



**SCHOOL OF GRADUATE STUDIES**  
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**THE IMPACTS OF MICROFINANCE INSTITUTIONS ON HOUSEHOLD'S  
LIVELIHOOD: THE CASE OF OROMIA CREDIT AND SAVING SHARE COMPANY  
AND BUSA GONOFA MICROFINANCE INSTITUTION OF JELDU BRANCH**

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The impacts of Microfinance Institution on Household's Livelihood;  
The case of Oromia Credit and Saving Share Company and Busa Gonofa  
microfinance institution of Jeldu woreda.

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# **CERTIFICATION**

## **Addis Ababa University**

### **School of Graduate studies**

This is to certify that the thesis prepared by Jifara Lemesa entitled “The impacts of microfinance on poverty reduction: The case of Oromia credit and saving share company and Busa Gonofa microfinance institutions of Jeldu Branch” and Submitted in partial fulfillment of the requirements for the degree of masters of science in Development Economics complies with the regulations of the University and meets the accepted standards with respect to its originality and quality.

Signed by Examining Committee

Internal Examiner \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

External Examiner \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

Advisor \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

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## **Acronyms and Abbreviation**

ADB	Asian Development Bank
AEMFI	Association of Ethiopian Microfinance Institution
AIMS	Assessment impact of Microfinance Service
ATE	Average Treatment Effect
ATT	Average of Treatment On Treated
BG	Buusaa Gonofa
BoARD	Bureau of Agriculture and Rural Development
CGAP	Consultative Group to Assist the Poorest
CIDA	Canadian International Development Agency
CSA	Central Statistic Authority
GDP	Gross Domestic Product
JWAO	Jelduworeda Administration Office
JWBGBO	JelduWoredaBusaGonofa Branch Office
JWOCSSCO	Jeldu Woreda Oromoia credit saving share Company
MDGs	Millennium Development Goals
MFI	Microfinance Institutions
NBE	National Bank of Ethiopia
NGO	Non-Governmental Organization
OCSSCO	Oromia Credit and Saving Share Company
PSM	Propensity Score Matching
UNDP	United Nation Development Program

## *Abstract*

The prevalence of poverty has been a common phenomenon in Ethiopia. Microfinance has been introduced and currently it is being practiced in the country as a tool to deliver financial service to the poor with the objective of reducing poverty and improve household livelihood. This paper examines the impacts of microfinance on household livelihood in Jeldu district, Oromia regional state. The study uses cross-sectional data collected from Jeldu woreda households to derive the empirical evidence. Propensity score matching was used for identify the impacts of microfinance intervention on improving the living standard of poor household in comparing client and non-client household. In this scenario, this paper found that credit has a significant and positive impacts on household average yearly income, consumption, Education, health care, employment generations and housing condition in comparing with non-client respondents. These findings confirm that credit provided for rural household is an effective policy tool to reduce poverty. Therefore, strengthening the existing operation of microfinance in the region would be appropriate socio-economic policy.

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***Key words:*** -*Microfinance, Poverty, Poverty reduction, Propensity score matching, Average Treatment effect on Treated*

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

Micro-financing is a category of financial services targeted at individuals and small business that lack access to conventional banking and related services. It has been practiced all over the world as a tool to deliver a financial service to the poor with the objectives of attacking poverty and improving the rural household livelihood. The main difference between microfinance and conventional bank is the size of the transactions. Microfinance institution offer saving accounts, small and short-term loans to people with few assets to use as collateral. Microfinance helps to increase household's income levels and improve their living conditions. (Idolor, et al.2012)

In Africa and other developing countries, micro finance is often viewed as a means of lifting people out of poverty (Meyer, 2006). According to Anyanwu (2004) microfinance institutions (MFIs) are regarded as the main source of funding micro enterprises with the aim to help in developing self-employment opportunities. For instance, microfinance institution has emerged as an instrument to expand financial service for rural and urban households and providing access to financial services that leads to improvement in household.

Microfinance industry in Ethiopia has shown remarkable quantitative growth since 1990. By lending loan, microfinance improved the living standard of people who reside in rural areas by providing substantial help and facility to the ultra-poor families. MFI provide door to door micro credit services to those poor families that have no collateral guarantees to produce and are not capable of fulfilling the banking requirement for credit eligibility. Such families are able to create their own assets by paying their microcredits in small installments out of their earnings made by engaging themselves in small entrepreneur activities (Deribie, et al.2013).

As it is an important factor in improving the livelihood of rural households, there are now a growing number of new microfinance institutions in Ethiopia and it was supervised by National Bank of Ethiopia. The Ethiopian government has laid down a regulatory frame-work for the establishment of microfinance institutions by issuing proclamation No.40/1996 that provides for the licensing and supervision of microfinance institutions. Since the issuance of this proclamation in July, 1996, thirty-five microfinance institutions have been legally registered and delivering microfinance service in the country which mobilized birr 28.4 billion in the saving deposit. Their

outstanding credit also went up 38.5 percent to reach Birr 37 billion. Their total asset also grew by 43.7 percent and reached Birr 56.3 billion at the end of December, 2017. All these indicators testify the growing role of the institution in poverty reduction and wealth creation among low income groups in both rural and urban areas (NBE, 3rd quarter, 2017).

Among these microfinance institutions, Oromia Credit and Saving Share Company (OCSSCO) and Busa Gonofa (BG) microfinance institutions were the MFIs that established in 1997 making their Head office in Addis Ababa. Since its establishment, OCSSCO and BG as independent microfinance institutions have been operating in providing Credit and mobilizing savings from members, non-members, associations and institutions. The general objective of the institutions was to alleviate poverty and promote economic development through the provision of credit and saving service and with the specific objectives of achieving household level food security in Oromia, increasing household's income and improving the overall economic and social conditions of rural households (AEMFI,2000). Hence, this study mainly focused on identifying the impacts of Oromia credit and Saving Share Company and Busa Gonofa microfinance institution on household livelihood using household survey data from Oromia region, West Shoa Zone in Jeldu woreda

## **1.2 Statement of the Problem**

The prevailing formal financial institutions in many developing countries such as Ethiopia are inefficient in providing sustainable credit facilities to the poor. The formal financial institution like Bank and insurance that could provide credit service for low income entrepreneurs, hand crafts, pastoral and farmer's families are very limited in Ethiopia and majority of the poor access financial service through informal channels such as Ikub, Mehaber, Money lender, relatives, friend etc (wolday, 2007).

Most micro credit services delivered by Non-Governmental Organization (NGO) and government initiated projects in Ethiopia did not give attention to saving due to strong belief that it was emanated from "the notation of the poor has nothing to save". However, this idea has been disproved after successful endeavors of Grameen Bank in Bangladesh. Limited access by rural farm households to financial service is widely recognized in developing countries and microfinance has been established to help them and operating with ultimate goals of poverty reduction and improve the rural household livelihood. (NBE, 2017)

Though microfinance is a new phenomenon in Ethiopian context, different studies have been conducted in the area. For example, Dereje Gezachew, (2017), studied the effect of Microfinance on poverty reduction in case of Burayu Town and found that MFIs have positive impact on reducing poverty as it enables to improve the household livelihood. Daba Moti (2003) conducted studies on the impact of microfinance on poverty reduction in the western wollega in the case of OCSSCO of Sasiga branch by using logit model and noted the positive impact of microfinance in reducing poverty. The studies conducted by Abrham, (2002) on the determinants of loan repayment performance in private borrowers around Zuway conclude that, education, access to other source of income and related work experience prior to taking the loan were found to be enhance loan diversion. Pedma and Getachew (2005) also conducted studies on the women clients of Omo and Sidama MFIs in Awasa Town, SNNP. Another studies by Getachew (2005) on the impact of Amhara Credit and Saving Institution on Poverty reduction in Amhara Region using before and after the program analysis of impact on the clients. In Addition, Birhanu, (2013) conducted studies on the Impact of Microfinance in reducing poverty in the case of OCSSCOs of Akaki branch using logit model and found that microfinance has positive impact on household welfare.

Even though many studies have conducted on microfinance institution in Ethiopia and many regions or woreda; to the best of my knowledge, I have not found study on the Impacts of microfinance on household livelihood in Jeldu woreda. Therefore, in considering this gap, the purpose of this paper is to identify the impact of micro finance on household livelihood using propensity score matching by answering the questions:

- Is there improvement of the household livelihood as the result of microfinance?
- What are the major challenges faced by microfinance institution of Jeldu branch?
- What is the Respondent's perception on Microfinance of Jeldu Branch?

### **1.3 General Objectives of the Study**

This study is aimed to examine the impact of microfinance on household livelihood in Jeldu woreda.

#### **1.3.1 Specific Objective**

The specific objective includes

- To determine the impact of microfinance on household livelihood in the study area
- To identify the major challenges faced by microfinance program of the sample study
- To identify the household's perception on Microfinance in the Sample Study

### **1.4 Hypothesis of the Study**

It is fact that credit has plausible contribution in increasing productive assets, income and facilities of employment.

The following hypothesis would be taken based on the objective stated above. This hypothesis would be used as guiding assumptions for the investigations.

H0. Microfinance in the study area does not improve the household livelihood.

H1. Microfinance in the study area improve household livelihood.

### **1.5 Significance of the Study**

This paper would contribute to knowledge required by policy makers, development planner, donors, program managers, NGO personnel, researchers, and other stock holders. Thus, the study findings further provide relevant and valuable information that can be used to cam up with policies that enhance the microfinance establishment in Jeldu woreda. The result also gives insight into the limitation and challenges of Microfinance in their effort to address issues of poverty and see relevant areas of intervention to increase their effectiveness. In addition, the research may serve as pointer towards need for further study in the area.

### **1.6 Limitation of the study**

The main limitation encountered in this research is the short duration of the study. This study requires to studying the difference in difference methodology that requires extensive period of time to collect data before and after borrowing. However, the study used cross-sectional data from Jeldu woreda and its sample size also limited to 382 respondents because of time and budget constraints. Another limitation of this study is its narrow geographical scope. This research limit

its scope in to Jeldu woreda microfinance as expanding the scope of the study was impossible due to the limited financial and human resource.

### **1.7 Organization of the paper**

The remaining part of the study was organized as follow. In Chapter two both theoretical and empirical literatures is reviewed. This is followed by research methodology, which is chapter three of the paper. Chapter four presents and discusses the results of both the descriptive and econometrics analysis. The last chapter presents conclusion and recommendation of the paper.

## **CHAPTER TWO**

### **REVIEW OF LITERATURE**

This chapter focuses on reviewing both theoretical and empirical literature on the concept of the impacts of microfinance on poverty reduction. The theoretical review focus on the construction of theories based on the study and the empirical literature focuses on empirical evidence from developed and developing countries in general and Ethiopia in particular.

#### **2.1 Theoretical Literature Review**

##### **2.1.1 What is Microfinance?**

Microfinance is financial institutions that provide a broad range of financial services to low income micro-enterprises and households. It is a form of financial development that has primarily focused on alleviating poverty through providing financial service to the poor (Robinson, 2001). Microfinance refers to the provision of financial service primarily savings, insurance and credit to low income households that don't have access to formal financial service. The Canadian International Development Agency (CIDA) defines microfinance as a provision of a broad range of financial services to poor, low income households and micro-enterprises usually lacking access to conventional financial institutions (CIDA, 2012)

Microfinance is the provision of broad range of financial service such as deposits, loans, savings, payment service, Money transfers and insurance to the low income households and their micro-entrepreneurs who are excluded from financial systems (ADB, 2010). It includes some main points such as returning in small-agreed installments, periodical savings and meeting, group based lending, no collateral and loan security.

The concept of microfinance can be best captured as small, short and unsecured. It is the provision of small loans that are paid within a short period of time, and is essentially used by low income individuals and households who have few assets that can be used as collateral. The idea here is to enable the poor to raise their income level and improve their standard of living. Hence, this is based on the belief that the goals of microfinance have been poverty reduction (Ukeje, 2005).

### ***Micro-credit and Micro-finance***

Microfinance and micro-credit are often used interchangeably. Hence it is important to highlight the difference between them. Though it is true that they are similar in nature and tends to perform similar function, obviously small part of microcredit is a subset of microfinance. The main difference between these terms is about the range of services and targeted clients. For example, ADB (2010) defines microfinance as the provision of a broad range of financial services such as loans, deposits, payment services, money transfers and insurance to poor and low-income households and micro-enterprises.

In general, Microfinance is a broader term than micro-credit and covers financial services that provide a greater scope of access for the poor. Microfinance also include imparting entrepreneurial skills and training, along with advice on many matters for a better living such as health, nutrition, educating children, and improving living conditions. Tolasa, (2011) states that most people think of microfinance as providing small loans to entrepreneurs to start small business. This is what is known as microcredit and forms a large part of what is considered to be microfinance. However, as mentioned above, microfinance is the provision of a broad range of financial service to the poor, including credit.

#### **2.1.2 Microfinance Institutions (MFIs)**

Microfinance institution is an organization, engaged in extending microcredit loans and other financial and non-financial services to poor borrowers for income generating activities and self-employment activities. This very broad definition includes a wide range of providers that vary in their legal structure, mission, and methodology. However, all share the common characteristics of providing financial services to clients who are poor and more vulnerable than traditional bank clients (CGAP, 2010).

Microfinance institution is usually not a part of formal banking industry or government. It is usually referred to as a Non-Governmental organization (Dilayehu, 2010). Micro-credit is a component of microfinance and it is the extension of small loans to entrepreneurs, who are too poor to qualify for additional bank loans. Especially in developing countries, micro-credit enables very poor people to engage in self-employment projects that generate income, thus allowing them to improve the standard of living for themselves and their families (Meagher, 2002). Microfinance

institution is an organization, engaged in extending microcredit loans and other financial service to poor borrowers for income generating and self-employment activities (Mawa, 2008).

### **2.1.3 Micro-finance Institutions in Ethiopia**

Microfinance institutions in Ethiopia are a recent phenomenon and the government efforts of delivering financial services especially credit to accelerate socio-economic development in Ethiopia may date back to the immediate post Italian period with the establishment of the ministry of Agriculture in 1943 and Agricultural Bank of Ethiopia in 1945. The main objective of the bank was to assist small land holders whose farms had been devastated during the Italian occupation through loans to purchase agricultural inputs and repaired houses (Abebe, 2006)

In Ethiopia, though savings and credit programs were operated for a number of years by NGO and microfinance institutions; the operation was for the first time undertaken by the market Town Program of the World Bank. This Market town program was implemented jointly with the Development Bank of Ethiopia and the Bureaus of Trade and Industry then called market towns in phase one and then spread to all major towns of the country (Tsehay and Mengistu, 2002).

Microfinance services were introduced after the demise of the Derg regime following the policy of economic liberalization. Microfinance is taken as a shift from government and NGOs subsidized credit programs to financial services run by specialized financial institutions. With this shift some NGOs and government microcredit programs were transformed to microfinance institutions (Irobi, 2008).

Microfinance institutions started proliferating following the issuance of proclamation No 40/1996 which regulated the business of microfinance in the country. The National Bank of Ethiopia, which is the licensing authority, has since been issuing a number of guidelines that underpin the operation of microfinance in the country (Teshay and Mengistu, 2006). The regulatory framework was put in place as part of government's effort to liberalize the financial sector and lay down an alternative institutional framework to provide financial services mainly to the rural poor to boost agricultural production enable food self-sufficiency and reduce poverty (Degefe, 2009).

Most of the microfinance institutions in the country are relatively young and they seem to replicate each other instead of innovating their own approach. Their financial products are almost the same with the exception of a few microfinance institutions that have recently started adding some new products. The loan sizes of most of the microfinance institutions are too small that some of their clients outgrow it very quickly. Some of the causes for high client drop out in both rural and urban areas seem to be small loan size, lack of product diversification on the part of the MFIs, lack of flexibility in approach among others. The Nation Bank of Ethiopia directive issued in 2006(MFI/18/2006) allows MFIs to provide larger loans to individuals using appropriate collateral, subject to single borrower limit of 1% of their capital. On the bases of this framework, some MFIs started extending relatively larger loans for working capital and for investment in cases where government agencies like Micro and Small enterprise development agency are involved in the recovery of loans through different linkage mechanisms. Relatively bigger amounts of working capital and loans are extended to those who have established businesses or can offer collateral in fixed asset form (Makanga, 2014).

The potential demand for microcredit in Ethiopia is enormous. However, there is very limited supply of financial services to the poor household (Wolday, 2007). The major sources of loan or financial service in Ethiopia are; formal banks, Microfinance Institutions, Cooperatives, NGOs which are involved in the delivery of financial services, government projects and programs involved in providing loans, semi-formal finance (Iqub, Iddir, Mahiber) and, informal finance (private money lender, traders supplier credits, friends, and relatives). The conventional banking sector in Ethiopia has been too weak to serve the needs of poor people due to limited branch and high collateral requirements. Moreover, the formal bank sector considers the poor as credit risks (Haftu, *et al.* 2009).

The majority of the poor get access to financial services through the informal and semi-formal channels such as private money lenders, Iqub, Iddir, friends, relatives, traders, among other (Wolday and Gbrehiewot, 2006). The informal lenders such as money lenders, traders, friends and relatives enforce loan contracts and their loan recovery rate high and the loan terms are flexible. However, the interest rates are very high. The semi-formal lending institutions such as Iqub and Iddir are the dominant and sustainable traditional institutions which meet the financial and social needs of the poor. Iqub is the dominant form of saving

and credit cooperatives in Ethiopia which is popular in both urban and rural areas, Iqub is not a permanent club; it could be continued or dissolved after its members have a turn (Wolday, 2007).

The conventional banking sector in Ethiopia has been too weak to serve the needs of poor people due to limited branch and high collateral requirements. Moreover, the formal bank sector considers the poor as credit risks. As a result, the Formal Bank of Ethiopia do not have mission of financing the poor in micro and small Enterprise sector. Thus, delivering financial services to the poor requires financial systems that reach the poor and an innovative targeting methodology and credit delivery mechanisms that helps to identify and attract only the poor who can initiate and sustain productive use of loans. To sum up, the delivery of financial services by MFIs in Ethiopia has been viewed as the strategy to secure food, poverty reduction, reduce un employment and thereby increasing their income, consumption, and for instance it used as a tools of reducing poverty (WoldayAmha,2007).

#### **2.1.4 Impacts of Microfinance on household livelihood**

Microfinance schemes were initiated to different objectives. The most common mentioned objectives include poverty alleviation and improving living standards, offering finance to the poor, women's empowerment, and the development of business sector as a means of achieving high standard and for instance reducing poverty (Okibo and Makanga,2014).

Microfinance is an effective tool for poverty reduction since the financial services enable the poor and low income households to take the advantage of economic opportunities to increase their living standards through self-employment. Low income households need financial support. For instance, the importance of microfinance has been increasing and many policy makers adopt microfinancing policies for reaching financial service for the poor. Microfinance service is considered to be an essential input to increase productivity and boosts income levels at household level and there by improve their livelihood (paradhan, et al.2005).

Microfinance facilitate and help the people to earn money though microcredit which helps them to manage an expected risk, educate their children, have better quality of life and to build asset and also to smooth their consumption level. In addition to this, Microfinance is an effective instrument for lifting the poor above the level of poverty by providing them self-employment opportunities and making them credit worthy and for instance, microfinance is considered as the chemical

through which the germ of poverty can be killed (Seibel,2003). Hence as microfinance provide credit at lower cost than informal commercial money lenders to the poor, the increasing number of microfinance practitioners around the globe is an indication that microfinance sector can play an important role not only to help, to attain the government's policies on poverty reduction and improve the household livelihood.

### **2.1.5 Assessing MFI's Microfinancing Scheme on Household livelihood**

Assessing microfinance impact has been the main concern of development specialists in order to know whether or not providing financial services to the poor has improved the household livelihood. The impact may be measured using indicators such as income, wealth, food security, child nutrition, employment opportunity, quality of life, or gender relations. Khandker (2009) argued that the immediate impact of having access to credit from a micro credit program is on employment and income in which these may have impact on other outcomes such as consumption, nutrition, contraceptive use, fertility and education. According to Meehan (2000), there are many supporters of micro credit provision who would agree that well designed lending programs could improve the income of the poor people. In line with this, Joanna Legerwood (1999) stated the three broad categories of impacts of microfinance activities.

1. Economic impacts (business expansion, income, accumulation of wealth and consumption).
2. Socio-political or cultural impacts (changes in favor, changes from barter to monetized economy, hope for changes in power, redistribution of assets, nutrition and education).
3. Personal impacts.

According to Joanna legerwood (2002) an impact from one of these categories can in itself cause an impact on one or more of the others. The poor participate in micro-credit programs in the expectation that borrowing will increase their income and sustain self-employment.

Khandker (1999) argued as to participation in micro-credit programs does in fact reduce poverty in terms of consumption and help increase income and employment on a sustained basis could be measured directly. The benefits of program participation can also be measured indirectly, by measuring changes in socio-economic outcomes. This implies that the effects of micro-credit programs on participants can be measured in terms of consumption, nutrition, employment, net worth, schooling, contraceptive use and fertility.

According to AIMS (2000), the purpose of an impact assessment is to answer the question of whether a project leads to change that is different from what would have happened without the intervention, or whether the program increases the probability of that change. In the context of the rapid growth and evolution of microfinance industry, impact assessment is a critical to classify whether or not the changes occur on the livelihood of the clients. Establishing impact is making a credible case that the program led to the observed or stated changes, meaning that the changes are more likely to occur with program participation than without program participation. It does not imply that the changes always occur from program participation. Rather, it increases the probability that the changes would be occurred.

Hulme (2000) identified three elements of the framework for the study of impacts. The first is the specification of levels at which impacts are assessed. The second is the specification of the types of impact that are to be assessed. The third is models to be used for the study.

#### **2.1.6 Concepts and Definitions of Poverty**

Traditionally, Poverty has been conceptualized in terms of income, with the poor defined as those living below a given income level. But poverty has been increasingly recognized as a multidimensional phenomenon that encompasses not simply low income, but also lack of assets, skills, resources and the power to influence decisions that affect an individual's daily life. (WHO,2004). The complex and multidimensional nature of poverty makes it a challenge to measure. For the sake of simplicity, an income based measure of poverty is most widely used, as it permits comparisons between regions and countries. To calculate extreme poverty in an individual country, the dollar a day measure is converted to local currency using the purchasing power parity (PPP) exchange rate, based on relative prices of consumption goods in each country.

Based on such calculations, the World Bank estimated that 1.2 billion people were living in extreme poverty in 2009, roughly 23.3 percent of the population of all low and middle-income countries (Tolosa,2011). Poverty is more than just a lack of income. He argues that by increasing the income of the poor, poverty is not necessarily alleviated. It depends on what the poor do with this money, oftentimes it is gambled away or spent on alcohol, so focusing solely on increasing incomes is not enough. The focus needs to be on helping the poor to sustain a specified level of

well-being by offering them a variety of financial services tailored to their needs so that their net wealth and income security can be improved

### **2.1.7 Overview of Poverty in Ethiopia**

By any standard, Ethiopia is one of the poorest countries in the world. Poverty in Ethiopia can be seen in a number of ways and this in fact, attributed to a multitude of interrelated factors. Bisrat (2011) for example, has identified these factors as insufficient source of income, lack of asset/skill, poor health status, poor educational level and backward attitude of people towards work. These factors in one or another way have direct or indirect effect on the life standard of the people. For example, lack of income results in reduction of expenditure pattern, poor health leads to being unproductive, absence from work, less energetic, lack of education results in lack of skill, helplessness and so on. Although these factors are believed to be universal, there are obviously some differences between the causes, processes, and consequences of poverty among the urban and rural societies. Roughly 29.6 per cent of the population lives below the national poverty line. However, there are marked differences between rural and urban areas.

Poverty in Ethiopia is more pronounced in the rural areas as compared to the urban areas. The situation worsened recently because of sharp increases in the prices of food and fertilizers on world markets, which made it more difficult for poor households in Ethiopia. Most rural households live on a daily per capita income of less than US\$0.50. and they have less access to most essential services. Most rural households are difficult to survive without recourse to seasonal or permanent urban migration in search of wage employment (Abu, 2013).

### **2.1.8 Assessment Levels**

Impacts can be assessed at different levels. According to Hulme (2000), the common units of assessment are the household, the enterprise or the institutional environment within which agents operate. Khandker (1999) and Ledgerwood (1999) stated that impact can be assessed at household, enterprise, individual and community levels.

According to Yaron (1997), there are two major schools of thought that are prominent in impact assessment of microfinance programs. The first one purely focuses on the organization or company and its operation. This approach focuses on institutional outreach and its sustainability. The assumption is that if both outreach and sustainability have been enhanced, then the intervention is judged to have a beneficial impact as it has widened the financial market, which

in turn extends the choice of people looking for credit and saving services. The second approach is the one, which focuses on the intended target groups or clients. This is the case that seeks to assess impact at household, enterprise, individual and community levels.

According to AIMS (2000), impact can be occurring at household levels, enterprise, individual and community. At the household level, microfinance contributes to net increase in household income, asset accumulation and labor productivity. Income invested in assets such as saving and education increases household economic security by making it possible to meet basic needs. This relationship clarifies paths of impact by which microfinance interventions can contribute to the goals of poverty alleviation and economic growth, and thus, households improve their economic security and accordingly, this paper deals with impact assessment at house hold level in which microfinance service contributes to net increase of house hold income, asset accumulation and labor productivity. To assess changes within this relationship, impact can be assessed in the movement of household's livelihood toward or away from greater economic security.

### **2.1.9 Overview of Financial Sector & Credit Policies in Ethiopia**

Finance refers to the process by which markets deal with cash flows over time. Financial markets make possible for individuals, partnerships, and governments to borrow and lend. Institutions that perform this sort of market function, matching borrowers and lenders or traders are called financial intermediaries such as banks, MFIs, credit and saving associations. Financial sector can play a significant role in improving food security, alleviating poverty and economic growth. However, the capacity of the conventional banking sector in Ethiopia has been too weak to serve the need of the rural community. Access to institutional credit is very limited, thus majority of the rural poor get access to financial services through the informal channels. The demand for rural finance is met through the informal sector (Yohannis, 2007).

Ebisa Deribe, (2013) argued that the most effective tool of poverty reduction and achieving security in Ethiopia is enhancing rural financial intermediation. The major sources of finance in Ethiopia are conventional banks, insurance companies, cooperatives, government projects, NGOs, Semi-formal and informal sectors and microfinance institutions. Recently, financial sector has been increasing through both branch expansion and emergence of new private sectors and these financial intermediaries can be broadly categorized as follows:

**a) Conventional Banks and Insurance companies:** These banks include Commercial Bank, Development and Construction Bank, and Business Bank licensed and supervised by National Bank of Ethiopia as per Proclamation No. 83/94. These banks and insurance companies are broadly categorized into public banks and insurance companies and private banks and insurance companies. Following the downfall of socialist regime, financial market liberalization was adopted. As a result, several privately owned commercial banks and insurance companies were established (Messele, 2002).

**b) Government projects and NGOs:** Many of these have initiated and implemented microcredit activities as a tool to poverty reduction endeavors.

**c) Semi-formal and Informal sectors:** These sectors provide financial services outside of the direct control of the state authorities. Informal sector includes revolving saving and credit associations, moneylenders, friends, relatives, neighborhood, and whole sellers, Iqqub, Iddir and Mahaber. These traditional structures are self-initiated organizations formed on the basis of social cohesion, economic status and sometimes ethnic origin. They comprise similar socio-economic status who know each other well and have been living within the same locality for some time. According to Dejene (1998), Iqqub is important source of finance for the poor household in Ethiopia.

**Microfinance Institutions:** The inability of conventional banks to address the financial demand of the rural poor put the consensus that reached to design new strategies for delivering financial services to the poor. The microfinance institutions mainly designed to provide rural banking services and mobilizing small savings. Good practice in microfinance is based on the ability to provide appropriate financial services to individuals and households that are otherwise excluded from the financial system (Tolosa, 2011). Currently, there are 35 MFIs engaged in providing microfinance credit and saving services to the poor in different parts of the country.

### **2.1.10 Conceptual Framework**

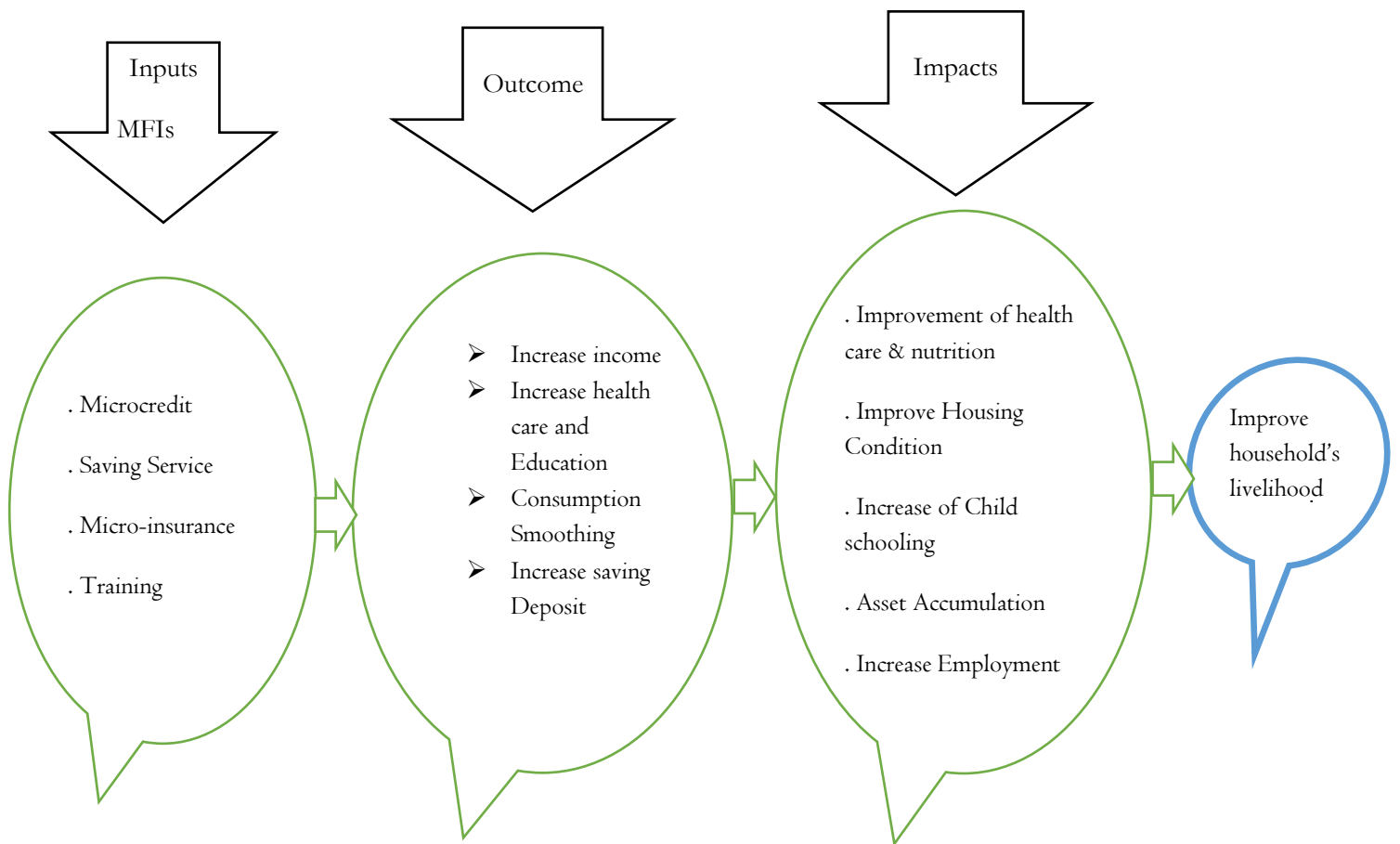
A conceptual frame work is structured from a set of broad ideas and theories that help a researcher to properly identify the problem they are looking at and frame their questions and find suitable literature and it also used to give explanation of how the researcher perceives the relationship between variables deemed to be important in the study (Muganda, 2004). The transmission through which microfinance is expected to impact poverty is intricate. They involve inputs, outputs, and outcome and this is related to the theory of change which explains the assumption that connects causal relationship from policy to outcome. Thus figure 2.1 below shows the path way through which MFIs offered to the household in the form of microcredit, micro-insurance, saving service, training on how to utilize loan and the outcomes which leads to increase income, improved housing condition, health care, nutrition, saving deposit and asset accumulation and all of this improvement leads to poverty reduction

**Micro-credit:** - Microfinance credit access positively contributes to reduce poverty by providing finance access to low income earners, less educated, and those in the informal sectors which helps in expansion of business, acquisition of better residential places and acquisition of education, health and improved welfare.

**Saving service:** - The amount of saving influence the amount of loan received from microfinance which means, the high amount of loaned enables them to expand their business and for instance it used to poverty reduction.

**Micro-insurance:** - Micro-insurance is one of the effective means of reducing the vulnerability of the poor from impacts of theft, disease, disability, fire, and other hazards and it improves the living standards of poor people and help them to come over poverty line and also help them to empower themselves.

**Training:** - Since most of the customers of microfinance were in the informal employment, thus the training provided by MFI enable the participants to develop their skills and talents as well as to have knowledge on how to save. Therefore, Training enabled customers to save more than non-participant (non-client) and led them to better usage of amount loaned by microfinance institution.



**Source: - Author's own construction**

**Figure 2.1 Conceptual framework of the impact of MFIs on Household livelihood**

## **2.2 Empirical Literature Review**

### **2.2.1 Studies in developing Countries**

Different studies in different disciplines used different approaches to assess impact

Khandker (2002) studied the impact of three micro credit institutions in Bangladesh on selected household levels. The study found that the most important effect of borrowing from a micro-credit program is its impact on per capita expenditure. The study also pointed out that the participation in group-based microfinance shows positive and significant impacts for school enrolment, asset holdings, consumption, nutritional status and household net worth of borrowers in all three programs.

Two major studies have assessed the economic impact of Grameen Bank on rural households. First, the study was undertaken by Hossain (1988) in the mid-1980s. It was based on 33 structured surveys of 975 borrowers in 15 villages. Household level information was collected from a random sample of 200 households in five villages and 80 households in two control villages. The study yields several types of evidence indicating the positive impact on the economic status of Grameen Bank borrowers. The loans had generated new employment, which reported that they were unemployed before joining the program. Incomes in member households were 43% higher than in target group households in the control villages. The study also reported increases in per capita food consumption in member households and more in housing and education. The second was by the World Bank in collaboration with the Bangladesh Institute of Development Studies used data on consumption, savings, asset ownership, and net worth to assess the effects of micro credit programs on poverty. The data were collected from members of the program and non-members.

In Zimbabwe, extremely poor clients of Zambuko Trust, a local MFI, increased their consumption of high protein foods at a time when food expenditures across the country as a whole were decreasing (Barnes, 2001). In Tanzania the income and assets values of borrowers are almost twice that of non-borrowers (REPOA, 2005). In India, in addition to increased economic wellbeing, some clients have shown a striking shift from irregular, low-paid daily labor to more diversified sources of income, with a strong reliance on small businesses (Simanowitz and Walters, 2002).

Joanna Ledger wood (1999) pointed that successful microfinance institutions contributing to poverty reduction are particularly effective in improving the status of the middle and upper segments of the poor. However, clients below the poverty line were worse-off after borrowing.

### **2.2.2 Studies in Ethiopia**

Even though operations of MFIs in Ethiopia are a recent phenomenon, not more than a decade and half, studies have been undertaken on different aspects including impacts of the services of the institutions. For example, Fiona Meehan (2000), Berahnu (2012), Teferi (2000), Tassew (2004); Woldy (2007); Daba (2004) and Bamlaku (2006) and concluded that microfinance scheme in Ethiopia has a positive impact on household nutrition, asset accumulation and net welfare of the program participants. Tarozzi et al. (2015) used data on district level in Ethiopia to study the effect of Microfinance on several socioeconomic outcomes, including child school

attendance, income generating activities, Labor supply, indicators of women empowerment and indicators of food and health adequacy. The study found that, access to loans had a positive impact on farm activities and self-employment and MFIs can have positive effect on poverty reduction. Tolera Teasema (2017) conduct studies on the impacts of microfinance on poverty reduction in case of Omo microfinance institution in Gurage zone and conclude that because of microfinance program intervention majority experienced improvement in their income and ability to bear personal and family medical and other expenses. Similarly, despite its fragment effects on improving lives of beneficiaries, majority absorbed improvement in their lives, money saved, and asset hold as a result of microfinance program intervention.

Meehan (2000) made impact assessment on the performances of DECSI. The study was based on both primary and secondary data to analyze the impacts of the services of the institution. Respondents were asked to assess the impact of DECSI financial services on their household income and conclude that majority of respondents reported a considerable, a few reported relatively modest increases in their household income, few said there had been no change in their economic status and very few reported they were worse off. The result of the study stated that women were more likely to have taken on new activities and more likely to complain that the loan size was insufficient.

Berhanu (2012), from his study of micro-credit and poverty alleviation in Ethiopia, identified that more than 70% of the respondents under his study reported the positive contribution towards employment creation, income generation, improved access to health and educational facilities as well as household nutrition. Teferi (2000) also argued the positive contribution on the average monthly total income of the program participants from his study of microfinance and the poor in Tigray.

Tsehay and Mengistu (2002) concluded that the credit and saving institutions intervention among poor women in Ethiopia has made some positive effects that made a difference on the socio-economic empowerment of the women clients.

Tassew (2004) in his study in Tigray indicated that Ethiopia has started giving attention to the establishment of MFIs in rural areas so as to help the poor get access to financial resources. He pointed out that the important consideration before providing credit to the poor is to examine whether the key factor for the poor to get out of their problem is finance. In this study, which

was conducted in 35 watersheds in central Tigray, he showed that the most important and profitable activities the poor can engage within the existing micro-credit systems are petty trading, goat fattening, poultry and chicken farming. As far as oxen and goat fattening is concerned, there is a higher positive return to both labor and capital. The return to capital is, of course, higher than the return to labor according to this study. Therefore, finance is required for these activities and thereby to reduce poverty in the study area. This, however, depends on the price of livestock.

Bemelaku (2006) has employed both descriptive statistics and logistic regression model to assess the impact of ACSI. According to his study, ACSI has helped its clients to smooth their income, shield them against shock during lean periods and have some productive assets.

In addition, Daba (2004) used logit model and descriptive statistics to examine the relation between participating in micro financing and the improvement in living standards. Then, he indicated that OCSSO has made positive contribution towards improving the welfare of the program clients. He went on explaining that since the outreach is increasing as the years go by and the loan repayment performance has been 100% for several years, it is possible to argue that OCSSO is contributing to poverty alleviation. But, loan repayment performance cannot be taken as best indicator of improvement in levels of well being because there are people who intentionally commit default of repayment.

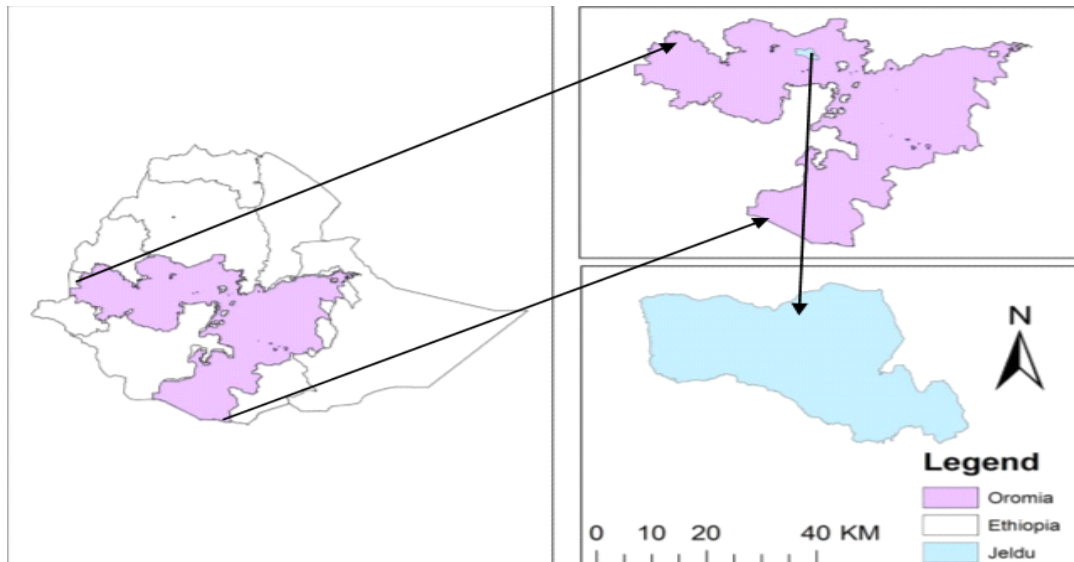
## CHAPTER THREE

### METHODOLOGY

#### 3.1 Description of the Study Area

Jeldu district is one of the districts located in the west Shewa zone of Oromia region. Gojo, the capital town of the district is 115 km North West of Addis Ababa. Jeldu is divided into 29 peasant associations. Geographically, it is situated between  $9^{\circ} 02' 47''$  to  $9^{\circ} 15' 00''$  N latitude and  $38^{\circ} 05' 16''$  E longitude. Jeldu is bordered on the south by Dendi, on the south west by Ambo, on the North by Gindeberet and Abuna Gindeberet, on the South east by Ejere and Meta Robi in the North east (Gudina, 2008)

The altitude of the district ranges from 1800 to 3200m a.s.l which is predominantly high land. The area receives bimodal rainfall pattern with short rainy season from March to April and main rainy season from June to September. The mean annual rainfall varies from 1800 to 2200mm. The mean minimum and maximum annual temperature ranges from  $17^{\circ}\text{C}$  to  $22^{\circ}\text{C}$ .



*Fig 3:1 Geographical location of Jeldu district.*

The land forms of Jeldu district is mountain, plateau, hills and have three types of soil such as nitosol, veritisol and sandysol. The estimated total population of Jeldu district was 213,274. The sex composition of the population of the district was 104504 were men and 108770 were women. The total number of households in the district was 44,432 of which of 36705

households are rural (JWAO,2017). All of the people of the study district are from Oromia ethnic group and the dominant religions are protestant, Ethiopian Orthodox Christian and Waaqeffata (BoARD, 2011)

### **3.2 Source and Method of Data Collection**

For this study, both primary and secondary data was used. Secondary source of data was obtained from branch's annual progressive report or office manuals, published and unpublished documents or papers, Website, Articles and reports was reviewed to make the study fruitful. Primary data would be obtained through structured questionnaires to who are the customers of MFIs and non-clients as the questionnaire was the only way to elicit-self report on people's opinion, attitudes, beliefs, and values.

The questionnaires contained both close-ended and open-ended questions which was distributed to all respondents by translating to the local language. The questionnaires were issued to the respondents at the time of visiting MFIs. In addition to questionnaire, the interview would be used for the field research in keeping the flexibility of interview depending on the understanding of the respondents. Accordingly, the researcher would be used this instrument to collect the reliable data from those who are selected.

As the issues to be addressed in the study, both qualitative and quantitative methods of data collection would be used. Quantitative data was collected by using open and close ended questions to get information. While qualitative data was collected through key informant interviews. The questionnaires have been pre-tested in sample of selected kebele on ¼ of the sample size to check and improve its clarity. The participant who was involved in the pre-test is those who have participate in microfinance and not-participate in microfinance.

### **3.3 Sampling Techniques**

Jeldu woreda was selected for the study purpose and it has nineteen kebele. These kebele has different household size, and distance from woreda town. For instance, the study applied stratified random sampling method in selecting sampled kebele. accordingly, six kebele such as, Gojo, shukute, seriti, Teso, Kersa and Chilanko, were selected for the study purpose. For instance, both beneficiary (treatment) and non-beneficiary (control) group were proportionally selected depend on the number of microfinance beneficiary and non-beneficiary household in each kebele. Accordingly, using simple random sampling procedures, 249 non-beneficiary

households and 133 beneficiary households were selected. Therefore, representative household for the study were selected randomly from microfinance beneficiaries as treatment group and non- beneficiaries as control group.

### 3.4 Sample Size

From 19 kebeles of jeldu woreda, six wored would purposively selected and sample size for this study is determined based on the following formula developed by Yamane (1967).

$$n = \frac{N}{1 + N(e)^2} \quad \text{Where } n = \text{sample size}$$

N=Total population

e=Error term

The six kebele has 8689 households which include participant of microfinance and non-participant. From this sample size can be computed as follow

$$n = \frac{8689}{1 + 8689(0.05)^2} \quad e = 5\%$$

$$n = \frac{8689}{22.72} = 382$$

**Table 3.1 Total households, Participants and non-participants in selected kebele**

Kebele	Total household	Total participants of (OCSSC)	Total participants of BG	Total participants	Total non-participants	Sample taken from each kebele
Gojo	2115	409	423	832	1283	93
Seriti	1435	283	316	599	836	63
Teso	1698	246	112	358	1340	75
Shukute(01)	989	213	206	419	570	43
Kersa	1074	179	313	492	582	48
Chilanko	1378	210	119	329	1049	60
<b>Total</b>	<b>8689</b>	<b>1540</b>	<b>1489</b>	<b>3029</b>	<b>5660</b>	<b>382</b>

Source: -JWAO, OCSSCO, JWBO, BGJWBO

### **3.5 Method of Data Analysis**

Both descriptive statistics and empirical method of data analysis was used to investigate the impact of credit on the live livelihood of the clients. Various statistical tool has employed to investigate the difference in the welfare of the clients and non-clients. Descriptive statistics were used to describe relevant aspects of variables and to provide detailed information about socio economic and demographic characteristics of household. The study employs Propensity Score Matching method to identify the impacts of microfinance intervention on household livelihood. Probit estimation was used to estimate propensity score and the result was presented in tables using different statistical techniques.

#### **3.5.1 Impact Assessment at Household Level**

At household level, the impact of microfinance intervention can be observed in association mainly with income, assets, and social empowerment of the frequent borrowers by comparing with the non-clients. In order to evaluate the impact of OCSSCO and BG's micro financing on household livelihood, the methodology suggested by Fidler and Webster (2005), which is the evaluation of changes in user livelihoods as a result of micro financing scheme is employed in which it compares the livelihood of clients and non-clients. In line with this, assessing impact at particular level requires adjustment to control for difference in unobservable household characteristics and the impact of the program is assessed at house hold level based on average yearly income of the household. Change in income affects access to education, access to medical facilities, nutritional status, savings, employment generation and empowerment among others, which are indicators of poverty. This has been done using propensity score matching method in comparing the livelihood of clients and non-clients of household in the sample study.

#### **3.5.2 Microfinance Impact Assessment Approach**

Different approaches can be used to assess the impact of microfinance in improving the incomes of rural households. In this study, in order to evaluate the impacts of microfinance in increasing the household income, the methodology used by Amin et al (2005) was employed. According to these scholars, comparing the livelihood of clients and non-client can be used to examine the effectiveness of microfinance on household livelihood.

Schuler and Hashemi (2011) used combining and comparing participants and non-participants with residents of village without credit-programs in order to look the effectiveness of the

program. The method of making comparison between clients and non-clients (control group) is the most common cross-sectional design used in evaluation research. Therefore, it is believed that the method of comparing participant and non-participant with respect to improvement in income is the most promising and useful tool and is the most valid of the cross-sectional approaches. In line with this, study also used to compare participant's and non-participant's income improvement by using propensity score matching method as it is an appropriate method to impact evaluation in comparing treated and control group when there is no-random assignment (Rosenbaum and Rubin, 1983).

### **3.6 Model Specification**

#### **3.6.1 Propensity score matching**

Propensity score matching is the most popular method used to find the match between treated and control groups. Propensity score can be estimated using models such as discriminate analysis. Probit or logistic regression is widely used (Staurt, 2011). However, this paper deals with probit model to estimate propensity score matching. Propensity score  $\pi$  for an individual (i) defined in Rosenbaum and Rubin, (1983) is a conditional probability (p) of assigning participant to a particular treatment or comparison group (T) given a set of covariate (xi) expressed as

$$\pi_i = P(T = 1 | x_i)$$

In this study the analysis was used to examine the impacts of microfinance intervention on poverty reduction by incorporate participant and non-participant household in the study area. Average treatment effect on the treated is useful to evaluate the effects on those for whom the program is actually intended and it is the difference between the potential outcome of intervention group and the potential outcome of non-participant and it is expressed as follows

$$\Delta_i = Y_i^T - Y_i^C$$

Where  $\Delta_i$  is the impacts program intervention

$Y_i^T$  is the outcome of Treated variable

$Y_i^C$  is the outcome of control variable

The average treatment effect (ATE) is the mean effect of the program on individuals randomly selected from both control and intervention group of population and this value is computed as follows:

$$ATE = E(\Delta_i) = E(Y_i^T - Y_i^C) = E(Y_i^T) - E(Y_i^C)$$

To match the scores of those who were a part of the intervention to those not, propensity score matching model was used as it was chosen over other methods. Primarily, as a model is non-experimental method, it applied in this study considering microfinance intervention does not have experimental non-participant household (control groups). In addition, others model like after and before and difference in difference was not applicable as they require base line data.

On the other hand, the model was preferred over regression discontinuity method as it does not require large number of respondents in order to draw a significant result. Although instrumental variables and encouragement design approach can be used, finding an appropriate instrumental variable that affects participation and not the dependent variables on ex post evaluation is proven to be difficult, despite the approach's ability to solve the problem of self-selection. The PSM assumes, in addition to the difference in treatment between intervention and non-intervention groups, there exists a variation in characteristics that affect outcome between the two groups.

The PSM model was helpful to analyze the extent of influence that the intervention of microfinance has improve the livelihood of the beneficiary compared to the non-participants. After calculating for the propensity score, each individual participant of the microfinance was matched to a non-participant with a similar propensity score. There are four types of matching methods which can be used to compare the outcome of a program beneficiary individual with the outcome of the control. These are:

***Nearest Neighbor Matching*** – In this approach a match with the closest propensity score is found for the intervention group from the control group. A match from the control group can be used once without replacement or more than once with replacement. This choice can be made based on the sufficiency of the data because replacement can cause trade-off between bias and variance in analysis.

***Radius Matching*** – This approach is similar to nearest neighbor matching, with an addition of a tolerance level on size of propensity score of the beneficiary and non-beneficiary individual. This makes the radius matching method more likely to drop bad matches, yet it also might have fewer matches because of this.

**Kernel Matching** – This matching method uses weighted averages of all individuals in the control group to estimate the counterfactual outcome. It uses more information, hence lowering the variance. Yet, is more prone to the use of bad matches causing a tradeoff between bias and variance similar to the others.

**Stratification Matching** – This method uses an interval in order to divide the common support of propensity score and then match the intervention and control groups within each interval. Although a rich dataset is needed, it has an advantage over the others as the estimation is based on many more observations enabling it to provide better matches.

A matching algorithm is picked for a research study based on the sample data collected, with an inevitable difference between bias and variance. Bias can be reduced through the quality of the information used to construct the counterfactuals, which causes lower variance and hence a better match for the intervention group. All intervention group observations whose propensity score is higher than the maximum or lower than the minimum propensity score of the control group have to be dropped. There is also a common support condition which can be used as a guide in selection of matching methods. This condition is more important when the nearest neighbor with replacement and kernel methods are used as the counterfactuals (Sianesi, 2001).

There are still some shortcomings associated with matching. Amongst these is the need for quality covariates as unobserved variables might cause selection bias. However, it is advantageous as in the absence of baseline data; it finds close matches from the control group to the intervention group. Therefore, first, a propensity score on the basis of a probit model was estimated for this study. Then a matching approach was selected based on the aforementioned pros and cons to the approaches. For this study a stratification approach was used for interpretation of the results as it provides better matches compared to nearest neighbor and creates intervals making interpretation that much easier. Despite this, ATT and t value of every approach was presented for comparison in this study. The common support condition was also checked to see if it was satisfied.

The first step taken in calculating the propensity score is to define the intervention and control group and the relevant outcome variables. The two groups of the target populations in this study were the clients of microfinance and the non-participant of microfinance of the study area. Then the selection of the control group was done after a detailed description of the intervention group

was done after a detailed description of the intervention group was finalized. This was done so as to make the control group most similar in demography as well as socio-cultural background to the intervention group. After the selection and assignment of the MFIs intervention and control groups, an effort was made to find observable characteristics that might affect the outcome of the program. These variables were first selected through review of previous works concerning the microfinance program participation and then used for matching. These are then used to control for background information which could possibly influence the outcome indicator of an individual. For this particular study, the variables age, marital status, Household size and literacy were considered. This measure is assumed to identify households that would be similarly affected by the intervention and hence are most comparable.

### 3.5.3. List of the dependent and independent Variables

**Table 3.2 Description of variable**

<b>Variable</b>	<b>Description</b>	<b>Variable type</b>
Income	The average household yearly income Continuous variable And its trend in the form of dummy variable Dummy variable; Increased=1 or Not increased=0	Dependent
Consumption expenditure	The respondent's perception of increased average household yearly consumption expenditure. Dummy variable; better=1, same or worse=0	Dependent
Education	Respondent's perception of improved education status which is measured in terms of spending on schooling or the ratio of completed years of education compared to years that should be completed with respect to age. Dummy variable; better=1, same or worse=0	Dependent
Health care	Respondent's perception of improved access to health care which is reflected in ability to spend on medication or access to health care facilities. Dummy variable; better=1, same or worse=1	Dependent
Housing condition	Respondent's perception of improved housing conditions which are reflected in the overall condition of the house (interior walls, and roof). Dummy variable; better=1 same or worse=0	Dependent
Employment generation	Dummy variable; better=1 Same or worse=0	Dependent
Gender	Dummy variable; Male =1, Female=0	Independent
Literacy	The number of years stayed in the school (Class attended) Continuous variable	Independent
Marital Status	Dummy variable; Married=1, Single, divorced or widowed=0	Independent
Household size	The number of family living together Continues variable	Independent

## CHAPTER FOUR INTRODUCTION

This chapter presents and discusses the findings of the study received through data collected in the field. This study aimed at examining the impacts of microfinance on household livelihood in Jeldu woreda. The data used for this study was collected from households of Jeldu woreda. The collection of these data was done using questionnaire which was administered to respondents, and it involved closed and open ended questions. It gives answer to the research question raised before the research was conducted.

### 4.1 Descriptive Data analysis

#### 4.1.1 Demographical characteristics of the respondents

##### Gender of the respondents

The study consists of both men and women household head which means both participants and non-participants households were interviewed for the study and it was summarize in the following table.

**Table 4.1 Sample respondents by sex**

Types of the respondents	Sex of the respondents		Total
	Male	Female	
Clients	61(46%)	72(54%)	133
Non-Clients	136(54.6%)	113(45.4%)	249
Total	197	185	382

**Source:** - Survey result of 2019

From the above table 4.1 we can consider that among 382 of respondents,133 are participant and 249 are non-participant. In this case, we should have to consider that the number of client and non-client respondents were proportionally taken depend on the number of clients and non-client households in the selected kebele. Therefore, non-client household are higher than client respondents and the interpretation of the result depend on the percent.

From the above table 4.1 we can consider that among 382 of respondents 133 are participant and 249 are non-participant and out of this, 197 respondents which constitute 52% percent of the

respondents are male household head and 185 respondents constituting of 48% were female. Generally, the majority of respondents are male but specifically among 133 of clients the majority of the respondents are female.

These findings showed that, 54% of the client respondents are female and 45.4% are male household head. This indicates that female household heads were more participated in microfinance than male household head. This result confirms the theory that, microfinance institutions is generally targeted to women empowerment and leads to poverty reduction and this is as a result of the fact that they are very sympathetic to the welfare of their household members.

### **Marital Status of Respondents**

In most case it is believed that those with more responsibilities engaged in many activities than the others. Married people are assumed to have more responsibilities to their children which they include school fees, medical fees, and clothes.

**Table 4.2 Marital status of Respondents**

Marital status	Types of the respondents		Total	Percent in average
	Client	Non-Clients		
Single	11(8.3%)	16(6.4%)	27	7
Married	113(85%)	215(86%)	328	86
Divorced	6(4.5%)	10(4%)	17	4.4
Widowed	3(2.2%)	7(2.8%)	10	2.6
Total	133 (100%)	249 (100%)	382	100

**Source:** Own Survey 2019

This result shows that number of respondent were 382 where by 27 which constitute 7 percent of the respondents were single, 328 which constitute 85.5 percent of the respondents were married and the rest 17 and 10 respondents were divorce respectively.

These result showed that the majority of respondents were married in both the clients and non-clients of microfinance institutions. This could be attributed to the fact that married person were

more participate in business activities or income generating activities than other else since they are more responsible for their families.

### Number of Dependent

The number of dependents has impacts on household in improving their livelihood. Majority of the respondents had dependents to support as a family that included mostly children and students who go to school. The number of dependents featured as contributory factor to the need and utilization of the loan from microfinance. This is due to the fact that, the bigger the number of dependents, the greater the demands for the basic needs like food, clothing, shelter, and education. The following table shows the number of dependent of the respondent household

**Table 4.3 the number dependent on household**

Number of dependents	Types of clients		Total
	Clients	Non-clients	
0	7	13	20
1	12	25	37
2	14	31	45
3	31	37	68
4	45	51	96
5	10	63	73
6	8	19	27
7	6	10	16

**Source:** -Survey result 2019

Table 4.3 shows the number of household dependents. The number of household dependents ranges from 0 to 7. The average household dependents for clients and clients are about 4 and 5 respectively. Households those have dependent may un able to improve their livelihood even they committed against poverty.

### Impact of microfinance on Income

One of the immediate impacts of having access to credit from microfinance is on income. This induced income may have impact on the other outcomes such as household consumption, education attainment, and responsiveness for medical care etc. Since most of the respondents do not keep records on their business activities, the income figures may not be accurate but the trends of estimate yearly income of the respondents serve for the study.

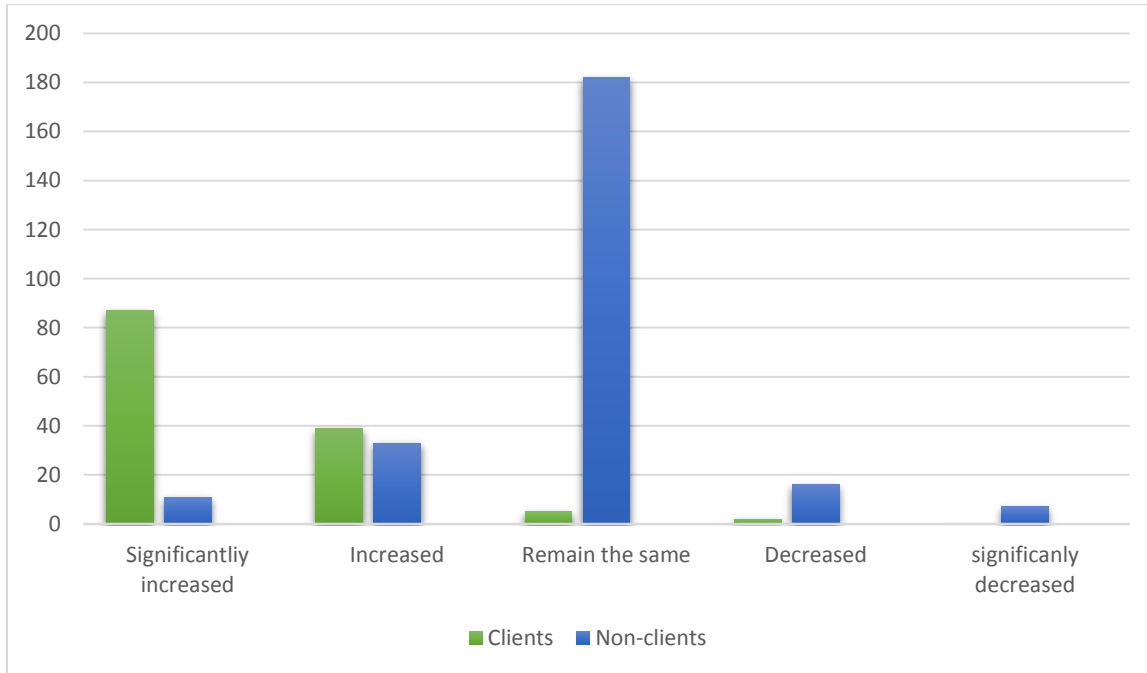
**Table 4.4 The impact of MFIs on income**

Respondents Trends of income	Types of the respondents		Total
	Clients	Non-Clients	
Significantly increased	87	11	98
Increased	39	33	82
Remain the same	5	182	177
Decreased	2	16	18
Significantly decreased	0	7	7

Source: - Survey result 2019

Table 4.4 indicate that out of total clients, 87(65%) clients reported that their overall level of income has increased significantly since their participation in the program while 39(29%) told as their income has been increased. From the total non-clients, only 11 (4.4%) non-clients reported as their income has significantly increased and 33(13%) reported as their income has increased while 182 (73%) reported as their income remained the same for the last years. The respondents whose level of income has at least increased for the last years are about 126 (95%) for client and 44 (17.4%) for non-client respectively. Form this result indicate that, the improvement in over level of income is more pronounced for clients than non-clients

**Figure 4.1 Trends of respondent's income**



**Source:** - Survey result 2019

From the respondents of sample clients who reported the increase in their level of income, 126(95%) reported that access to working capital from microfinance credit service help them to buy inputs, able to purchase business assets, expand existing business for agricultural activities and petty trade. On the other hand, from the sample of non-clients who reported the increment in their level of income 44(17.4%) of them reported as the cause of improvement in their income are good agricultural seasons and petty trade from their own working capital. Out of the sample clients who reported that the trend of their income was remained the same, crops failure, high number of household dependents, illness or death of the family were reported as main problem. Some of non-clients identified that lack of access to credit was the most significant reason for the problems in their business activities. Therefore, the responsiveness achieved in relating with income from program participants shows a clear indication that microfinance credit has enabled the clients to generate disposable income that could be spent on better facilities which could improve the living standard of the households concerned.

## Effects on Household diet

Having access to microfinance credit has also impact on household nutritional status. This indicator is simply to capture the direction of change in type and quality of household diet. Since the rural poor may not have records on their daily, monthly or yearly expenditure, type of meals or quality of meals, information on their average yearly expenditure on consumption, their responsiveness in nutritional status and trends of consumption expenditure were collected. According to Teferi Zewdu (2000), the immediate impact of microfinance program is on income and this induced income is expected to have an impact on another outcome like increase in consumption expenditure that leads to better household diet and living condition. Thus the trend of average yearly consumption expenditure of each respondent was collected. This is also used to compare the consumption expenditure of clients and non-clients on household nutrition. To understand this, the observed expenditure reported by respondents were used and it was indicated in the following table.

**Table 4.5 Trend of consumption expenditure of Respondents**

The respondent's Trends of Consumption expenditure	Types of respondents		Total
	Clients	Non-Clients	
Increased	116(87%)	48(19%)	164
Not increased	17(13%)	201(81%)	218

Source: - Survey result 2019

Information on the trends of household diet and responsiveness of consumption expenditure were also collected. Concerning consumption expenditure, it assumed that the improvement in consumption expenditure leads to better household diet and living condition. This concept tells us whether the status of household diet has been improved or not for the last years. It is obvious that microfinance intervention is expected to support program participants in ensuring food security which is the prime concern of all poor households. The findings of this study also confirm this as 116 (87%) of sample clients reported as the trend of their consumption expenditure has increased while only 48 (19%) of sample non-clients are reported as their

household diet and consumption expenditure have been improved over the last twelve months. Only 17 (13%) of clients and 201 (81%) of non-clients reported as their type and quality of diet as well as their consumption expenditure have not been improved over the last twelve months. These results indicate that more clients have enjoyed diet improvements than non-clients. Program participants have more chance if improving their diet in comparison to non-participants.

### **Impacts of microfinance on Health care**

Being one of the dimensions of poverty, access to basic health services by an individual predicts his/her level of poverty. In order to understand that respondents were asked to recall their monthly average of medical expenditure and medical facilities. However, medical expenditure is based on the number of members of households who are ill or injured. Since a number of members of households who are ill or injured within a given year might be different, the responsiveness of respondent's demand for medical care is considered in the study.

**Table: 4.6 the respondent's medical care**

Status of medical service	Types of respondents		Total
	Clients	Non-clients	
Improved	94(70%)	73(29%)	167
Non-improved	39(30%)	176(71%)	215

**Source:** - Survey result 2019

This result shows that 94(70%) of sample respondents and only 73(29%) of non-clients reported as their responsiveness toward access to medical facilities has been improved. However only 39 (30%) of sample clients and 117(71) of non-clients reported the trend that their ability to get access to medical service has not been improved. This result clearly shows that participating in microfinance service have improved their ability to respond to the demand for medical care. The study finds difference in responsiveness of demand for medical care between the two groups. Therefore, we can conclude that program participants have been benefited from the micro financing scheme.

## Educational attainment

Education is another dimension of poverty and therefore, educational attainment by an individual shows her/his level on poverty. In order to identify the impacts of microfinance on educational attainment, respondents were asked and information on educational attainment was collected.

**Table 4.7 Status of respondent's educational attainment**

Status of respondent's educational attainment	Types of respondents		Total
	Clients	Non-clients	
Not improved	8(6%)	206(82.6%)	214
Improved	125(94%)	43(17.4%)	168
Total	133(100%)	249(100%)	382

**Source:** -Survey data, 2019

From table 4.7 we understand that, the total number of respondents were 382 and 133 clients while the rest 249 were non-clients. This finding shows that, 125 clients' and 43 non-clients reported as their educational attainment was improved while 8 clients and 206 non-clients were reported as their educational attainment was not improved. These findings show that majority of client respondents had a better access to educational service while majority of non-client's access to education was same as before. Midgley (2003), said that we can know the poverty status of an individual by checking his/her educational attainment and better educational attainment of client respondents implies that there is decrease in the rate of poverty of individual where by loan they receive leads to increase their income and this improvement of income can be used to take their children to school.

## Effects on employment

The immediate positive impact of micro financing scheme is on employment generation. Type of business activities and the status of respondent's job opportunities were collected. The two basic

types of business activities are farming and petty trade. Others include livestock production, local food, drink preparation and this information on the types of business activity was obtained through interview questions. Since the respondents are rural poor, agriculture is the basic type of business activities for most of the respondents.

**Table 4.8 Job opportunities of respondents**

Status of respondent's job opportunity	Types of Respondents		Total
	Clients	No-clients	
Improved	97 (73%)	41(16%)	138
Non-Improved	36(27%)	208(84%)	244
Total	133(100%)	249(100%)	382

Source: - Survey data, 2019

From table 4.8 we can understand that, out of total sample clients, 97(73%) and 41(16%) of non-client respondents reported the trend that their employment opportunities have been improved for the last twelve months. On the other hand, only 36(27%) of client respondents and 208(84%) non-client respondents reported as there is no improvement in job opportunities. This implies that micro financing services to the rural poor have positive impacts on employments.

### **Effects on savings**

There are two types of savings: compulsory and voluntary. Compulsory saving is normally enforced and starts simultaneously with the loan that is approved for individuals who are program participants. Compulsory saving includes compulsory individual saving and compulsory group saving. These types of savings are used as collateral. Compulsory individual saving ranges from Birr 3 to 6 birr and Compulsory group saving is a saving of 10% from the loan size.

On the other hand, voluntary individual saving is a saving that depends on the willingness of the individual including clients and non- clients to save and withdraw at any time. Since 2014/15 the annual saving of the selected sites is summarized as follows.

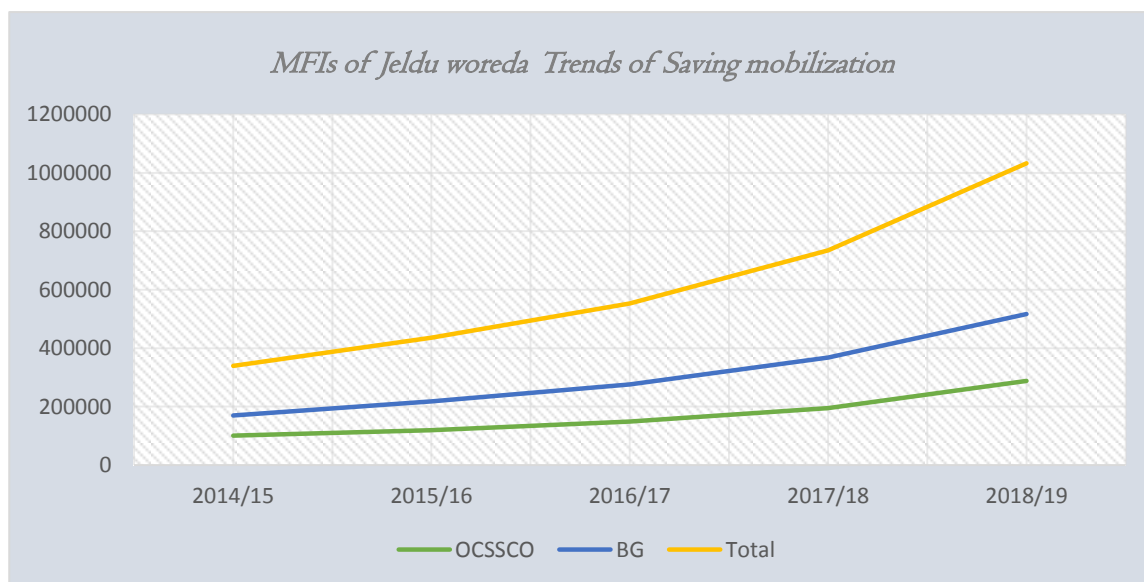
**Table 4.9 Saving mobilization of microfinance in the Study area**

Year	Types of saving						Total
	Compulsory				Voluntary		
	Compulsory individual saving		Compulsory group saving				
	OCSSCO	BG	OCSSCO	BG	OCSSCO	BG	
2014/15	13210	1183	68210	49698	19854	17421	169576
2015/16	16542	13754	71317	58651	31046	26541	217851
2016/17	18456	15321	90730	81365	39302	31326	276500
2017/18	29546	21659	120635	112353	45190	38145	367528
2018/19	38302	30654	147208	129541	102036	68745	516486

**Source:**-OCSSCO and BG MFIs of Jeldu branch, 2019

This table indicate that microfinance of Jeldu woreda gives different types of saving service such as compulsory individual saving, group saving, center saving and voluntary saving. This all types of saving have increased from year to year and it was pictorially explained as follow.

**Figure 4.3 The trends of Microfinance saving mobilization in the sample study.**



Out of the total sample respondents, the larger portions of clients have saving account in comparison with non-clients for the last two years. The voluntary savings are in the form of saving under BG and OCSSCO MFIs, Iqqub, Iddir and Mahaber. From table 4.11, it is observed that 133 (89%) of clients have voluntary saving account under the BG and OCSSCO MFIs micro financing scheme. However, no one has reported as he/she has voluntary saving account under the MFIs micro financing scheme. But it is observed that some of non-clients who have not been taken under sample respondents have saving account under MFIs micro financing scheme in the sample branches (see table 4.10).

**Table 4.10 Types of saving**

Types of saving	Types of respondents		Total
	Clients	Non-clients	
Saving in MFIs	133	0	133
Iqqub	7	164	171
Iddir	4	79	83
Mehaber	0	6	6

**Source:** - Survey results, 2019

This table 4.10 indicates that the sample respondents have saving accounts. The reasons for their saving include loan repayment, to earn profit, to withdraw in case of urgent needs, to spend on education and medical care expense and to improve their food security. The result shows that all clients have developed saving habits. The difference of savings between the two groups suggests that the program has brought and develops the habit of saving among the clients.

### **Impacts on women empowerment**

This is to identify on how women clients have been empowered by their participation in the microfinance program. Participation in microfinance program services expected to lead control over resource on the part of women clients. Information that control and decide over the business activities within the household was collected. Out of the total sample respondents, 20% of clients and 29% of non-clients reported that; there is a practice of only husband making decisions in household and this indicates that all of the decisions are dominated in the hands of husbands. On

the other hand, 85(64%) of clients and 154(62%) of non-clients' household reported that both husband and wife make decision in the household. 21(16%) clients and only 23(9%) of non-clients reported that only wife is a decision maker in the business activities of household. Therefore, there is significant impacts of microfinance on women empowerments in the study area since the result show much difference between the decision making of client women and non-clients (see table 4.11)

**Table 4.11 Impacts of microfinance on women empowerment**

Decision maker	Types of respondents		Total
	Clients	Non-clients	
Husband only	27(20%)	72(29%)	99
Husband & Wife	85(64%)	154(62%)	270
Wife only	21(16%)	23(9%)	14
Total	133	249	382

**Source:** - Survey Result, 2019

## 4.2 Econometric Analysis

### 4.2.1 Propensity score matching

Assessing impact at the household level requires adjustment to control for the difference between frequent borrower (clients) and those who are looking for credit that taken as non-clients. Since these two groups may have differences in observed characteristics and it may bias the result if we use the whole non-participant of MFIs as a comparison group for those are participant, we must find non-participant household from non-participant sample that observationally match with participants. To do this or to make comparison of control with treatment (clients) group, the researcher applied propensity score matching based on observed data. Propensity score matching is one of the methods in impact evaluation which can better match control and treatment units based on observed characteristics (Khandker, 2010). In the absence of baseline data, the model found close matches from the control group to that of the intervention and compared them. There is close socio-economic similarity between the beneficiary (client) and non-client (non-

beneficiaries) microfinance in woreda. In the course of the analysis, the variable which include marital status, education (literacy), family size and age were used to match between the household intervention and control groups.

The outcome variables that are being tested for change as a result of program intervention were education status, health care, housing condition, consumption expenditure and household average yearly income which are continuous variable. It is necessary to run the multicollinearity and hetroskedasticity tests in most of economic related research studies. However, these tests were not conducted in this study because of the fact the fact that hetroskedasticity error term has little influence on the estimated intervention effect in propensity score matching (Williams, 2009). Since multicollinearity implies a linear relationship among some or all explanatory variables of regression model, there was also no need to run multicollinearity tests in this study (Gujarati, 2004).

To calculate propensity score, probit model was used where the outcome variable regressed against the age, marital status, literacy, and family size. The results for the regression are shown in the table 4.12 below.

**Table 4.12 Probit regression for calculating propensity scores**

<b>Treat</b>	<b>Coefficients</b>	<b>Strd Errors</b>	<b>Z</b>	<b>P&gt; z </b>	<b>95% of conf. Interval</b>
Age	-0.06433	0.0235894	-2.73	0.006	(-0.1105 -0.0181)
Gender	-0.000193	0.1403297	-0.00	0.999	(-0.2751 0.2748)
Literacy	0.743248	0.2325331	3.20	0.001	( 0.2874 1.1990)
Marriage	0.2802	0.1998559	1.40	0.161	(-0.1115 0.6719)
Household size	-0.141248	0.0602331	-2.35	0.019	( -0.2593 -0.0231)
Cons.	1.803185	0.9940804	1.81	0.070	(-0.1451 3.751)

From the above output we can also see that all 382 observations in our data set were used in the analysis. Higher age, more female and people having high family size are less likely to

participate in the microfinance. While married and high educated were more likely to participate in the microfinance as they were statistically significant.

The balancing property was satisfied and 133 of clients and 235 of non-clients were matched in the calculated common support regions. The common support region was between 0.1021341 and 0.700113. This means that the highest propensity score was 0.700113 while the lowest was 0.1021341. The means propensity score was 0.35 which means the probability for the respondent to participate in microfinance program is 35%. The estimated propensity score and the common support are depicted in the appendix. The final number of blocks estimated was five. These numbers of blocks ensure that the mean propensity score is not different for intervention and control groups in each block. This information is used in the analysis as a basic for stratification. The blocks of strata were used to satisfy the balancing property of the propensity score.

### **Impacts of microfinance**

#### **Impacts of microfinance on house hold yearly income**

The impact of microfinance on household income depends on the duration in microfinance, amount of loan received and the training on the loan utilization. The loans provided by microfinance meets the capital requirement for new startups or expansion of existing business activity and it meets requirements ongoing production activity which brings to house hold income increment. Schuler and Hashemi (2011), used combining and comparing participants and non-participants with residents of village without credit-programs in order to look at village effects and also a membership duration variable is used to test the impact of credit programs on household income whether it increases over time or not. In assigning scores to all respondents, the outcome was summarized as it was depicted in table 4.13. The result shows those who participate in microfinance had higher mean income of 2312.18ETB than those who did not participate in microfinance service. However, this result might be explained through the existing difference among independent variable, respondents participating in microfinance have high literacy rate, marital status, more female compared to non-participate in microfinance and this result was summarized in table 4.13

**Table 4.13 Summary of household income sorted by Microfinance intervention**

<b>Treat=0</b>					
<b>Variable</b>	<b>Obs</b>	<b>Mean</b>	<b>Standard deviation</b>	<b>Minimum</b>	<b>Maximum</b>
Income	249	7232.349	2562.444	3500	16255
Age	249	30.4578	5.6489	18	55
Gender	249	0.5422	0.4992	0	1
Literacy	249	0.3775	0.4857	0	1
Marriage	249	0.7148	0.4523	0	1
No of Dependent	249	6.5823	2.5782	2	12
<b>Treat=1</b>					
<b>Variable</b>	<b>Obs</b>	<b>Mean</b>	<b>Standard deviation</b>	<b>Minimum</b>	<b>Maximum</b>
Income	133	9544.534	3534	5600	24500
Age	133	32.2331	3.9769	20	46
Gender	133	0.5263	0.5011	0	1
Literacy	133	0.7518	0.4335	0	1
Marriage	133	0.8646	0.3434	0	1
No. of dependents	133	4.9172	2.0190	2	9

Using the propensity score model, the observation under each of identified variables were compared for the desired outcome. Following to this, the aggregate scores were then incorporated in to the propensity score matching model to see the impact of microfinance service on the targeted rural household. The 133 microfinance beneficiary were matched to 235 non beneficiary (non-clients). The propensity scores are classified into intervals based on the range of values. Each interval consists of treatment and non-treatment subjects on average, have equivalent propensity scores. The difference between the outcomes of the treatment and control groups are calculated to obtain average treatment effect. It is an average of outcomes of a treatment per block weighted by the distribution of treated subjects across the blocks. For this study stratification matching method was used for the interpretation of the results as it provides better match compared to nearest neighbor and create intervals strata. According to Cochran, (1968), using five strata or groping the sample into quantile will eliminate more than 90-95% of

covariate bias. In this study, the result generated by employing stratification approach indicate that, the average yearly income of participant households was higher by 838.76 than the income of non-participant and it was significant as t-values were greater than two. This shows that microfinance enable to increase the average yearly income of beneficiary compared to no-beneficiary and this results confirm the descriptive result explained before. The result of microfinance impacts on household income using all matching method was presented in the appendix 2

**Table 4.14 The impacts of microfinance on household income using all matching method**

<b>Matching method</b>	<b>Treatment</b>	<b>Control</b>	<b>ATT</b>	<b>Std. Error</b>	<b>t</b>
Nearest Neighbor	133	93	257.91	170.605	1.51
Stratification	133	235	838.76	322.59	2.60
Kernel	133	235	864.58	285.94	3.02
Radius	133	235	1407.16	206.39	6.82

#### **The impacts of Microfinance intervention on household consumption expenditure**

One of the outcomes to microfinance intervention is the change in household consumption expenditure. In order to see the change in household consumption expenditure, the desired outcome was summarized by microfinance intervention. As shown in Table 4.15 those household who benefit from microfinance institution had higher household consumption expenditure than non-participant as the mean consumption expenditure of beneficiary is higher by 0.4731 than non-clients.

**Table 4.15 Summary of household consumption expenditure sorted by MFIs intervention**

<b>Treat=0</b>					
<b>Variable</b>	<b>Obs</b>	<b>Mean</b>	<b>Standard deviation</b>	<b>Minimum</b>	<b>Maximum</b>
Consumption exp.	249	0.4216	0.4948	0	1
Age	249	30.4578	5.6489	18	55
Gender	249	0.5422	0.4992	0	1
Literacy	249	0.3775	0.4857	0	1
Marriage	249	0.7148	0.4523	0	1
No of Dependent	249	6.5823	2.5782	2	12
<b>Treat=1</b>					
<b>Variable</b>	<b>Obs</b>	<b>Mean</b>	<b>Standard deviation</b>	<b>Minimum</b>	<b>Maximum</b>
Consumption exp.	133	0.8947	0.3080	0	1
Age	133	32.2331	3.9769	20	46
Gender	133	0.5263	0.5011	0	1
Literacy	133	0.7518	0.4335	0	1
Marriage	133	0.8646	0.3434	0	1
No. of dependents	133	4.9172	2.0190	2	9

The impacts of microfinance on household consumption expenditure were also determined by employing a technique that account for the matching variable. In this case, the impacts of microfinance on household's consumption expenditure were assessed where the information gathered on the household consumption expenditure were entered into the propensity score matching model and matched using different methods of matching; stratification. Radius, Kernel and Nearest neighbor matching method and its result was summarized as follow.

**Table 4.16 The effect of microfinance on household consumption expenditure**

<b>Matching method</b>	<b>Treatment</b>	<b>Control</b>	<b>ATT</b>	<b>Std. Error</b>	<b>T</b>
Nearest Neighbor	133	93	0.281	0.062	4.559
Stratification	133	235	0.279	0.018	22.412
Kernel	133	235	0.272	0.046	5.953
Radius	133	235	0.344	0.058	5.926

For all of matching method, the t-statistics was greater than two hence showing significant difference between the microfinance participant (clients) and non-participant respondents following matching. The output generated by all types of matching is positive and also

significant which confirm the positive impacts of microfinance on household consumption expenditure. By employing stratification matching method for interpretation, the household consumption expenditure of participant was higher by 0.279 than non-participants. In this case the matching of explanatory variables has decreased the household consumption expenditure by 0.194.

### **The impacts of microfinance on health care**

Health is a critical driver for growth in developing countries. Microfinance can influence health outcomes indirectly by improving people's economic status, or directly by offering health related service. Many studies conducted on the impacts of microfinance on health care and found that positive impacts of microfinance. In similar way, Leather and Dunford, (2010) found that microfinance is related with better maternal health and nutrition practice in Bolivia and Ghana.

To identify the impacts of microfinance institutions on the health care, the respondent's responsiveness for health care which is reflected by in ability to spend on medication or access to health care facilities was entered into propensity score matching. Table 4.17 shows the summary of household responsiveness for health care that sorted by microfinance intervention.

**Table 4.17 Summary of household responsiveness for health care sorted by MFIs intervention**

<b>Treat=0</b>					
<b>Variable</b>	<b>Obs</b>	<b>Mean</b>	<b>Standard deviation</b>	<b>Minimum</b>	<b>Maximum</b>
Health care	249	0.2972	0.4579	0	1
Age	249	30.4578	5.6489	18	55
Gender	249	0.5422	0.4992	0	1
Literacy	249	0.3775	0.4857	0	1
Marriage	249	0.7148	0.4523	0	1
No of Dependent	249	6.5823	2.5782	2	12
<b>Treat=1</b>					
<b>Variable</b>	<b>Obs</b>	<b>Mean</b>	<b>Standard deviation</b>	<b>Minimum</b>	<b>Maximum</b>
Health care	133	0.7067	0.4569	0	1
Age	133	32.2331	3.9769	20	46
Gender	133	0.5263	0.5011	0	1
Literacy	133	0.7518	0.4335	0	1
Marriage	133	0.8646	0.3434	0	1
No. of dependents	133	4.9172	2.0190	2	9

Table 4.17 shows that, the mean of client’s responsiveness for health care was higher by 0.4011 than non-clients. This result indicate that microfinance have positive impact on the household responsiveness for health care. That means, it improves the ability to spend for health care in increasing their income. Different matching method was used to examine the impact of microfinance on the respondent’s responsiveness for health care and the result was summarized in table 4.18

**Table 4.18 The effect of microfinance on health care**

Matching method	Treatment	Control	ATT	Std. Error	T
Nearest Neighbor	133	83	0.271	0.92	2.947
Stratification	130	208	0.273	0.066	4.144
Kernel	130	205	0.275	0.039	7.06
Radius	133	205	0.330	0.045	7.282

This finding showed significant difference of health care status between participant(beneficiary) and non-participant of microfinance as the t-statistics was greater than two for all matching method. The output of the analysis still did confirm the positive impact of microfinance on household care status, although the ration of participants’ household health care was higher by 0.273 than those who did not participate in microfinance using stratification matching method. The result generated in all approach showed the positive and significant impact of micro finance on household health care status.

### **The impacts of MFIs on education**

Educations are among the areas in which microfinance is expected to have positive impacts. In developing countries increased expenditure on education is necessary components of an effective anti-poverty as it enhances people’s productivity in the informal rural economy. Education is regarded as a primary driver of economic growth as well as an effective way out of poverty (Cheng.F.2013). Thus many studies have been conducted assessing the impacts of microfinance on education. According to Littlefied (2003), the first thing that poor people do when they

receive loans from microfinance is to invest in their children's education and he found that children tend to stay longer in schools when their family receives loans from microfinance institutions. Khandker (2009) similarly found in Bangladesh that microfinance program increase schooling and the contraceptive behavior of families. To examine the impacts of microfinance on education the respondent's perception to education status (trends) of their children was gathered and entered to PSM model and matched using different method of matching. This result was summarized in below Table 4.19

**Table 4.19 Summary of the respondent's educational attainment sorted by microfinance intervention**

<b>Treat=0</b>					
<b>Variable</b>	<b>Obs</b>	<b>Mean</b>	<b>Standard deviation</b>	<b>Minimum</b>	<b>Maximum</b>
Education attainment	249	0.3775	0.4857	0	1
Age	249	30.4578	5.6489	18	55
Gender	249	0.5422	0.4992	0	1
Literacy	249	0.3775	0.4857	0	1
Marriage	249	0.7148	0.4523	0	1
No of Dependent	249	6.5823	2.5782	2	12
<b>Treat=1</b>					
<b>Variable</b>	<b>Obs</b>	<b>Mean</b>	<b>Standard deviation</b>	<b>Minimum</b>	<b>Maximum</b>
Health care	133	0.7518	0.4335	0	1
Age	133	32.2331	3.9769	20	46
Gender	133	0.5263	0.5011	0	1
Literacy	133	0.7518	0.4335	0	1
Marriage	133	0.8646	0.3434	0	1
No. of dependents	133	4.9172	2.0190	2	9

From table 4.19 we conclude that the ratio of children's school enrolment of the participant household is higher by 0.374 than those non-participant households. The impact of MFIs on education was summarized below by using different matching method.

**Table 4.20 The impacts of Microfinance on Educational attainment.**

<b>Matching method</b>	<b>Treatment</b>	<b>Control</b>	<b>ATT</b>	<b>Std. Error</b>	<b>T</b>
Nearest Neighbor	133	109	0.125	0.031	3.981
Stratification	133	223	0.149	0.037	3.978
Kernel	133	223	0.140	0.038	3.726
Radius	133	223	0.235	0.073	3.214

The finding of the analysis showed a significance difference of educational attainment between the beneficiary of microfinance and non-beneficiary as in all method of matching shows positive impacts on educational attainments and the t-Statistic is greater than two. Stratification method, when assessed the school enrolment of the respondents, the ratio of children's school enrolment of microfinance beneficiaries was higher by 0.149 than those non-participate in microfinance institutions. The result generated by all types of matching method was statistically Significant and this indicate that microfinance have positive impact on children's school enrolment which confirm the descriptive result.

#### **The impacts of microfinance on housing condition**

Housing is an important or basic asset for households. The assumption is that household may have better housing after getting loan from microfinance. If households have access to capital through loans, they will invest it in income generating activities and this increase their income which enable them to have better housing or enable them to improve their housing conditions. In order to understand the impacts of microfinance on household hosing condition, the respondent's perception of their housing condition was asked and the impact was examined using PSM, model. To do these different types of matching method was applied and the result was summarized in the Table 4.21

**Table 4.21 The impacts of Microfinance on Housing condition**

Matching method	Treatment	Control	ATT	Std. Error	t
Nearest Neighbor	133	93	0.188	0.058	3.231
Stratification	133	235	0.181	0.072	2.528
Kernel	133	235	0.190	0.058	3.275
Radius	133	235	0.290	0.065	4.454

This finding, reveal that, there is a significant difference of housing conditions between the microfinance clients and non-participant respondents which indicate that microfinance in the study woreda have positive impact on the improving housing condition of its clients as compared with non-participants. The result generated by Stratification matching method also indicate that, the ratio of household having improved house were higher by 0.181 than non-clients. Dereje Getachew, (2017) found that the loans from microfinance have positive effect on the household housing condition.

### **The impacts of microfinance on employment generation**

The other, immediate impacts of micro financing scheme are on employment generation. In order to understand these trends of employment opportunities and the type of business activities that the respondents engaged in were collected. Farming and petty trade are the most types of business activities that most the respondent participates in and others include livestock production, local food and drink preparation and retail trading. Since most of the respondents were rural poor, agriculture is the basic types of business activities for most of the respondents. Poor household participant in microfinance programs in the expectation that borrowing increase their income and sustain self-employment. It is expected that enterprise can benefit from microfinance program by improving access to their capital, which helps them to expand their business and this can increase production, profit and create job opportunities to their household and community. To determine the impacts of microfinance on employment generation, PSM,

model was used and different method of matching method was used. The results of this findings were shown in the Table 4:22

**Table 4.22 The impacts of Microfinance on Employment generation**

Matching method	Treatment	Control	ATT	Std. Error	t
Nearest Neighbor	133	93	0.188	0.058	3.231
Stratification	133	235	0.181	0.072	2.528
Kernel	133	235	0.190	0.058	3.275
Radius	133	235	0.290	0.065	4.454

The difference in employment opportunities between microfinance client respondents and non-participant household was significant since the t-statistic was greater than two as it was revealed by all matching approach and the result is positive and significant in all case. Furthermore, participant household are more employed by a degree of 0.181 as it was generated by stratification matching approach. The intervention of microfinance contributed to improved employment through increasing income and sustains self-employment. Similar study conducted by Daba Moti, (2003) also found that microfinance has positive impact on employment generation and it plays an important role in reducing poverty. The study conducted by Dereje Getachew, (2017) also indicate that microfinance scheme have positive impact on employment generation for its clients.

### **4.3 Perception of sample clients**

Perceptions of clients with microfinance scheme in the sample branch were also collected to show the direction of change about the program. The perceptions are in the relating with benefits received from the program, their satisfaction and dissatisfaction about the program and recommendations.

From major benefits of the clients, the perception of clients regarding the benefits they receive from the program were collected on income increase, house improvement, household diet, access

to education, access to medical care, employment opportunities and Saving habits. In line with this the result generated from descriptive and econometric shows that microfinance enabled to improve the livelihood of the clients' respondents compared to the non-clients and this indicate that microfinance of the sample branch enable to improve the household's livelihood in the study area.

Satisfaction/Dissatisfaction of clients about the program was collected using open questions and majority of the clients satisfied with appropriate time of loan disbursement, appropriate time of loan repayment, appropriate interest rate. However, they dissatisfied with training on how to utilize loans which make as the household not diverse the loans to non-income generating activities and helps them to earn profit, loan size and the loan term of one year.

Clients attitude to continue or stay in the program were also collected and majority of the clients gave their opinion to continue in with the program and some of them reported to not continue with the program because of insufficient loan size, conflict among members, and shortage of loan length as the major reasons of not continue with the program.

#### **4.4 Major challenges of Microfinance program**

There are major non-client poor household looking for microfinance service in the stay area and this indicate that Microfinance of the sample branch is at its infant stage requiring expansion of its activities to reach its objectives. Microfinance of Jeldu branch like MFIs in Ethiopia faces the challenges of expanding its operation in order to assure finance service to large number of the poor and it has been countered with the following major problems.

1. **Poor infrastructure:** - Microfinance of the sample branch is focusing on the delivery of financial services to the poor households and areas where there hardly exists means of transportation, Postal service and formal banks. Very poor road network and transport facilities have limited the markets. The absence of such infrastructure makes difficult the delivery of financial services or monitoring or follow up clients in loan utilization in rural areas.

2. **Drought and natural disasters:** The frequent drought in the region affects loan repayments. Actually the registered arrears of microfinance are mainly the result of the drought.

Although the microfinance institutions in the sample study has the objective to reach the rural poor, the regulatory frame work and limited research affect financial product development in various ways. The major problems are described as follows.

- a) **Lending methodology:** The lending methodology is a group based and peer pressure. The group based criteria affect the development of new financial products, which need individual instead of group collateral. Considering center size, some people who are looking for credit from the program have faced a problem of center criteria. The criterion needs 8 to 10 groups' members. Since the rural poor are sparsely settled over the area, it is difficult to form a center where the members may not trust and follow up each other.
- b) **Loan term:** The loan term as per the regulation is maximum of one year, this affects the business activities which need more than one year.
- c) **Insufficient loan size:** The average loan size of 6000 loan ceiling the development of financial products with the loan size needed above the ceiling. The insufficiency of loan size makes the borrowers to divert the loan from more income generating activities.
- d) **Absence of market research and weak diversification:** The absence of market research and skills for financial product development has undermined the role of marketing. Weak diversification of loan is also considered as one problem in diversifying business activities. Much of microfinance's loan in the sample study goes to agricultural activities, which are based on weather conditions, which cause crop failure and yield reduction.
- e) **High lending interest rate:** The lending interest rate which has been fixed at 12.5% has been unattractive. Some of the clients argued the interest rate as it high. Arguing high interest rate discourages the program participants from continuing with the program

**3. Lack of Sufficient loan able fund:** BG and OCSSCO lack financial resource and argue the attention of donors and other financial resource and therefore it is difficult for microfinance to fulfill the loan demand of the entire region. It is also difficult to meet its loan capital requirements from local commercial sources and saving mobilized and covers all costs from interest charges.

**4. Lack of investment capital:** -This is a problem related with building capacity. These include lack of funds to build office at branch levels, lack of staff training, lack of building computerized management information system and lack of means of transport.

## **CHAPTER FIVE**

### **CONCLUSION AND RECOMMENDATION**

#### **5.1 Conclusions**

Microfinance is being practical all over the world as one of the major strategies being used to reduce poverty through the delivery of financial service such as credit, saving, insurance, training which enable to improve household's livelihood. Currently, provisions of credit and saving mobilization are one of the major strategies to alleviate poverty especially in developing countries such as Ethiopia. To meet this end, OCSSCO and BG microfinance institutions were established and operate in different regions and also in Jeldu woreda.

The objective of this study was to identify the impact of microfinance on household's livelihood. To do this, it tried to examine the impact of the program on socio-economic activities of the households using non-clients as control group and clients as treatment group, which is used in comparison of the change of their living standards of the two groups by using propensity score matching.

The study found out that, program intervention leads to change that is different from that would have happened without the intervention which was summarized as follows

- Microfinance leads to improvement in income as the descriptive result indicate that 94.5% of the clients reported as their average yearly income has been increased and the result generated by Propensity score matching also indicate the significance difference of the house hold average yearly income which means the average yearly income of the clients was higher than non-clients.
- The program intervention enabled to increase the client's consumption expenditure which leads to better household diet and living conditions and the result indicate the consumption expenditures of the beneficiary households in comparison to no-clients (non-beneficiary households).
- The clients responsive to medical care have been increased because of program intervention as the result showed that 95% of the client respondent's trends of responsive toward medical care were increased. The study also found difference in responsiveness of demand for medical care between the two groups.

- Microfinance program improves job opportunities by enabled to create new business or expanding the existing business which leads to increase employment opportunities of the clients. The result generated by PSM also indicate that microfinance have positive impacts on employment opportunities.
- The program has brought and develops the habit of saving among the clients. It extends people who are looking for saving service and enabled them to increase their deposit.
- There is a significance difference of children's school enrolment between clients of microfinance and non-clients which confirm that microfinance have positive impact on children's school enrolment.
- Microfinance improve women decision making in business activity or others activity in household.
- Therefore, all the result obtained through different methods confirm that microfinance of the sample study has improved the household's livelihood and hence H1 hypothesis was accepted and H0 was rejected.

## **5.2 Recommendations**

The findings of this study are important to implicate policies recommendation for the effective expansion of microfinance institution in Jeldu woreda. Hence this study draws the following policy implication to expand microfinance institution in the Jeldu woreda.

- ✓ As microfinance intervention have had positive impact on the client's income, Consumption expenditure, access to education, Medical care, employment generation, Savings and housing conditions strengthening and expanding the existing company in the woreda would be appropriate economic policy.
- ✓ The information obtained during interview indicate as the numbers of non-client respondents are looking for the program service which means microfinance in the woreda is at its infant stage to meet the need of the poor. Shortage of loanable fund is considered as one of the obstacle to reach a large number of people. Therefore, the company has to work hard to reach a large number of poor people over a long term through: -mobilizing savings from the public having clear and accountable owner ship structure and governance, interest rate that enables profitability and leverage equity to access capital market with regional government and NGOs, and looking for donor agents.

- ✓ Savings have been mobilized from clients and non-clients. However, saving mobilize from non-clients is too weak or unsatisfactory. Therefore, the company has to work hard to promote saving habit through offering attractive returns take small deposit, doorstep services, etc. in such a way that company can reach large numbers of poor people looking for credit.
- ✓ The company should be accompanying in providing training to the poor in their business activities including the importance of credit, loan utilization, market situation, and saving mobilization. These help the clients in proper use of loans for intended purposes which could reduce diversion of loan for non-income generating activities and help them to repay their loans which make also the company sustainable.
- ✓ Since most of the business activities of the clients are time sensitive, loan issue at needed time reduce diversion of loan from intended purposes and helps the borrowers to use the loan properly for their intended purpose.
- ✓ It is observed that some of the sample clients diverted their loans to non-intended purpose or non-income generating activities. Therefore, adequate advising and training are required for the clients. Credit the poor without collateral must follow community participatory to follow up each other in loan utilization. Avoid failure to understand the local culture, practices, and client perspective are key to understanding the nature of risk, response to shocks and reduce vulnerability.

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# Appendices

## *Apendex1*

**Addis Ababa University**

**College of Business and Economics**

**Department of Economics**

**Dear respondents,**

This is a questionnaire that intended to assess the impacts of microfinance on poverty reduction in the case of Oromia credit and saving share company (OCSSCO) and BusaGonofa (BG) of Jeldu branch. The information you provide is totally sought for academic purpose and shall be kept strictly confidential. Please feel free to share your comments and experiences regarding the credit you receiving if you were a client from OCSSCO or BG microfinance institutions

Thank you in advance for your corporation.

Types of Respondents-----Kebele-----

### **I. *Background Information***

1. Sex of the respondent

- a) Male
- b) Female

2. Marital status:

- a) Single
- b) Married
- c) Divorced
- d) Widowed

3. Age of the respondents-----years old.

4. Educational back ground (Literacy) of the respondents\_\_\_\_\_ Years

5. What is your household size? \_\_\_\_\_

6. What is the total number of dependents who are school age children or old enough? \_\_\_\_\_

## **II. Information on household income**

1. What is your average yearly income? \_\_\_\_\_

2. What is the trends of your over all income after two or three years?

- a) Significantly increase
- b) increase
- c) Same
- d) Decrease
- e) Significantly decreased

3. What is the trends of your overall consumption expenditure after three or two years?

- a) Increased
- b) Not increase

4. What is the trend(responsiveness) of your demand for medical care?

- a) Increased
- b) Not increased

5. What is your current status for educational service/ your children's school enrollment?

- a) Improved
- b) Not improved

6. What is the trend of your employment opportunities?

- a) Improved (better)
- b) Not improved (worse)

7. What is your housing condition?

- a) Improved
- b) Not Improved

8. Which types of saving you engaged in?

- a) Saving in microfinance
- b) Iqqub

- c) Iddir
- d) Mehaber

9. Who are the decision maker in household head

- a) Husband only
- b) Husband and Wife
- c) Wife only

### **Part III**

9. How many members does your group have?

10. Do you monitor whether a member of your group uses the loan for the intended purposes or not?

11. What is the advantage and disadvantage of group lending?

12. What is your overall opinion (perceptions) about the program?

13. Please suggest if any means of more appropriateness for the program

14. During your participation period, what have been the major constraints in operating your business?

15. Do you think that you will continue in the program?

Please reason out why you stay and leave the program

16. What is the major challenge faced to reach credit for all rural poor looking for microfinance service

**YUUNIVERSIITII ADDIS ABABAA**  
**DIPAARTIMENTII IKOONOMIKSII**  
**SAGANTAA BARUMSA EEBBA BOODAA**

*Gaaffilee hirmaattota waldaaaksiyoonaliqii fi Qusannaoromiyaa fi Buusaagonofaa ta'anii fi hirmaatota kan hin taaneen guutamu*

***Kabajamoodeeb ii kennitootaa,***

Gaaffiin kun kan qophaa'e dhiibbaa waldaan aksiyoonaafi liqii qusannaa oromiyaa akkasumas Buusaa Gonofaa aanaa Jalduu Hiyyummaa hir'isuu irratti qabu qorachhufi. Deebiin isin kennitan iccitiin kan qabatamuu fi dhimma qorannoo kana qofaaaf kan oolu ta'a. Kanaafuu deebiin isin kennitan bu'aa qorannoo kanaaf murteessaa waan ta'eef deebii sirrii fi quubsa ta'e akka nuuf laattan kabajaan isin gaafanna.

Hirmaannaa keessaniif galatoomaa!

Gosadeebiikennee.....(hirmaataayknhirmaataakanhintaane)

***Kutaa Iffaa***

1. Saala: -

a) dhiira

b) dhalaa

2. Haalafuudhaafheerumaa: -

a) Kanhinfuune (hinheerumne)

b) kanfuudhe (heerumte)

c) kan hiike

d) kan jalaa du'e ykn duute

3. Umrii waggaa \_\_\_\_\_

4. Sadarkaa barnootaa waggaan \_\_\_\_\_

5. Baay'inni maatii keessanii meeqa? \_\_\_\_\_

6. Baay'na hirkattoota maatichi qabu \_\_\_\_\_

## ***Kutaa 2ffaa***

1. Galiin ati giddugaleessan waggaatti argattuu meeqa? \_\_\_\_\_
2. Haaligalii isin giddugaleessaan waggaadhaan argattanii akkami?
  - a) haalaan dabaleera
  - b) dabaleera
  - c) jijjiirama hin qabu
  - d) Hir'ateera
  - d) haalaan hir'ateera.
3. Haallibaasii ati wantoota soorataaf oolaniif baaftu akkami?
  - a) Dabaleera
  - b) hin daballe
4. Fedhiin yaala fayyaa fayyadamuuf barbaaduu keessanii akkami?
  - a) Dabaleera
  - b) Hin daballe
5. Haallidaa'immankeessanbarnootahaalaanakkahordofaniiftaasiftanakkami?
  - a) Fooyya'eera
  - b) Hin fooyyofne
6. Haalli caarraa hojii argachuu keessanii akkami?
  - a) Fooyya'eera
  - b) Hin fooyyofne
7. Haalli mana jireenya keessanii akkami?
  - a) Fooyya'eera
  - b) Hin fooyyofne
8. Dhaabbataqusannoowwankanneenkeessaakamirrattihirmaaattu?
  - a) Waldaa qusannoo fi liqii
  - b) Iqubii
  - c) Iddirii
  - d) Mahaabara
9. Maatii keessan keessatti dhimmoota adda addaaf murtoo kan laatu eenyu?
  - a) Abbaa manaa qofa
  - b) Abbaa manaa fi haadha mana
  - c) Haadha manaa qofa

### ***Kutaa 3ffaa***

1. Gurmiin keessan namoota meeqa qaba? -----
2. Gurmii keessan keessatti liqii fudhattan kaayyoo yaadameef oolchuu fi oolchuu dhabuu miseensa keessanii ni hordoftuu? Yoo kan hin hordofne ta'e maaliifi?
3. Faayidaafimiidhaangurmiidhaanliqeeffachuumaali?
4. Yaadni walii galatti ati dhaabatichaaf qabdu maali?  
(jabinaafi dadhabina dabalatee)
5. Hirmaannaa keessan keessatti wantootni hojii haaraa akka hin eegalle ykn kan eegaltan akka hin babal'ifanneef gufuu isinitti ta'an maali?
6. Sagantichakeessattihirmaachuukeessanittifuftumooaddaankutuubarbaaddu?
7. Sababii dhiiftanii ykn addaan kuttaniif nuuf ibsaa

#### ***➤ Gaaffii dhaabbatichaaf dhiyaate***

9. Wantootnigurguddoonnamootatajaajilabarbaadhanundaaftajaajilagahaaakkahinkennineefik aayyookeessangalmaanakkahingeenyeegufuuisintita'anmaalfa'i?

## Appendix 2

### Estimated propensity score using probit model

**Table 1**

Probit regression	Number of obs	=	382
	LR chi2(5)	=	60.18
	Prob > chi2	=	0.0000
Log likelihood = -216.7964	Pseudo R2	=	0.1219

Treat	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
age	-.0643302	.0235894	-2.73	0.006	-.1105645 - .0180959
gender	-.000193	.1403297	-0.00	0.999	-.275234 .2748481
literacy	.7432478	.2325331	3.20	0.001	.2874913 1.199004
marr	.2802	.1998559	1.40	0.161	-.1115103 .6719103
households~e	-.1412479	.0602331	-2.35	0.019	-.2593027 -.0231931
_cons	1.803185	.9940804	1.81	0.070	-.1451769 3.751547

**Table 2**

### Estimated propensity score in region of common support

Description of the estimated propensity score  
in region of common support

#### Estimated propensity score

Percentiles	Smallest		
1%	.106271	.1021341	
5%	.1269715	.1021341	
10%	.1381015	.1043954	Obs 368
25%	.1794652	.106271	Sum of Wgt. 368
50%	.3759755		Mean .3585236
		Largest	Std. Dev. .1803698
75%	.5295827	.6690615	
90%	.5852991	.6818872	Variance .0325333
95%	.6053469	.6818872	Skewness .0317863
99%	.6690615	.700113	Kurtosis 1.367961

**Table 3***Inferior bound, number of participants and non-participants for each block*

The balancing property is satisfied

This table shows the inferior bound, the number of treated and the number of controls for each block

Inferior of block of pscore	TREAT		Total
	0	1	
.1021341	97	19	116
.2	53	19	72
.4	35	22	57
.5	39	60	99
.6	11	13	24
Total	235	133	368

**Table 4** Nearest matching method result

n. treat.	n. contr.	ATT	Std. Err.	t
133	93	257.907	170.605	1.512

Note: the numbers of treated and controls refer to actual nearest neighbour matches

**Table 5** Stratification matching method result on identifying the impacts of MFIs on household average yearly income.

n. treat.	n. contr.	ATT	Std. Err.	t
133	235	838.756	322.596	2.600

Table 6 The result of estimated radius matching method in examine the impacts of MFIs on average yearly income of household.

n. treat.	n. contr.	ATT	Std. Err.	t
133	235	1407.163	206.394	6.818

Note: the numbers of treated and controls refer to actual matches within radius

Table 7 The result of estimated kernel matching method to see the impacts of micro finance on household income

n. treat.	n. contr.	ATT	Std. Err.	t
133	235	864.581	285.944	3.024