
# W0LKITE UNIVERSITY

## COLLEGE OF BUSINESS & ECONOMICS

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School of Post Graduate Studies

**Determinants of Access to Microfinance Institutions Credit Service: The Case of sodo woreda, Guraghe zone, southern nation's nationalities, and People's regional state, Ethiopia.**

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**A thesis submitted to the department of Accounting and Finance in partial Fulfillment of the requirement for the degree of Master of Science (M .Sc) in Accounting and Finance.**

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# CERTIFICATE

This is to certify that the these is entitles “Determinants of Access to Microfinance Institutions Credit Service: The Case of sodo woreda, Guraghe zone, southern nation’s nationalities, and People’s regional state, Ethiopia.”, sub mitted to Wolkite University for the award of The Degree of Master of Accounting and Finance is a record of confide research work carried out by Mr.: Endale Tekelmaryam under my guidance and supervision. Therefore, I hereby declare that no part of this document has been submitted to any other university or institutions for the award of degree or diploma to the level of my knowledge and belief.

Advisor’s Name Date Signature

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# DECLARATION

This is to certify that this thesis " Determinants of Access to Microfinance Institutions Credit Service;“ The Case of sodo woreda, Guraghe zone, southern nation’s nationalities, and People’s regional state, Ethiopia " submitted for the partial fulfillment of the requirement of Master of Art Degree in Accounting and Finance, Wolkite University, through the Department of Business& Economics, done by Mr.Endale Tekelmaryam. It is my authentic work carried out under the guidance of my advisor, Chernet brad (Ph.D). The matter embodied in this thesis work has not been submitted earlier for award of any degree or diploma to the level of my knowledge and belief.

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# ABSTRACT

The provision of credit has increasingly been regarded as an important tool for raising the income of the rural population, mainly by mobilizing resources to more productive use. However, in Ethiopia, among other things, lack of finance is one of the fundamental problems impeding production, productivity and income of the rural households in general and food insecure households in particular. The Federal and Regional governments have been making different efforts to address the overwhelming problem of food insecurity by providing food security package based credit and other complementing services. Although credit facilities are available to rural households in the study area, in practice, many of the households have not made the use of the facility. Thus, this study has investigated the factors that determine the a ccess of rural smallholder farmers to the available credit facilities in the woreda. The result of binary logistic regression shown that sex, family size, head's occupation, dependency ratio, interest to credit, collateral, saving culture and infrastructure had **significant impact** on access to micro-finance institutions credit service in sodo woreda. In contrast, age, education, farm size, livestock own-ership and distance had **no significant impact** on the access to microfinance institutions credit service in sodo woreda.

The study recommended that new policies that encourage demand-driven financial services should be formulated. The Government should create market for the products of the farmers and provide proper training and skill development activities for the farmers on how to us the credit and improve their Agricultural production and productivity. In addition, the government should also encourage other financial institutions such as private institutions and NGOs that provide financial services.

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- ***Abbreviations and Acronyms***

- *AMFICS* Access to Microfinance Institutions Credit Service
- ACS Access to credit service
- CBE Commercial Bank of Ethiopia
- DBE Development Bank of Ethiopia
- GDP Gross Domestic Product
- GFDRE Government of the Federal Democratic Republic of Ethiopia
- MFIs Micro finance institution
- NBE National Bank of Ethiopia
- PAs Peasant Associations

# Chapter one-Introduction

## 1.1 Introduction

This chapter describes the introductory parts of the study by describing major economic activity of the country, significance of credit in the development of agriculture, problem of rural households demand for credit and accessing credit in the country/woreda major research questions, objectives, significance, scope and limitations of the study.

## 1.2 Background of the study

The microfinance revolution has allowed more than 150 million poor people around the world to receive small loans without collateral, build up assets, and buy insurance. The idea that providing access to reliable and affordable financial services can have powerful economic and social effects has captured the imagination of policymakers, activists, bankers, and researchers around the world In developing countries ,like Ethiopia ,micro financing institutions (MFIs) emerged with unique opportunity to serve poor people who do not have access to commercial banks. Microfinance involves the provision of micro-credit, savings, and other services to the poor that are excluded by the commercial banks for collateral and other reasons. Microfinance programs and microfinance institutions have augmented in outreach over the last few years with their largest client being the poor, vulnerable and women (Tchouassi.G, 2011).

Microfinance is typically viewed as an economic development strategy, and it is a particularly relevant approach in countries where disadvantaged group stand not to benefit from involvement in the conventional bank. In most developing nations, the majority subsists on income from microenterprise activities; the micro enterprise sector, is estimated to account for 20% to 70% of all employment in many developing countries, illustrating the importance of the informal economy in the subsistence of impoverished populations throughout the world(Bigsten et.al,2007).

Microfinance is a logical approach to development because it functions at the grassroots level, can be sustainable, is capable of involving large segments of the population, and builds both human and productive capacity (Shannon et al. 2007).

There is recent global agreement that microfinance institutions (MFIs) are good instruments to fill the gap of conventional banks' limitations in reaching the poor and the vulnerable non-poor with banking services. They are considered as one of the most effective interventions for empowering the poor in their Economic and social involvements. That is, through these microfinance institutions (MFIs), the poor are able to access financial Services, which previously were exclusively available to the upper-income population. The basic idea behind such intervention is that access to micro-finance services such as savings, credit, and micro-insurance to the poor could help them, among others, to expand their businesses that will all own them to pull out of poverty (Asmamaw, 2014; Shannon et al. 2007).

The formal microfinance in Ethiopia started in 1994. In particular, the Licensing and Supervision of Microfinance Institution Proclamation No. 40/1996 indicate that; the government encouraged the spread of microfinance institutions (MFI) in both rural and urban areas as it authorized them among other things, to legally accepted posits from the general public (hence diversity sources of funds), to draw and accept drafts, and to manage funds for the micro financing business (Ayalew, 2014).

Despite several efforts done by the government, microfinance outreach in Ethiopia is low and has not satisfied the demand of the rural poor. The institutions' selection criteria such as income, gender, credibility in community, age (active age group), permanent residence, character assessment, willingness to join credit group of self-selected members to co guarantee the loan of fellow group members, prior experience of saving and loan repayment, support letter from their respective peasant association turn out to be the key challenges that smallholder farmers have to face, limiting their access to credit (Kereta, 2007).

This has a negative effect on the demand for and access to micro credit by small farm householders. As several studies pointed out, very few smallholder farmers were able to get access to microfinance institutions. Age of the borrowers; short-term borrowing and physical incapacity of the borrowers were some of the factors constrained the farmers from accessing credit (Berhane & Garde broek, 2008).

Thus, this paper, considering the importance of credit services for smallholder farmers in rural areas for improving their livelihoods by way of improving their agricultural production and productivity, aims to investigate the determinants of smallholder rural households' access to microfinance in rural sodo woreda, Guraghe zone, southern nation's nationalities, and people's regional state,.

## 1.3 Statement of the Problem

Credit has become progressively known to be influential mechanism to lift rural poor out of miserable poverty. Credit plays vital role in expanding farming productivity through rising up the production assets (Chisasa,2019).It also allows small landholder farmers to capitalize their land improvements and thereby to approve new agricultural expertise‘s like high-yielding seeds and fertilizers that rise their productivity and income (Zeller& Sharma2000).

Unavailability of formal credit access limits the rural small landholder farmers their ability to expand productivity and thereby improve their living standard. Formal credit institutions like traditional commercial banks and development banks are not volunteer in delivering financial services to the rural poor farmers (Diagne, 1999).

Those institutions are able to spread the credit access to a limited business only. If they provide, they need different types of requirements from poor farmers such as collateral (Jemaneh, 2002).To address these difficulties, the Ethiopian government recognized microfinance institutions (MFIs) to reach a majority of rural poor. According to Bizuayehu et al., (2019), microfinance institutions have no clear rule and regulation with regard to formal credit access to the poorest of the poor showing that MFIs are not working their main task of reaching the poor. A large number of farmers are marginalized, and therefore do not have access to formal credit (as a result of lack of collateral and several requirements imposed by lenders) additionally, as a result of lack of effective enforcing technique and high default of loan repayment of farmers restrict from formal credit access by lenders (Zelalem et al., 2013).

Access to formal credit is fundamental and stiller mains challenge for the growth and survival of small land holder farmers especially in developing countries like sub–Saharan Africa countries including Ethiopia (Chandio et al., 2017 &Samuel, 2020). The study undertaken by Akpan et al. (2013);Dzadze et al. (2012); Shehla & Hasnu (2013) in sub- Saharan African countries to find out what explains access to formal credit by small landholder farmers in those countries indicates that small landholders got higher amount of loan other than medium farmers. In short, the main concern of this study is the overall aspect of farmers to formal credit in sodo woreda. The problem of the study was stands from the identified limited or in adequate the determinants of access to formal credit for small landholder f armers.

A considerable empirical investigation has been made outside Ethiopia on However, their finding lack consistency; for instance, studies conducted by (Kiplimo et al., 2015; Ibrahim & Aliero, 2012; Chivandire & Muhongayire, 2019) indicate that access to formal credit for farmers rise when there an increase in age and education. Similarly, studies by ( Dzadze et al.,& Duy et al.2012; Sebatta et al., 2014) also showed that access to formal credit were determined by saving account, extension contact, distance to lending institution and education level of households. In addition the study by (chisasa, 2019) showed that access to formal credit is not determined by education level of households.

.As per the researcher understanding, from the few researchers; the study by Samuel (2020) assumed in wolaita zone; the study by Yehuala (2008) assesses determinants of access to formal credit in North Gondar. Those studies are used descriptive research design and do not include all important variable that affect access to formal credit. In addition most of the literatures have inconsistency in their findings.

This study seeks to fill the gap by adding new variables that affect Determinants of Access to Microfinance Institutions Credit Service among small holder farmers in sodo woreda. Therefore, the researcher included some variables besides the studied determinants like, saving culture of farmers in formal credit institutions by small landholder farmers and amount of interest rates charged by formal credit institutions. Finally, the overall purpose of this study was conducted to explore the determinants that affect determinants of access to credit among smallholder farmers to formal credit in sodo woreda and it gives solution for the problems to improve access to formal credit.

This study is intended to deals with the following research questions:

## 1.4 Research Questions

1. What are the sources of microfinance credit services in the study sodo woreda?
2. What are determinants of rural small holder house holds' in accessing formal credit service?
3. What are the policies and procedures applied in micro finance credit services in the sodo woreda?

## 1.5 Objective of the Study

### 1.5.1 General Objective

To identify factors influencing smallholder farmers access to credit services from MFIs

### 1.6.1 Specific Objective

The specific objectives of the study are:

1. To assess sources of micro finance credit services in the study sodo woreda
2. To identify determinants of rural small holder households' in accessing formal microfinance credit services in the study district and
3. To identify policies and procedures applied in micro finance credit institutions and come up with locally implementable suggestion

## 1.6. Research Hypothesis

Based on objectives of the study, the researcher was hypothesized the following factors to evaluate their impacts on the access to formal credit.

H1.The **age** of households, has a positive and insignificant effect on access to formal credit

H2.**Sex** of the households a positive and insignificant effect on access to formal credit

H3.Levels of **education** a positive and significant effect on farmer's access to formal credit.

H4. **Family size** has a positive and significant effect on farmers in accessing formal credit

H5. **Head's occupation** has a negative and significant effect on access to formal credit

H6. **Dependency ratio** has a significant and negative effect on access to formal credit

H7. **Interest to credit** has a significant and positive effect on access to formal credit

H8.**Farm size** in hectare has a positive and insignificant effect different between farmers in accessing formal credit.

H9.**Collateral** has a significant and positive effect on access to formal credit for farmers.

H10.**Livestock** has a significant and positive effect on access to formal credit farmers.

H11.There is a significant positive influence of **saving culture** on access to formal credit for farmers.

H12.**Distance** from lending institutions has negative and no significant influence on access to formal credit for small landholder farmers.

H13.**Infrastructure** has positive and a significant effect on access to formal credit for small landholder farmers.

## 1.7 Significance of the Study

**The significance of the study is**

a. **T**o identify the determinants of access to formal credit and saving microfinance institutions found in sodo woreda, enhance the awareness of rural smallholder households' on the determinants and their by enhance credit and saving activities of the microfinance institutions.
b. The finding of the study would also pave the way for the clients of the microfinance institutions by providing information and creating awareness of the users.
c. The significance of the finding (study) would also benefit the organizations, civic societies, NGOs and other development actors that are engaged in the provision of credit facilities for the rural smallholder households.
d. Finally, the output of the study would also serve as a source of information for those who want to conduct further study on the area of credit and saving of micro financial institutions.

## 1.8 The Scope of the Study

The study was delimited to the factors that affect access to formal credit of small landholder farmers'. Geographically the study covers only small landholder farmers under the southern nation's nationalities, and people's, Guraghe zone, sodo woreda. The sample size of the study was focused on five selected kebeles; those are Genbela, Refanso, Anati, negysa and Adele Borobore. The study Determinants of Access to Microfinance Institutions Credit Service, because those are the main credit providers for farmers in sodo woreda and their branches are expanded over the area and small land holder farmers are using those institutions.

## 1.9 Organization of the Paper

This study is organized into four chapters. The first chapter deals with the introduction, consisting of background of the study, statement of the problem, research questions, objectives of the study ,significance of the study, scope of the study, and Organization of the Paper,. The second chapter deals with related literature review while the third chapter deals with the research methodologies. Similarly, chapter four Budget and work schedule

# CHAPTER TWO

# 2. LITERATURE REVIEW

## 2.1 Introduction

This chapter incorporates important sections. The first one is theoretical review, and the second one is empirical review, third one is Identified literature gaps, four one is one is Conceptual framework

## 2.2 Theoretical review

### 2.2.1 An Overview of Access to Formal Credit

Credit can be defined as the control over money and materials used as in exchange of goods and services and it is a promise to repay at a future date ( Lawal et al., 2009).Access to credit mean that where loans for farmers are open and farmers have taken the initiative to apply and utilize these loans. Credit can be available yet not accessible because of restrictions such as costs and strict qualification criteria. Credit touches the performance of agriculture by providing resources for purchase of inputs and the adoption of new technology (Amjad& Hasnu, 2013).Access to formal credit refers to the ability of individuals to gain external money to allow them ease cash flow problems (Catherine, 2016).It is the most essential means that enables the farmers to increase their tasks or accept new technologies (Dzadze et al., 2012).

A credit business has been crucial to the economic growth of the modern world. Credit situates to use property that would be otherwise lie idle, consequently allowing a country to more fully employ its resources. The existence of credit institutions breaks on the willingness of people to sureness of one another and of court of law to enforce business contracts. Transfer property from those who have money to those who do not but who wish to use it, as in the granting of loans by banks to individuals who plan to initiate a business venture is the major purpose of credit (Yehaula, 2008)

### 2.2.2 Historical Background of Micro Finance in Ethiopia

In Ethiopian context, formal financial sector includes National Bank of Ethiopia (NBE), Commercial Banks (owned by private and public), Development Bank of Ethiopia (DBE),credit and saving cooperatives and micro finance institutions (owned by regional governments ,NGOs ,cooperatives and individuals) (NBE,2003).Financial institutions are private or governmental organization, which serve the purpose of accumulating funds from savers and channeling them to the individual households and business looking for credit. Financial institutions are composed of deposit type institution (bank and non-bank contractual saving institutions), personal and business financial companies, government and quasi-government agencies, and miscellaneous lenders (Greanwal & Associates, 1983).

Formal financial institutions prefer high-income clients with large loans. They are urban- based and give loans to those engaged in trade and industry and consider the demand for loan by the poor as unattractive and unprofitable (Carter et al., 2004; Jemaneh, 2002). Because of the inability to secure the loan with fixed asset, the poor are borrower and credit was only accessible to large commercial farmers and industrial business activities considered as "high risk".

Microfinance industry in Ethiopia initially started as a micro credit scheme motivated by government and non-government organization. Following 1984/85 severe drought and famine, many NGOs started to provide micro credit along with their relief activity, although it was on a limited scale and not in a sustained manner (Wolday, 2002) the micro credit schemes were donor driven rather than an outcome of a clear policy direction and development strategy. NGOs' Microfinance is not allowed to accept borrowers' savings and must be financially supported by various subsidies and bank loans. Meanwhile, a credit cooperative relies heavily on client savings. Similarly, Omo MFI started operation in 2002E.C by providing small cost loans to poor people and encouraging them to develop their saving habit. The failure of the normal banks to provide banking facilities on the one hand, led the government to issue a legal framework for the establishment and operation of microfinance institutions (Gebrehiwot, 2002; Getachew &Yishak, 2006).

Cognizant this, in 1994/95, microfinance institution was introduced and taken as part of the government's poverty alleviation strategies aiming at facilitating rural credit access by rural households and playing a greater role in the Millennium Development Goals agenda (Getaneh,2008;Zaid,2008)

### 2.2.3 Basic principles of credit

According to World Bank (2018), there are five types of credit principle (five Cs).

- **Principle of character**: is the first C more specifically refers to credit history, a borrower‘s status or record of accomplishment for repaying debts. This information appears on the borrower’s credit report.
- **Principle of capacity**: it measures the borrower‘s ability to repay their credit by comparing income against recurring debt and assessing the borrower’s debt-to-income ratio.
- **Principle of capital:** Lenders are considering any capital the borrower puts toward potential investment.
- **Principle of collateral**: It is important for the borrowers as a secure loan and it gives the lender as assurance when the borrower defaults on the loan, the lender can get something back by repossessing the collateral.
- **Principle of condition**: It refers to how a borrower intends to use the money. Condition of loan such as interest rate, amount of principal and influence the lenders desire to finance the borrower

### 2.2.4 Objectives of Microfinance

Microfinance institutions (MFIs) are organizations that offer financial service to the low- income people. Microfinance industry in Ethiopia initially started as a micro credit scheme motivated by government and non-government organization. Most of the institutions offer micro credit and take back small amounts of savings from their borrowers and from the wider public. Examples of MFIs are NGOs, credit unions, cooperatives, private commercial banks, and non-bank financial institutions and Part of state owned banks (Baktiar, 2008).Access to credit is considered as one of the key elements in achieving the transformation plan and is an important factor in economic development to achieve higher growth in agricultural sector and is being an engine of growth. Microfinance institutions are among the tools used to address the problems of poverty and development of finance mainly for the poor that have no access to large financial institutions like banks. Credit and saving practices are the most important activities in micro finance institutions. It may encompass the provision of financial and other support services like savings, collateral free credit, insurance to the poor and it addresses the issue relating to poverty and unemployment. Microcredit cannot exist without microfinance institutions. Microfinance institutions provide hard-to-find financial services to local individuals and groups. MFIs aim to provide economic activity among low-income earners, for whom access to official banking services is impossible or nearly so. Micro finance institution is characterized as having dual objectives that is they are both social and financial. The former aim means that the MFI contributes to development and fights against poverty. The latter objective stresses that the MFI must remain profitable enough to continue operating.

### 2.2.5 Types of rural credit

There are two types of rural credit in unindustrialized countries. They are formal and informal credit. Formal credit institutions are works together with intermediary between depositors and lenders by charging relatively low interest rates. According to Dejene (1993) the credit interestrateis7% for individual farmers and private enterprises and 6% for state and collective farms.. In informal agricultural credit the cash is given by private persons, professional money lenders, landlords, friends and relatives, traders, commission agents ( Mohieldin & Wright, 2000).

When formal credit institutions are existed, informal borrowing reduces but not completely eliminate. This indicated that formal and informal sources are achieving different purposes for the household‘s transfer of resources. Formal and informal credit is mutably no interchangeable as a result; formal credit is required and mostly used for agricultural production purposes and investment in extra –farm revenue creating actions however informal credit may be important for consumption-smoothing purposes (Atieno, 2001).

The practical indication also advises that the imperfect substitutability among formal and informal credit redirects to some extent the presence of due dates and conditionally on in formal loan contracts (Diagne, 1999).

According to Dejene (1993) informal credit markets are appropriate only for sectors that were indirectly productive and through which the expenses for social duties was met. In addition to this informal credit, markets are not homogeneous and they are a part of the Dominant political, social and economic networks, including low transaction cost for credit supply.

**Generally there are two types of rural credit sources (formal and informal credit).**

### 2.2.6 Formal Financial Institutions in Ethiopia

Financial institutions are classified as governmental or private organizations, they have various functions. For instance, gathering money from savers and guiding those savers to individual households, and businesses observing for credit. Financial institutions are composed of deposit-type institutions (bank and non-bank contractual saving institutions), personal and business financial companies, government and quasi-government agencies, and miscellaneous lenders (Greenwald & Associates, 1983 cited as Sisay, 2008).

Formal financial institutions are an organization which is owned, controlled, licensed and registered by Governments (Mohieldin & Wright, 2000). In Ethiopia the expansion of financial sector is a long history and involved collection of banking and non-banking sectors. Financial institutions in Ethiopia include; commercial banks, development banks, specialized financial institutions, insurance companies, credit and savings cooperative, microfinance institutions (owned by regional governments, NGOs, associations and individuals). Those institutions are structured and managed by national bank of Ethiopia (NBE).

### 2.2.7 Informal Credit Institutions in Ethiopia

Aryeetey et al. (2005) defines informal finance works without rules and regulations forced on the farmers by formal financial institutions. Informal finance includes, professional moneylenders, rotating savings and credit associations, operations of savings and credit associations, and part-time moneylenders like, grain millers, traders, smallholder farmers, employers, relative and friends, as well as cooperative societies.

Informal financial institutions work without physical collateral, involving small loans and short term-transactions, and are described by adaptability and flexibility of operations in certain areas (Guirkinger, 2007).Among the characteristics of informal sector, no data on their activities are available through official statistical office (Abrham,2014). Informal finance is based on mutual trust because it operates outside state control and legal business regulations. The material collateral such as character, reputation, kinship, and family ties-plays an important role in borrowing from informal financial sources (Dejene, 1993).

## 2.3 Empirical literature review Determinants of Access to Microfinance Institutions Credit Service.

Among the number of factors, which have been related to access to formal credit for small landholder farmers, in this study the following demographic, socio-economic and institutional factors were hypothesized to express the dependent variable.

1) **Age:** is a categorical variable, treated as household heads during the time of household survey measured in years. Age is another important demographic factor that does not affects access to formal credit for small landholder farmers. The conclusions by researchers on age and access to formal credit were mixed. Many researchers draw their conclusion based on the idea that mature working age farmers (55-64years) may have high responsibility and high collateral this makes them higher in accepting credit access. Yehuala (2008) & Mesfin et al**,**(2017)concludes that older farmers are more credit accessed.

And others such as (Christina, 2017; Abraham, 2014) stated that age of households doesn't affect access to formal credit.

**H1:** The **age** of households, has a positive and insignificant effect on access to formal credit

2) **Sex:** is a dummy variable, which assumes a value of—1‖if the house hold head is male and—0‖ otherwise. According to Kyalo Musembi (2019) male headed households have participate in different meetings and have more exposure to information. In addition, male households have the ability to control economic resources; therefore, it was hypothesized that male-headed households have more access to formal credit from formal credit institutions. However, Dzadze *et al.* (2012) concluded that sex of the household heads does not affect access to formal credit of small landholder farmer's.

**H2: Sex** of the households a positive and insignificant effect on access to formal credit

3) **Educational level of the households**: The level of education is another factor that influences household's willingness to take credit access. Many studies on education and credit accesshave also been carried out but the results were mixed. Majority of the study conclude that highly educated farmers take credit access. Such as Yehuala (2008) & Muse (2016) described that higher education encourages in taking more financial risk. In addition, Deresse & Zerihun(2018) described that educated people are received more credit. Although some other studies portray that education level does not affect the level of credit access like Ololade & Olagunju(2013b) said that education was not a significant determinant of access to formal credit for farmers. Additionally, Adeola & Ayoade (2009) Level of education does not significantly affect access to credit of farmers.

**H3:** Levels of education a positive and significant effect on farmer's access to formal credit.

4) **Family size:** This refers to the total number of family members of the household who have the potential to work on the farm which was measured in man equivalent. The larger the number of family size, the more the labor force available for production purpose. The more the labor force available, lower is the demand for hired labor, this means no or low cost for hired labor. If demand for hired labor decreases due to availability of family size the need for credit decreases. Therefore, family size was hypothesized to have negative impact on access to credit.

**H4 Family size** has a positive and significant effect on farmers in accessing formal credit

5) **Head's occupation:** Households that are involved in off-farm and other private activities have higher demand for credit since these activities requiring them huge capital. Access to credit increases for those engaged in off-farm activities since they are assumed to have capacity to repay the loan from their businesses.

Therefore, head's occupation was hypothesized to have negative impact on access to credit.

**H5.** Head's occupation has a negative and significant effect on access to formal credit

6) **Dependency ratio:** Refers to the total family below 15 and above 65 years (unproductive age)andabove15andbelow65years(productiveage).Asindicatedintheliterature,the presence of more dependents in a household may discourage lenders because it signals higher desired consumption instead of investment, limited earning capacity and higher probability of default. However, households with high dependent ratio are more likely to have more demand for credit.

**H6.** Dependency ratio has a significant and negative effect on access to formal credit

7) **Interest to credit (deposit) :** is an ordinal variable, deposit interest rate is the amount of money paid to saving households at the time of withdrawals and it is the most important variable in determining access to formal credit (Elsevier B.V., 2019).

**H7:** deposit interest rate has a significant and positive effect on access to formal credit

8) **Farm size**: It is the total land size cultivated (sum of owned cultivate land, rented-in land and land secured through share cropping arrangements) by the household. It is categorical variable. The larger the cultivated land size the more the labor required that demands additional capital that might be obtained through credit. Nevertheless, the main hypothesis was that farmers who have larger farm size and those farmers who have smaller farm are not different in accessing credit from formal credit institutions.

**H8:** Farm size in hectare has a positive and insignificant effect different between farmers in accessing formal credit.

9) **Collateral:** is a dummy variable, which takes the value of—1 for those who have collateral availability and —0‖ otherwise. Small landholder farmers are expected to form a group that can serve as collateral to take credit access from formal credit institutions. However, households perceived that group lending if difficult for access to formal credit from credit sources. Therefore, farmers who have enough number of assets are less likely to go for credit(SamuelSemma,2020)

**H9:** Collateral has a significant positive effect on access to formal credit for small landholder farmers.

10) **Total Livestock ownership**: Is the total number of animals possessed by the household. It is a continuous variable. As the total number of animals in the household increases, the household would be less likely to go for credit (Erasto Abrham, 2014).

**H10**: **Livestock** has a significant and positive effect on access to formal credit farmers.

11) **Saving culture:** is ordinal variable, According to Samuel Semma (2020) when farmers save higher amount of money in financial institutions it could be substituted as collateral in providing credit.

**H11:** There is a positive and significance influence of saving culture on access to formal credit for small land holder farmers.

12) **Distance from lending institution:** It refers to the distance (in km) of the rural households from formal credit institution. Is an ordinal variable (Kidane et al., 2018). A farmer who lives near / far to the lending institutions has no different in location advantage in accessing formal credit.

**H12:** distance from lending institutions has negative and no significant influence on access to formal credit for small landholder farmers

13) **Infrastructure:** Particularly all-weather roads that connect rural to urban are taken this road access as determinants for household level access to formal credit in study area. Is an ordinal variable; in this study infrastructure is not the determinant of access to formal credit.

**H13:** Infrastructure has positive and significant effect on access to formal credit for small land holder farmers.

### 2.3.1 An Empirical Review on Determinants of Access to Credit

This study is mostly conduct in the context of unindustrialized countries; the main concern is given to assess empirical evidences in relation of small landholder farmers' access to formal credit in Ethiopia. Many studies indicate small landholder farmers determining access to formal credit as problem of developing countries.

### 2.3.2 Empirical reviews outside Africa

Amja & Hasnu (2007) empirically investigated an analysis of smallholder's access to rural credit and the cost of borrowing using survey data in Pakistan. There suit shows that infrastructure quality is the most important factor in determining access to formal credit. In this study, formal borrowers have significantly higher values rather than informal borrowers.

Hussain & Thapa (2015) investigated on credit fungi ability and analysis its factors in Pakistan. Smallholders borrowed for the purpose of repayment of outstanding loans in formal credit institutions.

Moreover, Saqib et al. (2018), empirically investigated factors influencing farmers access to agricultural in a flood disaster in risk-prone area in Pakistan. The result of weighted least square regression shows that socio-economic factors play a key role in farmer's access to credit. That means Education, farming experience and farm size were significant factors in farmer's access to formal credit. As discussed by Chandio et al. (2017) in Pakistan, credit is needed by different parts of the world, mainly for the purpose of capital requirement to improve land, purchase of fertilizers, seeds, pesticides and purchase of farm machinery. In this study, the researchers used probity regression model. The result of regression shows that gender, education level, farming experience, farm size and availability of collateral have positive effect on access to formal credit. However, age has a negative impaction access to formal credit.

Kochar (1997), study on the determinants of access to formal credit in India; an empirical analysis sings witching regression approach. This study reveals that the operation of formal credit sectors are significantly affected the rural economy, in both levels of income and income inequality. Moreover, Poliquit (2006) studied on the accessibility of rural credit among small farmers in Philippines. The result of the study show that most of the respondents borrow for farm production activities, usually during the planting period. Similarly, the farmers borrow more fundamentally for the purchase of production responses like seeds, fertilizers and chemical.

### 2.3.3 Empirical reviews in other African countries

Kip limo et al. (2015), tried to found the main factors that affect smallholder farmers financial services in Kenya. The result of this study reveals that household‘s education levels were statistically significant with positive effect on access to formal credit. Conversely, distances to the credit source were statistically significant with negative influence on access to forma credit financial services by using logistic regression model.

AK pan et al. (2013) conducted a study on the entitled that determinants of access and demand for credit among poultry farmers in southern Nigeria by using double hurdle model. The result of hurdle indicated that farmer‘s age, gender, education, farm size and distance from farmer’s resident to lending source are important determinants of access to credit.

Oboh & Kushwaha (2015) studied on the effect of socio-economic determinants of farmer‘s loan size by arable crop farmers in Benue State, Nigeria. In this study, the researchers used multiple regression analysis. The result of regression analysis indicated that distance, farm size, length of loan delay and visitation by lenders have positive significant on access to formal credit.

Anang et al., (2015), conducted a study in June (2015) that entitled on access to agricultural micro rendition Ghana. In this study, the result of Hack man selection model indicated that gender, cattle ownership and improved technology adoption were significant factors in determining farmer‘s loan size. Dzadze et al. (2012) also conducted on factors that limit or increase smallholder farmer‘s access to formal credit in abura asebu Kwamankese district of the central region of Ghana by using logistic regression model. The regression result shows that extension contact, saving habit and education level were significant impact on farmer‘s access to formal credit. This study stated that the odd of a smal lholder accessing formal credit is increase by saving habit, education and extension contact respectively. Chivandire (2019) studied on identifying the major factors affecting access to formal credit by smallholder farmers with particular reference to Chivi Woreda, Zimbabwe. The log it model reveals that demographic factors like, age of household head, sex, household size, marital status and household education level and economic activities of households are determinant of access to formal credit

### 2.3.4 Empirical Reviews in Ethiopia

Hussein (2007) conducted on understand and explain farm household economic behavior with reference to saving, credit and production efficiency under imperfect financial market conditions in Southeastern Ethiopia. Saving behavior of farm households was affected by factors related more to incentives and opportunities to save than to ability to save. Data was analyzed using stochastic frontier analysis and limited dependent variable econometric tools.

Kiros (2012) observed in Tigray region that education, land size, distance and livestock ownership are the major determinants of credit access. The researcher uses bivari at probit model.

Ayele & Goshu (2018), Examined factors determining microfinance loan utilization by smallholder farmers from Omo Microfinance institution in Lemo District of Hadiya Zone. The study uses univariate probit regression model. The results showed that literacy, household size, size of landholding and distance from residence to lending center were the significant determinants of access to formal credit.

Muse (2016) also conducted a study that entitled on the—determinants of household level access to formal financial services‖ in Hawasa, Sidama zone. In his study Binary logistic regression model was used. The result of the study showed that demographic factors like,(Age, Sex and education), institutional factors like, (participation of households in extension package program, lending procedure, family labor),socioeconomic factors like, (size of farmland, livestock ownership, experience in credit use), communication factors like, (distance from lending institutions and extension contact) are the most important determinants of access to formal credit.

Sisay (2008) studied on smallholder farmer‘s access to formal credit in Amhara region, north Gondar. The study uses binary logistic regression model. The result of log it model indicates access to formal credit was positively and significantly affected by participation in extension package programs; farm household ‘experiences in credit uses from formal credit institutions and total cultivated land size. But, number of livestock unit in tropical livestock unit (TLU) and farmers perception of group lending ne gatively and significantly affect access to formal credit.

## 2.4 Identified literature gaps

Access to credit is fundamental for small land holder farmers in UN industrialized countries of the world. Credit leads to an increase in spending, higher GDP (gross domestic product) and there by faster productivity growth, thus increasing income levels in the economy. Access to credit enables operational and capital investment where farmers get credit to buy seed, fertilizer and other equipment during the planting season. It plays a basic role in covering consumption insufficiencies of farm households and used as income transfer instrument to eradicate the imbalances in income distr ibution among the small, middle, and big farmers. However access to formal credit is affected by both socio-economic and institutional variables.

In Ethiopia, some researchers conducted in various regions. For example, the study by muse (2016) analyzes the determinants of household level access to formal finance in Sidama zone; the study by Samuel (2020) assumed in wolaita zone; the study by Sisay (2008) assesses determinants of access to formal credit in North Gondar. However, those studies are limited in describing rather than explaining the factors contributing for access to formal credit. In addition, Most of the empirical literatures are the same but; the studies are different in their research design, approach, and coverage of geographical area. In addition, there is inconsistency in their research question, methodology, objectives, most of the literatures focuses on both formal and informal credit institutions and does not include all-important variables on their study.

Therefore, the researcher tries to fill the gap by adding such two variables like of saving culture of households in formal credit institutions and amount deposit interest rate by formal credit institutions that affect small landholder farmers 'determinants of access to formal credit for the case of Sodo Woreda using115 small landholder farmers.

**In general, the main factors affecting access to microfinance credit can be categorized into four groups.**

a) Demographic factors (age, gender, education, etc.)
b) Socio-economic factors (distance from lending Institutions, size of farm land, live stock ownership, etc.);
c) Institutional factors (membership of farmers' cooperative, lending procedure, group lending, etc.)
d) Communication factors (extension contact, etc.)

## 2.5 Conceptual framework

Conceptual frame work is important for readers easily understanding the relationship between variables. Thus, based on the theories of overall literatures conceptual frameworks developed as follows:

Figure1: Conceptual framework for the study

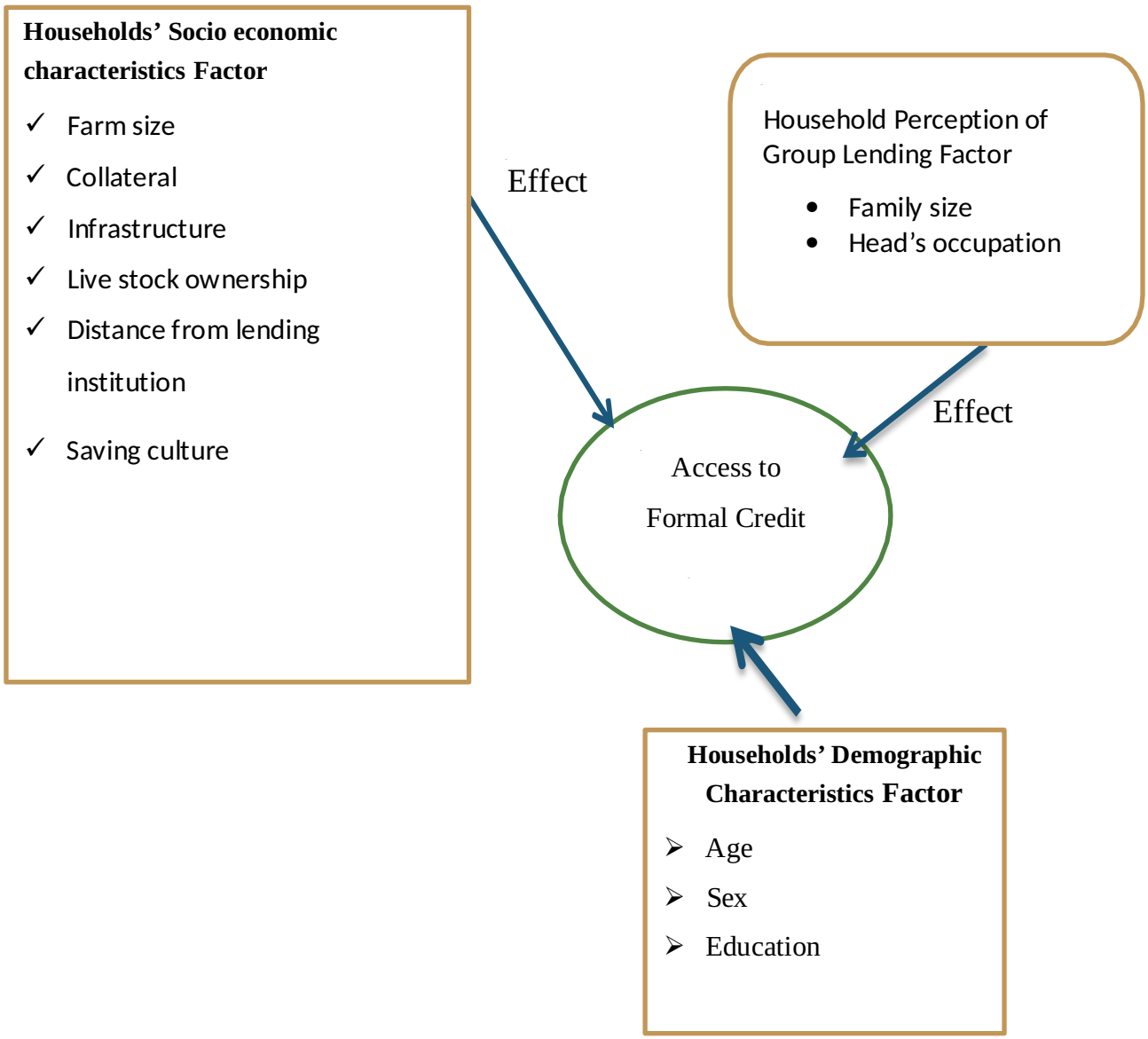


Figure 1 Source: Represented by the researcher based on literature Review (2023).

### 2.5.1 Description of Variables

In order to identify whether the sample households have demand for credit or not and whether they have access to credit or not in Sodo Woreda Microfinance Institutions (MFIs) and others, households were asked a series of questions like whether they applied for credit or not, including the reasons if they do not apply in detail. The descriptions of the variables that are considered important in this study are described as follows including their units of measurement.

1) **Dependent variables**: These determinant dependent variables of demand for and access to credit are representing the observed status of the respondents in deciding to apply and receive or use credit. It takes the value of '1' for users and '0' otherwise (non user).

a) **Demand for credit:** This is defined as the probability that an individual has applied for credit in Microfinance Institutions (MFIs) and others Microfinance Institutions (MFIs) in the last 12 months.

b) **Access to credit:** This dependent variable is defined as the probability that an individual has received any loan from Microfinance Institutions (MFIs) and others Microfinance Institutions (MFIs) in the last 12 months.

2) **Independent variables**: These are variables that are expected to influence the demand for and access to credit of the household respondents. The variables are obtained from the literature. The hypothesis for the factors and their expected signs are described under each variable.

I. **Households' Demographic Characteristics:-**

1) **Age of the household head:** It is hypothesized that young household heads with expectation of growing income and a high marginal utility income together with creating a new family, will have a high demand for micro credit. In contrast, access to credit is assumed to increase with age, since lenders assume that older borrower's ability to pay is higher.

2) **Sex**: It is hypothesized that male-headed households are expected to have higher demand for and better access to credit than female headed households. It takes the value of '1' if the head of household is male and '0' otherwise.

3) **Educational status of a household head**: Educated households are likely literate if the value is '1' and otherwise '0' or illiterate. Literate includes all formal and informal educational levels. Literate households have lower entry costs since they face less difficulty in collecting information and evaluating the information needed for decision to apply for credit.

II. **Household Perception of Group Lending: -** Rural households are expected to form a group as collateral to get credit from MIFs. But rural households perceive group lending, as it is difficult to

access credit from these sources.

1) **Head's occupation:** Households that are involved in off-farm and other private activities have higher demand for credit since these activities requiring them huge capital. Access to credit increases for those engaged in off-farm activities since they are assumed to have capacity to repay the loan from their businesses.

2) **Family Size: -** Refers to the total number of family in the household. It is assumed that households with larger family size demand more micro credit. Greater household size represents a bigger demand for consumption and less ability to repay the debt. So, they are expected to have less credit access from lenders.

3) **Dependency ratio:** Refers to the total family below 15 and above 65 years (unproductive age)andabove15andbelow65years(productiveage).Asindicatedintheliterature,the presence of more dependents in a household may discourage lenders because it signals higher desired consumption instead of investment, limited earning capacity and higher probability of default. However, households with high dependent ratio are more likely to have more demand for credit.

4) **Interest to credit (deposit) :** is an ordinal variable, deposit interest rate is the amount of money paid to saving households at the time of withdrawals and it is the most important variable in determining access to formal credit (ElsevierB.V, 2019).

III. **Households' Socio economic characteristics:**

1) **Cultivated land (farm) size:** It is total cultivated farmland under the production of different crops. It is measured in hectares. It includes own, rented and sharecropping arrangement cultivated land by the household head. It is hypothesized that increase in cultivated land would lead to increase in demand for credit. Moreover, lenders would prefer households who have high-cultivated land.

2) **Collaterals:** is a dummy variable, which takes the value of—1‖for those who have collateral availability and —0‖otherwise. Small landholder farmers are expected to form a group that can serve as collateral to take credit access from formal credit institutions. However, households perceived that group lending if difficult for access to formal credit from credit sources. Therefore, farmers who have enough number of assets are less likely to go for credit(SamuelSemma,2020)

3) **Infrastructure:** Particularly all-weather roads that connect rural to urban are taken this road access as determinants for household level access to formal credit in study area. Is an ordinal variable; in this study infrastructure is not the determinant of access to formal credit.

4) **Livestock Ownership (TLU):-**This refers to the total number of livestock rural households possessed and measured in Tropical Livestock Unit (TLU).

5) **Distance to the nearest credit source**: It refers to the distance (in km) of the rural households from the nearest credit institution. It is expected that as the distance increases demand for and access to credit decreases.

6) **Saving culture:** is ordinal variable, According to Samuel Semma (2020) when farmers save higher amount of money in financial institutions it could be substituted as collateral in providing credit.

## 2.5.2 Definition of Key Terms

The definitions of the following terms are conventionally agreed and accepted.

- **Credit:** is sum money, which is added to an account, an amount of money that is given to another client.
- **Client**: customers or beneficiaries of the program and who are screened by the microfinance institution and receive loan from the institution to repay on agreed time and also who are saving in that institution
- **Microfinance Institutions (MFIs);** -are institutions or organizations that offer financial service to the low-income people.
- **Saving:** -depositing or keeping money in the account that is used in the future for different purposes, including investment. There are two types of saving, namely voluntary and compulsory(involuntary

# CHAPTER THREE-

## 3. RESERCH METHDOLOGY

### 3.1 Description of the Study Area

Sodo Woreda is located in Garage zone 103 kilo meters south of Addis Ababa, 193 kilo meters from Hawassa, 110 kilo meters from Wolkite, and 30 kilo meters from Butajira. Administratively the Woreda is divided in to34 Rural and 5 Urban Kebeles. In the study area there are two MFIs; Agar Microfinance Institutions (MFIs) and Netsnet fana Microfinance Institutions (MFIs). Netsnet fana Microfinance Institutions (MFIs) and Agar Microfinance Institutions (MFIs) area recently established, in 2010 and 2012 respectively.

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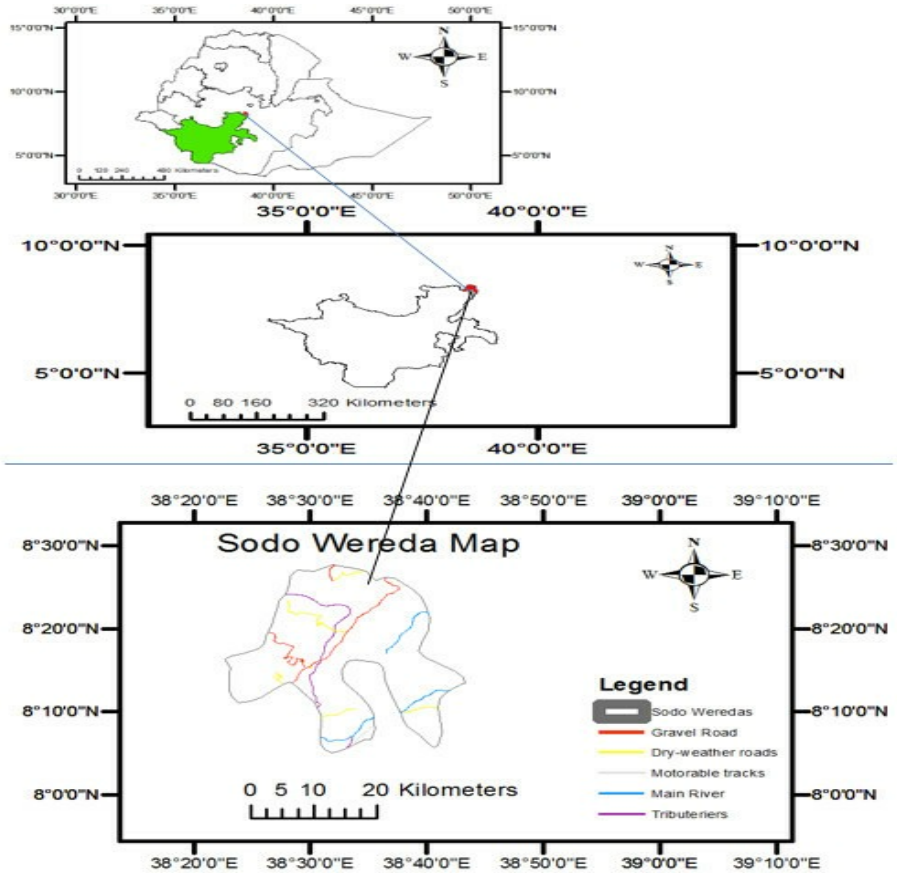

Figure 2 Location Map of Study Area Source: SWAO

## 3.2 Research Design

The study is aimed to investigate Determinants of Access to Microfinance Institutions Credit Service in case of microfinance institutions found in sodo woreda, the researcher uses descriptive research design since and explanatory it is suitable for analyzing the existing situation, narrating facts and investigating the determinants in their natural setting. Descriptive survey approaches employed to describe and interpret the causes of the problem in the wereda understudy, based on the combined data collected from both primary and secondary source

## 3.3 Sampling Technique

The study will use simple random sampling and purposive technique. A two stage sampling technique was used to select representative households from the study woreda. At the first stage sodo woreda was selected purposively due to the existence of several microfinance institutions that give credit for smallholder farmers. Secondly, among 39 rural kebeles of the wereda, five rural kebeles were selected; using simple random sampling technique through lottery method (sampled Peasant Associations should be non-continuous).

## 3.4 Population of the Study

The target of the study consists of small landholder farmers in sodo wereda. Was estimated population to be 160,107 of which 79,457 (49.63 percent) are females and the remaining 80,600(50.37 percent) are males. About 134,489 (84 percent) of the total population numbers lives in rural areas while the remaining 25,618 (16 percent) lives in urban areas. The major source of livelihood of the population in the sodo woreda Zuria is farming (sodoWoreda plan and economy development office 2015 e.c).

## 3.5 Sample Size Determination

Finally, sample size of farm household heads was determined by using a simplified formula provided by Yamane (1967). For this study, out of the total 1702 households (genbela - 320, refanso- 386, anati - 298, negysa-356 and Adele borobore -342), 115 households are selected using simple random sampling

method proportionally. The representatives of the farm households comprise both credit users and non-credit users. Two Microfinance Institutions (MFIs) that provide credit services for the rural smallholder households were purposively selected from the total microfinance institutions available in the wereda. The sample size of the representative households was determined based on the following sample size determination formula developed by Yamane (1967).

$$n = \frac{N}{1 + N\ (e)2}$$

n=Sample size for the research use=

N=Total number of smallholder farmers of sampled Pas=1702

e = margin of errors at (9%)

The indicated sample size of small holder households was distributed for the selected five Samples Peasant Associations as indicated in the following table.

Table1.Stratified sampling of Sample Households from purposively selected Peasant Associations

| Pas | Number of sample Pas total households | Sampling Fraction | Number of sampled Households |
|---|---|---|---|
| Genbela | 320 | 320/1702*115 | 22 |
| Refanso | 386 | 386/1702*115 | 26 |
| Anati | 298 | 298/1702*115 | 20 |
| Negysa | 356 | 356/1702*115 | 24 |
| Adele Borobore | 342 | 342/1702*115 | 23 |
| Total | 1702 | 115 | 115 |

## 3.6 Data Sources and Data Collection Method

In order to achieve the objectives of the study, quantitative and qualitative types of data were collected from both primary and secondary sources. Primary data were obtained through structured questionnaire from small landholder farmers .Secondary data were collected from reports, books, press, pressmen's, publishers, various research papers, government and non- governmental publications and report from the branch level persons the key informant to get informant is the participants.

## 3.7 Modal specification

The researcher uses variables to estimating the parameters of the model: such as dependent and independent variable.

The dependent variable is access to microfinance institutions credit service () reside in sodo wqreda.

Binary logistic regression analysis examines the influence of various factors on a dichotomous outcome by estimating the probability of the event's occurrence. It does this by examining the relationship between one or more independent variables and the log odds of the dichotomous outcome by calculating changes in the log odds of the dependent as opposed to the dependent variable itself. The log odds ratio is the ratio of two odds and it is a summary measure of the relationship between two variables. The use of the log odds ratio in logistic regression provides a more simplistic description of the probabilistic relationship of the variables and the outcome in comparison to a linear regression by which linear relationships and more rich information can be drawn. Regression methods have become an integral component of any data analysis concerned with describing the relationship between a response variable and one or more explanatory variables. The outcome variable in binary logistic regression is binary or dichotomous and the error term in binary logistic regression is distributed binomially, not normally. There are two primary reasons for choosing the logistic regression. First from mathematical point of view it is an extremely flexible and easily used function and second it lends itself to a clinically meaning full interpretation (Hosmer and Lemeshow, 2000).

**Model:** Let $Y_{nx1}$ be a dichotomous outcome random vector with categories 1 (user) and 0 (non user). Let X denotes the collection of k-independent variables and, β be of parameters that we need to estimate.

The logistic regression equation is given by:

The transformed variable, denoted by logit () is the log-odds and is related to the explanatory variables as:

Where; Yi=1, the respondent's response is Access to Credit Service or user

Yi=0, the respondent's response is without access means non user

X1: age of household

X2: sex of respondent

X3: education level of household

X4: family-size

X5; Head's occupation

X6; Dependency ratio

X7; Interest to credit (deposit)

X8; farm-size in hectare

X9; Collateral

X10; livestock ownership

X11: saving culture of respondents

X12; distance from lending institution

X13: Infrastructures

The odds ratio is a measure of association which has found wide use, as it approximates how much more likely (or unlikely) it is for the outcome to be present among those with y=1 than among those with y=0.

Therefore, in this study the model is specified as function: = f (,, , , , , , , ,; , and )

Where, is access to microfinance institutions credit service at period t. specifically; the log transformation of the model is as follows:

Where, P is the probability of occurrences of success or failure of the feature; is intercept term and,, , , , , ,,, , and are long run coefficients. Access to microfinance institutions credit service (Yi*) is the dependent variable measured by overall average score of the nine items: (,, , ,,,,, ,;,and). The above equations give suitable representations of the success probability, odds, and log odds. Indeed , these representations facilitate interpretations of parameter estimates. The parameterrefers to the effect of $X_i$ on the log- odds for Y = 1 controlling the other X's in the model. For predictor variables having L levels (L ≥ 2), interpretation can be made by making one of the L-levels as a reference category.

## 3.8 Method of Data Analysis

Descriptive statistics such as mean, standard deviation, chi-square and t-test and percentages are employed to analyze the factors that determine small holder house holds' access to microfinance credit average and percentage are used to measure the differences. In addition, frequency distribution and mean comparison were applied to describe the socio-economic and demographic characteristics of the credit use participants and non-participants. Furthermore, other tools are employed when found appropriate to identify factors determining smallholder farmers' access to microfinance credit service at the individual household level in the study woreda.

## 3.9 Scale of Measurement

Four-point Likert rating scale method of questionnaire was used in this study. The Likert-style rating method of questionnaire design enables numerical value to be assigned to cases for easy quantitative analysis. According to Hair et al. (2010) as cited in aberu Y.(2021) Likert scales are most appropriate for research designs that use self-administered surveys, personal interviews, or online surveys. The response scale for statements in the survey questionnaire ranges as 1 = strongly dis agree, (SDA); 2 = Dis agree, (DA); 3 = Neutral, (N); 4 = strongly agree(SA); 5 = agree(A);. For the purpose of the study, respondents were asked to indicate the degree to which they agreed or disagreed with each statement in every dimension in the questionnaire.

## 3.10 Reliability

The reliability of tools tests the accuracy of tools. The reliability of the tools is viewed by Creswell (2003) as the degree of accuracy demonstrated by the tools or method. A standardized test's reliability is

typically expressed as a coefficient of correlation, which calculates the intensity of the association between variables. Before progressing to the main analysis, the researchers performed a reliability test. The importance of the reliability test was to assess the possible limitations of the testing instrument so that it could influence steps to mitigate the errors found.

**Table 2:-Reliability Test Statistics**

**scale:** all variables

| Cronbach's Alpha | N of Items |
|---|---|
| **.89** | 22 |

Source; own survey & SPSS output (2023)

The Cronbach‟s alpha was used to assess the reliability of the scales used for this research. Thus, it is better to see the Cronbach‘s alpha reliability test statistics result, which ranges from -1 to +1. if the Cronbach ‘s alpha output becomes greater than 0.7, it indicates that all the items or the questions with regard to the respective variable are good, highly correlated and reliable. Cronbach ‘s alpha is existed between 0.60 to 0.70, it indicates fair reliability, and the coefficient from 0.70 to 0.80 is indicated as a good reliability and if the coefficient is larger than 0.80, it is considered as an excellent reliability which means that there is high internal consistency among the variables (Hair et al., 2003). As can be seen from the table, Cronbach's Alpha is 0.89 for aggregate field value. This value is considered excellent reliability; the result ensures that each area of the questionnaire is accurate. The numbers (N) of respondents are 115 respondents

# CHAPTER FOUR:

# 4. RESULTS AND DISCUSSIONS

This chapter presents results and discussions of both primary data that have been collected and processed to address the specific objectives of the study. The chapter is divided in to four major sections.

a. The first section presents the demographic and socio-economic characteristics of sample household farmers
b. Second section Formal and informal credit sources as well as perception so rural households concerning access to credit are explained under.
c. Third section rural households' demand for micro credit and their perceptions of credit are explained.
d. Fourth section social, economic and cultural determinants of rural smallholder households' access to formal credit services, saving and physical distance are analyzed. In line with this, the econometrics analysis that identifies the most important factors that affect rural small holder households' access to formal credit in rural areas in the study sodo wereda are employed.

## 4.1 Demographic and Socio-economic Characteristics of Sample Households

As indicated in the literature, farmers' participation in credit for agricultural and related activities can be affected by demographic and socio-economic factors as well as social and institutional loaning policies, procedures and other related factors. So, their effects are indicated as follows.

### 4.1.1 Demographic Characteristics of Sample Households

The demographic variables (sex, age, marital status, religion, household's family size) and educational level of the household heads are indicated by several studies as factors affecting farmers' participation in credit services. However, these variables had less impact in explaining rural households' access to formal credit.

#### 4.1.1.1. Sex of the Respondents

Regarding sex of the respondents, as the data obtained indicated, from the total 115 sample household

heads,74.8 percent are male-headed households while the remaining 25.2 percent are female headed (see table1.below).Of the total credit users respondents,41 (85.4 percent) are male-headed whereas 7 (14.6 percent) are female- headed. As it is seen from table 1, from the total male-headed respondents, 37 (43.0) are credit users while 49(57.0) are non-users. Similarly, from the total female respondents, 11 (37.9) are formal credit users while 18 (62.1) are non-users. The chi- square value (x2=7.68; p=0.008) indicated that there was a statistically significant difference in the sex of household head between participant and non-participant groups at 1% significance level. This implies that male-headed households have higher demand for and better access to credit service than female in the study sodo wereda. The chi-squire value of (10.28) indicates that there is a relationship between the sex of the household heads and use of credit

#### 4.1.1.2 Age of the Household Heads

This is the age of the sample household heads or respondents from the period of birth to the time of giving this information and measured in years. As it is seen from the table below, the average age of the sample rural household credit users is 48.9 years while non- users is 50.4. The mean average age of sample household heads is 49.7 years (50.4 years of males and 47.8 of females). Similarly, average age of male- headed credit users is 49.4years, while average age of female-headed credit users is 47.1 years. On the other hand, average age of male-headed non-credit users is 51.1, while that of female-headed non-users is 48.3 years.

There is no significant statistical significant mean age difference between credit users and non-users at 5% significant level in the study wereda. In general, age of the respondents have less determinant effect on households' access to credit in the study sodo wereda.

**Table 3. Sex and Age of the Respondents**

| Characteristics | | Non-users (N =67) | | Credit users (N=48) | | Female HH (N = 29) | | Male HH (N=86) | | Total (N=115) | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | N | % | N | % | N | % | N | % | N | % |
| Sex | Male | 49 | 57 | 37 | 43 | | | | | 86 | 74.8 |
| | Female | 18 | 62.1 | 11 | 37.9 | | | | | 29 | 25.2 |
| Mean Age | Male | 51.1 | | 49.4 | | | | | | 50.4 | |
| | Female | 48.3 | | 47.1 | | | | | | 47.8 | |
| | Mean | 50.4 | | 48.9 | | | | | | 49.7 | |
| | St.dev. | 5.60 | | 4.73 | | | | | | 3.63 | |

Source:-Own Survey Data, 2023, and HH=Household; N: represents number of household sample

Size the result of the study also indicated that the mean and standard deviation of sample.

**4.1.1.3 Education of the House hold Heads**

Findings on the respondent's level of education as shown in Table 4 indicate that most of the members of the (17.1%) were literate education, (31.6%) had adult education, (23.9%) were primary level 25.6% were secondary school or above. The findings confirm the argument that those who are more literate find it easy to get access to a loan either from microfinance institutions or government loan programs because the application process involves a lot of paper work and writing proposal (Ayuo & Kamau, 2013). It is therefore clear that those with secondary education have benefitted more than those with primary level of education.

The statistics of the highest level of education attained by the respondents in the study area are as given in

**Table 4 Level of education**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Literate | 20 | 17.1 | 17.4 | 17.4 |
| | adult education | 37 | 31.6 | 32.2 | 49.6 |
| | primary level | 28 | 23.9 | 24.3 | 73.9 |
| | secondary school or above | 30 | 25.6 | 26.1 | 100.0 |
| | Total | 115 | 98.3 | 100.0 | |
| Missing | System | 2 | 1.7 | | |
| Total | | 117 | 100.0 | | |

Source: Own survey data, 2023

**Note:-**Literate includes both formal and informal educational status of the household family.

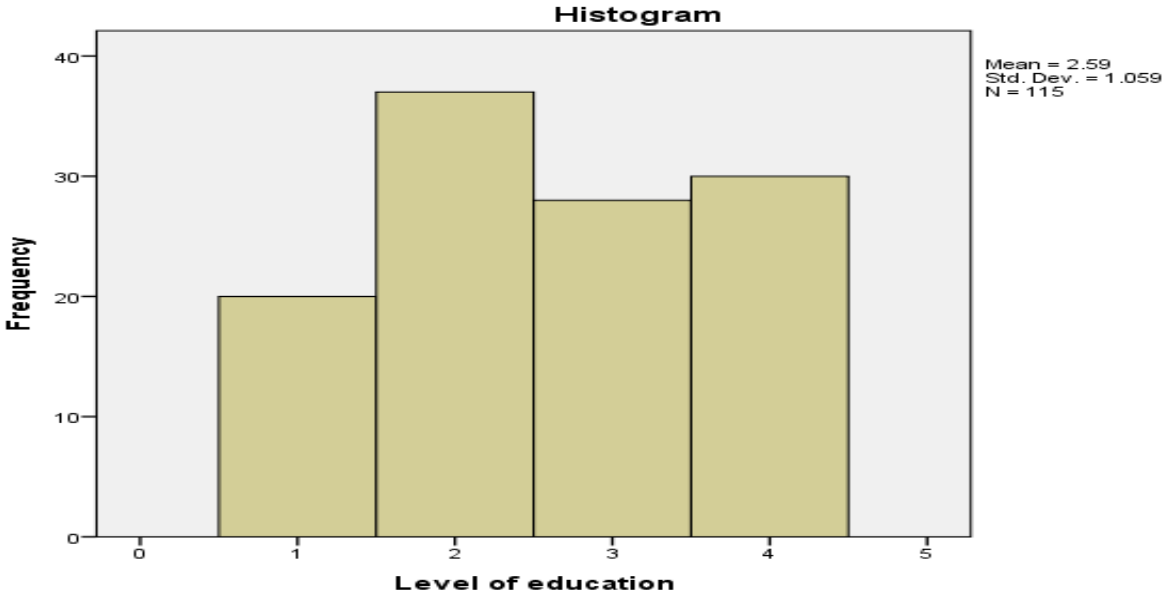


Figure 3 level of education

#### 4.1.1.4 Family Size of Household Heads

Family size is the number of people in the household. As indicated in the literature, the larger the family members, the more labor force available for the production purpose. Hence, families with sufficient labor force are expected to participate in credit service and increase household income. On the other hand, large households consume more than do small households and accordingly households who have more number of family members are less likely to participate in the credit utilization than households with less family members. In the study woreda the respondents have maximum family size of more than twelve and a minimum of three persons (Table 5). Average sample household family size is found to be 5.6, while average non-credit users' household family number is 5.3 and average credit users' household family size is 6.0.In this study, family size has no significant effect on credit access and increasing income.

Table 5. Family Size of Sample Household Heads

| Family Size | Non- Credit users | | | | Credit users | | | | Total Sample Households | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | T.N | % | Male | Female | T.N | % | Male | Female | T.N | % |
| 3–5 | 32 | 12 | 44 | 65.7 | 19 | 6 | 25 | 52.1 | 51 | 18 | 69 | 60.0 |
| 6–8 | 13 | 5 | 18 | 26.9 | 12 | 4 | 16 | 33.3 | 25 | 9 | 34 | 29.5 |
| 9–11 | 3 | 1 | 4 | 6.0 | 3 | 1 | 4 | 8.3 | 6 | 2 | 8 | 7.0 |
| 12+ | 1 | - | 1 | 1.5 | 3 | - | 3 | 6.3 | 4 | - | 4 | 3.5 |
| Total | 49 | 18 | 67 | 58.3 | 37 | 11 | 48 | 41.7 | 86 | 29 | 115 | 100 |

Source: Own survey data, 2023

However, at 10% significant level, there is mean family size difference between credit users and non-users groups. This implies that family size of the household has relationship with access to credit in the study area, and thus, family size is one of the determinant factors for access to credit. Families with relatively large labor force were participating in credit service in the study sodo wereda.

## 4.1.2 Socio economic Characteristics of the Sample Households

Cultivated land (farm land), livestock population (TLU) size, annual income (wealth) and household heads secondary activities are hypothesized as economic factors affecting access to credit services.

### 4.1.2.1 Land holding Size

Land includes total owned cultivated land, rented and land secured through sharecropping arrangement by the household head. According to the data obtained, the mean cultivated land of the sampled households ranged from 0.69 to3.25 hectares. Moreover, the average land cultivated in 2015 E.C by credit users and non-users was 1.23 and 1.06 hectare respectively. There is no significant mean difference on total cultivated land size between the two groups. This implies that total cultivated land size has less determinant effect on households 'access to formal credit in the study sodo wereda. But with regard to land ownership, from the total sample households, 13 respondents have no their own cultivated land. Of these, only 10 percent had access to credit.

The chi-square test was employed to measure whether there is significant difference between those who have their own land or not access to formal credit. The result shows that there is significant difference in access to credit among the groups at 5% probability level. Land ownership has determinant effect on households' access to formal credit in the study woreda. The implication is that, sample households who have no own land have less access to credit. In our country, land is owned both by public and government. People have the right to use, inherit and transfer his/her title or claim compensation for it (Constitution of FDRE, 1995). Land certification is introduced to promote land security. As indicated during key informants, land ownership has positive impact on access to credit. Youth households who have no land are marginalized from access to formal credit and accordingly land ownership is the determinant factor for rural households' access to credit in the study sodo woreda.

#### 4.1.2.2 Live stock Holding Size

Livestock holding size or ownership refers to the total number of animals (in this case ox, cow, sheep, goats, horse and donkey) possessed by the sampled households. As indicated in the literature, as the total number of animals of the household increases, the household would be less likely to go for credit. This can be attributed to increase wealth and income base of farm households, which makes more money available in the households that, minimizes demand for credit (Gonzalez, Vega et al, 2007). According to the data obtained, the average number of livestock population held by the sample households was 10.90 (table 6). The mean number of livestock owned by credit participant and non-participant households was 11.10 and 10.76, respectively (the same table).The mean difference between the treated groups regarding the size of livestock was positive and statistically significantat1% level of significance.

Table 6.Mean Difference of Variables of the Sample Households

| Variables | Credit user mean | Non-credit user mean | Total mean |
|---|---|---|---|
| Cultivated land holding Size in hectare | 1.23 (0.53) | 1.06 (0.52) | 1.13 (0.53) |
| Number of live stock Holding size | 11.10 (0.65 | 10.76 (0.64) | 10.90 (0.63) |
| Tropical Livestock Unit | 7.91(1.68) | 7.60 (1.88) | 7.73 (1.78) |
| Annual income of Household in birr | 19875.64 | 17881.10 | 18713.60 |
| Frequency of extension Contact per three months | 2.23 (3.81) | 1.9 (1.97) | 2.1 (3.17) |
| Sample HH distance to Then earest MFIs (kms) | 22.24 (2.45) | 22.64 (2.49) | 22.47 (2.46) |

Source: Own survey data, 2023

Livestock is the most important asset for rural households. Farmers in the study district under take both crop production and livestock rearing. There is no one uniform set of coefficients for converting livestock numbers into livestock units. According to FAO, 2018, conversion fact or s used for estimating Tropical Livestock Units are (cattle=0.7; sheep/goat = 0.1; donkey = 0.5 and horse = 0.8). Based on these factors, livestock population numbers were converted to Tropical Livestock Unit (TLU) to facilitate comparison between credit user and non-user.

The mean live stock holding size of total sample households is 4.80 TLU. On the other hand, mean livestock holding size of formal credit users and non- users are 4.93 and 4.71 TLU, respectively. This implies that there is no significant mean difference between credit users and non-users in livestock holding size in the study woreda. In other words, this implies that livestock ownership has less determinant effect on households' access to credit in the study sodo woreda. This result is contrary to Gonzalez, Vega et al, 2007 study.

#### 4.1.2.3 Annual Income of Sample Households

From the factors that determine rural households access to credit is personal income earned from different sources. It is believed that as level of income earned per annum increases, the operating expenses spent on input procurement to produce any production activities could be more covered by increased income. As seen from (table 6) above, average annual income of sample households (from the sale of crop, vegetable, fruit, animals and animals products, wood and its products, petty trade, daily labor, safety- net, food for work, remittance, aid and other income sources in the year (2015 E.C) was birr 18713.60. On the other hand, average annual income of credit borrowers and non-borrowers of sample households was Birr 19875.64 and 17881.10 respectively. As t-test shows there is no as such significant annual income mean difference between them. In addition to this, the econometric analysis indicated that annual incomes of the respondents have less determinant effect on households' access to formal credit in the study woreda.

## 4.1.2.4 Access to Extension Services and Package Program

### 4.1.2.4.1 Access to Extension Services

In the study wereda, it is observed that rural communities are supporting each other through traditional organizations like Debo, Idir, Mehaber, Iqub and the like. In addition, there are also modern rural supporting institutions like Development Agent Service, Health Post, Cooperatives, etc. These government institutions play an important role in the day-to-day activities of the rural community. Among the modern rural institutions, agricultural extension services or development agents play a leading role in the development arena of the rural community. The result of the survey indicated that 70 sample households (68.7 percent of the total sample households) have participated in the extension service for a minimum of one and half days to a maximum of three and half days per three months up.

Whereas 31.3 percent of the respondents are neither participated in extension services, nor borrowed credit from Microfinance Institutions (MFIs) Even though, the opportunities to participate in the extension services are for all households, there is significant difference in the access to formal credit between those participated in the extension services and non-participant at 5% probability level (Table 7).

The difference is mainly due to the government has given more attention for food insecure households in order to pull them out from food in secure and push to prosperity. To achieve the indicated objective, different inputs were delivered for the food in secured households on credit basis and development agents also facilitated more awareness for those households embraced by food security package. Therefore, rural small holder households who have frequent contact with development agents are largely demanding formal credit.

Frequency of extension service is the number of contacts with extension agents that the respondent households made in the month. Farmers who have a frequent contact with extension agents are expected to have more information that will influence farm household's demand for credit access from the microfinance institution. As the data obtained indicate, there is difference in the number of contacts development agents made with credit user and non-user households. As it is seen from table 6 above, development agents 'contact with credit user and non-user sample households on the average were 2.2 and1.9 days per three months/quarterly or 8.8 and 7.6 day's per annum, respectively. This indicated that the participant households have better access to extension services than non-participant, and the difference was statistically significant at 1% significant level in the study wereda. Thus, rural households that have frequent contact with development agents have got relatively better agricultural

extension services, including credit service than those households having non or low contact with extension agents. Therefore, credit and extension services have association. In this regard, development agents 'frequent contact with households is one of the determinants of access to credit in the study sodo woreda.

Table 7. Extension Services and Package Program Participation of Sample Households

| Variable | Response | Formal Credit | | | | | | Total (N=115) |
|---|---|---|---|---|---|---|---|---|
| | | Users | | | Non-users e | | | |
| | | Male | Female | T.N | Male | Female | T.N | |
| Extension service Participation | Yes | 26 | 7 | 33 (68.7%) | 29 | 8 | 37 (55.2%) | 70 (68.7%) |
| | No | 11 | 4 | 15 (31.3%) | 27 | 3 | 30 (44.8%) | 45 (31.3%) |
| Microfinance Institutions (MFIs), | Yes | 29 | 6 | 35 (72.9%) | 35 | 7 | 44 (65.7%) | 79 (68.7%) |
| | No | 8 | 5 | 13 (27.1%) | 19 | 4 | 23 (34.3%) | 36 (31.3%) |
| Own land | Yes | 33 | 10 | 43 (90.0) | 42 | 9 | 49 (73.1) | 92 (80.0) |
| | No | 4 | 1 | 5 (10.0) | 16 | 2 | 18 (26.9) | 23 (20.0) |
| Package program | Yes | 13 | 3 | 16 (32.5%) | 27 | 5 | 32 (67.5%) | 48 (41.7%) |
| | No | 24 | 8 | 32 (67.5%) | 29 | 6 | 35 (52.2%) | 67 (58.3%) |

Source: Own survey data, 2023, N = represents number of total sample size; Numbers in parenthesis indicate percentage.

**4.1.2.4.2 Package Program/Individual/Loan**

In general, participation in extension package program is found to be an important variable influencing access to formal credit use. As the data obtained indicates, from the total sample households, 48 (41.7 percent) are beneficiaries of food security package program in the study sodo wereda. Thus, the priority of extension package credit service is given for those food insecure households.

Individual lending model (for urban businessmen and employees) has been widely used in the wereda by some MFIs and by others along with the group lending. In case of Netsnet Microfinance Institutions (MFIs) individual lending started especially for food security package program. Netsnet Microfinance Institutions (MFIs) give credit in kind or/and on cash base individually at the interest rate of 15 percent per annum. The credit amount ranges between Br.1000.00 to 50,000.00 and principal repayment duration is annually, while interest payment is monthly. The amount of credit cans group to Br.150,

000.00 if

group members agreed and loan repayment is properly paid.

As the data obtained indicated, out of the total credit users, 68.75 percent have borrowed from Netsnet Microfinance Institutions (MFIs), while 31.25 percent borrowed from Agar fana Microfinance Institutions (MFIs). There are also smallholder's rural households who have borrowed money in-group from small- scale microfinance institutions like Netsnet fana (MFIs). Minimum number of group members is five. As the researcher's observation and key informants participants explanation, both Microfinance Institutions (MFIs) and small scale financial systems are more supervised, regulated and fixed repayment time and period while Netsnet Microfinance Institutions (MFIs) loan is flexible, less secured and accordingly it is less risky for borrowers.

With regard to sex, out of the total credit users' respondents, 83.3 percent borrowed package loans. Of these, females accounted for14.6 percent, while male accounted for 68.7 percent (Table 8).

There are differences between male and female access to package loans. As many studies indicated, the difference may arise from the existing gender inequality that has contributed to lower access for women households.

As the information obtained during key informants indicates, there is loan diversion problem in the woreda. This means some loan borrowers are diverting loan received for animal fattening to consumption and the like. To minimize this loan diversion problem, Agricultural woreda Office and Microfinance Institutions (MFIs) together with have decided to give the loan in kind. Credit in kind is relatively available for animal fattening, poultry, beehives and related activities. However, some sample households have indicated, as they prefer to borrow in cash.

## 4.2 Formal and Informal Credit Services and Lending Modalities

### 4.2.1 Sources of Credit in the Study Area

The availability of credit for poor farmers is quite important in order to finance agricultural and allied activities. In the study woreda (sodo woreda), there are formal and informal financial institutions, such as government banks, Multipurpose Service Cooperative and micro financial institutions like Omo Microfinance Institutions (MFIs) , and Netsnet fana Microfinance Institutions (MFIs)and Agar Microfinance Institutions (MFIs). It is known that Commercial Bank of Ethiopia does not give credit for rural smallholder households due to collateral problem. Agar Microfinance Institutions (MFIs) and Netsnet fana micro finance institutions give credit for rural smallholder households. On the other hand, informal credit sources include parents, friends, relatives or neighbors, local moneylenders, and others

As the information obtained from Microfinance Institutions (MFIs) sodo woreda branch officials and documents indicate, the main sources of finance are equities, contributions from shareholders and savings, which were not enough to cover the demand of rural smallholder farmers or clients' loans. This share company is the microfinance institute in the study woreda, started operation around 2010 E.C and 2012 E.C. The company has played a lot in the development of economy, education, health and housing conditions, though it has the problem to serve the poor rural households at large, due to the low habit of the saving and credit of the local community in the study woreda.

the roles played by small scale Microfinance Institutions (MFIs) like Agar, and Netsnet fana Microfinance Institutions (MFIs) in providing credit services for the rural smallholder farmers in order to enhance their agricultural production and productivity are huge. Some beneficiaries of the institutions claim the institutions regarding short loan repayment period, lack of awareness creation training for the clients on business plan and how to manage their money (save and expend), on the policies and procedures of asking loan and use the borrowed money for the intended or planned activities.

## In general, sources of credit are classified into the following two major groups

### 4.2.1.1 Sources of Credits and Their Operations in the Study sodo woreda

Among the formal financial institutions, Netsnet fana Microfinance Institutions (MFIs) and Agar Microfinance Institutions (MFIs) provide credit for rural households. From the total formal credit users respondents, 31.25 percent have got credit from Netsnet fana Microfinance Institutions (MFIs) while 68.75 percent from Netsnet fana Microfinance Institutions (MFIs) in-group guarantor or/and individual credit lending procedures or modalities (Table 8). Netsnet fana Microfinance Institutions (MFIs) and the mentioned MFIs follow both group or/and individual credit-lending modalities, while Agar Microfinance Institutions (MFIs) follow individual lending procedures.

Table 8. Access to Formal Credit by Sources

| Sources of Formal Credit | Credit Users N (48) | | |
|---|---|---|---|
| | Male HH (37=77.1%) | Female HH (11==22.9%) | Total HH |
| Agar MFIs | 11(22.9%) | 4 (8.3%) | 15 (31.25%) |
| Netsnet fana MFIs | 26 (54.2%) | 7 (14.6%) | 33 (68.75%) |
| Access group loan | 6 (12.5%) | 2 (4.2%) | 8(16.7%) |
| Access to package loan | 33 (68.7%) | 7 (14.6%) | 40 (83.3%) |

Source: Own survey data, 2023

#### 4.2.1.2 Informal Credit Sources and Their Contributions in the Study sodo woreda

In the study woreda, the most pre dominant informal credit sources are friends, relatives or neighbors. From the total respondents, 26 percent borrowed from these informal lenders without interest for consumption smoothing purposes in short period of time (Table 9).

Table 9. Access to Informal Financial Institutions,

| Access | Households Responses | | | | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|
| | Yes | | | No | | | | | |
| | Male | Female | T.N | Male | Female | T.N | Male | Female | T.N |
| Access to formal credit | 37 | 11 | 48(41.7) | 49 | 18 | 67(58.3) | 48 | 67 | 115(100.00) |
| Access to informal sources | 17 | 4 | 21(18.3) | 69 | 25 | 94(81.7) | 21 | 94 | 115(100.00) |
| Formal + in formal sources | 32 | 7 | 39(33.9) | 55 | 21 | 76(66.1) | 39 | 76 | 115(100.00) |

Source: Own survey data, 2023; Numbers in parenthesis represent percentage

**Friends, Relatives or Neighbors:-** In the study woreda, 18.3 percent of the total respondents accessed or borrowed loans from informal credit institutions, mostly from friends, relatives or neighbors. It is the custom of the people to help each other to smooth seasonal cash flow. On the other hand, from the total household respondents, 66.1 percent did not borrow any credit in 2015 E.C from both formal and informal financial institutions due to the short age of lending institutions as indicated during key informants.

'Ikub': -It is neither formal nor informal lending institution. But it is a form of social organization in which members of the community come together for the purpose of saving in cash or in kind and supporting each other. The normal practice is that members contribute the agreed amount of money on monthly basis and lots are drawn every month or at the beginning of the meeting. So, monthly the one who wins the chance gets the total collected money of Ikub. There is no interest rate charge on this informal source. Though this type of informal credit institution is popular in the urban areas, it was o bserved in two samples taken rural Kebeles of the sodo woreda t, namely Refanso and Adele Borobore.

### 4.2.2 Group Lending/Guarantor in MFIs

In the study woreda two-microfinance institutions that follow solidarity group lending modality in services are the major potential borrower's institutions. Smallholder farmers are expected to form a group (that can serve as collateral) to take credit from the mentioned formal credit sources. Group formation serves as a precondition to access loans. Farmers who are unable to form a group or deprived of membership by the group are not able to use formal credit.

Accordingly, starting from five, farmers who are well known to each other form a group by a process of self-selection Peasant Association credit and saving Committee as well as representatives of the financial institutions recruit potential borrowers. On this type of lending procedure, from 48 household credit user respondents, women households' share is 4.2 percent (Table 9). Those group guarantor borrowers applied their loans for different purposes; agricultural purpose (specially purchasing agricultural inputs, oxen, dairy cow and others) (42.8%), petty trade (28.6%), and consumption (28.6%), respectively.

Even though, the rural households' used the group guaranty or loans for different purposes,57.1 percent of the sample households' dislike group guarantee loans because of fear of risk in the case of default. If one member does not repay his/her loan, the other group members are required to cover the loan from their own resource, and if they do not, they lose access to future loans. Hence some respondents have indicated group formation requirements by lending institutions as a precondition to provide credit has negative influence on access to credit from microfinance institutions.

In general, majority of the group guarantor credit borrowers prefer to take the credit individually (package loans), because group guarantor loans interest rate is higher than package/individual loans. As sodo woreda Netsnet fana Microfinance Institutions (MFIs) branch office indicated, voluntary saving interest rate is 7.00 Percent, while loan interest rate for the client is 15.00 percent for food security package program users. Similarly, the above mentioned Agar Microfinance Institutions (MFIs) pay minimum saving interest rate of 9.50 percent and above based on the amount of saved money. As indicated earlier, in-group guarantor credit, group members are jointly accountable for repayment in the event of default .However, as indicated in the key informants, some relatively 'wealthy' households do not prefer to form a group with the poor farmers.

## 4.3 Rural Households Demand for Credit and Their Perceptions

### 4.3.1 Rural Households Demand for Credit Service

Rural households demand for credit refers to the number of households who are willing and able to borrow money at given conditions (such as duration, interest rate and lending methodology of credit providers). As explained earlier (table 9), of the total sample households, 67 (58.3%) households did not borrow money from formal credit institutions. Similarly, out of the total sample credit user households 64.6 percent have confirmed that they need credit (table 10). Women participation in credit services is very low. Of the total sample households participated in credit services (64.6 percent), female participation is about 14.6 percent.

Table 10. Sample Households Responses Concerning Demand for Credit

| Initiation to borrow | Sex | | Total |
|---|---|---|---|
| | Male | Female | |
| Yes | 24(50.0) | 7 (14.6) | 31(64.6) |
| No | 13(27.1) | 4 (8.3) | 17(35.4) |
| Total | 37(77.1) | 11(22.9) | 48(100.0) |

Source: Own survey data, 2023; Numbers in parentheses On the other hand, those who are not borrowing (35.4percent) have indicated the following reasons for their not borrowing.

Table 11. Reasons of Respondents for Not Borrowing Loans from MFIs

| S.No. | Reasons | Sex | | Total |
|---|---|---|---|---|
| | | Male | Female | |
| 1 | Having own saving | 7 (10.4) | 3 (4.5) | 10 (15.6) |
| 2 | Not selected by selectors | 7 (10.4) | 3 (4.5) | 10 (15.4) |
| 3 | Shortage of lending institutions | 10 (14.9) | 3 (4.5) | 13 (19.5) |
| 4 | Long credit getting process | 7 (10.4) | 2 (3.0) | 9 (13.3) |
| 5 | Small amount of loan | 6 (9.0) | 3 (4.5) | 9 (12.7) |
| 6 | Small farmland | 6 (9.0) | 2 (3.0) | 8 (11.3) |
| 7 | Fear of risk | 6 (9.0) | 2 (3.0) | 8 (12.2) |
| 8 | Total | 49 (73.1) | 18 (26.9) | 67 (100.0) |

Source: Own survey data, 2023

Moreover, as indicated in the literature and pointed out during key informants, demographic factors, social, economic, market access and the government rules and regulations are determinants of the demand for and access to credit in the study woreda. Similarly, collateral requirement, high interest rate, fear of risk to repay the loans due to the occurrence of failure of crops due to different natural calamities like drought, pests, insects and shortage of microfinance institutions in the woreda are other major dete rminant factors that affect access to credit.

## 4.4 Economic, Social and Institutional Determinants of Rural Smallholder Households Access to Credit Services

### 4.4.1 Saving Level

Saving has its own impact on access to credit. As prerequisite, the borrowers should save some amount of money in the Microfinance institution (MFI) they want to borrow from in order to obtain loan. The lending institution requires borrowers to start saving in it before one months of the time to go to ask for credit. The amount of credit the borrowers get also has relationship with the amount of saving they have deposited in the institution.

As pointed out by Key in formant sand, two major saving systems, namely traditional saving of money at home and modern saving in Microfinance institution (MFI) were observed in the study woreda. Traditionally, rural households save money at their home by purchasing livestock, planting trees, engaging in petty trade, poultry and gardening activities for wealth hoarding and security against emergency. The mentioned activities are the most widely used ways of saving in the study woreda.

Regarding saving in Microfinance institution (MFIs), almost all institutions provide two kinds of saving services for the borrowers, namely the voluntary and the involuntary (compulsory) saving. In the voluntary saving, client scan save whatever amount of money they have and they can also withdraw the amount of money at any time on request. But this is not the case in involuntary (compulsory) saving. Respondents, however, have a negative attitude towards this saving for two reasons. One, the amount of loan the institutions provide is not enough to invest; it is a limited amount. Second, compulsory saving is a closed money; you cannot use it or withdraw it when need arises. Because of this respondents are not happy with the lending system. Even in the voluntary saving itself, they mentioned that, the interest rate paid by Netsnet fana Microfinance Institutions (MFIs) for their saving is 7.00 percent while others pay 9.50 percent and above based on the amount of saved money.

In general, from the total sample households 27 percent save voluntary saving, while12.5 percent save compulsory saving in Netsnet fana Microfinance Institutions (MFIs). There is no any saving system in Microfinance Institutions (MFIs) service in the study woreda.

### 4.4.2 Physical Distance to the Nearest MFIs

This refers to the average distance the sample rural households travel to reach the nearest formal credit institutions in order to access credit. As the data obtained from sample households indicate, the average distance between the sample households and the nearest Microfinance Institutions (MFIs) is 22.47 kms. Similarly, the average distance between those sample households who have access to credit and no access to credit are 22.24 and 22.64 kms respectively (Table 6).In general, the distance is very far and surely the farmers residing farther away from the credit lending center have less likelihood of utilizing microcredit than those farmers reside closer to the lending center in the woreda. This is because farmers with long distance may be challenged in transportation, long lending procedures and may not get information easily. However, the research result has indicated that there is no mean physical distance difference between credit borrowers and none borrowers' households. Thus, in the study woreda, physical distance does not significantly affect rural households' access to formal credit.

### 4.4.3 Interest Rate of Loan

High interest rate and lack of fixed asset are the two important factors that influence rural households to apply for credit. For lenders, interest rate serves as a screening device to limit the probability of default by borrowers. However, high interest rate again negatively affects borrowers and causes high default. Netsnet fana Microfinance Institutions (MFIs) is the only microfinance institution that avail itself in sodo woreda district to give financial services to smallholder farmers. To get better services, one of the decisive factors is the availability of alternative financial institutions. Hence to understand how the people in the area feel about Netsnet fana Microfinance Institutions (MFIs) and Agar fana Microfinance Institutions (MFIs) services, different questions were asked including interest rate, group lending, loan disbursement period, general view about the loan amount and other qualities of MFIs.

As indicated here and there Netsnet fana Microfinance Institutions (MFIs) Charges an interest rate of 15 percent per year on the outstanding balance of the loan. Agar micro finance institutions (MFIs) charge an interest rate ranging from 22 percent annually. Accordingly, respondents were asked their feeling about the current interest rate of Netsnet fana Microfinance Institutions (MFIs) more preferable and others. Results showed that more than three-fourth (76 percent) of the respondents replied that interest rate is high and they are unable to get loan; and added that, it is not stable as well. For example, Netsnet fana Microfinance Institutions (MFIs) Charges 12 percent in 2010 E.C, while it raised to 15

percent in 2015 E.C. The reason might be mainly absence of competing financial institutions and lack of information about the clients; rather rural farmers are facing the drought and other shocks. In this regard, one respondent stated: “paying interest rate of 150 Eth Birr per year for a loan of 1,000 Eth Birr for a farmer means, it is just pushing the farmer to be poor, getting worse and up-rooted him/her to migrate to other places”. Hence, during key informants it was indicated, as the lending financial instit utions management should improve high interest rate as well as long lending regulations and procedures.

### 4.4.4 Loan Disbursement Period

Loan disbursement period is another key challenge that influences borrowers demand and access to credit. As indicated in the literature part, the time lag between application and disbursement of credit service was indicated as major constraint borrowers’ faced. In similar way, sample farmers in sodo woreda indicated that the loan period of about Netsnet fana Microfinance Institutions (MFIs) and Agar Microfinance Institutions (MFIs) are not appropriate for the rural poor. Around 58 percent of the total respondents have replied that the loan disbursement period is too late for them to use the loan in productive way. To minimize the indicated problems, sample households’ have indicated as the Peasant Association’s screening committee in collaboration with woreda Agricultural Office and officials of the micro finance institutions should do screening before their application reaches Netsnet fana Microfinance Institutions (MFIs) and Agar Microfinance Institutions (MFIs)officers. The sample households’ also indicated as lending policies, procedures and disbursement period are taking long time and affects access to credit.

The respondents have also indicated that even if they are hoping to get credit, it might not be possible to get it at the right time and this causes them to sell their important assets such as cows and others. While hoping to get credit and taking long time, farmers can lose their asset like livestock that are productive.

## 4.5 Binary Logistic regression

The following diagnostic tests were carried out to insure that the data fit and the basic assumptions of binary logistic regression methods are presented or cheeked. The researcher used binary regressions to investigate the challenges that affect access to credit service in sodo woreda. The researcher used the analysis measures like reliability test, model specification, odds ratio and Hosmer-LemeshowGoodness of fit statistics. Before evaluating the regression result in which the explanatory variable affect the expl ained variables, it's better to test some assumption.

Regarding the dependent variable, a sex pressed previously, it is a dichotomous variable with two categories. In addition, it is coded as two categories that are helpful to fit with binary logistic regression method.The study takes access to formal finance as a dependent variable with dummy if the response is yes as 1, 0 otherwise. Therefore, it fulfills the first assumption.

### 4.5.1Case Processing Summary:

is a summary, which shows the total number of cases observed, missingcases and cases included in anal ysis(Julie,2007).Case processing summary is presented in the following table.

Table 12: Case-processing summary

| Unweight Cases | | N | Percent |
|---|---|---|---|
| Selected Cases | Included in Analysis | 115 | 100.0 |
| | Missing Cases | 0 | 0 |
| | Total | 115 | 115 |
| Unselected Cases | | 0 | .0 |
| Total | | 115 | 100.0 |

**Source: Binary logistic regression output, 2023**

The case-processing summary in Table 12 shows that a total number of cases observed are 115 and of which 115 included in analysis and there is no cases selected as missing cases. When running binary logistic regression model, if there is missing in a given case in one of the explaining variables or predicted variable then it will be excluded from the overall analysis (Julie, 2007).

### 4.5.2 Omnibus test of model coefficient:

Gives an overall indication of how well the model performs, over and above the result obtained for Block 0, within one of the predictor enters in to the model. This referred as a goodness of fit 'test. For his set of result, a highly significant value is necessary (significant valueless than 0.05) (Julie, 2007).It presented in the following table,

Table 13: Omnibus tests of model coefficient

| | | Chi-square | Df | Sig. |
|---|---|---|---|---|
| Step 1 | Step | 142.948 | 3 | .000 |
| | Block | 142.948 | 3 | .000 |
| | Model | 142.948 | 9 | .000 |

**Source: binary logistic regression output, 2023**

Table 13 shows that a significant effect of access to finance (L R test: chi square=143, $p < 0.001$). Therefore, the model with the set of variables used as predictors is better than SPSS, original guess shown in the block 0, which assumed that everyone would report no access to formal finance.

**4.5.3 Hosmer and Lemeshow Goodness of Fit Test:** is the most reliable test of model fit available in SPSS and interpreted very differently from the omnibus test. Here poor fit is indicated by a significant value less than 0.05. Therefore, to support a model the value must be greater than 0.05 (Julie, 2007).

Table 14: Hosmer and Lemeshow Test

| Step | Chi-square | Df | Sig. |
|---|---|---|---|
| 1 | 8.135 | 5 | .470 |

**Source: Binary logistic regression output 2023**

As presented on Table 14 the chi-square value for the Hosmer-Lemeshaw Test is 8.135 with a significant level of 0.470. This value is larger than 0.05, therefore indicating support for the model.

**Model summary:** gives us another piece of information about the usefulness of the model. The Cox and Snell R square and the Negelkerke R square values provide an indication of the amount of variation in the dependent variable explained by the model (from a minimum value of zero to a maximum of approximately 1) (Julie, 2007).

### 4.5.6 Binary Logistic Regression Result

In this subtopic the study, investigate the level of relationship and magnitude of explanatory variables over predicted variable based on the logistic regression model output. The fore, finally the finding determines which of the

explanatry variable are predictive of access to formal credit. Here the data analyzed is variable in the equation table 15 from output of the regression. The variable in the equation table gives information about the contribution or importance of each of a models predictor variable. The test that is used here is known as the Wald test or odds ratio, and the value of the statistics for each predictor in the column labeled odds ratio. Columns are the variables that contribute significantly to the predictive ability of the model (Julie, 2007). The variable in the equation table is presented below.

Table 15 Logistic regression result: dependent variable (ACS) using STATA version 14

| | Coef. (β) | Odds Ratio | St. Err | t-value | p-value | [95% Conf.] | Interval | Sig |
|---|---|---|---|---|---|---|---|---|
| Age () | .202 | 2.35 | .341 | .362 | .057 | 1.102 | 2.05 | * |
| Sex () | .247 | 1.26 | .723 | .117 | .014 | 1.521 | 4.40 | ** |
| Education () | .036 | 3.54 | .264 | .019 | .890 | .657 | 2.57 | * |
| Family size | .421 | 3.34 | .617 | 30.702 | .000 | 1.213 | 2.72 | *** |
| Head's Occupation | -.025 | 5.23 | .391 | .000 | .029 | 1.294 | 5.78 | ** |
| Dependency Ratio | .770 | .67 | .239 | 10.407 | .001 | 2.815 | 9.85 | *** |
| Interest to Credit | .672 | 0.06 | .359 | 3.509 | .054 | 1.462 | 5.63 | * |
| Farm Size | -.059 | 2.10 | .031 | 3.496 | .012 | 3.065 | 1.37 | ** |
| Collateral | -.920 | 7.16 | .168 | 29.954 | .000 | 2.541 | 4.73 | *** |
| Livestock Ownership | -.010 | 2.67 | .248 | .002 | .058 | 4.883 | 4.03 | * |
| Saving Culture | -.257 | 5.02 | .212 | 1.469 | .022 | .063 | 1.56 | ** |
| Distance | .126 | .423 | .210 | .360 | .054 | 4.013 | 5.40 | * |
| Infrastructures | .755 | 2.41 | .221 | 11.661 | .001 | 3.267 | 2.30 | *** |
| Constant | -10.738 | .095 | 2.838 | 14.316 | .000 | .156 | 1.23 | *** |

| | | | |
|---|---|---|---|
| Mean dependent var | 0.653 | SD dependent var | 0.599 |
| Pseudo r-squared | 0.169 | Nuber of observations | 115 |
| Chi-square | 123.564 | Prob > chi2 | 0.000 |
| Akaike crit. (AIC) | 437.235 | Bayesian crit. (BIC) | 256.240 |
| Significance level *** p<.01, ** p<.05, * p<.1 | | | |

a.Variable(s) entered on step1: (,, , , , , , , ,; , and )

### 4.5.7 Interpretation of parameter estimates

For a dichotomous variable the parameter of interest is the odds ratio. An estimate of this parameter is obtained from the estimated logistic regression coefficient, regardless of how the variable is coded. This relationship between the logistic regression coefficient and the odds ratio provides the foundation for our interpretation of all logistic regression results. When both the dependent and independent variables are both dichotomous, the odds ratio is the probability that Y is 1 when X is 1 compared to the probability that Y is 1 when X is 0.

In Table 15 the Wald test of overall goodness of fit with Chi2 (13) =123.564 and p =0.000, where 13 is the degrees of freedom, indicates that all explanatory variables jointly are significant. The column labeled "coefficient" are the values for the logistic regression equation for predicting the dependent variable from the independent variable. These estimates tell the amount of increase in the predicted log odds of the dependent variable (ACS) that would be predicted by a one unit increase in the predictor, holding all other predictors remain constant.

The odds ratios for each explanatory variable were presented in 2$^{rd}$ column of Table 15. Odds ratio is a measure of association; it is an estimate of the risk of an exposed group (non-User) relative to control group (user) or unexposed (reference) group. Odds ratio less than 1 indicates negative relationship and odds ratio greater than 1 indicates positive relationship and odds ratio = 1 indicates no relationship. The first category of each explanatory variables was used as reference; subjectively.

The result of binary logistic regression shown that sex, family size, head's occupation, dependency ratio, interest to credit, collateral, saving culture and infrastructure had **significant effec**t on access to microfinance institutions credit service in sodo woreda. In contrast, age, education, farm size, livestock ownership and distance had **no significant impact** on the access to microfinance institutions credit service in sodo words.

## 1. Sex

The household head that has negligible benefit of male-headed households were 1.26 times more likely to be non-user of access to credit compared to household head who has benefit of female-headed households controlling for other variables in the model. Accordingly, the result of this study, shows sex of households (β =0.247) has positive and significant relationship with access to microfinance institutions credit service. Hence, hypothesis H2 is rejected.

## 2. Family size

The odds of the access to microfinance institutions credit service that was disagreed family size was 3.34 times higher than the odds of access to microfinance institutions credit service that was agreed regarding to family size controlling for the other variables in the model

The association of family size and credit access shows that most of the household have less than 2 families. That means access to credit is difficult without family. Because of smallest family size, farmers were without credit accessed in the study area. Accordingly, the result of this study, shows family size of households (β =0.421) has positive and significant relationship with access to microfinance institutions credit service. Hence, hypothesis H4 is accepted..

## 3. Head's Occupation

The odds of the access to microfinance institutions credit service that was disagreed Head's Occupation was 5.23 times higher than the odds of access to microfinance institutions credit service that was agreed regarding to Head's Occupation controlling for the other variables in the model

Accordingly, the result of this study, shows Head's Occupation of households (β =-0.025) has negative and significant relationship with access to microfinance institutions credit service. Hence, hypothesis H5 is accepted.

## 4. Dependency Ratio

The odds of the access to microfinance institutions credit service that was disagreed dependency ratio was 0.67 times lower than the odds of access to microfinance institutions credit service that was agreed regarding to dependency ratio controlling for the other variables in the model Accordingly, the result of this study, shows dependency ratio of households (β =-0.025) has positive and significant relationship with

access to microfinance institutions credit service. Hence, hypothesis H6 is accepted.

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5. **Interest to Credit (deposit)**

The odds of the access to microfinance institutions credit service that was disagreed Interest to Credit was 0.06 times lower than the odds of access to microfinance institutions credit service that was agreed regarding to Interest to Credit controlling for the other variables in the model

Accordingly, the result of this study, shows Interest to Credit of households (β =0.672) has positive and significant relationship with access to microfinance institutions credit service. Hence, hypothesis H7 is accepted.

**6. Collateral**

The odds of the access to microfinance institutions credit service that was disagreed Collateral was 7.16 times higher than the odds of access to microfinance institutions credit service that was agreed regarding to Collateral controlling for the other variables in the model

Accordingly, the result of this study, shows Collateral of households (β =-0.920) has negative and significant relationship with access to microfinance institutions credit service. Hence, hypothesis H9 is accepted

**7. Saving Culture**

The odds of the access to microfinance institutions credit service that was disagreed Saving Culture was 5.02 times higher than the odds of access to microfinance institutions credit service that was agreed regarding to Saving Culture controlling for the other variables in the model Accordingly, the result of this study, shows Saving Culture of households (β =-0.257) has negative and significant relationship with access to microfinance institutions credit service. Hence, hypothesis H11 is accepted.

8. **Infrastructure**

The odds of the access to microfinance institutions credit service that was disagreed Infrastructure was 2.41 times higher than the odds of access to microfinance institutions credit service that was agreed regarding to Infrastructure controlling for the other variables in the model Accordingly, the result of this study, shows Infrastructure of households (β =0.755) has positive and significant relationship with access to microfinance institutions credit service. Hence, hypothesis H13 is accepted.

### 4.5.8 Summary of Analysis

The impact of explanatory variables on tax administration effectiveness is summarized as indicated in the following table.

Table 16:- The Summary of expected and actual signs of independent variables

| Hypothesis | Independent Variables | Expected sign effect | Actual effect | Hypothesis status |
|---|---|---|---|---|
| H1 | Age () | Positive & insignificant | Positive & insignificant | accept |
| H2 | Sex () | Positive & insignificant | Positive & significant | reject |
| H3 | Education () | Positive & significant | Positive & significant | accept |
| H4 | Family Size | Positive & significant | Positive & significant | accept |
| H5 | Head's Occupation | Negative & Significant | Negative & significant | accept |
| H6 | Dependency Ratio | Negative & Significant | Positive & significant | accept |
| H7 | Interest to Credit | positive & Significant | Positive & significant | accept |
| H8 | Farm Size | Positive & significant | Positive & insignificant | reject |
| H9 | Collateral | Positive & Significant | Negative & significant | accept |
| H10 | Livestock Ownership | positive & insignificant | Positive & insignificant | accept |
| H11 | Saving Culture | Positive & Significant | Positive & significant | accept |
| H12 | Distance | Negative & insignificant | Positive & insignificant | accept |
| H13 | Infrastructures | Positive & Significant | Positive & significant | accept |

**Source**: Researcher Compilation, 2023

# CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Under this chapter, summary of the major findings, conclusions and locally implementable recommendations are analyzed.

## 5.1. Summary of the Findings

This study was initiated to assess the following main questions:

a) To understand the demographic and socio-economic characteristics of the rural household respondents,

b) To indicate sources of microfinance credit sources in the study woreda,

c) To identify determinants of rural smallholder households' in accessing formal credit services,

d) To assess rural households' perception of the demand for and accessing credit services and significance of credit and to identify policies and procedures of microfinance credit services in the sodo woreda.

For treating the mentioned and other related questions, primary data were collected from 115 sample rural households of sodo woreda. The mean, standard deviation, chi-square, t-test and related statistics were used to analyze the responses of the respondents obtained through distributing questionnaires;

The study found that greater number of the rural households have demand for credit, with large male household heads. Majority of the respondents have good perception about the significance of credit. Sex and marital status have also an association with demand for and accessing credit. In addition, older household heads, with greater family and larger cultivated land size have demand for and accessing credit. On the contrary, status of education is a constraint for non-demanders of credit than for the demanders indicating that non-demanders are less educated or illiterate. Long physical distance travelled to the nearest microfinance institution is almost equally a problem for both non-demanders and demanders of credit.

In the access side, it was shown that still there is greater gap between demand and sup. The major determinants ply of credit, which is indicated by 39 percent of the total respondents who have no access for credit that discouraged the respondents include high interest rate, failure to repay the loan on time and shocks faced from the occurrence of drought, illness, long waiting time and others.

There is no association between gender and access to credit. Married respondents are more likely to have access to credit than single. It was indicated, as religion does not matter in accessing credit. Furthermore, except dependency ratio and distance, the mean values of age, family size and literacy status were greater for those households who have access to credit. And also, it was revealed that those respondents who have access to credit owned relatively great asset endowment (cultivated land size, TLU and annual income). Consistent with demand, households who have access to credit are engaged more in agricultural activities and have information about Netsnet fana Microfinance Institutions (MFIs) and Agar Microfinance Institutions (MFIs). The study found that access to credit increases with age implying that productive ages are more attracted while young and old age households are discouraged from getting credit. However, age was not found to be the important factor in affecting demand for and accessing credit. In contrast, family size, sex and marital status affect rural households' demand for and accessing credit. The severable, however, were not found important in accessing credit.

Literacy was another important demand side factor and also influences access to credit since educated households can better understand the loan regulations as well as the borrowing procedures of the formal financial institutions and thereby reduce costs of gathering information.

Tropical livestock (TLU) related only with demand for credit as it is liquid asset and owners can sell it easily and the income from it can be used to solve their financial constraint.

Cultivated land size influenced both demand for and access to credit. Borrowers who owned large cultivated land are considered less risky and preferred by lenders and they access credit easily.

Lastly, the study showed that distance from Netsnet fana Microfinance Institutions (MFIs) and Agar Microfinance Institutions (MFIs) was not a matter for demanding credit but was influential for accessing credit indicating that the longer the distance, the more likely rural households are constrained from processing and receiving credit from microfinance institutions.

Group lending, interest rate, loan disbursement and loan repayment period are other variables analyzed in the study. Majority of the respondents complained that the high interest rate of Microfinance Institutions (MFIs) is challenging them in accessing credit and causes repayment default.

Also, almost half of the respondents complained about group lending as it makes them jointly liable. Majority of the sample households dislike group lending. Respondents added also that the loan disbursement period together with the compulsory saving of Netsnet fana Microfinance Institutions (MFIs) and Agar Microfinance Institutions (MFIs) constrained them from accessing credit. Long lending procedures and disbursement is a major constraint in accessing credit in the study woreda. As pointed out by supplemented key informants, both Netsnet fana Microfinance Institutions (MFIs) and Agar Microfinance Institutions (MFIs) are not active to work closely with PA committee on the problems of the borrowers associated with the period of receiving loan at the right time and diversion of borrowed money from its intended purposes and use for other purposes. The loan size and repayment period of the formal micro finance institutions are fixed and lack flexibility with the existing situation of the borrowers. On the other hand, one important quality of the institutions is that all institutions encourage saving that is crucial for investment and door-to-door collection of outstanding loan.

The result of binary logistic regression shown that sex, family size, head's occupation, dependency ratio, interest to credit, collateral, saving culture and infrastructure had **significant impact** on access to micro-finance institutions credit service in sodo woreda. In contrast, age, education, farm size, livestock own-reship and distance had **no significant impact** on the access to microfinance institutions credit service in sodo woreda

## 5.2 Conclusions

For rural smallholder farmers, household's demographic and socio-economic characteristics, including asset endowment of the households and institutional factors were the main determinants of demand for and access to credit. On the other hand, there seems to be greater gap between demand and access to credit in the study woreda. Though majority of the rural households were found demanding credit, it was only 62 percent who got access to credit mainly due to shortage of lending institutions and other related factors. Furthermore, even those farmers who may not have demand for and accessing credit are highly encouraged by farmers', Netsnet fana Microfinance Institutions (MFIs) and government Agricultural Office to take credit and buy the required agricultural inputs in order to enhance their agricultural production and productivity. But as indicated during key informants, sometimes the farmers are unwillingly bought high priced fertilizer from the government itself. In addition to that, Netsnet fana Microfinance Institutions (MFIs) and Agar Microfinance Institutions (MFIs) may not work in a way that credit can help the users as it simply agitate the demand for political reason. This means that it does not take into consideration the existing situation of the borrowers, accessibility of the market for them and not frequently supporting them through delivering training and awareness creation. Netsnet fana Microfinance Institutions (MFIs) and Agar Microfinance Institutions (MFIs) care mainly about the distribution of loan and the collection of the disbursed loan irrespective of the impact the loan has brought on the users of the credit.

In the study, the major factors affecting rural smallholder households demand for and access to credit were found to be size of farmland, annual income, shortage of micro financial institutions, physical distance to the nearest microfinance, small size loans and some few institutional factors like long lending policies, high rate of interest, repayment period, group lending, collateral issues, compulsory saving, restricted loan, etc. There are also factors like resettlement of the household, lack of experience in the use of credit, risk attitude of the household heads, household events and others that are not included in the study. The study focused mainly on formal sources of credit like Netsnet fana Microfinance Institutions (MFIs) and Agar Microfinance Institutions (MFIs). Agar due to several constraints mentioned in the text and other related issues. If both formal and informal lending institutions included in the study, it would have been very important, but unable to incorporate because of the mentioned and other related constraints.

## 5.3. Recommendations

Based on the outcome of the study, designing new and awareness creation services to address the credit needs of the rural poor households are imperative. Moreover, additional interventions such as facilitating of market for the products of the farmers, delivering training and awareness creation activity for the farmers are crucial. It is also advisable for policy makers to make an effort in designing appropriate educational system in such a way that rural farmers will get knowledge that will assist them in demanding for and accessing credit at less cost and low interest rate.

Netsnet fana Microfinance Institutions (MFIs) and Agar Microfinance Institutions (MFIs) should advertise themselves and the type of credit services they deliver for the rural poor households through different local medias like village meetings or social gatherings, Radio, Television and different newspapers in order to increase the knowledge and awareness of the rural households towards the benefits of credit services and objectives of the micro financial institutions.

Lastly, but not least, Netsnet fana Microfinance Institutions (MFIs) and Agar Microfinance Institutions (MFIs) found in the study woreda should work closely with Peasant Associations committee in order to facilitate and make the selection time short, transparent and improve lending policies and procedures of the micro financial institutions in the woreda. They should also focus on minimizing length of lending procedures, encouraging individual lending, and making borrowing credit and repayment period flexible and suitable with the goal of credit services and suit the needs of the rural households. In addition, government should encourage other governmental, private lending micro financial institutions and NGOs to emerge and provide financial credit services for the rural poor farmers at low or reasonable interest rate.

# 6. References


- Agarwal, S., & Hauswald, R. (2010). Distance and Private Information in Lending. Review of Financial Studies, 23(7), 2757-2788. doi:10.1093/rfs/hhq001
- Alamirew,B. (2006).Micro financing and Poverty Reduction in Ethiopia *.Program.
- Amha,W.(2000).Review of Microfinance Industry in Ethiopia: Regulatory, Program,(2).
- Anyiro,C.O.,& Oriaku,B.N.(2011).Access To And Investment Of Formal Micro Credit By Small Holder Farmers In Abia State, Nigeria. A
- Case study of absu microfinance bank, Uturu. Agricultural Economics,6(2).
- Balogun, O and Yusuf, S. (2011). Determinant sof Demand for Micro credit among the Rural.
- Bauchet, J., Marshall, C., Starita, L., Thomas, J., & Yalouris, A.(2011). Latest Findings from
- Belay.(1998).Agricultural Credit and Factors Impeding Loan Repayment of Smallholders in West Shewa:The case of Alemgena Woreda, Significance.
- Berhane, T., &Gardebroek, C. (2008). Joint-liability borrowing decisions under risk: Empirical evidence from rural microfinance in Ethiopia Paper prepared for presentation at the 12 th EAAE Congress “People, Food and Environments: Global Trends and European Strategies”, Joint-liability. Agricultural Economics
- Bigsten, A., Collier, P., Dercon, S., Fafchamps, M., Gauthier, B., Gunning, J. W., Soderbom, M., et al. (2000). Credit Constraints in Manufacturing Enterprises in Africa, (April 2000).
- Braver man, A and Guasch, J. L. (1986). Rural Credit Markets and Institutions in Developing Countries: Lessons for Policy Analysis from Practice and Modern Theory, World development,
- Carter, M. R., & Little, Peter D, Mogues Tewodaj and Negati, W. (2004). Shocks, Sensitivity and Resilence: Tracking the Economic Impacts of Environmental Disaster on Assets Ethiopia and Honduras.
- Chen, KeChen and Chiivakul, M. (2008). What Drives Household Borrowing and Credit Constraints? Evidence from Bosnia and Herzegovina, New York Consumption: Evidence From Rural Vietnam *.Management, (May 2006), 18-21,
- Devkota, D. (2006). Access to and Control Over Household Resources: A Consistency Check Using Gender Analysis and Household Survey Data, Access, 7 (Shrestha 1994), 98- 102.
- Diagne, A. (1999). Determinants of Household Access and Credit Participation in Forma land

Informal Credit Markets in Malawi. Discussion paper, (67).,

- Duflo, Esther Jameel, Abdul Crepon, B Pariente, W Devoto, F. (2008). Poverty, Access to Credit and the Determinants of Participation in a New Micro-credit Program in Rural Areas of Morocco. Access, Education,
- Ejigu, L. (2009). Performance analysis of a sample microfinance institution of Ethiopia,
- FAO (Food and Agriculture Organization of the United Nations Guidelines on Methods For Estimating Livestock Production and Productivity, June 2018.
- FDRE (Federal Democratic Republic Ethiopia) 1996, Federal Negar it Gazeta Proclamation No. 40/1996, Proclamation to provide for the licensing and supervision of the business micro financing institutions, Addis Ababa, Ethiopia.
- FintracInc. (2010). Annex I. Economic Data and Trend*Analysis*.
- Gebrehiwot Ageba, (2002), Microfinance Institution in Ethiopia: Issues of portfolio Risk, and institutional arrangement and governance the paper presented Mekelle University.
- Gebreselassie, A. (2006). Land, Land Policy and Smallholder Agriculture in Ethiopia: Options and Scenarios. *Development*, (March),
- Getachew Teka and Yishak Mengesha. (2006). Integration of Financial Services in to the poverty Reduction Strategy: The case of Ethiopia: paper presented in the East Africa Sub-Regional work shop, Dare Salaam, Tanzania
- Getaneh Gobezie, (2005). Livelihood through micro enterprise/ Assessing supply and demand constraints for microfinance in Ethiopia ( With particular reference to Amhara Region ) paper presented at the third International conference Ethiopian Economy, Addis Ababa, Ethiopia.
- Getaneh Gobezie, (2007). Successes in Expanding Microfinance Opportunities in Rural Ethiopia; Where There is Little Entrepreneurship? [A paper submitted for the International Finance Corporation & Financial Times Ethiopia, "Essay Competition" www.ifc.org/competition]
- Getaneh Gobezie, (2007b)."Impact Assessment of Microfinance in Amhara Region of Northern Ethiopia" Amhara Credit & Saving Institution (ACSI) Head, Planning & Monitoring, CEO, Institute E-Mail: cgarber@ideasnet.org Web:www.ideasnet.org
- Getaneh,G.(2008)Sustainable rural finance: Prospects, challenges and implications,4(February),
- GobezieG (2005).Regulating Microfinance in Ethiopia: affecting access to credit service of farm households.

- Gonzalez-Vega Nguyen, Korotoumou, Ouattara, and Thi-Dieu-Phuong (2007). Using Village Mechanisms to Expand the Frontier of Microfinance: The Case of the Caisses Villageoises in Mali Ohio State University
- Greanwal D, and Associate, (1983), the concise McGraw-Hill Dictionary of Modern Economics, New York, U.S.A
- HGI (Harar Global Institute (ud)], University of Microfinance Products. [On line] Available from http:// www.mh/hararglobal.com.accessed on 8/4/2009 Households in South-Western States, igeria.Journal of Agricultural and Soacilscinces,7(2),
- Hussein Hamda, (2007), Farm Household Economic Behavior in Imperfect Financial Markets, Doctoral Thesis, Swedish University of Agricultural Science, Uppsala. Institute for Development Policy and Management. *Micro*.SOS,F.(2000).Zoom Microfinance,
- Jappelli, T. (1990). Who is Credit Constrained in the U .S . Economy ?, *105* (1), 219-234,
- Jemaneh, S. (2002). Financial Arrangements And Determinants Of Consumption Credit Use By Rural Households: The Case Of Loume Woreda,
- Jorgenson, D. (1967). The Theory of Investment Behavior. Business (Vol. I, pp.129-188),Journal of Development Economics,
- Kahsay, Mand Kugbei, S. (2004). Alternative Seed Supply Systems in Ethiopia. Area,
- Karim, A. Tranzi, M., and Reille X. (2008). Islamic Microfinance an Emerging Market Niche Karlan, D., S. (2001). Microfinance impact Assessments: The Perils of Using New Members as a Control Group
- Kempson, Elaine, Claire Whyley, John Caskey and Sharon Collard., (2000). "In or out? Financial Exclusion: Literature and Research Review."London: Financial Services Authority. http: //www. Fast. gov.uk/pubs/consumer-research/crpr03.pdf
- Kereta, B. (2007). Outreach and Financial Performance Analysis of Microfinance Institutions in. Most, (November),
- Kochar, A. (1997). An Empirical Investigation of Rationing Constraints in Rural Markets in India.
- Lawal, J Omonona, B Ajani, O and Oni, O. (2009). Determinants of Constraints to Credit Access Among Cocoa Farming Household sin Osum State, Nigeris. Pakistan Journal of Social Science Limit and Credibility. Marketing Science, 21(1),32-53.doi:10.1287/mksc,
- Magri, S. (2002). Italian Households' Debt: Determinants of Demand and Supply.

- Modigliani, Franco and Miller, M. H. (1958). The American economic. *The American Economic*
- Nguyen,C.H.(2007).Determinants of Credit Participation and Its Impact on Household
- Nwaru, J. C. (2011). Determinants of Informal Credit Demand and Supply among Food Crop Farmers in AkwaIbom State, Nigeria.Rural and Community Development, 6 (1), productivity and on poverty. Management Randomized Evaluations of Microfinance. October, (2). Reveiw, 48(3),
- Roth, J. (1997). The Limits of Micro Credit as a Rural Development Intervention Prepared for the
- Soman, D., & Cheema, A. (2002). The Effect of Credit on Spending Decisions: The Role of the Credit
- Teka, G., & Mengesha, Y. (2006). Integrating Financial Services into the Poverty Reduction Strategy:
- Tenaw, S., & Islam, K. M. Z. (2009). Rural financial services and effects of microfinance on agricultural
- The CaseofEthiopia1.*Development*,
- Wette, H. (1983). Collateral in Credit Rationing in Markets with Imperfect Information: Note. The American Economic Association, 73(3),
- Yamane T (1967).Statistics: An Introductory Analysis, poor households to participate informal credit. A lt2nd Ed., New York: Harper and Row.
- Zaid, N. (2008).Microfinance Loan Delivery , Utilization and Impact: with specific reference to Tigray , northern Ethiopia,
- Zeller, M. Diagne, A. and Mataya, C. (1997). Market Access by Smallholder Farmers In Malawi: Implications For Technology Adoption, Agricultural Productivity, And Crop Income Manfred Zeller, Aliou Diagne, and Charles Mataya. Food Policy, (35).
- Zeller. M. M. Sharma, (2000).Empirical Measurement of Households access to credit and credit constraints in developing countries: Methodological issue and Evidence Food Consumption and Nutritional Division Discussion paper Number 90. International Food Policy Research Institute Washington DC.

**W0LKITE UNIVERSITY**

**COLLEGE OF BUSINESS & ECONOMICS**

**DEPARTMENT OF ACCOUNTING AND FINANCE**

**Questionnaire on Determinants of Access to Microfinance Institutions Credit Service**

**Dear Respondents**,

The objective of this questionnaire is to secure the necessary and relevant information that may be useful to conduct a research project regards "Determinants of access to microfinance institutions credit service'': The Case of sodo woreda. It is prepared by Ato Endale Tekelmaryam who is currently following his M. Sc (in accounting and finance) at Wolkite University. The information you provide will be believed to have a great value for the success of this research. No names or any identification marks are required. Please feel free to respond honestly. The information you are going to supply will be used for academic purpose only and will be preserving with strict confidentiality. The student who is a researcher appreciates in advance for your cooperation and spending your valuable time in filling and to participate in the stud. For any further contact to researcher by use **mobile number +25 19 10 72 19 40**

Hence, I kindly request you to take a few minutes and fill and return this questionnaire to me and you need not write your name. I want to thank you in advance for your cooperation.

## Instructions

Reade each question carefully and put your answer by tick (√) sign inside the boxes and cells in the table corresponding to the response that most accurately represents your views and/or level of agreement.

Please put your answer in the provided box only. No need of writing your name.

## Part I: Sample Households' Respondents Questionnaires

## Section I: Individual Characteristics of Farmers

1. Sex/Gender/: 1. Male [] 2. Female []

2. Age (in year): 1. from 15 to24 [] 2. From 25 to 54 [] 3. From 55 to 64 [] 4. Above 65 []

3. Level of education: 1. Illiterate [] 2. Adult education [] 3.primary level [] 4. secondary school or above

4. Marital status: 1. Single [] 2. Married [] 3. Divorced [] 4. Widow

5. What is your farm size in hectare? 1. Less than1hectare [] 2. From1- 2 hectares [] 3. Above 2 hectares [] 6.What is the name of your kebele? ----------

6. If you live in rural Keble, what is its distance from the nearest town/credit institution in Kms? -

7. Did you repay the loan you received from any borrowing institution on time? 1. Yes 2. No

8. If your response to question number 7 is 'No', why?

What is your view on the determinants of rural households' access to micro financial credit services found in your area? _

9. How many the total number of in animals in your households

| Species of Live stock | Number owned | Purpose | Species of agricultural production of 2015 E.C | Estimated amount by Quintals & birr | Purpose | monthly average income in birr |
|---|---|---|---|---|---|---|
| | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Ox | | | Cereals (teff, wheat, barley, sorghum, etc) | | | |
| Cow | | | Pulses (beans, peas, lentils, etc) | | | |
| Horse | | | Oilseeds (safflower, linseed, neug, etc) | | | |
| Donkey | | | Vegetables (cabbage, tomato, etc) | | | |
| Sheep/Goats | | | Fruits (avocado, banana, papaya, etc) | | | |
| Chicken/bidd y | | | Root crops (carrot, potato, onion, etc) | | | |
| State, if it's others | | | State, if it's others | | | |

**Section II: Access to Formal Credit/ Dependent variables**

Please! Indicate the appropriate scale of your opinion (by putting (√) mark) from range "1 = strongly dis agree, (SDA); 2 = Dis agree, (DA); 3 = Neutral, (N); 4 = strongly agree(SA); 5 = agree(A);

| **No** | **Variables** | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| Q1 | **Statements regarding to access to formal credit/ dependent variable** | | | | | |
| 1 | There is access to credit & borrowed money used for purchasing agricultural inputs and expanding the production and productivity | | | | | |
| 2 | There is enough credit and saving providing institutions in the sodo woreda | | | | | |
| 3 | In my opinion farmland and livestock population toward having access to credit service information adequately in sodo woreda | | | | | |
| 4 | Currently I get sufficient credit services from formal lending institutions | | | | | |
| 5 | I obtain credit service from ACSI for the purpose of purchase of fertilizer & seeds, farm equipment, food, livestock, household goods and for debt payments | | | | | |
| 6 | There is interest attached to the credit clients receive according to sodo woreda credit institutions | | | | | |
| 7 | In my view there is quality credit services and to satisfied with the general service of micro finance institutions for clients | | | | | |

## Part-III Questionnaires for determinants/independent variables

| No | **Variables** | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| **Q2** | **Statements regarding to institutional characteristics (like landing procedure and interest rate)** | SA | A | N | DA | SDA |
| 1 | The lending procedure of formal credit institution is very simple. | | | | | |
| | | | | | | |

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|---|---|---|---|---|---|---|
| 2 | Formal credit institutions have convenience working time of repayment for their clients | | | | | |
| 3 | Formal credit institutions have an ability to prepare an application letter and filling different formats | | | | | |
| 4 | There is working ethics and efficiency of officials in formal credit institutions | | | | | |
| 5 | We are getting sufficient interest rate of return for our deposits | | | | | |
| 6 | The interest rate of ACSI is higher, Because of this discouraged smaller holder | | | | | |
| **Q3** | **Statements regarding to demographic factor (like Age, Sex and Education level)** | | | | | |
| 7 | The age of small holder from 18-year up to 55 years are more used credit services | | | | | |
| 8 | To use equally formal credit service both male and female household heads in sodo woreda | | | | | |
| 9 | In formal credit institutions there is bias between smaller holder households of educated client | | | | | |
| 10 | To give equally perceive the literate and illiterate household heads towards having access to credit service. | | | | | |
| **Q4** | **Statements regarding to Socio- Economic Characteristics of Farmers** | | | | | |
| 11 | There is financial problem for purchasing agricultural inputs and for enhancing agricultural production and productivity in sodo woreda | | | | | |
| 12 | The credit institution gives small amount of loan as well as want to put my fixed assets (land, livestock, house, vehicle, etc)at risk for collateral requirement | | | | | |
| 13 | There is no enough agricultural extension package program in sodo woreda | | | | | |
| 14 | Formal credit institutions are very worried about Compulsory group lending and group collateral requirement in accessing credit | | | | | |
| 15 | In my view all Peoples to save money from formal credit institutions | | | | | |
| 16 | Household savers in the formal credit institutions have the ability repay their loan than non-savers | | | | | |
| 17 | A higher degree of agree as you continue to save after repaying your loan | | | | | |
| 18 | I have enough information about Formal credit institutions | | | | | |
| 19 | A higher degree of agree that as you can get the information from radio, phone, internet, extension agents and from other farmers | | | | | |
| 20 | The lending institutions are very far from our home | | | | | |
| 21 | We have rural road that connects Our kebele with different woreda | | | | | |
| 22 | There is sufficient infrastructure in our Kebeles | | | | | |