatives should provide education, training and information to their members, elected leaders, employees and to the potential members as well. From able 4.22

the researcher concludes that, low emphasis is given to providing training, education and information to members of savings and credit cooperative in the study areas.

4.2.13. Access to other services

The survey result indicated that the average distances travelled by the respondents to get services from health centre or health post, market place, telephone centre and school were about 2.357, 2.856, 10.295, and 1.651 kilometres respectively. The distance to health centre or health post influenced the saving habit of the households. As the distance to the health post increases the household members incurred more cost to get health service and the productivity of the members of the households decreases.

Table4.23: Summary statistics of distance to services (2007)

		Distribution of the services (km) (N=130)			
S.No	Type of Services	Mean	Std. Dev	Maximum	Minimum
1	DISHPO	2.357	2.614	12	0.1
2	DISMKT	2.856	4.159	36	0.5
3	DISTE	10.295	14.266	40	0.1
4	DISSCH	1.651	2.153	12	0.1

Source: Computed from the field survey data (2007)
Note: DISHPO= Distance to Health Post, DISMKT= Distance to market, DISSCH= Distance to school, DISTEL= Distance to telephone center

The proximity of main market to the farmer's house shows access to the main market system to sell output. It also shows access to easy transportation facility to sell farm produces in this market. Thus, distance to market influences the savings behavior of the members of RuSACCOs. The distance to Tele and distance to school affects the respondent's decision in savings cash from their production.

4.2.14. Response on Democratic structure and members' participation

RUSACCOS member respondents were asked whether the services provided by their cooperative were satisfactory or not. The survey results revealed that about 115 (88.5 percent) of RUSACCOS members reported that the services were satisfactory. On the contrary, 15(11.5percent) of the sample members of RUSACCOS reported that the service were not satisfactory. The reason why the respondents are not satisfied by the services provide were reported in order of reasons: 1)the committee members are weak in capacity;2) the resource mobilized from members is very minimal;3) there is bias to few members; 4) members of the savings and credit cooperative are very few in number.

The respondents were asked about the suitability of RUSACCOS' operational areas. Accordingly, 97 percent of the respondents have reported that restriction of an operational area of primary cooperatives to one PA is appropriate. To them, the most important reasons are: firstly, they felt that it is accessible to mobilize household savings and to manage the mobilized savings; secondly, members know each other and can easily communicate; thirdly, they could easily understand opportunities and threats associated with RUSACCOS and they can take appropriate measures on time; fourthly, sample respondents brought forward that a sense of ownership may improve through time and lastly, the operational cost of the cooperatives become lower.

On the opposite, 3 percent of the respondents reported the operational area of RUSACCOS to PA is not appropriate. The reason for not appropriate restricted on one PA were: experience obtained from RUSACCOS will be limited; the mobilized savings will not be effectively and efficiently

used for loan; the cooperative will have limited members and finally the amount of mobilized savings become minimal for that reason.

In response to the questions asked about the leadership efficiency and operational system of RUSACCOS management committee, 95.4 percent of the respondents who are RUSACCOS members have reported that the management committee performed its duties properly and 96 percent of them assured that the management committee runs its duties based on RUSACCOS by-law and GA decisions.

4.2.15. SACCO society member's perception about the RuSACCOs

Almost all sample members of RUSACCO (99 percent) reported that they have full confidence in the working system and general status of their cooperative, which is also revealed by the fact that all sample RUSACCO members were determined and saved their regular savings throughout the year without any interruption. In addition, 102 (78.5 percent) respondents have increased their monthly regular savings amount by participate their family members to be members of the societies and by increasing their share. After the respondents joined to savings and credit cooperatives, 104 (80 percent); 91(70 percent) and 111(85.4) of the total respondents expanded on-farm and off- farm activities; have engaged in new activities and increased their income respectively.

The main reasons reported by the respondents for an improved confidence in RUSACCOS, in their order of importance (rank) were reported as follows: RUSACCO provides effective and efficient services; the cooperative executes its activities only according to the by-law that is

approved by the GA; better understanding about the role and importance of RUSACCOS and there is good legal ground for cooperative promotion (Table 4.24).

Table4.24: Reasons of the respondents for having confidence in RuSACCOs (2007)

Description	A		B		C		D		Rank
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
V. important	85	65.4	91	70	99	76.2	6	4.6	A(1)
Important	15	11.5	7	5.4	9	6.9	53	40.8	C(2)
L. important	17	13.1	10	7.7	2	1.5	12	9.2	B(3)
Total	117	90	108	83.1	110	84.6	71	54.6	D(4)

Reasons for having confidence in RUSACCOS (N=130)

Source: survey results, 2007

Code: A = RUSACCO provides effective and efficient services; B = better understanding about the role and importance of RUSACCOS; C = the cooperative executes its activities only based on its bylaw and D = there is good legal ground for cooperative promotion.

Although the respondents saved their regular savings through out the year, 118 (90.8 percent) respondents did not increase the amount of their monthly regular savings due to different reasons. The most important reasons mentioned were family expenditure commitment; low level of income; high cost of living; high social commitment; and debt commitments. In the field survey the researcher found the leverage ratio savings to share ratio was similar between members. In this case, the poor households couldn't participate in savings and credit cooperatives and save from their income. The reasons for not increasing savings were reported in Table 4.25

Table4.25: Reasons for not increasing monthly regular savings

Description	Reasons for not increased savings(percent of response)(N=130)					
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Very important	56.2	50.8	34.6	10	3.3	0
Important	31.5	32.4	36.9	39.23	44.1	5.6
Less important	2.3	3.8	8.5	20.77	17.6	53.8
Total	90	87	80	70	65	59.4

Source: Computed from the field survey data (2007)

Code for columns: 2= income is low; **3** =high social commitment; **4**= high cost of living; **5**= family expenditure commitment; **6**= debt commitment and **7**= lack of confidence on SACCOS.

4.3. Suggestions and Recommendations

Savings and credit cooperatives are usually governed by a volunteer Board of directors elected by and from the membership. Small, young savings and credit cooperatives are also often staffed entirely by volunteers. To solve the challenges and problems of RUSACCOS the member and official respondents recommended on how to improve the savings behavior of rural savings and credit cooperatives.

4.3.1 Response of Focused Groups (officials)

The RUSACCOS focused groups (officials) and members of SACCOS offered their suggestion and recommendations to improve the savings behavior of members of RUSACCOS and to promote economically effective savings and credit cooperatives in the study area. They recommended as:

Table 4.26 Suggestions or recommendations of the official respondents

Descriptions	Official Respondents general recommendation (N=50)						
	1	2	3	4	5	6	7
Very important	10	10	7	7	4	3	2
Important	0	0	3	1	0	0	1
Less important	0	0	0	2	0	0	0
Total	10	10	10	10	4	3	3
Rank	A	A	A	A	B	C	C

Source: Computed from the field survey of the sample officials respondents (2007)

Note:-1= promote awareness creation on savings mobilization; **2**= Provide problem based training to members and none members to participate; **3**= Strengthen the governance of SACCOS; **4**= Build autonomous and independence of SACCOS; **5**= Increase members participation; **6**= Provide qualified promoters and; **7**= support savings and credit cooperative societies revolving fund for long term loan.

From the total official respondents, 86 percent, 10percent and 4 percent reported that the recommendations were very important, important and less important respectively. In order of importance of the suggestions of the official respondents they were ranked as: A) promote awareness creation on savings mobilization; provide problem based training to members and none members to participate; strengthen the governance of SACCOS. B) Increase member's participation and C) Provide qualified promoters and support savings and credit cooperative society's revolving fund for long term loan.

4.3.2 Responses of members of RuSACCOs

Respondents who are RUSACCO-members have clearly indicated that the following support should be rendered by the cooperatives, the government and non government organizations. These are: promote awareness creation on savings mobilization; providing problem oriented training and exposure visits to members and non members of savings and credit cooperatives; strengthen the governance of SACCOS; build autonomous and independence of SACCOS; increase membership participation; provide qualified promoters and provide revolving fund for loan.

From the total member respondents, 84.4 percent, 15 percent and 0.6 percent reported that the selected recommendations were very important, important and less important respectively. In order of their importance of the suggestions of the members of RUSACCOS respondents, they are ranked as follows:

   A. increase membership participation;

   B. promote awareness creation on savings mobilization and provide loan able fund as revolving fund for loan;

   C. providing problem oriented training and exposure visits to members and non members of savings and credit cooperatives;

   D. strengthen the governance of SACCOS and provide qualified promoters and

   E. build autonomous and independence of SACCOS.

Table4.27: Suggestions/recommendations of the respondents to improve the savings behavior of members of RuSACCOs (N=130 * 7vote = 910vote).

Description	Very important		Important		Less important		Rank
	Number	Percent	Number	Percent	Number	Percent	
1	117	90	13	10	0	0	B
2	115	88.5	13	10	2	1.5	C
3	109	83.8	20	15.5	1	0.7	D
4	83	63.8	47	36.2	0	0	E
5	118	90.8	11	8.5	1	0.7	A
6	109	83.8	21	16.2	0	0	D
7	117	90	12	9.3	1	0.7	B
Total	768	84.4	137	15	5	0.6	

Source: Computed from the field survey of the sample member respondents (2007)
Code for Column (1):1= promote awareness creation on savings mobilization; 2= providing problem oriented training and exposure visits to members and none members of savings and credit cooperatives; 3= strengthen the governance of SACCOS; 4= build autonomous and independence of SACCOS; 5= increase membership participation; 6= provide qualified promoters and 7= provide fund as revolving fund for loan.

The government should encourage the promotion of savings and credit cooperatives, because they are the surest ways of increasing savings and lowering the cost of living for rural and urban people. The good running of savings and credit cooperative was affected due to lack of awareness, illiteracy and lack of general basic knowledge. But these should be surmounted through intensive and extensive cooperative education.

4.4. Determinants of RUSACCOS members' savings magnitude

To identify factors that influence the magnitude of savings of members of RUSACCOS (the second objectives of the study), the second stage of estimation (OLS regression) was used to ascertain the variables which significantly influence households' annual savings magnitude in RUSACCOS. Sixteen variables were hypothesized that significantly influence the members' savings magnitude in RUSACCOS. The variables are**:** sex (MHSEX), members' age (MHAGE), members' family size (MHFSZ),members' educational level (EDUCM), members' size of land holding (LANDH), household annual on-farm income (ONFAI), annual household non-farm income (NOFAI), annual total expenditure of the members' (ANEXPEN), total annual expenditure on social/religious ceremonies(CEEXP), livestock resource in TLU (LIVRTLU), amount of loan from RUSACCOS(AMLON), timeliness of credit from non-RUSACCO financial institutions (TLCFNO), savings interest rate(SAVINR), beneficiariness of credit (BECR),members', total expenditure (EXPEND)and members' savings experiences in undisclosed places (SAUNPL). Moreover, inverse Mills ratio was used as one explanatory variable in the OLS regression to control for selectivity bias.

 By removing the most insignificant variables the OLS result shows that only eight variables, namely the members' age distribution (MHAGE), members' land holdings size(LANDH), members livestock holding in TLU(LIVTLU), distance to RUSACCOS from the residence of the members in Km(DISTRU), on-farm income of the sample respondents in Birr (ONFARI), amount of loan from RUSACCOS(AMLON), total annual expenditure on social/religious ceremonies(CEEXP)and training, information and education given to the members of RUSACCOS (TRAIN) have significant effect on the magnitude of RUSACCO members' annual savings.

Empirical evidences of household savings show that methods of savings are categorized as savings in cash, saving in bond holding, saving in agricultural products and saving in livestock. Saving in agricultural products is preferably practiced because of its higher flexibility. Landholdings strongly influence the rate of total saving, since the size of land holding influences income and income influences savings positively. The variables that are statistically significant with the savings magnitude of members of RUSACCOS are estimated in Table4.28.

Table4.28: Parameter Estimates of the OLS linear regression equation

Variables	Estimate	Std Error	t Ratio	Prob>|t|
Intercept	427.89815	31.83529	13.44***	<.0001
AGE(X1)	-2.440552	0.861958	-2.83***	0.0054
LANDHS(X5)	48.29682	8.780187	5.50***	<.0001
LIVTLU(X6)	5.4425784	1.813802	3.00***	0.0033
DISTRU(X11)	-17.65711	6.225498	-2.84***	0.0054
ONFARI(X7)	0.0073417	0.002691	2.73***	0.0073
AMLON(14)	-0.013641	0.006997	-1.95**	0.0435
CEEXPE(9)	-0.037149	0.015696	-2.37**	0.0195
TRAIN(X13)	23.56386	7.222227	3.26***	0.0014

RSquare	0.558135 =55.81 percent
RSquare Adj	0.528921 = 52.89 percent
Root Mean Square Error	76.05512
Mean of Response	393.6308
Observations (or Sum Wgts)	130

Source: computed from the survey data result (2007)

Note: ***, **, is significant at one, five and ten percent probability level   respectively

On the basis of the results given in the above Table (4.28), the multiple linear regression function was estimated as:

$$Y = \beta_o + \beta_1 x_1 + \beta_2 x_2 + ... + \beta_m x_m + E.$$

Y= 427.898 – 2.441(X1) + 48.297(X5) + 5.443(X6) - 17.657(X11) + 0.007(X7) -0.013(X14) - 0.037(X9) – 23.564(X13)

Members' age **(AGE):** In this study it is assumed that as age increases, farmers would acquire knowledge and experience through continuous learning and the level of responsibility to manage the family and the need to accumulate assets for tomorrow become high. But the result of OLS linear regression describe that age of the members is significant at less than one percent and negatively related with savings amount of the members of RUSACCOS. As age of the respondent increases by one year, the savings magnitude of members of RUSACCOS declined by 2.441 Birr, other things are constant. This may be due to past bad experiences of those who were the members of the then cooperatives may be uncertain to be members of the RUSACCOS and they may also be uncertain to deposit substantial amount of savings in RUSACCOS. The study held by De Serres and Pelgrin (2003) found that age of the household heads negatively related to savings magnitude.

Size of Land holdings **(LANDHS):** it is associated with the savings magnitude of members positively and significantly at less than one percent probability level. A unit increase or decrease of land holdings of members of rural savings and credit cooperative societies, will increase or decrease the savings magnitude of members by 48.29 Birr (a one percent change increase or decrease in land holdings will increase or decrease by 48.29 percent of the respondents savings

amount) under *ceteris paribus* assumption. The same results were reported by Azhar, (1995) landholdings strongly influence the rate of total saving, since the size of land holding influences income and income influences savings positively. This implies that land holding has an influence on the savings magnitude of members of RUSACCOS in the study areas.

Livestock holdings (**LIVTLU**): were found to influence the savings magnitude of members of RUSACCOS positively and significantly, confirming the hypothesis. The implication of the result was that livestock are an important source of cash in rural areas to increase the savings amount. Hence, having them offer a means for a better propensity to save. Under normal condition, savings in livestock represents the most practiced form of savings in the study area. The researcher found that livestock holding positively influence the savings magnitude of the respondents at less than one percent significance level. When livestock increases or decreases by a unit of TLU, the savings magnitude of respondents increased or decreased by 5.44 Birr accordingly while other variables held constant. Similar empirical evidences were reported on household savings in Pakistan by Azhar, (1995).

Distance of the respondent's residence from RUSACCOS office (**DISTRU**): It is associated with the savings magnitude of members negatively and significantly at 1 percent probability level. The negative association implies that for a unit increase in distance between the farmers' residence and the RUSACCOS office, there will be less chance for increase in the amount of savings. The close nearness of RUSACCO to the beneficiaries would save farm resources (time, labor) which otherwise would have been spent to access different financial products and services. Distance to rural savings and credit cooperative societies' office negatively influences the savings magnitude

of members of the societies. As the distance of RUSACCOS increases or decreases by a unit of Kilo meter (Km) from the residence of members, the savings amount of the members' decreases or increases by 17.657 Birr other variables are held constant.

The amount of on-farm income **(ONFARI):** It represents the amount of annual income of farm household members of RUSACCOS generated from on-farm activities. The higher the amount of annual income might reflect households' strategy of improving its agricultural production and productivity to secure the household basic needs and gradually to change the household members' life style. It was hypothesized that on-farm income is positively related to the magnitude of annual savings. On-farm income influences the savings magnitude of members of RUSACCOS positively and significantly at one percent probability level of significance, confirming the hypothesis. A one percent increase or decrease in on farm income, the amount of savings of the members of rural savings and credit cooperative societies will increase or decrease by 0.73 percent other variables held constant. Wener and Earnst (2003), Oliveira *et al.* (2003) found income of the households positively related to the magnitude of savings.

Amount of loan received from savings and credit cooperatives **(AMLON):** It is associated negatively and significantly at ten percent probability level with the savings magnitude of members of the rural savings and credit cooperative societies in the study area. Because members have the commitment to repay the loan on time they do not increase the amount of monthly savings. A one percent increase or decreases in the amount of loan from RUSACCOS; will decrease or increase the savings magnitude of members by 1.36 percent under the assumption of *ceteris paribus*.

Expenditure on social/religious ceremonies **(CEEXPE):** It includes death of family member, funeral (*teskar*), holidays, "*mahber or zikir*" wedding, engagement and circumcision. Celebration of one or more of these ceremonies needs much material and financial resources which are sometimes beyond what the members of SACCOS could afford. Expenditure on social/religious ceremonies is inversely related to the members' of savings magnitude and statistically significant at five percent probability confidence level. Therefore, a one percent increase or decrease on social and religious ceremonies will decrease or increase the amount of savings of members of RUSACCOS by 3.71 percent, other variables are held constant.

Access to training **(TRAIN):** It was positively and significantly at one percent probability level related to the members' savings magnitude in RUSACCOS. This implies that members who have participated in RUSACCOS training programs have increased the amount of savings. The possible reason is that, in the rural areas, there is a great gap between the demand for financial product by the farm households and the supply of products by financial product providers. Often, under such circumstances possible options and experiences needed to deal with this issue are not available in the rural settings. Therefore, knowledge gained through training might give a chance to the beneficiaries to be part of the solution. The other possible reason is that RUSACCOs are financial institutions that are owned by the members providing financial services, products and net benefits obtained from the operation to the members themselves. Hence, an in-depth understanding about the operation system of the cooperatives through training might encourage them to be member of the RUSACCOS. Participation in training programs on RUSACCOS increases the probability of savings magnitude by 23.56Birr, holding other variables constant

Table4.29. the Effect Tests of the linear model

Source	Nparm	DF	Sum of Squares	F Ratio	Prob > F
AGE	1	1	46372.54	8.0169	0.0054
LANDH	1	1	175019.50	30.2573	<.0001
LIVTLU	1	1	52081.88	9.0039	0.0033
DISTRU	1	1	46531.57	8.0443	0.0054
ONFARI	1	1	43054.05	7.4432	0.0073
AMLON	1	1	21985.34	3.8008	0.0435
CEEXPE	1	1	32403.42	5.6019	0.0195
TRAIN	1	1	61575.44	10.6451	0.0014

Source: Computed from survey Result (2007)

Table4.30 Scaled Estimates of the linear model

1. Nominal factors expanded to all levels
2. Continuous factors centered by mean, scaled by range/2

Term	Scaled Estimate	Plot Estimate	Std Error	t Ratio	Prob>|t|
Intercept	387.10539		6.963853	55.59	<.0001
AGE	-62.23409		21.97993	-2.83	0.0054
LANDHM	108.66784		19.75542	5.50	<.0001
LIVTLU	53.146778		17.71177	3.00	0.0033
DISRUSA	-44.14276		15.56375	-2.84	0.0054
ONFARIN	55.257567		20.25411	2.73	0.0073
AMLOAN	-34.10197		17.49208	-1.95	0.0435
CEEXPEN	-36.963		15.6171	-2.37	0.0195
TRAINING	23.563862		7.222227	3.26	0.0014
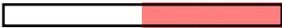
Table4.31. Correlation of Estimates of the linear model

Corr	Intercept	AGE	LANDH	LIVTLU	DISTRU	ONFARI	AMLON	CEEXPEN	TRAIN
Intercept	1.0000								
AGE	-0.832	1.0000							
LANDH	-0.238	-0.065	1.0000						
LIVTLU	-0.081	-0.051	-0.118	1.0000					
DISTRU	0.0082	-0.267	0.0988	-0.172	1.0000				
ONFARI	-0.17	0.0636	-0.178	-0.139	0.1382	1.0000			
AMLON	-0.07	-0.109	0.1525	0.0382	-0.063	-0.001	1.0000		
CEEXP	0.0175	-0.287	0.0569	-0.091	0.1475	0.0139	-0.016	1.0000	
TRAIN	0.0976	0.113	0.1714	0.0904	0.008	0.0278	0.073	0.0281	1.0000

Source: computed from the survey regression result (2007)

CHAPTER FIVE

5. CONCLUSION AND RECOMMENDATIONS

5.1. Conclusion

Ethiopia's Agriculture Development led industrialization strategy (ADLIS) has the basic objective of reducing rural poverty, increasing agricultural production and productivity. Though agriculture is the crucial sector in the national economy, its production and productivity is unsatisfactory.

There are different types of banking and non-banking financial intermediaries in the world, and they differ in the services they offer to their clientele. In Ethiopia, there are two types of non-banking financial intermediaries: share company microfinance institutions, and savings and credit cooperatives. However, as compared to the demand for the service, their coverage is very small. The delivery of financial products and services through microfinance institutions in Ethiopia is one of the policy instruments used to enable rural and urban households to increase their output and productivity, induce technology adoption, increase input supply, increase income thereby helping them reduce their poverty and attain food security.

It is an accepted fact that the future economics growth inter alias, is largely a result of current investment activities. These investments could be expended in the development of human resources to increase efficiency as well as in building up productive capacity to exploit its natural resources. Investment, in turn, is mainly a function of savings from current income. In recent years in Ethiopia, the over all economy is marked by impressive performances. Preliminary

estimates of real GDP, for the year 2007/08 registered a 10.1 percent growth indicating a complete recovery from sluggish performances of the recent past (Birritu, 2005).

The main objective of this study was to examine savings behavior and identify factors that influence the magnitude of members' savings in savings and credit cooperatives. Formation of savings and credit cooperatives in Ethiopia has started in 1964 by employees of Ethiopian Airline by the initiation of interested Ethiopian individuals who have foreign countries exposure and peace core workers of foreign origins. Formation of rural savings and credit cooperatives is a new phenomenon for the country.

This study was undertaken in the Tigray National Regional State in the Southern part of the region in two purposively selected woredas, namely Alamata and Ofla woredas. From ten randomly selected PAs, 130 member respondents were randomly selected and 50 focused group management committee members were chosen. Both primary and secondary data were collected and used. Based on the objectives of the study, appropriate tools and techniques of analysis such as descriptive statistics, linear regression statistical models procedure were employed.

The major source of income for the sample farmers was from on-farm and off-farm activities. About 52 and 48 percent income of the respondents was from on-farm and off-farm activities respectively. Members of rural savings and credit cooperatives have regularly deposited their monthly regular savings. The amount of monthly regular savings made by members in RUSACCOS is predetermined by general assembly (GA) ranging between the minimum Birr 16 and maximum of Birr 60 in the study areas. The amount of members' monthly regular savings

differ from individual to individual due to their awareness level, savings habit, consumption habit, sources of earning, capacity to save, and accessibility to the facilities.

The criteria that qualify a member for a loan, the official respondents have reported based on the societies loan policy approved by the general assembly as follows: 1)Saving regularly, 2)Being a member for required period, 3) Fulfilling his duties and responsibilities: - having minimum share and compulsory savings, active in promoting new members,4)Personal integrity of the business owner(s) and family, 5)Honest and trustworthy, honorability to agreements with the SACCO Society and 6)Ability of the business to repay the loan, the profitability and viability of the business for which the borrower applied.

The major sources of credit for the respondents are RUSACCOS, DECSI, and CBE. For the last three consecutive years, 83 percent of the respondents were credit beneficiary. The types of loans available for the beneficiaries were: production, provident, and consumption loans. The maximum and minimum loan in both the study area was 3400Birr and 310 Birr respectively. The maturity of loan was declared by annual general meetings, maximum one year and minimum six months. The leverage ratio, interest rate for loan and savings deposit of member differs from woreda to woreda and from SACCOS to SACCOS.

To identify factors that influence the magnitude of savings of members of RUSACCOS (the second objectives of the study), the second stage of estimation (OLS regression) was used to ascertain the variables which significantly influence households' annual savings magnitude in RUSACCOS. Seventeen variables were hypothesized that significantly influence the members'

savings magnitude in RUSACCOS, by removing the most insignificant variables the OLS result shows that only eight variables were significantly related to the magnitude of members' annual savings in the RUSACCOS.

5.2. Recommendation

In order to promote and strengthen rural savings and credit cooperatives in Alamata and Ofla woredas and to assure the beneficiariness of the rural households from RUSACCOS financial products and services in a sustainable manner, some recommendations are suggested to be addressed by the concerned stakeholders.

The focused groups and members recommended to strengthen savings and credit cooperative, the government should encourage the promotion of savings and credit cooperatives, because they are the surest ways of increasing savings and lowering the cost of living for rural and urban people. The good running of savings and credit cooperative was affected due to lack of awareness, lack of general basic knowledge and negative influence by externals. But these should be surmounted through intensive and extensive cooperative education.

The study has shown that a unit incremental of farmers' annual on-farm income increases the probability of members' increasing the savings amount of rural members and encourages the potential members to participate in RUSACCOS. This implies that those farm households who are running on-farm activities should use agricultural inputs to maximize their income from on-farm activities Technical support should be given by these governmental institutions at all level.

Members' participation in training programs increased the probability of being a member of RUSACCOS. Training is an important issue in the cooperative movement, which enable to develop farmers' awareness and participation level. The participation rate of rural members in the RUSACCO movement as compared to the potential members and the demand for the services is very minimal. Therefore, knowledge gained through training might give a chance to the beneficiaries to be part of the solution. The other possible reason is that RUSACCOS financial institutions owned by the members are providing financial services, products and net benefits obtained from the operation to the members themselves. Hence, an in-depth understanding about the operation system of the cooperatives through training might encourage them to be member of the RUSACCOS. Moreover, as the training programs were need-oriented and well targeted, that farmers have got answers to their reservations that used to make them uncertain to increase the saving amount of members and to participate potential members to RUSACCOS, specifically in the promotion of financial cooperatives. Therefore, problem oriented and target focused training programs and relevant modules should be prepared and offered to members and potential members by cooperatives promotion Agency and by the regional cooperative promotion department.

Expenditure on social/religious ceremonies includes death of family member, funeral (*teskar*), holidays, "*mahber or zikir*'' wedding, engagement and circumcision. Celebration of one or more of these ceremonies needs much material and financial resources which are sometimes beyond what the members of SACCOS could afford. Therefore, the concerned stakeholders (government, religious leaders and non government organizations) should take a measure to minimize the

expenditure on social and religious ceremonies in order to increase the savings of the house holds.

The researcher observed that the difference between loan interest and the savings interest in the study area was very high. The loan interest rate ranges from 10 percent to 14.5 percent in both the study areas. However the savings interest in Alamata woreda and Ofla were 2 and 3 percent respectively. This difference influences the actual and potential members not to participate in increasing additional share, savings and it will not encourage potential members to membership. The minimum savings interest of National Bank of Ethiopia declaration for formal and informal financial institution is 4 percent. Therefore the annual general meetings of the SACCOS and the promoters of cooperatives should change savings interest as well as minimize the gap between the loan and savings interest rate based on the existed market interest rate.

The leverage ratio of share to savings in the study area was Birr 3.5 to 1 and Birr 4 to1 in Alamata and Ofla in that order. The researcher supposed these leverage ratios are appropriate for the poorest of the poor to save money monthly minimum Birr 4.5 and Biri5 from their income. But the general assembly (GA) of the SACCOS decides the minimum share is Birr4 that means every member should save monthly Birr 18 and Birr 20 for Alamata and Ofla respectively. The decision of the GA influences the poor not to participate to save from their income according to the minimum leverage ratio of the societies. Therefore, to increase savings magnitude of members, the membership of SACCOS should be increased and the poor should participate in RUSACCOS and save from their income based on the leverage ratio.

The study points out some important measures to be taken by: SACCOS, government and non governmental organizations to strengthen SACCO societies in the rural areas of the Woredas.

  📖 Focus on deposit mobilization first. Savings and credit cooperatives with this focus tend to be stronger and more durable because savers have the biggest incentive to keep their cooperatives financially sound. Support with technical assistance to improve savings products and information systems.

  📖 Support savings and credit cooperatives that want to learn new techniques to reach poorer customers. Donors can provide technical assistance to help savings and credit cooperatives better understand member needs, and develop and manage credit, savings, payment, and money transfer services appropriate for poorer and more remote clients. Such efforts are more likely to succeed in financially solid cooperatives. Savings and credit cooperatives in the Philippines and Guatemala have added solidarity loans for remote rural areas, allowing group members to eventually graduate to individual loans.

  📖 Keep financial standards at the core of internal management and external supervision. To fulfill their mission of providing members with high-quality services, savings and credit cooperatives need to run a sound financial business.

  📖 Provide competent supervision of savings and credit cooperatives. Savings and credit cooperatives are often supervised by the same government agency that is responsible for all kinds of non-financial cooperatives, including agricultural and marketing. In addition to the government body supervision, supervision by external should be employed.

  📖 Concentrate resources on savings and credit cooperatives that are willing to implement sound policies and standards. The government and non government organizations may encourage savings and credit cooperatives first rather than spreading the resource over all

the cooperatives in the region. Because savings and credit cooperatives societies are the surest ways of increasing savings and lowering the cost of living, mobilize rural finance and create investment in the rural areas.

External funding does have the advantage of being a resource for longer-term loans, but it should be limited in relation to members' deposits and the internal capacity for managing a larger loan portfolio. When the members of RUSACCOS get access of loan from external fund, members may decrease the amount of savings and develop dependency. Therefore, the societies should be aware of the damage due to external creditors.

5.3. Implication for Future Research

Since no work on member's savings behavior and determinants of savings has been undertaken in this area, the study result might also initiate other researchers to conduct different research works from different perspectives, which may contribute for strengthening of financial intermediaries and rural household savings behavior.

The study was conducted in Alamata and Ofla Woredas only. It will be worth while to conduct similar studies in a few woredas of the Western, Central and Eastern zones of Tigray region.

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7. APPENDICES

Appendix 1

Appendix Table 1: Trends in Growth of Saving and Credit Cooperatives in Ethiopia

Year	Number of Cooperative	Membership	Contributions and Saving	Contribution and saving per person
1978	60	13,020	4,056,732	311
1979	62	13,958	3,848,144	277
1980	160	19,337	3,954,204	204
1981	163	19,630	4,576,273	233
1982	171	22,371	6,219,311	278
1983	160	27,556	7,528,691	273
1984	171	30,815	9,421,332	305
1985	217	38,166	12,970,879	340
1986	264	56,885	22,925,673	403
1987	309	63,540	23,300,011	367
1988	371	68,366	30,845,398	451
1989	419	98,973	50,406,195	509
1990	484	118,037	68,959,446	584
1991	495	119,799	78,772,710	658
1992	420	109,231	87,035,927	797
1993	426	101,299	86,105,842	850
1994	497	112,664	99,767,864	886
1995	522	116,619	111,173,060	953
1996	578	129,216	124,441,325	963
1997	620	147,302	159,865,849	1,085
1998	670	150,468	167,059,812	1,110
1999	716	156,938	174,577,503	1,110
2004	2,146	155,120	504,334,084	3,251
2006	5,437	381,212	994,960,169	2,610

Source: Wolday Amha (2003) and Cooperative Agency (2006)

Appendix 2

Appendix Table 2: Conversion factors used to estimate Tropical Livestock Unit (TLU)

Animal category	TLU
Calf	0.20
Donkey	0.70
Heifer	0.75
Sheep and goat	0.13
Cow and ox	1.0
Horse/Mule	1.10
Chicken	0.013

Source: Strock, et al. (1991)

Appendix 3: INTERVIEW SCHEDULE. (A)

I.   Identification

Farmer Number   _____

Farmer's Name   _____

Location:

     Region   _____

     Zone   _____

     Woreda   _____

     PA   _____

     Village   _____

Enumerator's Name _____   Supervisor's Name _____

Signature   _____   Signature   _____

Date of data collected_____   Date of supervision_____

II. Member's Socio-demographics and resource ownership

1. Member's characteristics

1.1. Sex of the member's ------- (male =1, female =0)

1.2. Age of the member's -------Years

1.3. Can you read and write? ------ (Yes =1, no =0)

1.4. Formal education years of schooling -------Years

1.5. Are you a member of local organizations (Edir, Equb, etc)? __ (yes =1, no =0)

1.6. Do have any responsibility in local administration?___ (Yes =1, no =0)

1.7. Do you have any responsibility in non-RUSACCO cooperatives?___ (Yes=1,no =0

2. Total family size

2.1 . Children less than 8 years of age----------

2.2 . Children 8 to 14 years of age--------------

2.3 . Men 15-60 years of age--------------------

2.4 . Women 15-60 years of age----------------

2.5 . Persons over 60 years of age-------------

3. Resource ownership

3.1. Total owned land _____tsimad, Rented in land_____ tsimad, Rented

   out ____tsimad, Other land _____tsimad

3.2. Type of house owned 1) Grass roofed 2) Iron sheet roofed 3) Both

4. Access to services

4.1. Distance to the nearest market _____Km

4.2. Distance to the nearest telephone center _____Km

4.3. Distance to the nearest school _____Km

4.4. Distance to the rural savings and credit cooperative office _____Km

4.5. Distance to commercial bank of Ethiopia branch _____Km

4.6. Distance to DECSI branch office/center _____K

PART III. Agricultural and non-agricultural activities, and income and its utilization

5. Annual income from agricultural activities (2006/07 production season)

5.1. Annual income from crop production and its utilization

Area.cov=area coverage in hectare, YQ=yield in quintal, UP=unit price, TV=total value

Season	Type of cultivated crops	Area cov. (ha)	YQ	Value		Consumed		Sold		Used for seed		Stored	
				UP	TV	Q	TV	Q	Rev	Q	TV	Q	TV
Rain-fed	Wheat												
	Barely												
	Teff												
	Sorghum												
	Maize												
	Millet												
	Oats												
	peas												
	Beans												
	Nhug												
	Potato												
	Others												
Irrigation	Maize												
	Potato												
	Tomato												
	Pepper												
	Others												

5.2. Income from crop production by products and grass (2006/07 production year)

Crop type	Type	By- product			Consumed		Sold	
		Unit	Unit price	Total value	Qnty	Value	Qnty	Revenue
Maize	Stalk							
Teff	Straw							
Wheat	Straw							
Barely	Straw							
	Grass							
	Other (specify)							

Qnty=Quantity

5.2. Income from crop production by products and grass (2006/07 production year)

Crop type	Type	By- product			Consumed		Sold	
		Unit	Unit price	Total value	Qnty	Value	Qnty	Revenue
Maize	Stalk							
Teff	Straw							
Wheat	Straw							
Barely	Straw							
	Grass							
	Others							

5.3. Livestock ownership for 2006/2007-production year

Livestock type	Noan	Avpr	Tova	Consumed		Sold		
				Noan	Val	Noan	Rev	Purpose of selling
Cows								
Oxen								
Bull								
Heifers								
Calves								
Sheep								
Goats								
Horses								
Mules								
Donkeys								
Hens								

Rev=revenue

Purpose of selling: (1= to repay loan, 2= to replace by other livestock,3= to buy consumable goods 4= to have cash at hand, 5= other (specify))

5.4. Livestock products and by-products (2006/2007 production year)

Product type	Total product produced				Consumed by the household		Sold	
	Unit	Unit price	Qnty	Value	Qnty	Value	Qnty	Revenue
Milk								
Better								
Egg								
Skin								
Hide								
Dung								
Other (specify)								

Qnty=Quantity
Listy=Livestock type, Noan=Number of animals, Avpr=average unit price, Tova=Total value, Val=value,

5.5. Income from forest and perennial crops and its utilization (2005/06 production year)

Type of trees	Number of trees	Produced				Consumed by the household		Sold	
		Unit	Unit price	Qnty	Value	Qnty	Value	Qnty	Revenue
Eucalyptus									
Mangoes									
Avocado									
Papaya									
Gesho									
Coffee									
Orange									
Lemon									
Others (specify)									

6. Income obtained from off/non-farm activities and other income sources (in three consecutive production years

Type of off/non- farm activities and other sources of income	Income in Birr		
	2004/05	2005/06	2006/07
Renting of animals (oxen, pack animals etc) and land			
Wage employment by members of the household			
Sales of fire wood			
Earning from family member hired to other household			
Sales of drinking and food items			
Food aid/donation (Birr equivalent)			
Food for work (Birr equivalent)			
Weaving			
Small industries (grain mill, oil mill, etc.)			
Trading (animal, crop etc)			
Assistance from relatives and friends			
Gift			
Wood work			
Others (specify)			
Total income			

7. Household purchases of agricultural and non-agricultural products

7.1. For the household consumption, purchased agricultural products for the last three consecutive years

Type of crops	Unit	2004/05			2005/06			2006/07		
		Qnty	Unit cost	Total value	Qnty	Unit value	Total value	Qnty	Unit cost	Total value
Maize										
Wheat										
Barely										
Millet										
Peas										
Beans										
Lentil										
Potato										
Onion										
Coffee										
Others										

Qnty=Quantity

7.2 .For the household consumption purchased livestock and livestock products

Type of livestock and livestock products	Unit	2004/05			2005/06			2006/07		
		Qnty	Unit cost	Total value	Qnty	Unit cost	Total value	Qnty	Unit cost	Total value
Cow/Ox										
Sheep										
Goat										
Hen										
Milk										
Better										
Egg										
Skin										
Hide										
Dung										
Other (specify)										

Qnty=Quantity

7.3. For the household consumption purchased non-agricultural products/industrial products for the last three consecutive years

Type of Product	Unit	2004/05			2005/06			2006/07		
		Qnty	Unit cost	Total value	Qnty	Unit cost	Total value	Qnty	Unit cost	Total value
Salt										
Sugar										
Oil										
Soap										
Omo										
Dry cell										
Others										

Qnty = Quantity

7.4. Please provide information on the following non-food expenditures spending units for the last three consecutive years in Birr

Spending unit	Amount of Birr spent		
	2004/05	2005/06	2006/07
Clothes/ shoes/fabrics			
Linens (sheets, towels, blankets etc)			
Cleaning materials			
Kitchen equipments (cooking pots, etc)			
Charcoal			
Fire wood			
Kuras gas			
Wood for construction			
Furniture			
Transport			
Ceremonial expenses (wedding, funeral, birth day)			
Entertainment expenses			
Contributions to Eddir			
Donation to religious institutions			
Taxes			
Medical treatment and medicine			
Education expenses			
Grain mill services			
Others (specify)			

7.5. Please provide information on farming costs/inputs costs

items		Unit	2004/05			2005/06			2006/07		
			Qnty	Uni cost	Total value	Qnty	Uni cost	Total value	Qnty	Unit cost	Total value
Fertilizer	Urea										
	Dap										
Seeds	Maize										
	Wheat										
	Teff										
	Vegetables										
Insecticide											
Herbicide											
Improved implements											
Seedlings											
Wage for the workers who help with farming											
Farm land rent											
Any other cost describe											

Qnty= Quantity

PART IV. Savings and Credit Services

8. Do you have cash savings habit from your income (by any means)? _____(Yes=1,no=0)

8.1.   For how long do you save cash in undisclosed places? _____Year
8.2.   For how long do you save cash in financial institutions? _____Year
8.3.   If yes for question 8 why do you save (the main purpose/reason)? ___(For investment =1, for precaution in case of disaster =2, for transaction purpose =3)
8.4.   Why you put/save your money in undisclosed places? _____ _____ _____ _____in order of rank (the unavailability of financial institutions in the nearby distance=1, not having confidence on the financial institutions =2, do not have awareness about financial institutions role and importance =3, because it is more readily available=4)
8.5.   If you are saving cash, what is the name of the financial institution that you usually save your cash? _____ (Ethiopia Commercial Bank of Ethiopia =1,DECSI = 2, RUSACCO =3)
8.6.   When you save your money in the financial institutions? _____(Monthly =1, during harvesting=2, any time whenever market price for agricultural produces is good =3)

8.7. Provide detail information on your savings trend for the last three consecutive years?

Mode of Savings (1)	Place/institution savings take place (2)	Year of savings Started (3)	No of household member participating in savings (4)	Time of savings (5)	The amount saved in Birr			
					2004/05 (6)	2005/06 (7	2006/07 (8)	Total savings amount in Birr
Traditional savings								
Savings in financial institution								

Codes to be used for the response of question 8.7

For column 2   **For column 5**

Undisclosed places   1   Monthly   1

Traditional associations   2   During harvesting   2

RUSACCO   3   Any time whenever

DECSI   4   there cash to be saved   3

CBE   5

9.   Are you an active member of rural savings and credit cooperative? _____(Yes = 1, no =0)
9.1.   Have you got benefits from your cooperative? _____ (Yes = 1, no = 0)
9.2.   What types of benefit have you received from your cooperatives in order of importance?
        ___ ___ __ __(able to save cash for tomorrow and easily access to credit services =1,
        understand prudent cash handling and creation of money =2, received interest rate for
        savings and annual patronage dividend payments =3, increased know how about
        alternative businesses and business plan development=4,(other)specify_____=5)
9.3.   Do you have both regular and irregular savings in the cooperative?___ (yes =1,no=0)
9.4.   Are you increasing your monthly regular savings from time to time?___(yes =1,no=0)
9.5.   What was/were/ the source(s) of income for your regular savings?____ ____ ____ in
        order of ranks (from the sales of agricultural products =1, from livestock products and by
        product= 2, from non-agricultural activities like petty trading, wood work, weavings
        etc.=3, other (specify)_____=4)
9.6.   What were the main reasons not to increase your annual cash savings amount? ___ __ ___
        ___ __ __ __ in order of importance(income is low=1, high social commitments=2,
        family expenditure commitment =3, high cost of living =4, debt commitment =5, lack of
        confidence on financial institutions =6, other (specify)_____=7)
9.7.   Do you have strong confidence on your cooperative? _____ (Yes = 1, no =0)

9.8. Why you do have confidence?___ ____ ___ ____in order of importance (because the cooperative execute its activities according to its by law and general assembly decisions =1,provide efficient and effective services and also the level of benefit obtained from the cooperative is increasing from time to time=2, do have better understanding about the role and importance of the cooperative =3, there is good legal ground for the cooperatives promotion =4)

9.9. If no, what is/are your reason(s)?___ ___ ___ ___in order of rank (no good cooperative management and service = 1, there is interference of government bodies =2, no technical support is given by cooperative promoters =3, don't have detail know how about RUSACCOs=4 , other(specify)------------=5)

9.10. Provide information on household cash savings in the RUSACCO in different forms

Participant household member	Forms of savings	Total amount in Birr		
		2003/04	2004/05	2005/06
Household head	Compulsory			
	Irregular savings			
	Share			
	Patronage dividend received			
	dividend diverted to savings/share			
Wife	Compulsory			
	Irregular savings			
	Share			
	Patronage dividend received			
	dividend diverted to savings/share			
Children(<14)	Children savings			
Other family member	Compulsory			
	Irregular savings			
	Share			
	Patronage dividend received			
	dividend diverted to savings/share			
Total	Compulsory			
	Irregular savings			
	Share			
	Patronage dividend received			
	Patronage dividend diverted to savings/share			

9.11. To strengthen your cooperative what do you expect from the government? ___ ___ ___ ____in order of importance(providing continuous and problem oriented training =1, assigning efficient and committed promoters =2, avoid government bodies interferences =3, provide loan able funds=4, other (specify)_____=5)

9.12. Have you ever attended in any training programs regarding RUSACCOs (objectives, savings mobilization, organization, management, operation system, etc.)? _____(Yes =1,no =0)

10. **Credit provision and loan repayments**

10.1. For the last three consecutive years, have you borrowed from different lenders? (Yes =1, no =0)

10.2. If yes, please provide the detail information as follow

10.2.1Amount of loan borrowed

Source of loan	Reason for the loan	Kinds of Loan					Total loan in Birr
		Loan in cash		Loan in kind			

Code to be used to the response of question 10.2.1

Column (1)

CBE=1   Money lenders =5

DECSI=2   Relatives/Friends=6

RUSACCOS=3   other traditional association=7

Other type of Coops=4

For column (2)

to buy farm tools/implements	=1	to buy inputs	=2
to buy oxen	= 3	to buy dairy cows	= 4
to buy fattening cattle	=5	to pay for hired labor	= 6
to pay rents/taxes	= 7	to repay other loan	= 8

to start other off farm business   =9

10.2.2. Loan Repayment

Source of loan	Total amount to be paid back				Repaid principal (birr)	Paid interest (birr)	Amount of the outstanding Loan (birr)
	In cash Amount (birr)	In kind Amount (kg)	The kind Estimate (birr)	Total Loan (birr)			

Code to be used to the response of question 10.2.2

Column (1)

CBE=1   Money lenders =5

DECSI=2   Relatives/Friends=6

RUSACCOS=3   other traditional association=7

Other type of Coops=4

10.2.3 Amount of loan borrowed and repaid of three consecutive years

S.N	Description	Years		
		2004/05	2005/06	2006/07
1	Amount of loan borrowed (birr)			
2	Interest rate			
3	Reason for loan			
4	Source of loan			
5	Repaid amount (birr)			
6	Repayment rate			
7	Amount of loan defaulted (birr)			

Code to be used to the response of question 10.2.3

CBE=1   Money lenders =5

DECSI=2   Relatives/Friends=6

RUSACCOS=3   other traditional association=7

Other type of Coops=4

10.3. Have you got required amount of loan from RUSACCO? ___(Yes=1, no=0)
10.4.   Was the credit received from RUSACCO timeliness____ (yes=1, no =0)
10.5. Have you ever been defaulted loan from RUSACCO ?____ (yes =1, no=0)
10.6.   If yes to question 10.5 what was /were the reason(s)? ____ ____ ___ ___in order of ranks (crop failure due to natural hazard =1, miss used of the loan =2, due to low market price of products produced =3, the loan was beyond the capacity of the house hold =4, other(specify)_____=5)
10.7. If no to question 10.5, what was/were/ the reason(s)? ____ ___ ___ __ in order of rank (market price for the produced products was encouraging=1, follow up and motivation made by RUSACCO was strong =2, rules and regulations of RUSACCOs are tight=3, RUSACCO is owners institutions=4, other (specify)_____=5)
10.8. Have you got the required amount of loan from non-RUSACCO lenders?____ (Yes=1, no=0)
10.9. Was the credit received from non-RUSACCO lenders timeliness?__(yes=1, no =0)
10.10. Have you ever been defaulted loan from non-RUSACCO financial institutions? ____ (Yes =1, no=0)
10.11. If yes to question 10. 10, what was/were the reason(s)?___ ___ __ __ __in order of rank (crop failure due to natural hazard =1, miss used of the loan =2, due to low market price of products produced =3, the loan was beyond the capacity of the household =4, poor follow up of the institution =5, other (specify)_____=6)
10.12. If no to question 10. 10, what was/were the reason(s)? ____ ____ ___ ___in order of rank (market price for the produced products was encouraging=1, follow up and motivation made by the financial institution was strong =2, rules and regulations were strict= 3, to maintain the work relationship with the lender =4, other (specify)_____=5)

PART V

11. Institutional and social factors
11.1. Do you have different social and religious ceremonies celebration habits? __(Yes=1, no=0
11.2.   If yes to question 11.1, please provide information on your social and religious ceremonial expense trends for the last three consecutive years

Celebrated social/religious ceremony	Year					
	2004/05		2005/06		2006/07	
	Frequency	Estimated total expense	Frequency	Estimated total expense	Frequency	Estimated total expense
True cross						
Epiphany						
Easter						
Mahiber/ziker						
Wedding						
Funeral						
Remodan						
Areffa						
Other(specify)						

11.3. Are you decreasing your social/religious expenses from time to time?___(yes = 1,no=0)

11.4. If yes to question 11.3 what are your main reasons? _____ _____ _____in order of rank (the amount of income from time to time is become decreasing =1, household size and living expenses become increasing =2, the awareness level of the household members increased and there is the need to have assets for tomorrow = 3)

11.5. Do you follow regional and/or national cooperatives promotion agency radio program? (Yes =1, no=0)

11.6. Are you a member of Equb?____ (yes=1, no=0)

11.7. For how many years have you been Equb member? ___Years

12. Rural savings and credit Cooperatives operation, management and performance

12.1. Is the operation area of RUSACCOs appropriate (since it is one kebele or PA)? ____(Yes =1, no =0)

12.2. If yes, what are your reasons? ____ _____ ____ ____ _____ in order of reasons (members know each other and communicate easily=1,accessible to mobilize and manage savings=2, decrease operational costs=3, can easily understand opportunities and treats associated with members=4, increase ownership feelings=5)

12.3. If no, what are your reasons? _____ ____ ___ ____in order of reasons (the amount of mobilized savings become minimal =1, experience obtained from members become limited=2, the cooperatives will have limited members=3, the mobilized savings will not be effectively and efficiently used for loan=4, other (specify)_____ = 5)

12.4. Was the service provided by the cooperative (RUSACCO) satisfactory? _____(yes =1, no =0)

12.5. If no to question 12.4, what is/are the reason(s)?___ ___ ___ ___ ___ (there is biased ness to few members =1, the committee members are weak in capacity =2, the resource mobilized from members is very minimal = 3, member of the cooperative are few in number =4, other(specify)_____=5)

12.6. Do you think that the committee members know their duties and responsibilities properly? _____(Yes =1, no =0)

12.7. Are the committee members working according to the cooperative bylaw and general assembly decisions?_____(yes =1, no =0)

12.8. Within a year, how many times did loan committee member visit you? _____

12.9. After you joined RUSACCO, have you expanded and increased you activities (agricultural& non agricultural) and income? ____ (Yes =1, no =0)

12.10. After you joined RUSACCO, have you engaged in new activities (agricultural or non agriculture)? _____(Yes =1, no =0)

12.11. After you joined RUSACCO, does your income increased? (yes=1, no =0)

12.12. Have you trained about RUSACCOs (objectives, savings mobilization, organization, management, operation system, etc.) for the last three consecutive years? (Yes =1, no =0)

13. Can you list the advantages and disadvantages of RUSACCOS?

13.1 Advantages 1.
      2.
      3.

13.2. Disadvantages 1.
       2.
       3.
       4.
       5.

14. Offer your suggestions/recommendations/ to improve the savings behavior of RUSACCS.

S.No	Recommendations	Very important	Important	Less important
1	Promote awareness creation on savings mobilization			
2	Provide problem based training for members			
3	Strengthen the governance of SACCOS			
4	Build autonomous and independence of SACCO			
5	Increase members participation			
6	Provide qualified promoters			
7	Support SACCOS revolving fund for loan			
Others1				
2				
3				
4				

Appendix 4: INTERVIEW SCHEDULE (B)

Semi structured schedule for SACCO's management committee

1. General

1.1 Name of management committee _____Sex _____
Age _____ Position _____
1.2 Name of the SACCOS_____
1.3 Address:
    Zone _____
    Woreda_____
    Tabia (Kebele)_____
1.4 Date of establishment_____
1.4 Date of registration_____
1.5 Amount of Capital and progress of members from establishment of the SACCOS up to now
(2007)

YEAR	MEMBERS			Capital		
	Male	Female	Total	Share	Savings	Total
2002						
2003						
2004						
2005						
2006						
2007						

1.7 The reason why none member house holds not become a members of the SACCOS? /×/
    ☞ Due to lack of awareness and information _____
    ☞ Due to poor management of the SACCO _____
    ☞ Due to low income of the none members _____
    ☞ Others (specify)_____

2. Organizational status of the SACCOS

2.1 Who managed the SACCOS? /×/
    ☞ **Board of Directories** _____
    ☞ **Official Employee (manager)** _____
    ☞ Others (Specify) _____
2.2 What kinds of committee your SACCOS do have:
    ☞ Boar of directories _____
    ☞ Control Committee _____
    ☞ Savings Committee _____
    ☞ Loan Committee _____
    ☞ Education and training Committee _____

☞ Others (Specify _____

2.3 Educational status of the committee members (in number)
  ☞ Illiterate _____
  ☞ Read and write _____
  ☞ Grade 5 to grade 8 _____
  ☞ Above grade 8 _____

2.4 Have the SACCO society official employee? Yes_____   No_____
  If your answer is "Yes "can you explain the kinds of the occupation?
  ☞ Manager_____
  ☞ Accountant_____
  ☞ Casher _____
  ☞ Others (specify) _____
  If your Answer is "no" What are the reasons why the SACCOs don't have official
employees?_____
_____
_____
_____

3. Type of Services provided by the SACCOS to the members

3.1 Financial Services (X)
  ☞ Savings _____
  ☞ Loan _____
  ☞ Insurance_____
  ☞ Others (specify)_____
3.2NonefinancialServices(specify)_____
_____
_____

3.3 Do you ask collateral for loan to the members? Yes_____ No_____
  If your answer is yes specify the type of collateral:
  ☞ Savings of the member (borrower)_____
  ☞ Member's savings guarantee _____
  ☞ Asset of the of the member _____
  ☞ Office letter guarantee_____
  ☞ Kebele or Woreda administration guarantee_____
  ☞ Others (specify) _____
3.4 Do the SACCOS have default arrear of loan? / x/ Yes ____ No _____
  If your answer is yes, how much amount of money is uncovered on the specific time?
      _____birr
  Do you know the reason why the loan is uncovered? Yes, it is due to-
  ☞ Member's dishonesty_____
  ☞ Loss or disaster of member's asset_____
  ☞ Death of members_____
  ☞ Member's migration_____

☞ Mismanagement of the_____
3.5 Can the SACCO society give services to none members? Yes _____ No_____
 If your answer is yes, what type of services provide the SACCOS to none members.
       ☞ Savings _____
       ☞ Loan _____
       ☞ Both _____

3.6 Can you mention the last 5 years status of the SACCOS?

S.No	Type of Activities	Amount of money (in birr)					
		Before2003	2003	2004	2005	2006	2007
1	Savings						
2	Loan demanded						
3	Loan disbursed						
4	Loan collected						
5	Uncollected loan						
6	Annual profit						

4. Loan Policy of the SACCOs
4.1 What are the criteria to be full fill the members of the SACCOs for loan application
    1. _____
    2. _____
    3. _____
    4. _____
    5. _____

4.2 Maximum and minimum loan provided by the SACCO:
    ☞ Maximum loan of the SACCO in Birr _____
    ☞ Minimum loan of the SACCO in Birr _____
4.3 Maturity period of the loan:
    ☞ Maximum (in year) _____
    ☞ Minimum (in year) _____
4.4 Amount of compulsory savings provided by the members
    ☞ Maximum (in Birr) _____
    ☞ Minimum (in Birr) _____
4.5 Leverage ratio and amount of interest rate of the SACCO:
    ☞ Leverage ratio _____
    ☞ Savings interest rate _____
    ☞ Loan interest rate _____

5. Women's Participation
5.1 Women's participation in Savings:
    ☞ Total savings of the members' _____
    ☞ Women's savings from the total savings _____
    ☞ Percentage of women's savings_____
5.2 Participation of women's in loan
    ☞ Total loan disbursed to members' _____

☞ Loan disburse to women members _____

☞ Percentage of the loan taken by women members _____

5.3. Participation of women members in board of directories and sub committees of the SACCOs:

S.No	Name of the committee	Members			% share of women's
		Males	Females	total	
1	Board of directories				
2	Controlling committee				
3	Savings committee				
4	Loan committee				
5	Education committee				
6	Others (specify)				