IMPACT OF MICROFINANCE ON WOMEN'S ECONOMIC EMPOWERMENT: A CASE STUDY ON OMO MICROFINANCE IN GIMBO WOREDA, SOUTH NATIONS NATIONALITIES AND PEOPLES REGION, ETHIOPIA

A thesis Submitted to the school of Graduate Studies of Jimma University in Partial Fulfillment for the Requirements of the Degree of Master of Science (MSc) in Economics (Economic Policy Analysis)

BY:

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JIMMA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

MSC PROGRAM

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CERTIFICATION

This is to certify officially state that the thesis entitled " The Impact Of Microfinance On Women's Economic Empowerment: A case study on Omo Microfinance institution in Gimbo woreda, Kaffa Zone, SNNPR, Ethiopia" is the original work carried out by Tesfaye Melaku Merra under our guidance and supervision.

Therefore, we hereby declare that no part of this thesis has been submitted to any other university or institution for the award of any degree or diploma.

Main Adviser's Name	*Signature*	*Date*
_____	_____	_____
Co-Adviser's Name	*Signature*	*Date*
_____	_____	_____

DECLARATION

I, Tesfaye Melaku, here declare that this research entitled “The Impact of Microfinance on Women’s Economic Empowerment: A case study on Omo Microfinance institution in Gimbo woreda, Kaffa Zone, SNNPR, Ethiopia” is submitted by me in partial fulfillment for the requirements Msc in Economics (Economic policy analysis) at Jimma university. It is my original work and has been cried out by me under the guidance and supervision of Dr. Jemal Abafita and Mr. Esubalew Ayalew. All sources and materials in this thesis have been duly acknowledged.

Researchers Name	Signature	Date
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Board of Examination Thesis

We, the under signed, members of the board of examiners read this thesis " The Impact of Microfinance on Women's Economic Empowerment: A case study on Omo Microfinance institution in Gimbo woreda, Kaffa Zone, SNNPR, Ethiopia and evaluated the final open defense by Tesfaye Melaku Merra. We examined the candidate and then we certify that it is suitable submission for the reward of Msc Degree in Economics (economic policy analysis).

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ABSTRACT

In a subsistence agriculture and low income developing countries, microfinance provision to rural areas is taken as a mechanism to reduce poverty and to empower women economically. MFI have made important contributions to poor people particularly to women, by providing a financial service to those who are excluded from the formal financial sector. The study aims to assess the impact of microfinance on women economic empowerment with a case study of Omo Microfinance Institution in Gimbo woreda. By using multi-stage sampling method, the primary data was collected from a total of 200 rural women of which 115 of them are non-clients of Omo Microfinance Institution, which are used as control group. The control groups are future clients that are very similar to clients in their overall characteristics. The empirical analysis of this research was carried out both by descriptive statistics and regression analysis. The regression analysis part was used propensity score matching method of analysis.

The estimated logistic regression result depict that women's involvement in major decision making is significantly affected by age, women's spouse level of education, number of family size, head of the house hold, being member of other MFI and amount of initial wealth. Women's level of education, marital status and ecology were variables that are insignificant in affecting women's economic empowerment. The propensity score matching estimation result reveals that OMFI has significant effect in increasing average yearly household income and personal cash saving of its client but it is insignificant in affecting positively women's access and ownership and control over assets. Thus, the program intervention has been resulted a positive impact on women's economic empowerment in the study area. Therefore, it is recommended that credit provision of OMFI should give priority in asset formation, access to resources, acquire asset and able to control over it.

Key terms**: **Microfinance, Empowerment and Propensity Score Matching

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ACRONYMS

ADB	Asian Development Bank
ACSI	Amhara Credit and Saving Institution
ATE	Average Treatment Effect
ATT	Average Treatment Effect on Treated
CBE	Commercial Bank of Ethiopia
CEO	Chief Executive Officer
CIDA	Canadian International Development Agency
CSOs	Civil Society Organizations
DECSI	Dedebit Credit and Saving Institution
ETB	Ethiopian Birr
HMFI	Harari Microfinance Institution
KZFaED	Kaffa Zone Finance and Economic Development
LDCs	Least Developing Counties
MDS	Microfinance Development Strategy
MFI	Microfinance Institutions
N.D	No Date
NGOs	Non-governmental Organizations
OMFI	Omo Microfinance Institution
PSM	Propensity Score Matching
REST	Relief Society of Tigray
SEPDA	Southern Ethiopia Peoples Development Association
SNNPR	South Nations Nationalities and Peoples Regional Government
USAID	United State Agency for International Development
UNDP	United Nations Development Program
VIF	Variance Inflation Factor
WB	World Bank

CHAPTER ONE

1. INTRODUCTION

1.1. Background of the Study

Gender discrimination, marginalization, unequal treatment and unequal access to resources between women and men hinder women's progress. Due to these inequalities women are still vulnerable to poverty and they are marginalized from different economic, social and political activities (Batliwal, 1994). Gender equality is a means to promote growth, reduce poverty and particularly to empower women (World Bank, 2001). In subsistence agriculture and low income developing countries, microfinance provision to rural areas is taken as a mechanism to handle poverty and to empower women's economically (Gebrat, 2013).

The term empowerment stands for a broad range of concepts and has different meaning in different contexts (Baden, 1997; Malhotra et al., 2002). Different authors define the word empowerment according to the need of their work in different ways. Empowerment is the enhancement of assets and capabilities of diverse individuals and groups to engage, influence and hold accountable to the institutions which affect them (Bennett, 2002). Women's empowerment is a means to promote growth, reduce poverty and promote better governance (World Bank, 2001).

Empowerment is not a top-down strategy rather it is a bottom-up process. In most cases, the meaning of empowerment has three dimensions that are economic empowerment, social empowerment and political empowerment but sometimes it includes cultural empowerment. Since the focus of this study is on economic aspect, let us define what economic empowerment means (Mayoux. 2005).

Particularly, economic empowerment is defined as women's access to savings and credit which gives them a greater economic role in decision making through their decision about savings and credit (Mayoux. 2005). Economic empowerment looks for guarantee of skills, capabilities, resources and access to secure and sustainable incomes and livelihoods as well as access to assets and resources (Luttrell, 2009).

Economic empowerment of women with microfinance programmes, focusing and claiming to empower women, have become popular among donors and NGOs in recent years. The shift in development policies from the emphasis on women's active role in production as a means to more well-organized development, to the approach of women's empowerment through women organizing for greater self sufficiency, has also meant a change in policies for the improvement of women's economic role (Baden, 1997).

The birth of microfinance was in Bangladesh in 1970's. Muhammad Yunus shocked by the appalling poverty and human suffering in Bangladesh and began to think about microcredit to improve the situation (Bateman, 2010).

Microfinance is a financial service which is provided to those who are excluded from the formal financial sector. Microfinance can be categorized as formal, semi-formal, and informal (Elisabeth, 2013). Microfinance is becoming an instrument for the empowerment of the rural poor households particularly women in a way that is self-sustaining (Gebrat, 2013).

According to Bateman (2010), the importance of microfinance to the poor is for the following reasons. Microfinance serves as social solidarity in poor communities, gives everyone the opportunity to escape from poverty if they want, it saves the poor from traditional money lenders, and it is important in helping women empowerment and helps the poor in terms of consumption smoothing.

Today, in many developing countries microfinance plays crucial role in alleviating poverty. It is a real development instrument for the improvement of the economic life of the poor, particularly women. Ethiopia is one of the poorest countries in the world and to address this challenge, the government is implementing different developmental programs like licensing the formal credit sector to reach the rural poor at the grass root level. Providing financial services to the poor particularly for women is central to economic empowerment.

The informal financial system is one of the most important sources of finance for poor households in rural parts of Ethiopia due to limited access to financial institutions. Under the informal financial scheme the main sources of loans are friends, relatives

and moneylenders (Al-Bagdadi and Bruntrup, 2002). The rapid growing microfinance industry in Ethiopia is a recent phenomenon (Ebisa et al., 2002).

The establishment of formal credit sector in Ethiopia dates back to 1995. Particularly, the licensing and supervision of microfinance institution proclamation of the government encouraged the spread of microfinance institutions in rural areas (Getaneh, 2005). The microfinance industry in Ethiopia has shown a significant qualitative and quantitative growth since its establishment. The formal base has been laid by the issuance of proclamation No. 40/96 which established the licensing and supervision of MFI as share companies in accordance with the commercial code of Ethiopia (Al-Bagdadi and Bruntrup, 2002).

Microfinance contributes to poverty reduction through increasing income, accumulations of capitals, and diversification of income sources for investment (Tesfay, 2003). In Ethiopia studies show that, microfinance programs benefited the poor in terms of increased income, employment creation, changing the saving habits of households and their expenditure pattern drastically increased on different goods and services (Haymanot, 22007; Balamurugan, 2012; Gebrat, 2013). As client of microfinance institutions, women's income was increased proportionally as men income increased (Gebru and Paul, 2011).

Omo MFI is one of the MFI established in Ethiopia in the South Nations Nationalities and Peoples Region (SNNPR) following the proclamation No. 40/1996 in 1997, which is intended to fill the shortage of formal financial institutions by meeting the needs of the poor households and small scale borrowers in income generating schemes. OMFI is operating in all zones and woredas of the region. According to Balamurugan (2012), OMFI serves more than 872,000 loan and saving clients.

Agriculture in the study area is characterized by rain-fed and subsistence nature which serve as main source livelihood. Though, OMFI is the only financial institution in the study area, women clients of OMFI in Gimbo woreda are too few in number compared with the total population of the woreda because of its limited outreach in all kebeles. Therefore, this study is intended to identify and analyze the impact of microfinance on women's economic empowerment in Gimbo Woreda of South Nations Nationalities and Peoples Region.

1.2. Statement of the Problem

In the world as well as in Ethiopia women constitute more than fifty percent of the total population. But these parts of the population have been discriminated and marginalized from different activities specifically from economic aspects in the past with no appropriate earnings. This action makes women poor and dependent on their husbands or parents in the family. About 1.3 billion people who live below absolute poverty line and, seventy percent (70%) of them are women (UNDP, 1995 as cited in Balamurugan, 2012).

Empowering women are vital, both to recognize the right of women and to attain developmental objectives like economic growth, poverty reduction, health, education, welfare and the like (Golla et al., 2011). Women empowerment takes three dimensions. These are economic, social, and political empowerment but it encompasses beyond this dimension like cultural empowerment (Luttrell, 2009).

Women's work in most parts of the world, mainly in developing countries, but not resulted in the same level of economic empowerment as that of men (CIDA, n.d). Following the collapse of derge regime, the EPRDF government adopted different policies to address the poor in general and to empower women in particular through affirmative action. Organizations like NGOs and CSOs on the other hand tried to play their role in solving these problems of discrimination and marginalization of women. Microfinance is one tool to empower women, though it is not given emphasis in the past. However, currently governments and various organizations have began to recognize microfinance as an important intervention in empowering the poor particularly women.

In developing countries, traditional beliefs and other obstructions such as discrimination and unequal treatment, heavy domestic workload, high rate of illiteracy among women, have restricted their roles in the household decision making and limited women's involvement in the economy and their access to resources. Unless women are empowered economically, they would be unable to play significant role in economic development. Providing credit which is easily accessible to them is one means of empowering women to run their business (Ablorh, 2011).

The impact of microfinance on women empowerment is still debatable. Though microfinance plays a great role, there is no agreement that microfinance programs have positive effects on economic status of women (Aghion and Morduch, 2005). Some empirical findings show that microfinance has positive impact on women's economic empowerment while others argue that microfinance has negative impact on women's empowerment.

Optimist advocators of microfinance argue that microfinance has positive impact in empowering women through an increase in household consumption expenditure, ability to make small and large purchase, control over assets, involvement in family decision making, mobility and freedom from family domination are listed as channels through which women could be empowered (Hashemi et al., 1996; Schuler et al., 1996; Pitt and Khandker, 1997; Kato and Kratzer, 2013; Awojobi 2014). Similarly, studies in Ethiopia depict that microfinance has significant impact on women's empowerment (Tesfay, 2003; Haymanot, 2007; Balamurugan, 2012; Ahmed, 2013).

On the contrary, other studies on microfinance show that microfinance has insignificant effect on women empowerment. They argue that women have little or no control over their loan and the loan is controlled by male relatives, a number of borrowers were to lose their property for repaying the loan. Thus opponents of microfinance argue that microfinance has negative impact on women empowerment (Vengroff and Creevey, 1994; Goetz and Gupta, 1996; ILO, 1998; Kulkami, 2011).

According to Tesfay (2003), in Ethiopia microfinance services have limited impact on entrepreneurial development, microenterprise sustaining and profitability. A study conducted by Yimer (2011) on rural microfinance and women empowerment indicates that one third of the respondents included in the study did not perceive meaning full changes in their life and the impact of microfinance is not same and alike to all matured women clients.

Thus, there is no uniformity among scholars and researchers on the impact of microfinance on women economic empowerment. Therefore, this study is conducted to fill the existing literature gaps where there are inconclusive findings by including additional variables on previous studies. On the other hand, the researcher couldn't find any research undertaken on the research question at hand in the study area. So,

the finding of this study will help to visualize the impact of microfinance on women economic empowerment in the study area.

1.3. Objective of the Study

1.3.1. General Objective

The general objective of this study is to analyze the economic impact of Omo microfinance institution in empowering women.

1.3.2. Specific objectives

The specific objectives of this study are:

- To assess the impact of microfinance on women's access to resources and their control over assets.
- To investigate the contribution of microfinance on women's participation in household decision making.
- To examine the effects of microfinance on women's income.
- To examine the impact of microfinance on the saving habits of women.

1.4. Significance of the Study

Women as an essential part of the society and have immense potential, their participation and decision making on socio-economic issues in the past was very low due to different reasons. Economically empowering women is crucial. In the study area as well as in the western parts of the region, the researcher couldn't find any research undertaken regarding the impact of microfinance in empowering women. So this study may serve as a reference for further researchers who want to investigate in this regard. Furthermore, this study serves for concerned bodies as an input for further policy issues in the area. Finally, this paper comes with findings in the study area that depict the impact of microfinance on women economic empowerment.

1.5. Scope and Limitation of the Study

Regarding geographical scope, the study was conducted in SNNPR, Gimbo Woreda sub-branch OMFI. Whereas the subject matter of the scope is limited to the impact of Omo microfinance on women's economic empowerment aspect.

The study focuses only on the impact of Omo microfinance on rural women's economic empowerment aspect. Therefore, the study does not assess the impact on urban women's clients and does not include other dimensions of women empowerment like social, political and cultural empowerment. On the other hand, few responsive rates of respondents due to different reasons limited this study.

1.6. Organization

This study was organized as follows. The first chapter describes about background of the study followed by a review of concepts and literature of microfinance and women's empowerment. The third chapter describes the data and methodology part. The last two chapters that are, fourth and fifth chapters are devoted to the analysis of the data and conclusion and recommendations respectively.

CHAPTER TWO

2. LITERATURE REVIEW

2.1. Theoretical Literature Review

2.1.1. Definition and Scope of Microfinance

According to Asian Development Bank (ADB), microfinance is the provision of a broad range of finance such as deposits, loan payment services, money transfers, and insurance to poor and low-income households and their microenterprises (Binh, 2000; ADB, 2000). Microfinance is the provision of financial services to low-income clients, including self-employed. They give broad base function and termed as developmental tool (Ledgerwood, 1999). Microfinance is being recognized as one of the development strategy for the poor (Otero, 1999).

“Microfinance refers to the provision of formal services to poor and low-income peoples, as well as for others systematically excluded from the financial system. It embraces not only a range of credit products but also savings, money transfers and insurance (WB, 2012).

Microfinance is not simply banking, rather it is a multi-dimensional development instrument in which different activities usually engage such as small loans, informal appraisal of borrowers and investments, collateral substitutes, such as group guarantees or compulsory savings, access to repeat and larger loans based on repayment performance, streamlined loan disbursement and monitoring, and secure saving products (Ledgerwood, 1999). Cornford differentiates the meaning between microfinance and microcredit as microfinance is the provision of a broad range financial service to low- income microenterprises and households. The financial service range includes savings and loans while other products include insurance, leasing, and money transfers. On the other hand, microcredit emphasizes the provision of credit services to low-income clients, usually in the form of small loans for microenterprise and income generating activities (Cornford, 2002).

Microfinance covers many varieties of institutional arrangements and approaches. They range from small self-helping groups with a handful of members to huge

organizations that have nationwide coverage and millions of clients (McGuire and Conroy, 2010). MFIs can be non-governmental organizations (NGOs), savings and loan cooperatives, credit unions, government banks, commercial banks, or non- bank financial institutions and clients of microfinance are characteristically self-employed, low-income entrepreneurs in both urban and rural areas. Traders, street vendors, small farmers, service providers, and artisans and small producers, are those normal clients of MFIs. These clients are poor but they are not poorest of the poor (Cornford, 2002; McGuire and Conroy, 2010).

2.1.2. Conceptualizing Women's Empowerment

Empowering women's are vital, both to recognize the right of women and to attain developmental objectives like economic growth, poverty reduction, health, education and welfare and the like (Golla et al., 2011). The term empowerment has many definitions in different socio-cultural perspectives, and does not interpret easily into all languages (Narayan, 2002).

> *'A woman is economically empowered when she has both the ability to succeed and advance economically and the power to make and act on economic decisions'…(Golla et al, p: 4).*

There is no consensus how empowerment is viewed as outcome or process, how power operates, strategies for inclusion, its implication, approaches and definition. In most literature empowerment takes three dimensions that are economic, social and political empowerment but it encompass beyond this dimension like cultural empowerment. But for the sake of this study, it focuses on economic empowerment aspect only. According to Luttrell (2009) economic empowerment is defined as an economic empowerment that looks for guarantee of different skills, capabilities, resources, and access to assets and resources. Regarding types of power relation, it can be classified as power over (ability to influence), power to (organize and change existing hierarchies), power with (increased power from collective action), and power from within (increased individual consciousness). Empowerment is associated with the gender and development approach and challenging the way in which the inclusion of women in the development process can increase their work burden (Luttrell, 2009).

On the other hand, meaning of empowerment refers to generally to the expansion of freedom of choice and action. This means one can decide on what she wants to do freely and act on it. The need of empowerment is to achieve quality of life and human dignity, good governance, pro-poor growth, project efficiency and enhanced service delivery. Empowerment, particularly, empowerment of poor people (women), remains in almost all developing countries is an ideal rather than a realism in which poor people's experiences are pervaded by a common sense of powerlessness and voice lessens (Narayan, 2002).

Various dimension indictors of empowerment includes economic, education, governance, health and media empowerment. Among others economic empowerment indicators includes market participation (labor force participation or composition in the market) measured by accuracy of productivity and equity (owner ship of land and other assets) (Chung et al., 2013). According to UNDP (2011), gender empowerment is measured through political representation indicated by female and male shares of parliamentary seats, representation in senior positions in the economy depicted by female and male shares in office and managerial position and power over economic resources indicated by professional and technical position. Poverty is one of the main indicators of women disempowerment. As their poverty reduces women empowerment increases in various decisions making.

Malhotra et al., (2002) differentiates ordinary/common dimensions of empowerment and its operationalization in to three areas. At household level economic empowerment is measured through women's control over resources and their role to family support and at community level asset and land ownership, access to credit, access to markets and representation in local trade associations are indicators/measurements of women's economic empowerment. In the broader sense women economic empowerment is measured through their representation in high paying works, women CEO's and representation of their economic interest in macroeconomic policies and strategies of local and federal budgets (Malhotra et al., 2002).

2.1.3. Microfinance and Women Economic Empowerment

In the past women's having huge talent and potential have been discriminated and marginalized from different activities, particularly from economic aspects which is responsible for social exclusion. Empowering women has many roles and seeks to meet strategic gender needs through participation on resources and development issues that concern the life of women. Most women particularly, those who are poor, are more vulnerable because of uneven distribution of resources and are unable to meet the basic requirements that worsen the unmet gender needs. Thus, lack of entitlement arising from inadequate assets and capabilities, makes women so poor and unable for the fulfillment of basic livelihood needs. The consequence is social and economic exclusion of a certain class and category of people and their consequent is disempowerment. That is why the idea of empowerment has influenced development practitioners, development agencies (both governments and NGOs), theoreticians and governments and donor agencies in the last decade (Padma and Getachew, 2004).

Microfinance and women empowerment interface at both intrinsic and extrinsic levels in which, the extrinsic level of empowerment refers to gaining greater access to and control over financial and physical assets, while the intrinsic level involves changes within, such as the rise in self-reliance, confidence, motivation and positive hope for the future (Yimer, 2011). Microfinance enables to mobilize and organize the poor and women at grass roots level and offer hitherto denied access for critical assets to them (Amin et al., 1998).

To achieve gender justice in the microfinance sector there is still a long way to go. In spite of increased access to small loans and savings, women's access to more advanced products is still unequal in many countries particularly in the LDCs. Evidences on membership of clients depict very little about the quality of the services accessed by women compared with men. Generally, women's loan is lower than their spouse or men, which constrains them to run good business that requires large loan. Most of their loan does not buy assets like land, house, machinery and equipment. The fact is that, women are the majority of savers, but men receive the majority of loans (Mayoux, 2010.

Availability of credit may also reduce willingness of customers and relatives to give interest-free loans and/or access to more charitable forms of credit from traders.

Moreover, a recent study has found that women's access decreases compared to that of men as NGOs change to formal institutions, become more profitable and mature (Mayoux, 2010).

The logic of microfinance's potential for empowerment is similar to the economic model of empowerment; microfinance makes women economically independent by putting capital and financial resources in their hands. Economic independence results in higher bargaining power for women in their households and communities, and subsequently results in higher prestige and self-esteem. Here the functions are synchronous with its potential to empower (Kulkami, 2011).

In some cases, microfinance may even disempower women. The extent, to which women are able to benefit from simple financial services which do not take gender clearly into consideration, depends largely on context and individuals condition. Primarily, there is the subject of financial indicators of access: women's program membership, numbers and size of loans and repayment data cannot be used as indicators of real access or proxy indicators of their empowerment. Registration for loans in women's names does not necessarily indicate even participation in decisions about loan application, as men may simply negotiate loans with male program experts as an easier means of getting access to credit.

Secondly, the contribution of financial services to increasing incomes varies widely. Experiences from South Asia and Latin America show that, most women use their loans for their husband's activities, either as a rational investment choice where their own economic activities are limited or because their husbands claim the money as their right due to gender inequality. Finally, women's better contribution to household income does not ensure that women necessarily benefit or that there is any challenge to gender inequalities within the household though women seek to increase their power within joint decision-making process rather than seek independent control over income, neither of these outcomes can be assumed to occur (Mayoux, 2010).

2.1.4. Overview of Microfinance Sector in Ethiopia

Most of the population in Ethiopia resides in rural area under widespread poverty. A program like microcredit makes the government to reach these marginalized populations at the grassroots level. The history of microfinance in Ethiopia goes to the

mid of 1990's. As a recent phenomenon, microfinance service in Ethiopia was introduced for the first time in 1994 as an experiment when the relief society of Tigray (REST) attempted to rehabilitate drought and war affected people through rural credit scheme in Tigray region (Yohannes, 2006).

Regarding owner ship, financial foreign investment in Ethiopia is prohibited by law. Particularly, proclamation No. 84/1994 precludes a foreign national from undertaking banking business in Ethiopia, and no person is permitted to own more than twenty percent (20%) of a banking company's shares. On the basis of this proclamation, MFIs in Ethiopia should be established as share companies, the capital thereof owned fully by Ethiopian nationals and/or organizations wholly owned and registered under the laws with a head office in Ethiopia (Getaneh, 2005). The microfinance sector in Ethiopia is characterize by its rapid escalation, wide geographic coverage and increasing numbers of clients, large shares of government, focus on rural households, promoting credit and saving products (Ebisa et al., et al., 2012).

Recently microfinance institutions in Ethiopia are increasing rapidly to provide credit for the poor with various technical assistances. The number of microfinance in Ethiopia reached 33 with total capital and asset 3.8 billion and 13.3 billion birr respectively. Of the existing microfinance institution seventy five percent of the total capital in the industry is occupied by Amhara credit and saving institution (ACSI), Dedebit credit and saving institution (DCSI), Oromiya and Omo credit and saving institutions. In Ethiopia, out of the existing microfinance institutions fifty percent of the MFI are operating in Addis Ababa (Gashaw, 2014).

2.1.5. Overview of Omo Microfinance Institution (OMFI)

OMO microfinance institution (OMFI) was established in the South Nations Nationalities and Peoples Region (SNNPR), which is intended to fill the shortage of formal institutions by meeting the needs of the poor households and small scale borrowers in income generation schemes. The prime mission of OMFI is improving the economic status of low income, productive poor people particularly poor women in the region through increased access to credit and saving services. OMFI exerts its maximum effort to bring about accelerated and sustainable economic development in

the region by the provision of efficient, effective and sustainable financial services to economically active poor people through effective partnership with GO and NGOs.

OMFI is established in 1997 and at the same time registered as a share company as per the requirement of proclamation number 40/1996 which states the provision of licensing and supervision of the business of microfinance institutions. It has been established with five share holders, these are, SNNP regional government, southern Ethiopia peoples development association (SEDA), Wondo Trading Company and two natural persons[1]. OMFI operates for the achievement of government policies and strategies. Currently it is operating in 11 branches and 69 sub-branches which constitute exactly more than half of the region's geographical outreach (Dilayehu, 2014).

The main services provided by MOFI to its clients are credit, savings, pension fund administration, and micro lease. The target groups of clients includes from the agricultural sector, micro and small scale enterprises or business, petty traders, hand craft, and services sectors.

2.2. Empirical Literature

Various studies within the country or across countries may find different results on the impact of microfinance in empowering women. Some studies argue that microfinance has significant role in empowering women while other argues that microfinance has no role in empowering women. Even if microfinance plays a great role, there is no agreement that microfinance programs have positive effects on economic status of women (Aghion and Morduch, 2005).

Microfinance credit provision by Grameen Bank and Bangladesh Rural Advancement Committee (BRAC) argues that microfinance has significant effect in empowering women through increased mobility, economic security, involvement in major decision making, ability to make large purchase, freedom from family domination, political and legal awareness, participation in public protests and political campaigning (Hashemi, et al., 1996). Impact participation by gender three group based credit programs, Grameen Bank, Bangladesh Rural Advancement Committee (BRAC) and

[1] Natural persons are those individual persons who are the share holders of OMFI

Bangladesh Rural Development Board's (BRDB) on women and men in general find that significant effect on the well-being of the poor household but the effect is greater if women are the program participant (women annual household expenditure increased more than men) (Pitt and Khandker, 1997).

A study by Roxin et al (2010), on impact of microfinance in Sierra Leone revealed that MF had improved clients' business expansion, increased their income and expenditure. Their study depict that microcredit has considerable impact on economic empowerment but it has only initial impact on social empowerment. At the same time their finding reveals no impact on women political empowerment.

Different scholars argue that, microfinance has no role in empowering women since women have little or no control over their loan and the loan is controlled by male relatives, a number of borrowers were to lose their property for repaying the loan (Vengroff and Creevey, 1994; Goetz and Gupta, 1996).

The study in Tigray region on the impact of microfinance on poor women shows that directly or indirectly, microfinance services provided by Dedebit credit and saving institution (DECSI) are contributing to the sustenance and improvement of the life of the poor women and their households. This study was conducted using multi-stage sampling with descriptive method of analysis. The evidence from this study depict that microfinance has positive impact in increasing income, diversifying sources and reducing variability of income. It also show that increased consumption, improved living condition in terms of house repairs and expansions, medical services and capital accumulation in the form of increased saving. This study critically depicts that women empowerment in terms of improved attitude and respect of their husband, increased self-confidence and self-image (Tesfay, 2003).

A research conducted at ACSI indicates that microfinance participant women are much better than non-participants in terms of household asset holding, yearly average off farm income, and involvement in decision making process in the household. The study was conducted using simple random sampling method with logit econometric method of analysis. Similarly, the estimation result of the logit model indicates out of 23 explanatory variables used 15 of them are significant (Gebrat, 2013). The study by Haymanot (2007), using descriptive statistics and binomial logit regression method of

analysis reveals that microfinance has a positive impact on women economic empowerment in terms of increased participation of women in the household decision making, and improved living standard condition of its clients. Matured clients of ACSI have improved their household incomes, asset possession level, and saving habit; thereby positively affecting their ability to fully participate in household decision making.

A study by Yimer (2011), at ACSI using explanatory research method, show that in majority cases matured women clients have gone substantial change in many dimensions, to mention some indicators, like change in terms of skills essential for making and managing businesses, level of confidence and self-esteem and worth, personal cash assets, level of financial independence, income and diversifying income sources. But one third of the respondents included in the study did not perceive meaning full changes in their life. Therefore, the impact of microfinance is not same and alike to all matured women clients.

A study in Harari microfinance institution (HMFI) using descriptive statistics and logistic regression depict that, HMFI participants have been better in their income, improved their saving habits and control over resources than non-participants. The study used 123 sample respondents of which 15 of them are non-participants used as a control group. At the same time, the study used PSM method of analysis to identify the impact of HMFI on its clients. But the validity of the control group is questionable to apply PSM method of impact evaluation because of low number of non-participants which may result biased estimates of ATT. More over the study doesn't carry out sensitivity analysis to see the effect of unobservable covariates between participants and non-participants (Ahemed, 2013).

The study in SNNPR of OMFI by Balamurugan at Wondogent indicates that microfinance has significant effect on women empowerment. The descriptive statistics and regression analysis of the study was conducted using before and after method of analysis. OMFI contributes to social and economic empowerment of women in the study area. Women's hope and self-confidence improved through active participation in OMFI. Wondogent OMFI gives to women significant changes in terms of employment creation and income generation, saving habits and decision

making. Therefore the study concludes that Wondogent OMFI affects women in terms of social and economic empowerment (Balamurugan, 2012).

Most of the studies conducted on women's empowerment particularly economic empowerment were carried out using either descriptive statistics or logistic regression. Few studies tried to use PSM method of impact evaluation particularly in Ethiopia is rare and even those conducted on similar topic fails to carry out full PSM procedures. Therefore, in the existing literature there is no uniformity among scholars and researchers on the impact of microfinance on women economic empowerment and their findings are yet inconclusive.

CHAPTER THREE

3. RESEARCH METHODOLOGY

3.1. Brief Description of the Study Area

Kaffa Zone is one of the 14 administrative zones found in the SNNPR state located in the south western part of Ethiopian at a distance of 449 Km from Addis Ababa and 729 Km from the capital of SNNPR state, Hawassa. It is bordered to the north and east by Oromia region, to west and south west by Benchi Maji Zone, to North West by Shaka Zone and to east by Konta special woreda. The Zone is located between $6^0 24^1$ and $8^0 13^1$ north latitude and $35^0 48^1$ and $36^0 78^1$ east longitudes. The Zone constitutes ten rural woredas (Gimbo, Gewata, Gesha, Sayilem, Bita, Chena, Decha, Telo, Cheta, and Addiyo) and one town administration, Bonga, which is the capital of Kaffa Zone.

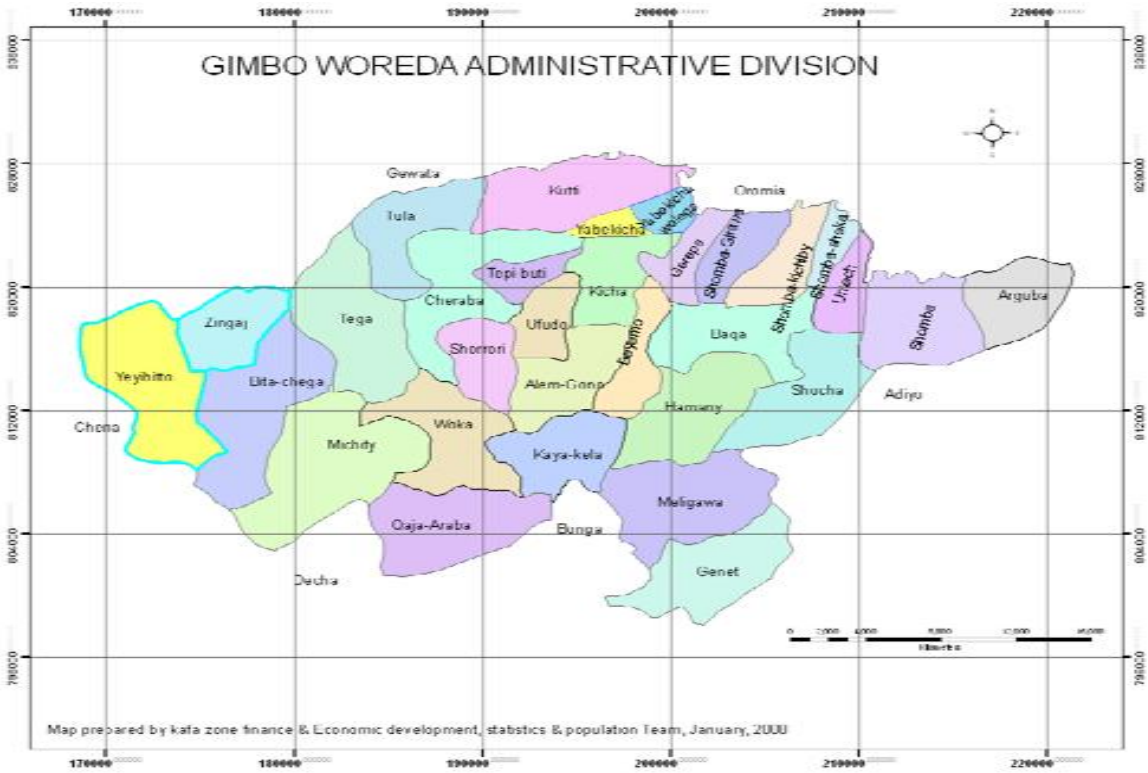
Gimbo woreda is located between $7^0 23^1$ and $7^0 49^1$ north latitude and $36^0 00^1$ and $36^0 47^1$ east longitudes. It is bordered to the north by Oromia region, to west Cenna and Gewata woreda, to south by Decha woreda and to east by Addiyo woreda. The woreda contains 33 rural kebeles and three urban kebeles[2]. The total land area of Gimbo woreda is 832.5 square kilometer. It has three agro-ecological zones i.e. high lands (0.3%), mid-lands (74.4%) and low lands (15.3%).

According to Kaffa Zone finance and economic development office population projection in 2014 (based on the population and housing census of 2007), the total population of the Gimbo woreda is 114113 of which 57309 are females. Of the total population, 97401 (85.4%) of the population resides in rural areas depending on subsistence agriculture and 16712 (14.6%) are urban dwellers. Regarding ethnic composition, Kafficho which is indigenous native and other ethnics Amhara, Oromo, Tigray, Guragie lives inside the woreda. The majority of the inhabitants are followers of the Orthodox, Protestant and Muslim religion respectively.

[2] Kebeles are small sub-divided local administrative units in the community

Agriculture is the major economic activity practiced in the area followed by trade. More than 85% of the population of the woreda is engaged in mixed agricultural farming (crop and livestock) and the remaining population remains in commercial/ trading activity, government sector employment, and wage laborer. OMFI is the only institution in the woreda that provides financial services to the poor households particularly to women (KZFaED statistical abstract bulletin, 2014).

Fig 3.1 Map of the study area



Source: KZFaED department, 2014

3.2. Data Type and Source

Primary data was collected by means of a structured questionnaire responded by OMFI matured clients (being clients 3 to 5 years), incoming clients (clients for 1 to 2 years), and non-clients (loan applicants but yet not given) in Gimbo woreda. At the same time, semi-structured interviews were held with clients to get additional information of respondents' opinions, perceptions and attitudes to verify information given by clients. An interview of different officials and experts was conducted at different levels.

This study was also used secondary data obtained from various sources like reports, manuals, abstracts etc. Mainly quantitative data was used.

3.3. Study Population

The study population consists of all poor women in the study area. These include all women clients of OMFIs and women non-clients (loan applicants as control groups).

3.4. Sampling Design and Technique

The survey was used cross-sectional data. Under this study, multi-stage and purposive sampling methods were used. At the first stage Gimbo woreda is selected among ten woredas and one town administration in Kaffa Zone because it is one of the two sub-branches of OMFI opened their office early (Bonga and Gimbo, beginners) and compared with Bonga town, Gimbo woreda encompasses large clients. Gimbo woreda has a total of thirty five Kebeles. For the purpose of facilitating its service delivery, Gimbo woreda sub-branch OMFI has five clusters or ketenes (Gimbo, Wushwush, Kuti, Kayikelo and Gojeb).

In the second stage, three clusters were selected purposively according to the distance from the woreda town, one from the remote, one from the middle and one from the nearest. In the third stage, two kebeles were selected from each cluster randomly. Finally, from these six kebeles, respondents were selected using simple random sampling method from the list file of the clients in the institution.

Similarly, non-clients (control groups) are those applicants to take loan from Gimbo OMFI sub-branch office in the near future after they fulfill the institution selection criteria. To assess the impact of microfinance, it is necessary to compare the outcomes of clients with control groups that have similar characteristics. The control groups are future clients that are very similar to clients in their overall characteristics. The justification for the use of purposive sampling is intended to include women clients only.

3.4.1. Sample Size Determination

To determine the sample size, the researcher tried to consider information from prior studies in the same topic, the available budget at hand for the study and time frame to accomplish this study within the calendar were considered. Prior studies like

Haymanot (2007), Balamurgan (2012) and Ahmed (2013) used their sample size 171, 120, and 123 respectively. In addition by taking into account my budget, time and its feasibility, for this study data was collected from 200 women. Of the total samples 115 of them are non-clients which are used as a control group for the study. Regarding the distribution, 15 clients were selected from each 5 kebeles and 20 clients from 1 kebele since it has large number of client compared with the rest 5 kebeles. Non-clients were selected by 1.35 ratio scale to 1 client (1.35:1).

3.5. Method of Analysis

The empirical analysis of this research was employed both descriptive statistics and regression analysis. The descriptive statistics was used measure of dispersions (mean, SD, variance), percentages, tables and maps. The regression analysis was employed logit to estimate propensity score matching using STATA software.

3.5.1. Propensity Score Matching (PSM)

Propensity score matching method of impact analysis is a method of comparing microfinance clients and non-clients in the programme areas, where both groups experiences similar communication facilities, socio-economic characteristics, topography, development infrastructure programs and others, to examine whether there is economic variation between program participants and non-participants. The assumption behind this study is that at most microfinance benefits the poorest of the poor at the grass root level.

The justification for choice of PSM method over other impact analysis method like DID method was that, PSM method uses only cross-sectional data collected at point of time while DID method needs baseline data. Another justification for the use of PSM method was that, self selection bias can be best controlled or minimized by using PSM and PSM reduces dimensionality. In non-experimental data, PSM compares treatment effects across participant and matched non-participant units. PSM assumes selection bias is based on only observed characteristics (not account for unobserved factors). Because of the above reasons, PSM method is chosen for this study.

There are a range of assumptions to hold PSM method of analysis. To hold PSM, first participants and non-participants have similar distribution of observed characteristics

and have similar distribution of unobserved characteristics (if not it causes problems of selection bias), the same set of questionnaire is distributed for both groups with the same economic environment and assumption of unit homogeneity (there is no unobserved heterogeneity). Finally the assumption of conditional independence (there is no reverse causality) must be hold.

The PSM is defined as the conditional probability of receiving treatment (participant) given pre-treatment characteristics (Rosenbaum and Rubin, 1983).

$$p(X) = pr(D = 1 / X) = E\{D/X\} \text{ ……………………………………………… (1)}$$

Where D= (1, 0) is the binary variable indicating whether a woman has empowered (=1) or not (=0) and X is a multidimensional vector of pre-treatment characteristics (observable characteristics) and p(X) is the propensity score.

Let W_{i1} and W_{i0} represents the outcome when women are participant in microfinance and the outcome when not participate respectively. So, the difference between the treated and control group is given as,

$$\Delta i = Wi1 - Wio \text{ ……………………………..…………………………........ (2)}$$

Where, W_{i1} is the outcome if treated and W_{i0} is the outcome of untreated. Let equation (2) is expressed as B_i o to express the causal effect, the treatment variable takes 1 if the individual I receives treatment and 0 otherwise. Then, ATT of an individual I can be expressed as:

$$ATT= E (W_{i1}/B=1-E (W_{i0}/B=1)) \text{…………………………….……….......... (3)}$$

The E (Wi0/B=1) from equation (3) is unobservable outcome known as counterfactual. In other words E(Wi0/B=1) is the average outcome of treated individuals had they not received the treatment).

$$E[W_{i1}/B=1]-E[W_{io}/B=0]= ATT+E[W_{i0}/B=1]-E[W_{i0}/B=0] \text{…………..(4)}$$

Selection bias is shown by the difference between left hand side of equation (4) and ATT. Since the main parameter interest is ATT, it can be defined as:

$$ATT=E [W_{i0}/B=1]-E [W_{i0}/B=0]=0 \text{………………………………..(5)}$$

In estimating propensity scores, all variables that affect participation in microfinance are included. Therefore, the average treatment effect on those treated conditional on propensity score p(x) is given as: $ATT=Ep(x)/B=1\{E[W_{i1}/B=1, p(x)]-E[W_{i0}/B=0, p(x)]$…… (6)

ATT is the difference between expected outcome values with and without treatment for those who actually participate in treatment. In equation (6), the PSM estimator is the mean difference in outcomes over the common support region, appropriately weighted by propensity score distribution of participants (Caliendo and Kopeinig, 2005).

ATT is average treatment effect on treated (i.e the effect of treatment) if the woman participate in microfinance (B=1) and otherwise (B=0).

According to Becker and Ichino (2002), the assumption of common support region falls between 0 and 1 (i.e. $0 \prec p(x) \prec 1$). This implies that the test of balancing propensity is performed only on the observations whose propensity score belongs to the common support region of the propensity of treated and control groups. Those individuals that lay outside the common support region would be excluded in treatment estimation and this improves the quality of matching to estimate ATT.

In order to estimate the missing counterfactual outcome for each treated observation different matching estimators are used: Nearest Neighbor matching, Kernel matching, caliper matching and Radius Matching. The selection of matching algorithm is tested using lower value in pseudo R^2, balancing test (number of insignificant explanatory variables after matching) and better number of matched observation.

By comparing the result of all matching estimators, kernel with band width 0.5 is selected for this study with different criteria. In this regard, kernel matching algorithm matches several non-participants with a participant.

3.5.2. Estimation of the Propensity Scores

The probability of women clients to be empowered (women's involvement in major decision making), P_i is given as;

$P_i = E(Y=1/X_i) = \frac{1}{1+e^{-(\beta 1+\beta 2Xi)}}$ ..... (7)

The logistic representation of women's involvement in major decision making is; $P_i = \frac{1}{1+e^{-Zi}} =$ ..... (8)

The probability of women's does not involve in major decision making is given as; $1-Pi = \frac{1}{1+e^{Zi}}$ ..... (9)

$$\frac{p_i}{1-p_i} = \frac{1+e^{Zi}}{1+e^{-Zi}} = e^{Zi} \text{ .... (10)}$$

$\frac{p_i}{1-p_i}$ = the odds ratio in favor of women's involvement in major decision making, i.e. ratio of the probabilities that women participate in major decision to the probabilities that not participate in decision making. Taking the natural logarithm;

$$Li = \ln\left(\frac{p_i}{1-p_i}\right) = Z_i = \beta_0+\beta_1\beta_1+\beta_2X_2+\beta_3X_3+\ldots.+\beta_nX_n \text{ ..... (11)}$$

By taking the error term in to consideration, the log odds ratio model becomes

$$Zi = \beta_0+\beta_1X_1+\beta_2X_2+\beta_3X_3+\ldots.+\beta_nX_n+u_i \text{ .....(12)}$$

Where

- ✓ P_i is the probability of participating in a programme
- ✓ Z_i is a function of explanatory variables (X_i)
- ✓ Xi is the explanatory variables
- ✓ β_o is an intercept
- ✓ $\beta_1,\beta_2\ldots\beta_n$'s are slopes of the equation in the model
- ✓ L_i is log of the odds ratio which is linear in X_i's and B's
- ✓ U_i is the disturbance/error term

Here Z, takes two possible values i.e. z=1 women's are economically empowered means participates in major decision and z=0 if not.

3.6. Description of Variables

For the purpose of this study different variables were selected based on economic theory and previous empirical findings from the existing literatures on similar studies. In impact evaluation study, variables choice must be those variables which affect both participants and non-participants (i.e. both treated and non-treated groups share characteristics of X covariates). Heckman et al., (1998), argues that, only variables that affects both program participation and outcomes should be included in the estimation propensity scores. Thus, in this study variable which affect clients OMFI and non-clients are selected depending on observable characteristics of respondents in the study area.

Outcome variables (impact indicators): In this study three outcome variables namely average yearly household income (ayhi), personal cash saving (pcs), and asset ownership and possession are used as an indicator of the impact of OMFI on women economic empowerment. Average yearly household income is a continuous variable which determines women status in signifying their empowerment. It has positive expected sign. Existence of personal cash savings is also expected positively related with women empowerment. Household assets ownership (ownast) like farm land, house, jewelry and livestock's etc are assumed that positively related with women empowerment.

The dependent variable is women's involvement in major decision making in the family which includes decisions on sales/purchase/rent/repair of house, farm land, livestock's like ox and cows, grains and the like. As a result, women's involvement in major decision making, as a proxy variable is used to indicate the economic empowerment of women. This variable was used in Hashem et al., (1996) as independent variable to explain women's empowerment.

Independent variables: Age, respondents (women) level of education, women's spouse level of education, marital status, head of the household, being member of other MFI, number of household size, ecology and initial wealth.

Age of respondent (age): It is a continuous variable. Older women have no independence and empowerment than younger women as they are

housewife and not participate on decision making. So, it is hypothesized that age is positively related.

Marital status is categorical variable it may relate positively or negatively.

Respondents (women) level of education (wle): It is a continuous categorical variable. If women's have more education their confidence will increase. Thus, it is expected that education has positively related.

Spouse level of education (sle): it is a continuous categorical variable. It is expected that education is positively or negatively correlated.

Head of the household (hhd): dummy variable = 1 if head of household is women otherwise 0. If women are house hold head it is expected positive if not negative.

Number of household Size: it is a continuous variable. It may relate positively or negatively.

Being member of other MFI (bmofi): it is dummy variable (if women are clients of other MFI =1 otherwise=0). It may relate positively or negatively

Ecology (eco): dummy if the place has good ecology to engage in productive work (=1) and =0 if not. It is expected positive or negative relationship. If the environment has good ecology, women's have encouraged to work hard and they need credit for the purchase of agricultural input and if not they discourage.

Initial wealth: dummy if a woman has initial wealth (=1) and = 0 if a woman has not initial wealth. The expected sign is positive, if there is initial wealth otherwise negative.

Table 3.1 Summary variables description

Variable name	Definition	Its expected sign

Outcome variable		
Ayhi	Average yearly income	+
Pcs	Personal cash saving	+
Ownast	Ownership of asset	+
Dependent variable		
	Women's involvement in major decision making	
Independent/explanatory variables		
Age	Age of respondents (women's)	+
Mrsta	Marital status	+/-
Wle	Women's level of education	+
Sle	Spouse level of education	+/-
Hhd	Head of the household (dummy if woman is head=1)	+
Nhsize	Number of household size	+/-
Bmofi	Being member of other MFI (dummy if women is client of other MFI=1)	+/-
Aminw	initial wealth	+
Eco	Ecology	+/-

Source: Own computation, 2016

CHAPTER FOUR

4. RESULT AND DISCUSSION

This section presents both the descriptive and econometric result and findings of the study. The study examined the impact of OMFI on women's economic empowerment based on primary data collected from women clients and non-clients in the study area. The questionnaire was designed in line with the pre-determined objectives of the study and distributed to the sampled respondents. The information given in the questionnaire was checked with semi-structured interview from randomly selected sampled respondents.

4.1. General Characteristics of the Respondents

From the total sampled respondents, the data was collected from 196 respondents. Of the total respondents 84 of them are clients of OMFI while remain 112 of them are non-clients. Non-clients are those respondents that came to the organization for loan after they fulfill the requirements but not yet given loan. Regarding the response rate of the questionnaire, 98.8% of client respondent returned the questionnaires while 97.3% of the control groups were returned the questionnaire. Of the total respondents 2% of women were not willing to give information because some of them were on work and some others were not available at the time.

The religion statistics of the respondents show that 73.98%, 16.84%, and 9.18% of them are followers of Orthodox, Protestant and Muslim religions respectively. The total sample result of age distribution depict that 27.55% respondents were between the age 20 to 30 while 48.47 % of the respondents are between the age 31 to 40 and 14.29% of respondents are between the age of 41 to 50. From the total samples 3.57% of respondents are above the age of 50 years and 6.12% of the respondents don't know their age. The minimum and maximum age of the respondents is 20 and 60 respectively and their mean age is 37. The age distributions of the respondents indicate that most of the respondents are in the working or productive age group.

Table 4.1 Age distribution of the respondents

Variable	Obs[3]	Mean	Std. Dev.	Min	Max
Age	196	37.01523	7.579832	20	60

Source: own computation, 2016

To examine separately, the minimum and maximum age of client respondents' is 20 and 57 where as non-client respondents' age is 20 and 60.

Regarding marital status, the sample result show that 70.41% of the respondents were married where as out of the total respondents 15.31%, 8.67% and 5.61% of them are widows, single and divorced respectively. The descriptive statistics depict 53.57 % of the respondents are headed by their husbands while 41.84 % of the respondents are head of themselves. Out of the total respondents only 4.59 % of respondents responded that they are headed by their family. The mean household head difference between client and non-clients is -0.1686684 with p-value 0.0401 which is significant at 5% level of significance. The result indicates that much of the clients are heads of their family (see Table 3 in the appendix).

Table 4.2 Distribution of marital status and head of the family

	Head of the household			
Marital status (mrsta)	Myself	Husband	Others	Total
Single	12	4	1	17 (8.67)
Married	41	91	6	138 (70.41%)
Widowed	22	6	2	30 (15.31%)
Divorced	7	4	0	11 (5.61%)
Total	54 (41.84%)	140 (53.57%)	2(4.59%)	196 (100%)

Source: Own computation, 2016

Education status of respondents show that 46.94 % of them are illiterate, 27.04 % of them can read and write, 15.31 % of them are learned from grade 1 to 4, 6.63 % of them are learned from 4 to 8, 3.57 % them are learned from grade 8 to 12 and 0.51 % of them are above grade 12. The mean education level difference between client and non-non-clients is -0.782237 and the p-value 0.000 (highly significant at 1% of

[3] Obs indicates number of observations

significance level) which leads to reject the null hypothesis that is there is no difference between the groups in women's education level (i.e. clients are better educated than non-clients) (see table 1 in the appendix).

Regarding their (women) spouse education level the sample result depict that 14.29 % of their husband are illiterate, 29.08 % of them can read and write, 28.57 % of them are learned from grade 1 to 4, 21.94 % of them are learned from 4 to 8 and 6.12 % of them are learned from 8 to 12. The mean spouse education level difference between client and non-clients' husband is -0.264881 and the p-value 0.1047 (which is insignificant) that leads to accept the null hypothesis that there is no difference between the groups in spouses' education level (see Table 2 in the appendix).

Table 4.3 Distribution of respondents and their spouse level of education

Respondents level of education			Spouse level of education		
	Frequency	Percent		Frequency	Percent
Illiterate	92	46.94	Illiterate	28	14.29
Read and write	53	27.04	Read and write	57	29.08
Grade 1-4	30	15.31	Grade 1-4	56	28.57
Grade 4-8	13	6.63	Grade 4-8	43	21.94
Grade 8-12	7	3.57	Grade 8-12	12	6.12
Above grade 12	1	0.51	Above grade 12	-	-
Total	196	100.00	Total	144	100.00

Source: own computation, 2016

The respondents' family size ranges from 1-10. The minimum and maximum family sizes of clients are 1 and 10 while for non-clients it is 1 and 9. On average, both client and non-client respondents have 5 family sizes. The mean household family size difference between client and non-clients is -0.6325327 and the p-value 0.0262 (which is significant) that leads to reject the null hypothesis that there is no difference between the groups in family size (i.e. clients have less family size than non-clients) (see Table 4 in the appendix).

Table 4.4 Distribution of family size of respondents separately

Clients			Non-clients		
No. fam Size	Frequency	Percent	No. fam Size	Frequency	Percent
1	4	4.76	1	14	12.50
2	6	7.14	2	10	8.93
3	12	14.29	3	19	16.96
4	14	16.67	4	16	14.29
5	20	23.81	5	27	24.11
6	7	8.33	6	11	9.82
7	18	21.43	7	11	9.82
8	1	1.19	8	2	1.79
10	2	2.38	9	2	1.79
Total	84	100.00	Total	112	100.00

Source: Own computation, 2016

Concerning the main occupation, the sample result depicts that more than three-fourth of the respondents (79.7%) were engaged in the agriculture sector. Agriculture, being the main occupation in the study area, it is followed by trade activities which accounts about 14.72% of occupation activities in the area. The remain 4.57 % of respondents reply that they are engaged in government sectors like agricultural and health extension workers, teachers and 1.02% were engaged in different works. Separately, 77.11% of client respondents' main occupation is agriculture while for non-client respondent it accounts 81.42%. Trade accounts 19.28% and 11.5% for both client and non-clients respectively. Three clients responded that their main occupation is government employers. Six non-clients occupation is government employee while two of them are engaged in different activities.

Table 4.5 Distribution of respondents' occupation

Job	Freq.	Percent	Clients		Non-clients	
			Freq.	Percent	Fre	Percent
Agriculture	157	79.70	65	77.11	91	81.42
Trade	29	14.72	16	19.28	13	11.50
Gov't employer	9	4.57	3	3.61	6	5.31
Other	2	1.02			2	1.77
Total	196	100.00	84	100.00	112	100.00

Source: Own computation, 2016

Table 4.6 Summary of descriptive statistics of selected variables

Variable	Obs	Mean	Std. Dev.
Religion	196	1.352041	.6433454
Age	196	33.88265	11.47401
Marital status	196	2.178571	.6592537
Women's level of education	196	.9438776	1.13766
Spouse level of education	144	1.765306	1.130473
Job/occupation	196	1.25	.6023458
Number of family size	196	4.443878	1.98505
Head of the family	196	1.627551	.5720464

Source: Own computation, 2016

Among the total sample, one observation reported that she has been client of OMFI since its establishment which is the maximum period for 15 years. Of the total samples 30% of the respondents were clients since 2000 E.c, while more than 72% of the respondents were been clients since 2004 E.c. The majority of clients' loan size lie between 3000 - 5000. The maximum and minimum loan size is 9000 and 1500 during the last five years from recent to back loan cycles. The maximum loan size is determined by OMFI while the minimum size is determined by client request or demand. The descriptive statistics depict that, when the loan cycles increases, the average amount of loan is also increase.

Of the sample taken, 34% of the clients reply that, they take the loan for the purpose of buying ox for their farm activities. On the other hand, 22.78%, 20.25% and 16.46% of clients take their loan for the purpose of buying agricultural input, for fattening (sheep and goat) and to small trade respectively. The remaining 12.66% of the clients use the loan for different purpose like to build/repair their house and for household consumption.

Table 4.7 Distribution of loan purpose

Loan purpose	Freq.	Percent
To buy ox	27	34.18
To buy agricultural in puts	18	22.78
Fatting	17	20.25
Trade	13	16.46
Other	9	12.66
Total	84	100.00

Source: Own computation, 2016

Regarding loan repayment, 77.79% of clients reported that they didn't face loan repayment problem. But 22.21% of the clients reply that during the last five loan periods either in one or two loan period they face loan repayment due to die and stolen of ox, sheep, use of their loan for household expenses and illness. They repaid their loan by selling household assets and by borrowing from relatives and neighbors. Regarding group formation, the minimum size of the group is five clients.

4.2. Effect on Asset Ownership

Among sampled clients 78% of them have at least one ox and 90% of them have more than two sheep with five maximum sheep. Regarding household utensils, 83% of clients reported that they have cooking utensils and radio while 17% of clients answered that they have full household materials and Radios, Television and DVD player.

Regarding home ownership 9.64% client respondents said that they didn't have house, they are being living in rent-house. These clients are those health extension workers, agriculture extension workers and teachers. 44.58% of clients have ''Sar bet'' while

45.78% of them have ‘’Korkoro bet’’. The client respondents explained that, they owned their house mostly after they were being OMFI client. Regarding house improvements, 19.51% clients’ house was not improved while 43.37% are able to built additional houses and 24.39% of clients were able to decorate their house. 12.73% of clients reported that they don’t know whether there is improvement or not. Accordingly, 10.84% of the respondents explained that OMFI has ‘’very-high’’ impact on their access and control over assets while 39.76 % of clients reported that the impact is ‘high’. 46.99% of clients explained that the impact of OMFI on their access and control over assets is ‘medium’ and 2.41% answered it has ‘low’ impact.

Out of 112 non-clients, 7.96% of them have no house and 59.29%, 28.32% and 4.42% of future clients have owned ‘Sar bet’, ‘Korkoro bet’ and both ‘Sar bet’ and ‘Korkoro bet’ respectively. Of these non-clients 45.28% have no improvement in their house, 14.15% and 6.6% of them have been able to built better house and built additional rooms. 22.64% of respondents were able to decorate their house while 11.32% of them reported that they don’t know whether there is improvement or not.

Of 112 future clients 39.82% are very-high interested and 45.13% highly interested to participate in the loan program of OMFI. 14.16% of non-clients have medium level of interest to participate in OMFI loan program while one observation confirms that low level of interest to participate in the program, only for the sake of her neighbors she is going to participate.

The t-test result indicates that, the mean difference on asset ownership between client and non-clients is 0.0803571 and the p-value is 0.1233 which is insignificant at 10% significance level. This leads us to accept the null hypothesis that there is no difference between clients and non-clients in asset ownership (see Table 7 in the appendix).

In general, the above descriptive and t-test analysis depict that OMF has limited impact on access and control over asset between program participants and non-participants. This is because of their unwise use of loan for consumption expenditures and their limited entrepreneurship on the use of loan.

4.3. Effect on Income

In order to see the impact on income, respondents' average yearly income was asked. Accordingly, client respondents reported that 8.34 % of them estimate their average yearly income lie between 10001 to 20000 and 1.19 % of the clients earn estimated average yearly income in between 20001 to 30000. The remain 23.8 %, 3.57 % clients income falls between 5001 to 10000 and 30001 to 40000 respectively while 60.71% of clients reported that their income falls under 5000. Their minimum and maximum income is 1000 and 80000 with the mean income of 6131.311.

Similarly, 10.71 %, 11.6 % and 2.68 % of non-clients explained that their estimated average yearly income falls between 10001 to 20000, 5001 to 10000 and 20001 to 30000 respectively. 75 % of non-clients reported that their average income was less than 5000. The minimum and maximum income of non-clients is 900 and 30000 with the mean income of 7957.619.

Table 4.8 Average yearly income of respondents

Average yearly income	Up to 5000	5001 to 10000	10001 to 20000	20001 to 30000	30001 to 40000	40001 to 50000	> 50001
Clients (84)	51	20	7	1	3	2	
Percent (%)	60.71%	23.8%	8.34%	1.19%	3.57%	2.39%	
Non-clients (112)	84	13	12	3		-	
Percent (%)	75%	11.6%	10.71%	2.68%		-	

Source: Own computation, 2016

92.96% of clients reported that their income was increased because of adequate market for their business, good agricultural season and profitability of their business and 2.77% of clients explained that their income was greatly increased while 4.33% of clients explain that, their income has no change because of illness of the family and dead of livestock like ox and sheep.

Accordingly, 50% of the respondents explains that OMFI has high impact in increasing their income while only 7.32% of clients report that the impact is very high in increasing their average yearly income. 39.02% of clients explained that the impact of OMFI on increasing their income is medium and 2.44% answered it has low

impact. A single observation states that OMFI has very low impact in affecting her income. Compared with clients, non-clients income was not increased. Only 32.14% of non-clients reported that their income has shown improvement due to good agricultural season and adequate market.

The t-test result for average yearly household income depict that, the mean difference between clients and non-clients average yearly income is -59094.64 and the p-value is 0.0000 which is highly significant at 1% significance level (see Table 5 in the appendix). This leads to reject the null hypothesis that there is no difference between clients and non-clients average yearly household income. The implication is that clients of OMFI earn better average yearly household income than non-clients. The result is consistent with the findings of (Tesfay, 2003; Haymanot, 2007; Roxin et al, 2010; Gebru and Paul, 2011; Balamurugan, 2012; Gebrat, 2013 and Ahmed, 2013; Kato and Kratzer, 2013).

4.4. Effect on Saving

Sampled respondents explained their saving experience before they were client of OMFI as follows. Among 84 clients 92.77 % of respondents explained that they didn't have saving account at any institution before they join OMFI. Only 7.23 % of clients reported that they have saving account in CBE with their male partner. 80.52% of clients explained that they haven't knowhow or awareness about saving while 14.29% and 5.19% of the clients indicated that lack of money and distance of financial institutions affect them not to save.

On the other hand, 92.86% of non-clients explained that they haven't saving account at any institution. They said that we opened saving account after the selection or recruit of OMFI agent in the near past for the purpose of loan. Only 7.14 % of non-clients have saving in the form of *equb*[4] and account at CBE. 70.48% of non-clients explained that they haven't knowhow or awareness about saving while 12.38% and 17.14% of the clients indicated that lack of money and distance of financial institutions affect them not to save.

Out of 84 sampled respondents, 36.62% and 25.35 % clients explained that they are saving to cover emergency cases and for their loan repayment purpose respectively.

[4] *Equb* is a traditional way association in which peoples save their money for pre-determined time, usually a week or a month and receives their savings in a rotation.

On the other hand 28.17 % of client respondents explained their saving is used for both emergency cases and loan repayment while remain 9.86% respondents explained that they are saving for safety of their cash and to cover household expenses. Of 112 non-clients 64.86 % and 35.14 % of respondents explained that they are saving for emergency cases and for the sake of loan (i.e. indicates after recruit saving).

Respondents were asked to explain the impact OMFI on their saving habits and they elucidate as follows. Out of 84 clients 16.87% and 39.76% of respondents marked that OMFI has very-high and high impact in improving their habits respectively. 43.37% of clients explained that OMFI has medium level impact in improving their saving habits.

Non-clients were asked their level of interest to participate in OMFI loan program and they responded as 39.82%, 45.13% 15.04% of them have very-high, high and medium interest to join the program.

From the t-statistic test, the mean difference on personal cash saving between clients and non-clients is –0.698799 and the p-value is 0.0000 which is highly significant at 1% significance level. This leads us to reject the null hypothesis that there is no difference between clients and non-clients in personal cash savings (see Table 6 in the appendix). This implies that clients of OMFI have better cash savings than non-clients. In general, OMFI has improved clients saving habits than non-clients and this finding is consistent with (Haymanot, 2007 and Ahmed, 2013; Kato and Kratzer, 2013).

4.5. Effect on Decision Making

Women were asked to indicate their level of involvement in major decision making in the household as a proxy to depict the impact of OMFI on their economic empowerment. They are asked to indicate their involvement on deciding to purchase or sale land, house, ox (domestic animals in general) and on the use of their loan, saving, buy clothing, household foods etc. If women are able to decide activities independently or jointly with their spouse, it is considered as they empowered since they involved and able to affect the decision making process.

Accordingly, 25.3% of clients and 5.31% non-clients explained that decisions on selling or buying of land and house were made independently by themselves. 62.65%

of clients and 41.59% of non-clients made their decision jointly with their spouse while 12.05% of clients and 53.1% of non-clients decisions made by their spouse on selling or buying of land and house. The ramming 3.54% of non-clients decisions was made by other relatives. Regarding decision making to buy or sell ox, cow etc (domestic animals), 25.3% of clients and 5.31% of non-clients able to make decisions independently and 59.65% of clients and 39.82% of non-clients can decide jointly with their spouse.

For instance, the t-test result on decision making to sell/buy land indicates that, the mean difference on decision making to sell/buy land between client and non-clients is 0.4244567 and the p-value is 0.0001 which is significant at 1% significance level. This leads us to reject the null hypothesis that there is no difference between clients and non-clients in decision making (clients are better decision makers than non-clients) (see the table 7.1 in the appendix).

Similarly, the t-test result on decision making to sell/buy ox (domestic animals) indicates that, the mean difference on decision making to sell/buy ox between client and non-clients is 0.8922952 and the p-value is 0.0093 which is significant at 1% significance level. This leads us to reject the null hypothesis that there is no difference between clients and non-clients in decision making to sell/buy ox (domestic animals) (i.e. clients are better decision makers) (see the table 7.1 in the appendix).

From the above descriptive statistics it can be concluded that, clients are better decision makers than non-clients. Thus, their improved or better decision making ability of clients was the result of the loan program which increases their income, saving habits and their overall confidence and status at all.

Table 4.9 Women's decision making at household level

Description	Clients			Non-clients		
	Herself	Jointly	Others*	Herself	Jointly	Other*
Decision on the use of loan	29(35.37%)	52(63.41%)	3(1.22%)	-	-	-
Decision on the use of saving	28(33.37%)	55(66.27%)	-	23(20.35%)	84(74.34%)	5(5.31%)
Decision to buy household food	36(43.37%)	47(56.63%)	-	28 (24.78%)	77 (68.14%)	7(7.08%)
Decision to buy cloth	29(34.94%)	52(62.65%)	4 (2.41%)	24 (21.24%)	71 (62.83%)	17(15.93%)
Decision to buy cooking materials	45(54.22%)	38(45.78%)	-	42 (37.17%)	64 (56.64%)	6(6.19%)
Decision to pay for health expenses	26(31.33%)	54(65.06%)	4 (3.61%)	21 (18.75%)	66 (58.93%)	25(22.32%)
Decision to pay edir, mahiber...etc fees	21(25.3%)	52(62.65%)	11(12.05%)	17 (15.04%)	61(53.98%)	34(30.98%)
Decision to sell/buy ox	21(25.3%)	49(59.65%)	14(15.66%)	6 (5.31%)	45 (39.82%)	61(54.87%)
Decision to sell/buy land, house	21(25.3%)	52(62.65%)	11(12.05%)	6 (5.31%)	47 (41.59%)	59(53.1%)
Decision to repair house	21(25.3%)	56(67.47%)	7(7.23%)	12(10.71%)	70(62.5%)	30(26.79%)
Decision to rent farm land	20(24.39%)	52(63.41%)	12(12.2%)	6(5.31%)	69(61.06%)	45(33.63%)

Source: own computation, 2016

Others* indicate that decision is made mostly by their husbands or family

Respondents asked to explain the impact of OMFI as very-high, high, medium and low. Accordingly 10.84% and 45.78% of the clients explained OMFI has very-high and high impact in improving their saving habits respectively. While 42.17% of clients elucidate that OMFI has medium impact in improving their level of saving. Only two observations reported OMFI has low impact on their decision making. The result is similar with the findings of (Tesfay, 2003; Haymanot, 2007; Gebru and Paul, 2011; Balamurugan, 2012; Gebrat, 2013 and Mohamed, 2013; Kato and Kratzer, 2013).

In general, the descriptive statistics indicates that, OMFI increased women's average income, improved their saving habits and improved their participation in major decision making process in the family than those non-clients in the study area. Regarding asset ownership and capital formation, OMFI has limited impact on its clients compared with non-participants. The overall descriptive result depict that OMFI has positively affected its clients in increasing their involvement in major decision making process, improved their level of confidence, self esteem and reduce their poverty than non-program participants.

The result of the above descriptive statistics was strengthened from the interview explanation held. According to sub-branch manger currently OMFI has given special attention to women and efforts are made to benefit women's from our services. As a result, women were benefited from the loan program during the last years and they improved their overall living status. Loan officer explained that, << I believe that, women were benefited from our loan program and as much as we can we are supporting and encouraging them and many of our member had improved their living condition. Their income is increased. If you see their saving account, for sure, you will understand about their awareness on their saving habits improvement. Generally, I can say that, they are benefited from the loan program in many ways >>.

4.6. Estimation Econometric Model

Under this sub-section, the logistic regression model and propensity scores for matching of clients and non-clients were presented. To estimate the effect of propensity scores, logit model is employed because there is no difference on result between logit and probit model (Caliendo and Kopeinig, 2005).

Before looking the econometric regression result, it is better to cheek the fitness of the model usually the problem of heteroscedascity and multicollinearity. Accordingly, the problem of heteroscedascity which is common in cross-sectional data was checked and solved by robustness of standard error before the estimation of the model.

The problem multicollinearity which is the relationship between continuous explanatory variables and coefficient of contingency (the association between discrete variable) was checked by different tests. To detect multicollinearity problem, variance inflation factor (VIF) was calculated and the result depict that the data had no problems of multicollinearity (see Table 9 in the appendix). Likewise the contingency coefficients were computed to check the association among discreet variables. The value of contingency coefficients lies between 0 and 1 in which 0 indicating no association between the variables and values close to 1 indicates high degree of association. Since contingency coefficient is not greater than 0.75 all discrete variables can be used in the regression analysis (see Table 8 in the appendix). The Pseudo R^2 indicates the overall significance of the model.

The model was estimated by STATA 13.0 software using propensity score matching method of analysis.

4.6.1. Determinants of Women Involvement in Decision Making

The logistic regression model used nine explanatory variables such as age, marital status, head of the household, women's level of education, spouse level of education, number of household size, being member of other microfinance institutions, ecology and amount of initial wealth. The dependent variable is a binary variable taking a value of 1 if a woman is client and 0 if not.

The logistic regression estimate was made to identify factors that affect women's involvement in major decision making in the family. Accordingly the logit regression estimate depict that women's involvement in major decision making is significantly affected by age, women's spouse level of education, number of family size, head of the house hold, being member of other MFI and amount of initial wealth. But variables like women's level of education, marital status and ecology were insignificant in affecting women's economic empowerment. The result of women's level of education is consistent with Haymanot, (2007) and marital status is consistent

with the finding of Gebrat, (2013) in affecting women's involvement in major decision making process.

The result of the model indicates that age of respondents is significantly affects women empowerment at 1% significant level. This is may be because of aged women's relatively can't decide on the household issues and dominate by their husband. The positive relationship between age of respondents and women empowerment is consistent with the finding of Ahmed (2013). If women are head of their family they are better chance to involve and decide on their asset and other family issues. Therefore, the variable head of the household affects women involvement in major decision making significantly at 1% significance level.

Respondents spouse level of education significantly affects women's involvement in major decision making at 1% significant level. As the spouse's level of education increases their awareness and attitudes towards their wife changes and husbands start to consult their wife on major decision issues in the household.

Number of household size of respondents affects women's empowerment significantly at 10% significant level. The justification is that as family size increases their income will increase by engaging in various income generating activities.

The variable being member of other microfinance institution (credit experience) affects women's empowerment significantly at 1% significance level. The justification is that, women who have member of other microfinance institution have better knowledge how to use the loan and invest and it is positively related with women empowerment. Amount of initial wealth also significantly affects women's empowerment at 5% significant level. Women who have initial wealth have the opportunity to start their business earlier and when combined with their loan, they may have better capital to engage in a better business (see Table 10 in the appendix).

Table 4.10 Results of logistic regression

Linear regression			Number of obs= 196	
			F(9, 186)= 132.46	
			Prob > F= 0.0000	
			R-squared= 0.7196	
			Root MSE= .26901	
Treated (trtd)	Coef[5].	Robust Std. Err.[6]	T	P>t
Age	-.0043554	.001649	-2.64	0.009*
Marital status (mrsta)	.0324927	.034696	0.94	0.350
Women level of education (wle)	.0386928	.0258815	1.49	0.137
Spouse level of education (sle)	-.0441805	.0166268	-2.66	0.009*
No. family size (nhsize)	.0220113	.0112116	1.96	0.051***
Head of the household (hhd)	.0994024	.0353047	2.82	0.005*
Being member of other MF institution (Bmofi)	.7165681	.0750943	9.54	0.000*
Ecology (Eco)	-.0354206	.0777547	-0.46	0.649
Amount of initial wealth (Amtinw)	6.16e-06	2.46e-06	2.50	0.013**
_cons	-.1174421	.1499552	-0.78	0.435

Source: Source: Own computation, 2016

*, ** and *** are indicating variables that are significant at 1%, 5% and 10% significance level respectively

4.6.2. Propensity Scores

From the total sample, propensity score matching estimation result discards three observations from clients but it doesn't discard any observation from non clients. As

[5] Coef. represents to mean coefficients
[6] Std. err is to mean Standard error

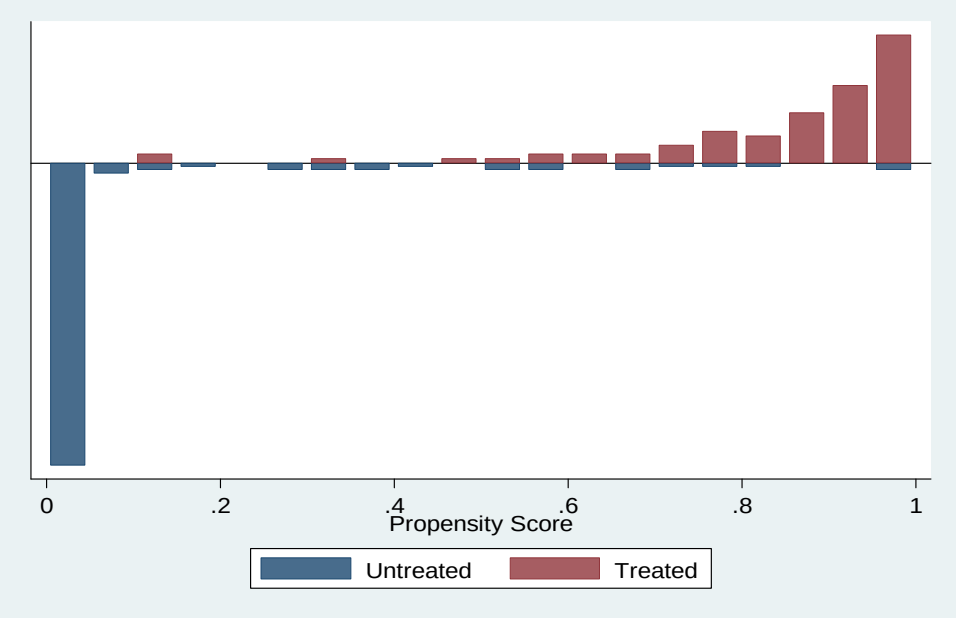
indicated from table 11 below, 112 of non-clients (untreated) are on common support region and 81 of the clients (treated) are on common support region (see Table 13 in the appendix).

Table 4.11 Distribution of common support

psmatch2: Treatment Assignment	psmatch2: Common support		
	Off suppor	On suppor	Total
Untreated	0	112	112
Treated	3	81	84
Total	3	193	196

Source: Own computation, 2016

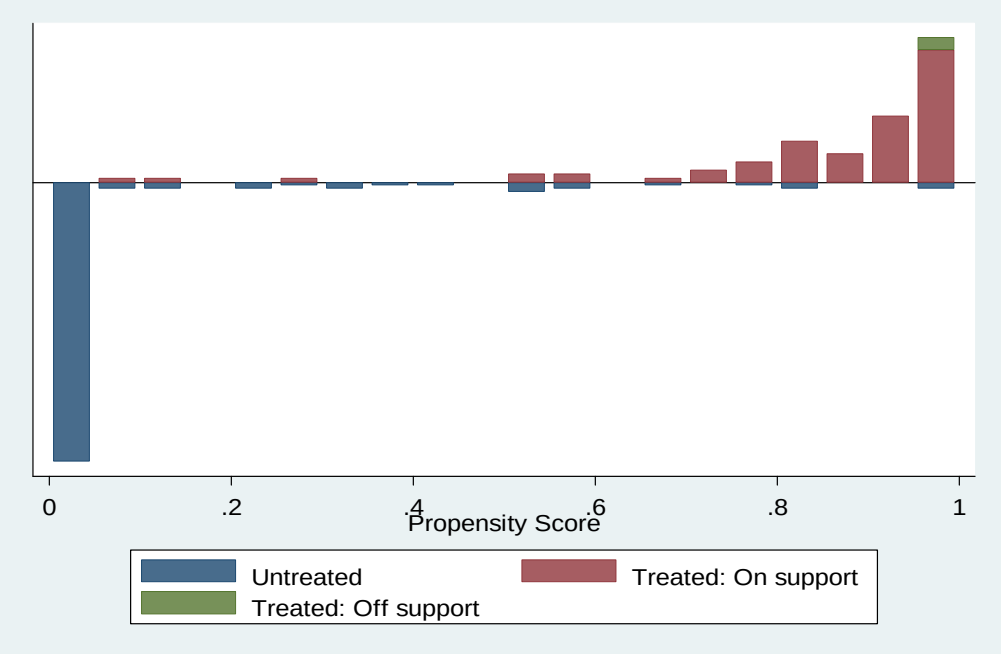
Fig 4.1 Presentation of common support region before matching



Source: Own computation, 2016

The minima and maxima criterion deletes all observations whose propensity score is smaller than the minimum and larger than the maximum propensity scores (Caliendo and Kopeing, 2005).

Fig 4.2 Presentation of common support region after matching



Source: Own computation, 2016

Accordingly, the result of estimated propensity score varies in between 0.000 to 0.998 with the mean of 0.103 for untreated and from 0.119 to 0.999 with the mean of 0.85 for the treated. That is, clients whose estimated propensity scores less than 0.119 and larger than 0.998 are not included in the matching exercise. That is [0.119, 0.999] and [0, 0.998] are propensity scores for treated and untreated respectively. Therefore, by minima and maxima criterion, taking the minimum propensity score from the treated and the maximum score from the untreated forms the common support region. Thus, the common support regions lie between [0.119, 0.998] which show none of observations was dropped from non-clients in the sample (see Table 11 in the appendix).

Table 4.12 Distribution of estimated propensity scores

	Observations	Mean	Std. Deviation	Minimum	Maximum
Untreated	112	0.103501	0.2233307	0.0000207	0.9981149
Treated	84	0.8531177	0.1776374	0.1190692	0.9997642
Total	196	0.4247653	0.424432	0.0000207	.9997642

Source: Own computation, 2016

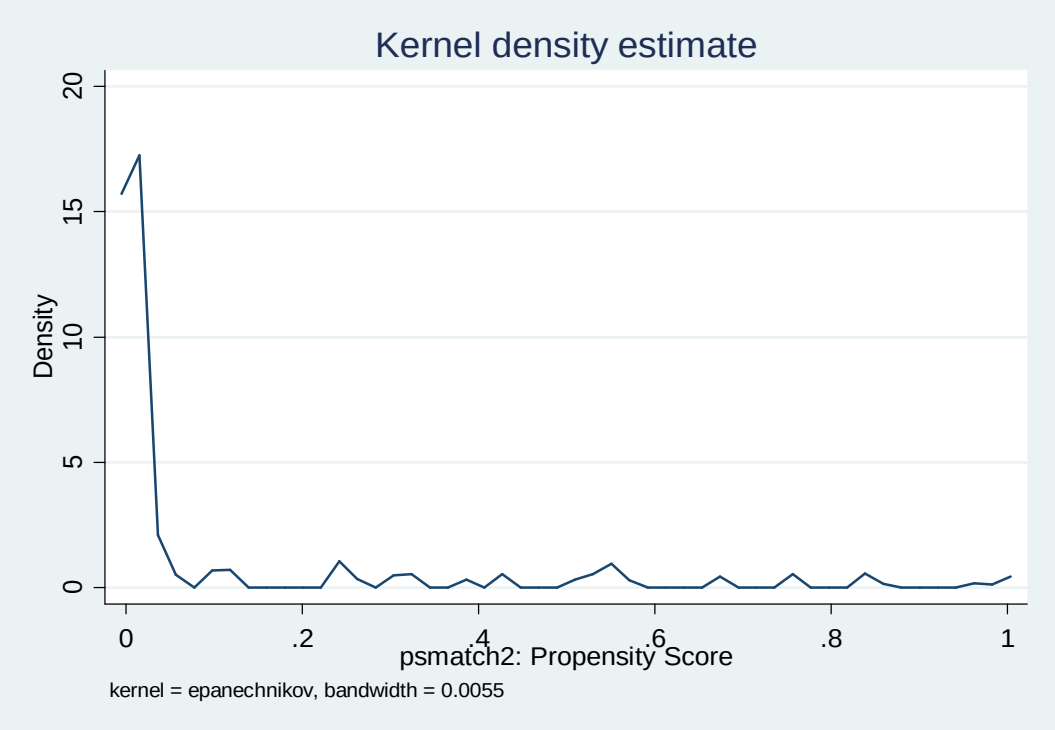


Fig 4.3 (a) Kernel density estimate for non-clients (i.e. most of non-clients are found in the left middle left partly)

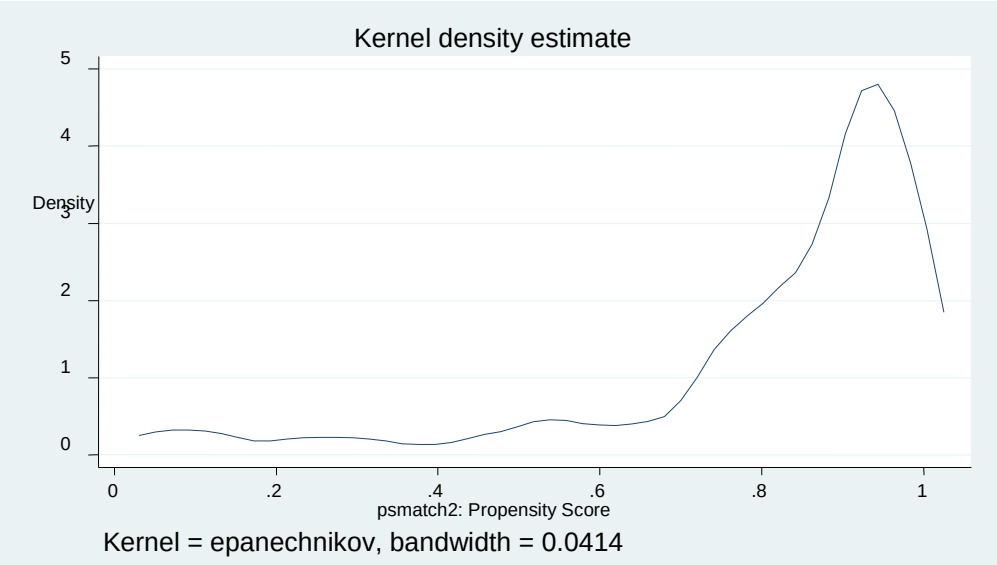


Fig 4.3 (b) Kernel density estimate for clients (i.e. most of clients are found in the right hand side middle left partly)

The above graphs depicts that there is wide area in which the propensity score of clients are similar to those non-clients.

4.6.3 Choosing Matching Algorithm

Different matching estimators can be used to match the treated and the untreated in the common support region. The question of choosing matching algorithm depends on the pseudo-R2, balancing test and number of matched observations (Dehejia and Wahba, 2002). So that for this data kernel 0.5 is chosen based on the above criteria i.e. low pseudo R2 (pseudo R2= 0.184), the balancing test that balances all explanatory variables (6 insignificant explanatory variables) after matching and the largest matched number of observations (193) are considered.

Table 4.13 Results of checking matching algorithms.

Matching algorithm	Balancing test *	Pseudo R^2	Number of matched observation
Nearest neighbor (NN)			
NN (1)	2	0.344	193
NN (2)	2	0.331	193
NN (3)	3	0.263	193
NN (4)	4	0.236	193
Radius			
0.1	5	0.730	193
0.25	5	0.730	193
0.5	5	0.730	193
Kernel			
0.1	3	0.315	193
0.25	4	0.243	193
0.5	6	0.184	193

Source: Own computation, 2016

4.6.4 Testing the Balance of Propensity Score and Covariates

After matching, every covariates mean between the two groups in the matched sampled has been reduced and pseudo-R^2 should be relatively low (Caliendo and Kopeinig, 2005). The major aim of propensity score estimation is to balance the distributions of relevant variables in both groups. Below from table 13 before matching age, women level of education (wle), number of household size (nhsize), being member of other microfinance institutions (bmofi), and amount of initial wealth (amtinw) were significantly different for the two groups of respondents. But after matching these significant variables were insignificant which indicates that the differences in covariates mean between the treated and untreated groups was eliminated and now the covariates between the groups is balanced (see Table 14 in the appendix).

Table 4.14 Propensity scores and covariates balancing

Variable		Mean		t-test	
	Unmatched				
	Matched	Treated	Control	t	p>t
_pscore	Unmatched	.86771	.09922	26.12	0.000
	Matched	.86288	.72158	4.40	0.000
Age	Unmatched	31.262	35.848	-2.82***	0.005
	Matched	31.494	37.751	-3.73	0.000
Marital status	Unmatched	2.1905	2.1696	0.22	0.827
(Mrsta)	Matched	2.1975	2.2011	-0.03	0.975
Women level of	Unmatched	1.3929	.60714	5.08***	0.000
education (Wle)	Matched	1.3951	1.1783	1.17	0.246
Spouse level of	Unmatched	1.9167	1.6518	1.63	0.105
education (Sle)	Matched	1.9383	2.0588	-0.77	0.442
No. household size	Unmatched	4.8095	4.1696	2.26**	0.025
(Nhsize)	Matched	4.7778	4.6985	0.23	0.820
Head of the family	Unmatched	1.7262	1.5536	2.11**	0.036
(Hhd)	Matched	1.716	1.5296	2.19	0.030
Being member of	Unmatched	.9881	.15179	19.34***	0.000
microfinance	Matched	.98765	1.022	-0.66	0.512
Ecology (Eco)	Unmatched	.90476	.91071	-0.14	0.887
	Matched	.90123	.89853	0.06	0.955
Amount of initial	Unmatched	16145	8114.8	5.59***	0.000
wealth (Amtinw)	Matched	15015	10657	2.36	0.020

Source: Own computation, 2016

*** and ** show level of significance at 1% and 5% respectively (before matching).

The fairly low pseudo-R^2 and the insignificant likelihood ratio tests supports the hypothesis that both treated and non-treated groups have similar distribution in covariates X after matching (i.e. there is complete balance in the characteristics in both groups). After this procedure, we can compare observed outcomes for participants with control groups that lie in the common support region (see Table 14 in the appendix).

Table 4.15 Ch-square test for the joint significance of variables

Sample	Pseudo R^2	LR chi2
Unmatched	0.720	192.80
Matched	0.184	41.24

Source: Own computation, 2016

The result of all the above tests indicate that the matching algorithm being chosen and used is comparatively best for this data and thus, now it is possible to estimate ATT for clients of OMFI.

4.6.5. Estimating Average Treatment Effect on Treated (ATT)

To meet the objectives of this study, this part evaluates the program's impact on the outcome variable (i.e. average yearly income, personal cash saving and asset owner ship) for their significant effect on women clients (participant), after pre-intervention differences were controlled (See table 12 in the appendix).

Table 4.16 Average treatment effect on the treated

Variable	Sample	Treated	Controls	Difference	S.E.	T-stat
Average income(ayhi)	ATT	8141.23457	3750.04694	4391.18762	1989.43316	2.21**
Personal cash saving (pcs)	ATT	3937.03704	1399.70352	2537.33352	905.841628	2.80**
Asset owner ship (Ownast)	ATT	.888888889	.780704869	.10818402	.120760812	0.90

Source: Own computation, 2016

** show the level of significance at 5%

Table 4.16 depict the estimation result of the outcome variables in which out of the three outcome variables two of them (i.e. average yearly income and personal cash saving) are statistically significant while one variable (asset ownership) is statistically insignificant but positive ATT.

Thus, the program intervention has resulted in a positive and statistically significant mean difference between the client and non-client women in terms of increase in income and cash saving. From the above table, the result of ATT is positive indicating

that average yearly income, personal cash saving and owning asset has been improved because of microfinance program in the study area.

Therefore, microfinance program in the study area has been improved women's economic empowerment as shown from table 4.15 and the mean difference value of the outcome variables between client and non-client women was positive.

4.6.6. Sensitivity Analysis

Since PSM cannot alleviate the potential problem of unobservable variables, sensitivity analysis must be carried out to check the robustness. The sensitivity analysis was carried out on the estimated average treatment effect for the outcome variables and the matching estimator result depict that there is significant effect on the program participants. The sensitivity analysis result (i.e. at $e^{\gamma}=1$ up to 1.6) indicates that there was no unobserved variable that affect estimates of ATT or progamme participants.

Thus, it can be concluded that the impact estimates of ATT are insensitive to unobserved selection bias and clearly indicates that OMFI has positive impact on its clients (see Table 15 in the appendix).

CHAPTER FIVE

5. CONCLUSION AND RECOMMENDATION

5.1. Summary

Due to the widespread of inequalities, gender discrimination and deprivation of rights, women were vulnerable to poverty and they were denied from various socio-economic activities particularly in LDCs. To end this ignorance, gender equality is a way to promote growth, reduce poverty, equal access to resources and involve in decision making process at different levels which empowers their economic capacity.

Credit is one means of empowering women's economic capacity. MF provision to poor women is taken as a mechanism to reduce poverty and empower women economically. Microfinance provides social cohesion in poor communities, gives opportunity to escape from poverty for the poor particularly women.

The main aim of this study was to analyze the economic impact of Omo microfinance institution in empowering women with a case study in Gimbo woreda, South nation nationalities and peoples region (SNNPR), Ethiopia. Using multi-stage sampling technique, the input data was collected from 6 rural kebeles of which 84 microfinance clients and 112 non-clients with structured questionnaires. Semi-interviews were used to get additional information and cross check information provided in the questionnaire. Control groups were those loan applicants to take loan after they meet the selection criteria of the institution.

The data was analyzed by using both descriptive statistics and econometric models. The econometric model was carried out using propensity score matching method of analysis.

The result of descriptive statistics reveal that 9.64% of clients and 7.96% of non-clients didn't have house, 44.58% of clients and 59.29% of non-clients have Sar bet while 45.78% of clients and 28.32% of non-clients owned Korkoro bet. 10.84% and 39.76 % of client respondents explains that OMFI has ''very-high'' and "high" impact on their access and control over assets. While almost half of clients (46.99%) and (2.41%) clients explained that the impact of OMFI on their access and control over assets was "medium" and "low" respectively. It clearly shows Omo microfinance has

limited impact on access and control over their asset or slight differences between program participants and non-participants.

OMFI has significant impact in increasing their average yearly income. 92.96% of client's income is increased duet their participation in the program. Similarly saving has significant impact on the savings of respondents showing difference on their saving habits. 92.92% of non-clients didn't have any saving account at any institution due to their lack of awareness.

The finding of this study on the impact OMFI in improving women's decision making was found significant. 12.05% of clients and 53.1%) of non-clients explained that they didn't participate on decisions to sell or buy land and house. They indicated that the decision is made by their spouse. Thus, clients are better decision makers than non-clients.

The logistic regression result indicate that out of nine explanatory variables six variables were significantly affects women's involvement in major decision making. Age, women's spouse level of education, number of family size, head of the house hold, being member of MFI and amount of initial wealth were significant variables. Women's level of education, marital status and ecology were insignificant in affecting women's economic empowerment (involvement in major decision making).

The estimation of propensity score matching result discards only three observations from clients and none from non-clients. The common support region lies between [0.113, 0.998] which show none of observations was dropped from non-clients in the sample.

From the existing matching algorithm kernel 0.5 was chosen based on low pseudo-R^2, more insignificant balancing test and by looking better number of observations in the common support region.

The propensity score matching estimation result reveals that out of the three outcome variables average yearly income and personal cash saving are statistically significant in affecting women's economic empowerment, but access and control over asset (asset ownership) was statistically insignificant with positive ATT. Therefore, the program intervention has resulted in a positive and statistically significant mean difference between the client and non-client women in terms of increase in income

and cash saving. ATT is positive indicating that average yearly income, personal cash saving and owning asset has been improved.

Summing up, the findings of this study explicitly depict that, with its limitation, OMFI had a positive impact on women's economic empowerment in the study area.

5.2. Recommendations

As a policy indicator, the intervention of microfinance program is expected to improve and empower the living standard of the poor's particularly women at the grass root level and hence reduces poverty. As such the economic status of women and their level of participation in decision making will significantly improve.

Descriptive statistics of this study reveals that there is little difference between clients and non-clients in accessing, owning and control over resources. Similarly the econometric result depict ATT has statistically insignificant effect on women's accesses to resources and control over asset. Thus, it can be concluded that, OMFI has limited impact on women's accesses to resources and control over asset.

Therefore credit provision of OMFI should give priority in asset formation, access to resources, acquire asset and able to control it. Taking these actions reduces their level of poverty and empowers women's economic capacity.

OMFI should take appropriate measures to ensure its organizational mandates, objectives and commit to benefit women from its services by providing training, advisory services and continuous follow-up to assist women's economic empowerment. Linkages with other governmental organizations like women and children offices and agricultural offices should be made to work cooperatively and address problems.

Though, the impact of OMFI on women's average yearly income is significant, efforts should continue to increase access to resources and accumulation of assets that eventually help to wipeout or eliminate poverty and empower them.

In conclusion, additional researches should be carried out to acquire more empirical findings on the impact of OMFIs on women's access to resources, own asset and control over their resources.

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APPENDIXES

Table 1 Results of t-test for women level education (wle)

```
. ttest wle, by(trtd)

Two-sample t test with equal variances
```

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	112	.6071429	.0732553	.775261	.4619826	.7523031
1	84	1.392857	.1496006	1.371112	1.095308	1.690407
combined	196	.9438776	.0812614	1.13766	.7836134	1.104142
diff		-.7857143	.1546633		-1.090752	-.4806768

```
    diff = mean(0) - mean(1)                                      t =  -5.0802
Ho: diff = 0                     degrees of freedom =      194

    Ha: diff < 0                 Ha: diff != 0                 Ha: diff > 0
 Pr(T < t) = 0.0000         Pr(|T| > |t|) = 0.0000          Pr(T > t) = 1.0000
```

Table 2 Results of t-test for women's spouse level education (sle)

```
. ttest sle, by(trtd)

Two-sample t test with equal variances
```

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	112	1.651786	.1051366	1.112661	1.443451	1.860121
1	84	1.916667	.1247008	1.142902	1.668642	2.164692
combined	196	1.765306	.0807481	1.130473	1.606054	1.924558
diff		-.264881	.1624806		-.5853362	.0555743

```
    diff = mean(0) - mean(1)                                      t =  -1.6302
Ho: diff = 0                     degrees of freedom =      194

    Ha: diff < 0                 Ha: diff != 0                 Ha: diff > 0
 Pr(T < t) = 0.0523         Pr(|T| > |t|) = 0.1047          Pr(T > t) = 0.9477
```

Table 3 Results of t-test for head of the household (hhd)

```
. ttest hhd, by(trtd)

Two-sample t test with equal variances
```

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	112	1.553571	.0535714	.5669467	1.447416	1.659727
1	84	1.72619	.0618866	.5671996	1.603101	1.84928
combined	196	1.627551	.0408605	.5720464	1.546966	1.708136
diff		-.172619	.0818473		-.3340439	-.0111942

```
    diff = mean(0) - mean(1)                                      t =  -2.1090
Ho: diff = 0                     degrees of freedom =      194

    Ha: diff < 0                 Ha: diff != 0                 Ha: diff > 0
 Pr(T < t) = 0.0181         Pr(|T| > |t|) = 0.0362          Pr(T > t) = 0.9819
```

Table 4 Results of t-test for number of household size (nhsize)

```
. ttest nhsize, by(trtd)

Two-sample t test with equal variances
```

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	112	4.169643	.1867939	1.976841	3.799498	4.539787
1	84	4.809524	.2125415	1.947975	4.386787	5.23226
combined	196	4.443878	.1417893	1.98505	4.16424	4.723515
diff		-.639881	.2835573		-1.199132	-.08063

```
    diff = mean(0) - mean(1)                                      t =  -2.2566
Ho: diff = 0                     degrees of freedom =      194

    Ha: diff < 0                 Ha: diff != 0                 Ha: diff > 0
 Pr(T < t) = 0.0126         Pr(|T| > |t|) = 0.0251          Pr(T > t) = 0.9874
```

Table 5 Results of t-test for average yearly household income (ayhi)

```
. ttest ayhi, by(trtd)

Two-sample t test with equal variances
```

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	113	2612.389	759.9167	8078.025	1106.712	4118.067
1	84	61730.36	11809.92	108239.7	38240.9	85219.81
combined	197	27820.05	5452.958	76535.91	17066.05	38574.05
diff		-59117.97	10211.48		-79257.08	-38978.85

```
    diff = mean(0) - mean(1)                                      t =  -5.7894
Ho: diff = 0                     degrees of freedom =      195

    Ha: diff < 0                 Ha: diff != 0                 Ha: diff > 0
 Pr(T < t) = 0.0000         Pr(|T| > |t|) = 0.0000          Pr(T > t) = 1.0000
```

Table 6 Results of t-test for personal cash saving (pcs)

```
Two-sample t test with equal variances
```

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	113	.2654867	.0417265	.443559	.182811	.3481625
1	84	.9642857	.0203697	.1866915	.9237712	1.0048
combined	197	.5634518	.0354255	.4972211	.4935876	.6333159
diff		-.698799	.051509		-.8003852	-.5972128

```
    diff = mean(0) - mean(1)                                      t = -13.5665
Ho: diff = 0                     degrees of freedom =      195

    Ha: diff < 0                 Ha: diff != 0                 Ha: diff > 0
 Pr(T < t) = 0.0000         Pr(|T| > |t|) = 0.0000          Pr(T > t) = 1.0000
```

Table 7 Results of t-test for owner ship of asset (ownast)

```
. ttest ownast, by(trtd)

Two-sample t test with equal variances
```

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	112	.8125	.0370468	.3920666	.7390893	.8859107
1	84	.8928571	.0339495	.3111524	.8253329	.9603814
combined	196	.8469388	.0257835	.3609685	.7960885	.897789
diff		-.0803571	.0519158		-.1827491	.0220348

```
    diff = mean(0) - mean(1)                                      t =  -1.5478
Ho: diff = 0                                     degrees of freedom =      194

    Ha: diff < 0                 Ha: diff != 0                 Ha: diff > 0
 Pr(T < t) = 0.0616         Pr(|T| > |t|) = 0.1233          Pr(T > t) = 0.9384
```

Table 7.1 Results of t-test for decision making

```
. ttest sebyland, by(trtd)

Two-sample t test with equal variances
```

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	101	2.346535	.0763468	.7672763	2.195065	2.498005
1	77	1.922078	.0734052	.644128	1.775879	2.068277
combined	178	2.162921	.0558503	.7451359	2.052703	2.27314
diff		.4244567	.1084279		.2104706	.6384428

```
    diff = mean(0) - mean(1)                                      t =   3.9146
Ho: diff = 0                                     degrees of freedom =      176

    Ha: diff < 0                 Ha: diff != 0                 Ha: diff > 0
 Pr(T < t) = 0.9999         Pr(|T| > |t|) = 0.0001          Pr(T > t) = 0.0001

. ttest selngox, by(trtd)

Two-sample t test with equal variances
```

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	97	2.865979	.2937014	2.892623	2.282987	3.448972
1	76	1.973684	.077173	.672779	1.819948	2.127421
combined	173	2.473988	.1711019	2.250495	2.136258	2.811718
diff		.8922952	.3389599		.2232108	1.56138

```
    diff = mean(0) - mean(1)                                      t =   2.6325
Ho: diff = 0                                     degrees of freedom =      171

    Ha: diff < 0                 Ha: diff != 0                 Ha: diff > 0
 Pr(T < t) = 0.9954         Pr(|T| > |t|) = 0.0093          Pr(T > t) = 0.0046
```

Table 8: Pair wise correlation coefficient of explanatory variables for Heckman selection

	age	mrsta	wle	sle	nhsize	hhd	bmofi	eco	amtinw
age	1.0000								
mrsta	0.0102	1.0000							
wle	-0.0814	-0.1575	1.0000						
sle	-0.1152	-0.0673	0.2928	1.0000					
nhsize	-0.0022	0.0645	-0.0275	0.0581	1.0000				
hhd	0.0269	-0.1355	0.1805	0.1972	0.0786	1.0000			
bmofi	-0.1471	-0.0130	0.3316	0.2082	0.0738	0.0394	1.0000		
eco	0.0230	0.1132	-0.1091	-0.0505	0.1694	0.1330	-0.0629	1.0000	
amtinw	0.0286	0.0192	0.1250	-0.0021	0.1288	0.1073	0.2860	0.2166	1.0000

Table 9: Variance Inflation Factor (VIF)

Variable	VIF	1/VIF
bmofi	1.27	0.785890
wle	1.26	0.793077
amtinw	1.19	0.841900
sle	1.16	0.861010
eco	1.14	0.880355
hhd	1.12	0.894982
mrsta	1.06	0.945817
nhsize	1.05	0.948113
age	1.04	0.963609
Mean VIF	1.14	

Table10: Results of logistic regression

Linear regression

Number of obs	= 196
F(9, 186)	= 132.46
Prob > F	= 0.0000
R-squared	= 0.7196
Root MSE	= .26901

trtd	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
age	-.0043554	.001649	-2.64	0.009	-.0076086	-.0011022
mrsta	.0324927	.034696	0.94	0.350	-.0359555	.100941
wle	.0386928	.0258815	1.49	0.137	-.0123662	.0897518
sle	-.0441805	.0166268	-2.66	0.009	-.0769818	-.0113792
nhsize	.0220113	.0112116	1.96	0.051	-.000107	.0441296
hhd	.0994024	.0353047	2.82	0.005	.0297532	.1690515
bmofi	.7165681	.0750943	9.54	0.000	.568422	.8647141
eco	-.0354206	.0777547	-0.46	0.649	-.1888151	.1179739
amtinw	6.16e-06	2.46e-06	2.50	0.013	1.31e-06	.000011
_cons	-.1174421	.1499552	-0.78	0.435	-.4132738	.1783897

Table 11: Results of estimated propensity scores (kernel algorithm with band width 0.5)

```
.
. sum  _pscore
```

Variable	Obs	Mean	Std. Dev.	Min	Max
_pscore	196	.4247653	.424432	.0000207	.9997642

```
. sum  _pscore if   trtd==1
```

Variable	Obs	Mean	Std. Dev.	Min	Max
_pscore	84	.8531177	.1776374	.1190692	.9997642

```
. sum  _pscore if   trtd==0
```

Variable	Obs	Mean	Std. Dev.	Min	Max
_pscore	112	.103501	.2233307	.0000207	.9981149

```
. sum  _pscore, detail
```

psmatch2: Propensity Score

Percentiles		Smallest		
1%	.0000251	.0000207		
5%	.0001563	.0000251		
10%	.0006894	.0000502	Obs	196
25%	.0047174	.0000523	Sum of Wgt.	196
50%	.3014825		Mean	.4247653
		Largest	Std. Dev.	.424432
75%	.8975484	.9983144		
90%	.9801366	.9994602	Variance	.1801425
95%	.9958644	.9996164	Skewness	.1944331
99%	.9996164	.9997642	Kurtosis	1.211288

```
. psmatch2 ($ylist $xlist), kernel outcome(ayhi pcs ownast)bwidth(0.5)common  logit

Logistic regression                               Number of obs   =        196
                                                  LR chi2(9)      =     189.21
                                                  Prob > chi2     =     0.0000
Log likelihood = -39.243143                       Pseudo R2       =     0.7068
```

trtd	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
age	-.0619957	.0300193	-2.07	0.039	-.1208324	-.0031589
mrsta	.1412991	.4542472	0.31	0.756	-.749009	1.031607
wle	.4884861	.283603	1.72	0.085	-.0673655	1.044338
sle	-.5883765	.312909	-1.88	0.060	-1.201667	.024914
nhsize	.3477937	.1612854	2.16	0.031	.0316802	.6639072
hhd	1.274851	.590017	2.16	0.031	.1184394	2.431264
bmofi	6.341883	1.041868	6.09	0.000	4.299859	8.383908
eco	-.8970449	1.001038	-0.90	0.370	-2.859044	1.064954
amtinw	.0000758	.0000286	2.65	0.008	.0000197	.000132
_cons	-5.886478	1.988413	-2.96	0.003	-9.783695	-1.98926

Table 12: Average treatment effect on the treated

Variable	Sample	Treated	Controls	Difference	S.E.	T-stat
ayhi	Unmatched	7957.61905	4761.58036	3196.03869	1235.77156	2.59
	ATT	8141.23457	3750.04694	4391.18762	1989.43316	2.21
pcs	Unmatched	3891.66667	2460.98214	1430.68452	505.77035	2.83
	ATT	3937.03704	1399.70352	2537.33352	905.841628	2.80
ownast	Unmatched	.892857143	.8125	.080357143	.051915845	1.55
	ATT	.888888889	.780704869	.10818402	.120760812	0.90

Note: S.E. does not take into account that the propensity score is estimated.

Table 13: Region common support

psmatch2: Treatment assignment	psmatch2: Common support		Total
	Off suppo	On suppor	
Untreated	0	112	112
Treated	3	81	84
Total	3	193	196

Table 14. Propensity scores and covariates balancing

```
. pstest   _pscore $xlist ,both
```

Variable	Unmatched / Matched	Mean Treated	Mean Control	%bias	%reduct |bias|	t-test t	t-test p>|t|	V(T)/ V(C)
_pscore	U	.86771	.09922	383.5		26.12	0.000	0.61*
	M	.86288	.72158	70.5	81.6	4.40	0.000	0.59*
age	U	31.262	35.848	-40.4		-2.82	0.005	1.22
	M	31.494	37.751	-55.1	-36.4	-3.73	0.000	1.41
mrsta	U	2.1905	2.1696	3.1		0.22	0.827	1.03
	M	2.1975	2.2011	-0.5	82.8	-0.03	0.975	0.75
wle	U	1.3929	.60714	70.5		5.08	0.000	3.13*
	M	1.3951	1.1783	19.5	72.4	1.17	0.246	2.08*
sle	U	1.9167	1.6518	23.5		1.63	0.105	1.06
	M	1.9383	2.0588	-10.7	54.5	-0.77	0.442	1.84*
nhsize	U	4.8095	4.1696	32.6		2.26	0.025	0.97
	M	4.7778	4.6985	4.0	87.6	0.23	0.820	0.66
hhd	U	1.7262	1.5536	30.4		2.11	0.036	1.00
	M	1.716	1.5296	32.9	-8.0	2.19	0.030	1.30
bmofi	U	.9881	.15179	295.8		19.34	0.000	0.08*
	M	.98765	1.022	-12.2	95.9	-0.66	0.512	0.06*
eco	U	.90476	.91071	-2.0		-0.14	0.887	.
	M	.90123	.89853	0.9	54.5	0.06	0.955	.
amtinw	U	16145	8114.8	78.7		5.59	0.000	2.01*
	M	15015	10657	42.7	45.7	2.36	0.020	0.59*

* if variance ratio outside [0.65; 1.54] for U and [0.64; 1.55] for M

Sample	Ps R2	LR chi2	p>chi2	MeanBias	MedBias	B	R	%Var
Unmatched	0.720	192.80	0.000	96.1	36.5	376.6*	0.63	44
Matched	0.184	41.24	0.000	24.9	15.8	109.6*	1.71	56

* if B>25%, R outside [0.5; 2]

Table 15 Results of sensitivity analysis test (ayhi)

```
. do "C:\Users\z\AppData\Local\Temp\STD13000000.tmp"

. rbounds rho,gamma(1(0.05)2)

Rosenbaum bounds for rho (N = 81 matched pairs)

Gamma           sig+      sig-    t-hat+    t-hat-       CI+       CI-
-------------------------------------------------------------------------
    1         .000997   .000997   1409.86   1409.86    446.67   2708.19
 1.05         .001859   .000514   1295.81   1534.73   388.151   2786.22
  1.1         .003247   .000263   1177.19   1625.48   328.004   2880.91
 1.15         .005359   .000134   1092.94   1711.91   242.057   3009.49
  1.2         .008421   .000067   1007.68   1829.64   176.083   3157.88
 1.25         .012671   .000034   938.825      1964   110.388    3248.8
  1.3          .01835   .000017   863.693   2085.21   32.0746   3393.17
 1.35         .025688   8.4e-06   792.588   2183.36  -10.6058    3531.3
  1.4          .03489   4.2e-06   716.359   2281.51  -61.5608   3691.46
 1.45         .046124   2.1e-06   653.234   2403.24   -97.578   3816.72
  1.5         .059515   1.0e-06   593.855   2507.35  -128.828   3916.83
 1.55         .075133   5.0e-07   542.273   2592.87  -177.711   3985.26
  1.6            .093   2.4e-07   497.165   2636.59  -219.497   4065.82
 1.65          .11308   1.2e-07   460.108   2688.78  -263.602   4179.05
  1.7         .135287   5.8e-08    429.43   2740.73   -289.49   4306.32
 1.75          .15949   2.8e-08    399.39    2775.2  -322.733   4469.95
  1.8         .185519   1.4e-08   360.159    2822.3   -360.89   4621.26
 1.85         .213169   6.7e-09   328.004   2880.91    -389.3   4816.56
  1.9         .242212   3.2e-09   274.536   2949.02  -439.426   4999.46
 1.95         .272406   1.6e-09   229.034    3028.6   -471.84   5102.07
    2         .303497   7.6e-10   199.866   3117.31  -501.254   5370.57

* gamma  - log odds of differential assignment due to unobserved factors
  sig+   - upper bound significance level
  sig-   - lower bound significance level
  t-hat+ - upper bound Hodges-Lehmann point estimate
  t-hat- - lower bound Hodges-Lehmann point estimate
  CI+    - upper bound confidence interval (a=  .95)
  CI-    - lower bound confidence interval (a=  .95)
```

JIMMA UNIVERSTY (01)

COLLEGE OF BUSINESS AND ECONOMICS

SCHOOL OF GRADUATE STUDIES

DEPARTMENT OF ECONOMICS

QUESTIONNAIRES

Dear respondents;

This questionnaire is prepared with the intention to gather information on the impact of microfinance on women economic empowerment: case of selected kebele's of Gimbo woreda. It's made up of closed and open ended questions. The information you provide will be valuable for the successes of the research project. Please be honest and objective while filling the questionnaire. Your genuine response to the following question would have crucial importance to the results of the study. The information you provided is only used for academic consumption and will be kept confidential.

Thank You for Your Cooperation!!!

INSTRUCTION: Circle your answer among the given choices and fill your own idea in the blank space

QOUSTIONAIRE: For Clients of OMFI.

PART I: GENERAL INFORMATION

- Keble _____
- Name of the village_____
- Ketena (cluster)_____

PART II: SOCIO DEMOGRAPHIC CHARACTERISTICS

1. Age _____
2. Religion: 01) Orthodox, 02) Protestant. 03) Muslim, 04) Catholic
3. Marital status:- 01) Single, 02) Married 03) Widowed 04) Divorced
4. Educational status:- 0) Illiterate, 01) Read and Write, 02) Grade 1-4, 03) Grade 4-8, 04) Grade 8-12 05) above grade 12

5. Husbands' Educational status: 0) Illiterate, 01) Read and Write, 02) Grade 1-4, 03) Grade 4-8, 04) Grade 8-12 05) above grade 12

6. Job/occupation: - 01) Agriculture, 02) Trade, 03) Government employer, 04) Others_____

PART IV: HOUSEHOLD LIVELIHOOD INFORMATION

7. Number of household size; 01) Male ____02) Female ___03) Total_____

8. Head of the household: - 01) Myself 02) Husband 03) If others specify ___

9. What is your family source of livelihood?

No./(code)	Source of livelihood	Put them major to least (1^{st}, 2^{nd}…)	Remark
01	Livelihood		
02	Small trade		
03	Labor wage /service		
04	Handicrafts		
05	Fire wood and charcoal selling		
06	Selling local drinks		
07	Month Salary		
08	Remittance		
09	If others mention		

PART III: LOAN INFORMATION

10. When did you get your first loan from OMO? Month _____year_____E.C

11. Have you ever taken credit form other intuitions rather than OMO? 1= Yes 0= No

12. If yes for Q11 when did you take the loan?_____

13. For Q 12 from where you get the loan?_____

14. How do you take the loan from OMO? 01) In a group 02) Individual

15. From Q14, if it is in a group, how many group members are there?
01) Male _____02) Female _____03) Total_____

16. What is your relationship with the group members? 01.) Relatives
02.) Neighbors, 03.) Friends, 04.) All combined 05.) If other specify____

17. How many times did you take loan from OMO?(last five consecutive recent years)

No.	Loan year	Loan maturity period	Requested amount in birr	Released/a proved amount in birr	Remark
1st					
2nd					
3rd					
4th					
5th					

18. For what purpose do you take the loan? 01). To purchase oxen 02). To purchase agricultural input 03). For fattening 04). To trade 05). If other specify___

19. Was the loan enough for purpose? 1 = Yes 0= No

20. Did you spend the loan for your aim? 1 =Yes 0 =No

21. If for Q20 your answer is no, state the reasons why not spend on the intended objectives?

Reasons	Non-intended purpose	Amount spent	Remark
Amount of loan was not enough for the intended target			
The initial requested loan was not released			
Market problem			
To repay another loan			
To make more profitable business			
the loan taken by Spouse			
Others specify			

22. Have you ever face repayment problem? 1. Yes 0= No

23. If for Q22 your answer is yes, what are the reasons?

01.) Loan activity was not profitable 02.) I used the loan for household expenses

03.) Los of assets acquired by the loan 04.) Lack of demand/ sales

05.) Disasters like thief, fire 06.) Other specify

24. How did you pay your loan? 01.) From my business run by the loan

02.) By selling household assets

03.) By borrowing from relatives, friend and neighbors

04.) By taking loan from other institution

05.) Not paid 06.) If other specify_____

PART IV: ASSET INFORMATION

25. Do you have house before you joined OMO? 1= Yes 0= No

26. If yes for Q25, what kind of..?

01.) Sar bet 02.) Korkoro bet 03.) Both 1&2 04.) If others specify_____

27. How much was its estimated construction cost?_____

28. Is there any improvement after you joined the program? 1= Yes 0= No

29. If yes for Q28 what are the changes? 0) No change

01.) Able to build bitter house 02.) Able to built additional rooms

03.) Able to decorate amount of house 04.) Specify if other_____

30. Did you have farm land? 1= Yes 0= No

31. If yes for Q30, how much it is in hectare or timade_____

32. Did the loan for your agricultural input come from the loan? 1= Yes 0= No

33. How do you see the role of OMO on your access and control over assets?

01.) Very High 02.) High 03.) Medium 04.) Low 05.) Very Low 06.) No role

34. Please indicate your asset (live stock) after and before joining OMO?

Code	Type of Asset	Acquire			How expense are covered	
		No. of asset	Indicate the sources		From activities financed by the loan	If other specify
			From the loan	If Other, specify		
01	Oxen					
02	Cow					
03	Bulls					
04	Calves					
05	Horses					
06	Mules					
07	Donkey					
08	Goat					
09	Sheep					
10	Hen					
11	Bee					
12	Ornament					
13	TV					
14	Radio					
15	DVD					
16	Cooking utensils					
17	Mention others					

PART V: INCOME INFORMATION

35. Please state your average yearly income?

Sources of income	Amount in birr
Average yearly income	

36. Over the last loan period, do you think that your income is increased? 1= Yes 0= No

37. Did your personal income in the loan period ___?

01.) Increased 02.) Increased greatly 03.) Decreased 04.) Decreased greatly

05.) No difference (same as before) 06.) If other specify

38. If your income is increased at all, why? Because of…

01.) Adequate market, 02.) Under taken new business, 03.) Good agricultural season,

04.) Profitable of the business 05.) If any mention_____

39. If your income is decreased at all, why? Because of…

01.) Poor agricultural season 02.) Poor market /sales 03.) The business was not profitable

04.) I or my family member has been sick? 05.) If any mention_____

40. Did you use your loan to?

01.) Invest in different activities like commercial, agricultural or services?

02.) Buy consumption expenditure like food, cloth, house repair?

03.) You give the loan for the spouse or some else?

04.) Mention if any other_____

41. In general, how do you see the impact of OMFI to affect your income source and level of income?

01.) High 02.) Very high 03.) Medium 04.) Low 05.) Very low 06.) No impact

07.) Negatively affect my income 08.) If other specify_____

42. If negative affect please explain it_____

PART VI: SAVING INFORMATION

43. Do you have saving account before you join OMO? 1= Yes 0= No

44. If yes for Q43, where do you have?_____

45. If not for Q43 why?

01.) Lack of awareness 02.) Lack of money 03.) Distance of institutions to save

04.) Other _____

46. Do you have saving in OMFI? 1= Yes 0= No

47. If yes what type of saving? 01.) Compulsory 02.) Voluntary 03.) If other specify _____

48. Amount of monthly saving 01.) Compulsory _____02.) Voluntary _____

03.) Total current saving _____(in birr)

49. Do you think compulsory saving is useful? 1= Yes 0= No

50. If yes/no justify for Q49 _____

51. If you have faced difficulties in compulsory saving please explain your reasons?

52. How do you solve difficulties in compulsory saving?

01.) Selling household assets 02.) By borrowing from relative 03.) Other_____

53. If you have savings in kind form pleases mention

Items in kind	Amount	Expected value in Birr	Remark

54. During your loan period, is your personal cash saving ?

01.) Increased 02.) Increased greatly 03.) Decreased 04.) Decreased greatly

05.) No change 06. Other _____

55. What is your source of voluntary saving? 01.) From the business financed by the loan02.) If other source specify it _____

56. Why you are saving?

01.) To finance emergency cases 02). For loan repayment 03.) For safety of my cash 04.) To cover household expenses 05.) To earn interest

06.) If others please specify _____

57. Can you withdraw from your compulsory saving at any time?

If yes/no explain_____

58. In the last one year, how much did you with draw from your

1. Compulsory saving_____ 2. Voluntary saving_____

59. Who decides to use the savings?

01.) Myself 02.) Spouse 03.) Jointly 04.) Other specify _____

60. How do you evaluate the impact of OMFI in improving your saving habits?

01.) High 02.) Very high 03.) Medium 04.) Low 05.) Very low

06.) No impact 07.) Negatively affect 08.) Other_____

61. Explain if negatively affect_____

PART VII: INFORMATION ON DECISION MAKING

62. Specify/show the decision makers of each activity below from the table mark as (√)

01. Myself 02. Myself and spouse jointly 03. Mostly spouse

04. Female relatives (mother, sister, aunt grandmother …)

05. Male relatives (husband, father, brother, uncle, grandfather…)

06. Others _____55) Don't Know

Code		No.1	No.2	No.3	No. 4	No.5	No.6	No.55
01	The use of loan							
02	The use of saving							
03	Buy household food							
04	buy clothing							
05	Cooking utensils							
06	Pay health related costs							
07	Fee for equib, edir, mahiber ,wedding…							
08	Selling ox, cow, horse…							
09	Selling/ buying land, house …							
10	Repairing the house							
11	Renting the farm land							
12	Others specify							

63. How do you evaluate the impact of OMFI in improving your decision making role in the house hold level?

01.) High 02.) Very high 03.) Medium, 04.) Low 05.) Very low

06.) No impact 07.) Negatively affect 08.) Other_____

PART VIII: INFORMATION ON THE AREA ENDOWMENT, ECOLOGY AND INITIAL WEALTH

64. Is your area endowed with natural gifts (like fertile soil, good weather condition...etc)? 1= Yes 0= No

65. If yes Q36 did it help you to get loan and helpful in repayment?

1= Yes 0= No

66. Is the ecology suitable for your business? 1=Yes, 0=No 55)= Don't Know

67. If yes /No explain it_____

68. Is there any negative impact on your business financed by the loan explain ___

_____

69. Have you initial wealth? 1=Yes, 0= No

70. If yes for Q69, is it in____? 01) in kind 02) in asset 03) in cash 04) all 55) Don't Know

71. How much is your initial wealth calculated value in cash?_____

72. Do your initial wealth was helpful to your business? 1= Yes, 0=No 55) Don't Know

73. If yes for Q72 was …..?

01) it was helpful to start my business as an initial capital

02) it was helpful to run my business with my loan

03) it was not helpful at all

04) if others explain it____ 55) Don't Know

Name of the enumerator_____ signature_____

Date of interview_____

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Thank You for Your Cooperation!!!

INSTRUCTION: Circle your answer among the given choices and fill your own idea in the blank space.

QOUSTIONAIRE: For Non-Clients of OMFI.

PART I: GENERAL INFORMATION

- Keble _____
- Name of the village_____
- Ketena (cluster)_____

PART II: SOCIO DEMOGRAPHIC CHARACTERISTICS

1. Age _____
2. Religion: 01) Orthodox, 02) Protestant. 03) Muslim, 04) Catholic
3. Marital status:- 01). Single, 02). Married 03).Widowed 04).Divorced
4. Educational status:- 0) Illiterate, 01) Read and Write, 02) Grade 1-4, 03) Grade 4-8, 04) Grade 8-12 05) above grade 12

5. Husbands' Educational status: 0) Illiterate, 01) Read and Write, 02) Grade 1-4, 03) Grade 4-8, 04) Grade 8-12 05) above grade 12

6. Job/occupation:- 01). Agriculture, 02). Trade, 03). Government employer, 04). Others_____

PART III: HOUSEHOLD LIVELIHOOD INFORMATION

7. Number of household size M_____F_____T_____

8. Head of the household:- 01. Myself 02. Husband 03. If others specify _____

9. What is your family source of livelihood?

No./ (code)	Source of livelihood	Put them major to least (1st, 2nd…)	Remark
01	Livelihood		
02	Small trade		
03	Labor wage /service		
04	Handicrafts		
05	Fire wood and charcoal selling		
06	Selling local drinks		
07	Month Salary		
08	Remittance		
09	If others mention		

PART III: ASSET INFORMATION

10. Do you have house? 1. Yes 0= No

11. If yes for Q10, what kind of..?

01). Sar bet 02). Korkoro bet 03). Both 1&2 0 4). If others specify_____

12. How much was its estimated construction cost?_____

13. Is there any improvement during the last 2 years? 1. Yes 0= No

14. If yes for Q13 what are the changes?

01). Able to build bitter house 02). Able to built additional rooms

03). Able to decorate amount of house 04). Specify if other_____

15. Did you have farm land? 1. Yes 0= No

16. If yes for Q15, how much it is in hectare or timade_____

17. Please indicate your asset (live stock) ?

Code	Type of Asset	Acquire			How expense are covered	
		No. of asset	Indicate the sources		From activities financed by the loan	If other specify
			From the loan	Other specify		
01	Oxen					
02	Cow					
03	Bulls					
04	Calves					
05	Horses					
06	Mules					
07	Donkey					
08	Goat					
09	Sheep					
10	Hen					
11	Bee					
12	Ornament					
13	Tv					
14	Radio					
15	DVD					
16	Cooking utensils					
17	Mention others					

PART IV: INCOME INFORMATION

18. Please state your average yearly income?

Sources of income	Amount in birr
Average yearly income	

19. Over the last loan period, do you think that your income is increased?

1. Yes 0= No

20. Did your personal income in the last period ____?

01). Increased 02). Increased greatly 03). Decreased 04).Decreased greatly 05). No difference (same as before) 06). If other specify_____

21. If your income is increased at all, why? Because of…

01). Adequate market, 02). Under taken new business, 03). Good agricultural season, 04).Profitable of the business 05). If any mention_____

22. If your income is decreased at all, why? Because of…

01). Poor agricultural season 02). Poor market /sales 03). The business was not Profitable 0)4. I or my family member has been sick? 05). If any mention_

PART IV: SAVING INFORMATION

23. Do you have saving account other than OMO? 1. Yes 0= No

24. If yes for Q23, where do you have?_____

25. If not for Q23 why?

1. Lack of awareness 2. Lack of money 3. Distance of institutions to save

4. Other _____

26. If you have savings in kind form pleases mention

Items in kind	Amount	Expected value in Birr	Remark

27. During your last periods, is your personal cash saving_ ?

1. Increased 2. Increased greatly 3. Decreased 4. Decreased greatly 5. No Change 6. Other _____

28. What is your source of saving?

1. From the business financed by the loan

2. If other source specify it _____

29. Why you are saving?

1. To finance emergency cases 2. For loan repayment 3. For safety of my cash

4. To cover household expenses 5. To earn interest

6. If others please specify _____

30. In the last one year, how much did you with draw from your_saving_____

31. Who decides to use the savings?

1. Myself 2. Spouse 3. Jointly 4. Other specify _____

PART V: INFORMATION ON DECISION MAKING

32. Specify/show the decision makers of each activity below from the table mark as (√)

1. Myself 2. Myself and spouse jointly 3.mostly spouse

4. Female relatives (mother, sister, aunt grandmother …)

5. Male relatives (husband, father, brother, uncle, grandfather…)

6. Others _____55) Don't Know

Code		No.1	No.2	No.3	No. 4	No.5	No.6	No.55
01	The use of loan							
02	The use of saving							
03	Buy household food							
04	buy clothing							
05	Cooking utensils							
06	Pay health related costs							
07	Fee for equib, edir, mahiber ,wedding…							
08	Selling ox, cow, horse…							
09	Selling/ buying land, house …							
10	Repairing the house							
11	Renting the farm land							
12	Others specify							

PART VI: INFORMATION ON THE AREA ENDOWMENT, ECOLOGY AND INITIAL WEALTH

33. Is your area endowed with natural gifts (like fertile soil, good weather condition...etc)?

1= Yes 0= No

34. If yes Q33 did it helpful you to business? 1= Yes 0= No

35. Is the ecology suitable for your business? 1=Yes, 0=No 55)= Don't Know

36. If yes /No explain it_____

37. Is there any negative impact on your business financed by the loan explain ___

_____

38. Have you initial wealth? 1=Yes, 0= No

39. If yes for Q38, is it in____? 01) in kind 02) in asset 03) in cash 04) all 55) Don't Know

40. How much is your initial wealth calculated value in cash?_____

41. Do your initial wealth was helpful to your business? 1= Yes, 0=No

55). Don't Know

42. If yes for Q72 was …..?

01) it was helpful to start my business as an initial capital

02) it was helpful to run my business with my loan

03) it was not helpful at all

04) if others explain it____ 55) Don't Know

Name of the enumerator_____signature_____

Date of interview_____

Measurement Index

Women Economic Empowerment Measurement Index

Variables	Measurement unit		Indicators/changes
Access to asset, ownership and control over it	In number (productive asset land, animals...etc)	No. of house owned	At least living house
		No. livestock	>1 ox, >2 sheep/goat
		Land ownership	At least 1.5 ha/land
		Ornaments	Have ornament
		Cooking utensils	Have full cooking utensils
Average Income	In ETB	Amount personal income (level of income and revenue earnings, profits)	Increase in income
			Increase in expenditure (Improved livelihood)
Personal cash saving	In ETB (individual and household saving)	Amount voluntary saving	Increased (improved) their saving habits
		Amount of compulsory saving	
Decision making	Involvement	major decision making	Increase in bargaining power

From the above table women's involvement in major decision making is a proxy variable for women's economic empowerment. Out of the three outcome variables, if woman has empowered in two outcome variables, they are considered as they are empowered for this study.