



Assessment on the Effects of Village Savings and Loan Associations (VSLA)
on Poverty Reduction in Hawassa, Ethiopia

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Declaration

I hereby declare that the thesis entitled ‘Analysis of the Effects of Village Savings and Loan Association (VSLA) on Poverty Reduction in Hawassa, Ethiopia’ is my own work and that I have not previously submitted it at any university for a degree or examination. All sources that I have quoted have been indicated and duly acknowledged by means of referencing.

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Signature: 

May 2018

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Abstract

Formal microfinance institutions have been an important tool in the fight against poverty in developing countries, but their reach for rural people and urban slum poor are limited. Following this, Village Savings and Loan Associations (VSLAs) are established as an alternative, informal mechanism for saving and borrowing that do not require external capital or ongoing financial or administrative support from a founding organization or government bodies. Thus, this study aimed to assess the effects of women participation in VSLA on poverty reduction with a case study in Hawassa city, Ethiopia. Using a mixed qualitative and quantitative research methodology, the study tried to focus on examining the effects of VSLAs contribution to economic and social wellbeing of households, and decision makings, and women participation in community activities. The study used 254 samples (127 VSLA participants, and 127 non-participants) and collected data using questionnaire and focus group discussion.

The study used propensity score matching (PSM) to estimate the impact of women participation in VSLA on average monthly household income, and the result indicated the average effect of women participation in VSLA on average monthly household income of participant women is positive and significant at 5% significant level, ranging from 169.63 Birr/month (nearest neighbor matching) to 141.55 Birr/month (Kernel matching), on average. Besides, comparison between participants and non-participants using hypothesis testing shows that women participation in VSLA has a significant positive association with improvements in household diet, health, children's education, and women's involvement in household decisions. However, although hypothesized, no significant association is found in relation to women participation in community activities. Findings from the focus group discussions are also consistent with the results from the PSM and hypothesis testing. Following the findings, the study recommends government and nongovernmental organizations to provide regular, timely and need based capacity building trainings for VSLA participants; Link VSLA participants with formal microfinance institutions; conduct regular monitoring and follow ups by either the city or sub-cities Women Children Affairs Department/offices or concerned government body; different concerned stakeholders in the city including government, nongovernmental organizations, microfinance institutions and others need to work in coordinated manner to solve the recurrent challenges of VSLA participants in Hawassa city; and finally government and/or nongovernmental organizations need to take best practices and lessons from existing VSLAs and expand the VSLA initiative to address more impoverished women in the city.

Table of Contents

Declaration.....	ii
Acknowledgement	iii
Abstract.....	iv
Tables of Contents	v
List of Tables	viii
List of Figures.....	viii
List of Abbreviations and Acronyms.....	ix
Keywords.....	x
Chapter One.....	1
Introduction and Background.....	1
1.1 Chapter Overview.....	1
1.2 Introduction: Poverty in Context	1
1.3 Contextualization of the study	3
1.4 Problem Statement, Research Questions, Aim and Objectives of the Study	5
1.4.1 Problem Statement	5
1.4.2 Research questions.....	7
1.4.3 Aim of the Research.....	7
1.4.4 Objectives of the Research.....	7
1.5 Significance of the study	8
1.6 Organization of the study	9
Chapter Two	10
Literature Review	10
2.1 Chapter Overview.....	10
2.2. Concepts and Definitions: Poverty	10
2.2.1 Definition of Poverty	10
2.2.2. Approaches in analyzing Poverty	11
2.2.3 Measurements of Poverty	14
2.3 Concepts and Definitions: Village Saving and Loan Association (VSLA).....	17
2.3.1 Definitions: Village Savings and Loans Association (VSLA)	17
2.3.2 Village Saving and Loan (VSL) and Women	19
2.4 Empirical Studies on VSLA and Poverty Reduction.....	20

2.5 Chapter Summary	24
Chapter Three.....	25
Theoretical and Conceptual Frameworks.....	25
3.1 Chapter Overview.....	25
3.2 Theoretical Framework.....	25
3.3 Conceptual Framework of the Study	26
3.4 Hypotheses of the Study	29
3.5 Operationalization/Measurement of Key Variables	29
3.6 Chapter Summary	31
Chapter Four.....	32
Research Methodology	32
4.1 Chapter Overview.....	32
4.2 Description of the Case Study Area: Hawassa City	32
4.3. Research Design	33
4.4 Research Approach.....	33
4.5 Sampling Technique	34
4.5.1 Sample Size.....	34
4.5.2 Sampling Procedure	35
4.6 Methods of Data Collection.....	36
4.6.1 Questionnaire	36
4.6.2 Focus group discussion (FGD)	37
4.7 Data Analysis and Presentation	37
4.7.1 Quantitative Data Analysis	38
4.7.1.1 Propensity Score Matching	38
4.7.1.2 Hypothesis Testing.....	43
4.7.2 Qualitative analysis	44
4.8 Ethical Statement.....	44
4.9 Chapter Summary	44
Chapter Five.....	44
Assessing the Effect of VSLA on Urban Poverty Reduction: Empirical Findings.....	46
5.1 Chapter Overview.....	46
5.2 Effect of VSL on Poverty Reduction: Quantitative Analysis.....	46

5.2.1 Propensity Score Matching (PSM) Analysis	46
5.2.1.1 The Choice of Outcome and Covariate Variables for PSM	47
5.2.1.2 Descriptive Statistics of Covariates	48
5.2.1.3 Estimation of the Average Effect of VSL on Household Income	50
5.2.2 Comparative analysis via Hypothesis Testing	51
5.2.2.1 Effect on household diet.....	52
5.2.2.2 Effect on household health.....	54
5.2.2.3 Effect on Children’s Education	57
5.2.2.4 Effect on women’s decision making and community participation	59
5.3 Effect of VSL on Poverty Reduction: Qualitative Analysis.....	61
5.3.1 Effect of Women VSL Participation on Household Diet.....	61
5.3.2 Effect of Women VSL Participation on Household Health.....	62
5.3.3 Effect of Women VSL Participation on Children Education.....	64
5.3.4 Effect on Decision Making and Community Activities Participation	65
5.4 Chapter Summary	67
Chapter Six.....	68
Summary Findings, Conclusions and Policy Recommendations	68
6.1 Chapter Overview	68
6.2 Summary of findings and conclusions.....	68
6.3 Recommendations	71
6.4 Limitations and suggestions for future research.....	73
References	75
Annex.....	85
Annex I: Statistical Outputs.....	85
Annex II: Questionnaire and Focus Group Discussion Guide	90

List of Tables

Tab. 4.1 Coverage of sample VSLA women Participants by sub-cities.....	35
Tab. 5.1 Descriptive Statistics of Covarities	48
Tab. 5.2 Propensity Score Matching Estimation Using Logit model.....	49
Tab 5.3 Estimation of ATT of women participation in VSL on Household income	50
Tab 5.4 Respondents Perception towards their Household diet (in last 12 months)	52
Tab 5.5 Chi-Square Test for women Perception towards household diet	53
Tab 5.6 Respondents Perception towards their Household Health (in last 12 months)	54
Tab 5.7 Chi-Square Test for women Perception towards household Health	55
Tab 5.8 Respondents Perception towards their Children Education	57
Tab 5.9 Chi-Square Test for women Perception towards Children Education	58
Tab 5.10 Respondents Participation in Household Decision Making (in last 12 months) ..	59
Tab 5.11 Respondents Participation in community activities (in last 12 months)	60

List of Figures

Fig 3.1 Conceptual Framework of the Study.....	27
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List of Abbreviations and Acronyms

AEMFI	Association of Ethiopian Microfinance Institutions
ATT	Average Treatment Effect on the Treated
CSA	Central Statistical Agency
FGDs	Focus Group Discussions
GDP	Gross Domestic Product
GTP	Growth and Transformation Plan
HCAFED	Hawassa City Administration Finance and Economic Development
HCAWCAD	Hawassa City Administration Women and Children Affairs Department
IGA	Income Generating Activity
IPA	Innovations for Poverty Actions
LDCs	Least Developed Countries
MDGs	Millennium Development Goals
MFI	Microfinance Institutions
MoFED	Ministry of Finance and Economic Development
NBE	National Bank of Ethiopia
NGO	Nongovernmental Organization
PASDEP	Plan for Accelerated and Sustainable Development to End Poverty
PSE	Propensity Score Estimation
PSM	Propensity Score Matching
ROSCAs	Revolving Savings and Credit Associations
SDGs	Sustainable Development Goals
SIDA	Swedish International Development Cooperation Agency
UN	United Nations
VSLA:	Village Savings and Loans Association

Keywords

Associations

Decision

Development

Ethiopia

Loans

Microfinance

Participant

Poverty

Savings

Village

Chapter One

Introduction and Background

1.1 Chapter Overview

This study deals with the effects of VSLA on urban poverty reduction in Hawassa city. In this chapter, the background and context of the study, the statement of problem, the research questions, aims and objectives of the study are presented. It ends with a structural overview of the chapters throughout the entire study.

1.2 Introduction: Poverty in Context

The importance of poverty alleviation, as an indicator of social and economic development, is expressed by the fact that ending poverty in all its manifestations is the first goal of Sustainable Development Goals (SDGs). Sustainable Development Goal number one aimed to lift people living in \$1.90 or below per day and ensure social protection for the poor and vulnerable by 2030 (UN, 2016,12).¹

There has been marked progress on reducing poverty over the past decades. The world attained the first Millennium Development Goal (MDG) target to cut the 1990 poverty rate in half by 2015 five years ahead of schedule, in 2010. Despite the progress made in reducing poverty, the number of people living in extreme poverty globally remains unacceptably high (UN, 2012, 3)² and given global growth forecasts poverty reduction may not be fast enough to reach the target of ending extreme poverty by 2030. According to the most recent estimates, in 2013, 10.7 percent of the world's population lived on less than US\$1.90 a day, compared to 12.4 percent in 2012. That is down from 35 percent in 1990. This means that, in 2013, 767 million people lived on less than \$1.90 a day, down from 881 million in 2012 and 1.85 billion in 1990 (World Bank, 2016,2)³.

According to latest World Bank estimates (2016, 57)⁴, the share of Africans who are poor fell from 56% in 1990 to 43% in 2012. Empirical literature and statistics show that the distribution of poverty is not specific to a given region or country. The Sub Saharan African

¹ <https://sustainabledevelopment.un.org/topics/sustainabledevelopmentgoals> accessed March 2 2017

² <http://www.un.org/millenniumgoals/pdf/MDG%20Report%202012.pdf> accessed on 5th July 2017

³ <http://www.worldbank.org/en/topic/poverty/overview> accessed on 12th December 2017

⁴ <http://www.worldbank.org/en/region/aft/publication/poverty-rising-africa-poverty-report> accessed on 4th June 2017

scenario is severe compared to other parts of the world. Ethiopia, as part of Sub-Saharan Africa, is one of the world's poorest countries by any standard. Though the proportion of the population living below the poverty line in Ethiopia declined from an estimated level of 48 percent in 1990/1 to an estimated level of 38.7 percent in 2004/5 and further decreased to 33.5% in 2010, poverty remains widespread in the country (World Bank Group, 2016, p.77).⁵

It can be seen from the above facts that poverty is a pervasive problem in our society. Spanning across the world, poverty exists in different levels and various forms. As the World Bank broadly defines it, poverty is a “pronounced deprivation in wellbeing,” (Haughton & Khandker, 2009; 2). Due to the profound impact that poverty has on the poor’s well-being, efforts have been made by various governments, international governmental and nongovernmental organizations to combat extreme poverty. As a result of coordinated efforts, since 1985 extreme poverty has been reduced in every region of the globe. This reduction has been the result of many factors and developmental policies implemented over the past 30 years. Among many factors, the most unique developmental policy pioneered by Mohammed Yunus is prominent. This policy is called microfinance. Microfinance often provide micro loans to the group of 5 poor people without collateral and used to start and expand small businesses which ultimately aimed to help the poor break the vicious cycle of poverty (Yunus, 1999, p.149).

While many banks and microfinance institutions (MFIs) provide valuable services to the poor in the developing world, they are most successful in economically dynamic urban areas, where investment opportunities abound; the borrowing requirements of small-scale enterprises are high; income streams are regular and diverse and the cost of reaching clients is low. But 30 years since the start of the microfinance revolution, people who live in many rural areas and urban slums, and those who are very poor, have a difficult time gaining access to useful microfinance products (Brannen, 2010). This situation initiated for the evolution of village saving and loan as a significant model for creating access to financial resource to destitute poor in urban slums and rural areas.

Village Savings and Loans (VSL) is a concept developed by CARE International, an international NGO, and implemented by Moira Eknes in CARE's Matu Masa Dubara (Women on the Move) project in Niger in 1991(Hugh, 2002: 1). The Village savings and

⁵ <http://www.worldbank.org/en/country/ethiopia/overview> accessed on 4th February 2017

loans (VSL) model is a self-managed and self-capitalized microfinance methodology. By having its members mobilize and intermediate local pools of investment finance, it offers savings, insurance and credit services in markets outside the reach of formal institutions (Edengenet, 2016).

The VSL model has spread to at least 73 countries in Africa, Asia and Latin America, with over 12 million active participants worldwide. Thus, VSL model intends to provide the urban very poor and the rural poor with savings services as well as insurance and credit that can be delivered cost effectively, provide a secure place to save, the opportunity to borrow in modest amounts, easy to understand and transparent in its operations (VSL Associates, 2017).⁶

This study analyzes the effects of village saving and loan association (VSLA) in urban poverty reduction with focus on the poorest of the poor women and their households in Hawassa, Ethiopia. Using both qualitative and quantitative methods, the research tried to examine to what extent the VSLA impacted poorest of poor women and their households in economic and social wellbeing, household decision making and participation in community activities.

1.3 Contextualization of the Study

Ethiopia is the second-most populous country in Africa with a population of 99.4 million, and population growth rate of 2.5% in 2015. One of the world's oldest civilizations, Ethiopia is also one of the world's poorest countries. The country's per capita income of \$590 is substantially lower than the regional average (Gross National Income, Atlas Method). The government aspires to reach lower-middle income status over the next decade. The Ethiopian economy has experienced strong and broad-based growth over the past decade, averaging 10.8% per year in 2003/04 - 2014/15 compared to the regional average of 5.4%. Expansion of the services and agricultural sectors account for most of this growth, while manufacturing sector performance was relatively modest (World Bank, 2016)⁷.

In Ethiopia, only 16 percent of the population lives in urban areas making the country the least urbanized in the world. The majority of the population lives in the highland areas with farming as main occupation, while lowlands are mostly occupied by a pastoral people (CSA,

⁶ <http://www.vsla.net/> accessed on January 4th 2018

⁷ <http://www.worldbank.org/en/country/ethiopia/overview> accessed on 11th March 2017

2011, 3-4). Ethiopia is an agrarian country, which agriculture accounts for 43 percent of the gross domestic product. In terms of financial institutions, the country has one commercial, two specialized government owned banks and 14 private commercial banks. Besides, there are 30 privately owned microfinance institutions (NBE, 2011, 5).

To help attain the Millennium Development Goals (MDGs) by 2015, Ethiopia adopted the Plan for Accelerated and Sustained Development to End Poverty (PASDEP), the second poverty reduction strategy, covering the period 2005/06 to 2009/10. In keeping with this plan, the economy has grown in real GDP at a rate of 11 percent per annum in the five years. This rapid growth is the result of diversification and commercialization of small-scale agriculture, expansion of non-agricultural production in services and industry, capacity-building and good governance, off-farm employment especially through small enterprises, and investment in infrastructure. The first Growth and Transformation Plan (GTP I) has been developed for the period 2010/11-2014/15, designed to maintain rapid and broad-based economic growth and eventually to end poverty (MoFED, 2010).

The consecutive poverty reduction strategies implemented throughout the previous periods enable a fast-growing economic growth which in turn brought positive trends in poverty reduction, in both urban and rural areas. While 55.3% of Ethiopians lived in extreme poverty in 2000, by 2011, this figure was reduced to 33.5% as measured by the international poverty line, of less than \$1.90 per day in 2015. The government is currently implementing the second phase of its Growth and Transformation Plan (GTP II). GTP II, which runs from 2015/16 to 2019/20, aims to continue improvements in physical infrastructure through public investment projects and transform the country into a manufacturing hub. The overarching goal is to turn Ethiopia into a lower-middle-income country by 2025 (World Bank, 2016,4).⁸

Despite the enormous economic growth, poverty and unemployment remains a major problem in the Ethiopian economy which forces a lot of people to join petty trade and informal sector. The informal sector in Ethiopia is highly constrained by access to financial resources. To overcome this problem, microfinance services were indicated as suitable solutions that meet the need of borrowers who need capital in small amounts.

⁸ <http://www.worldbank.org/en/country/ethiopia/overview> accessed on 4th February 2017

In Ethiopia, the delivery of financial services to the poor is a very recent development which was started with proclamation number 40/1996 in which the legal framework that allow the establishment and operation of microfinance institutions was framed. Subsequently microfinance credit service has become one of the most prominent instruments in the development programs and has been operating towards resolving the credit access problem of the poor (Bamlaku, 2006). However, their outreach and service delivery to the poor in urban and rural areas is limited. Therefore, there should be a microcredit facility which is part of a microfinance that provides a wider range of financial services not only to support entrepreneurship, but also in many cases help poorest of the poor alleviate poverty and uplift entire communities by extension (Bamlaku, 2006). In response to these realities, many development agencies have sought to develop community-based financial organizations that could cost-effectively provide financial services to a clientele at the “low demand” end of the spectrum. Thus, Village Savings and Loan (VSL) model is one among others.

VSL model was introduced in Ethiopia in 2004 by CARE International. The VSL model started as pilots in two regions of Ethiopia, Amhara and Oromia in Lay Gaint and West and East Harrargie zones respectively (CARE, 2006, 1). Since then the model has been adopted by government, different international and local NGOs and widely used in different parts of Ethiopia. In Hawassa city, there are 49 VSLAs which comprises of 859 poorest of the poor members (HCAWCD, 2016). Considering these, this study assesses the effects of VSLA in urban poverty reduction in Hawassa city.

1.4 Problem Statement, Research Questions, Aim and Objectives of the Study

1.4.1 Problem Statement

Following the success of Muhammad Yunus with the Grameen Bank in 1970s, microfinance and microcredit continued to grow in the 1980s and 1990s. Since the 1990s the microfinance came to be a window of hope by development agencies for economic development (Lakwo, 2007; SIDA, 2004). Yunus stated that “formal institutions such as commercial banks pronounced a death sentence on the poor because they rejected the poor as unworthy of credit, imposing a financial apartheid.” (Yunus, 1999, p.149). The primary objective of MFIs is to create a small and easily accessible loan to the poor that can foster pro-poor growth. Microfinance can facilitate poverty reduction through improved quality of life on the one hand and women’s economic empowerment on the other (Dunn and Arbuckle, 2001; SIDA,

2006). Moreover, microfinance interventions may lead to empowerment of women by increasing their incomes and their control over that income, enhancing their knowledge and skills in production and trade, and increasing their participation in household decision-making (Kabeer, 1997; Haileselesse, 2007; Fredrik, 2013). As a result, social attitudes and perceptions may change, and women's status in the household and community may be enhanced. However, women are not willing to approach credit institution since the collateral the finance institutions requested from poor women is more than they can afford (SIDA, 2006; Bekele & Jacobs, 2008). In addition, the World Bank (2007) observed that from the 193.6 million families which are categorized as poor worldwide, only 47.8% were found to be in the range of reaching the formal financial institutions' services (Mochoge, 2016, p. 1).

In Ethiopia, following the microfinance legislation in 1996, women in both urban and rural areas of Ethiopia are accessing microcredit and benefiting from services of various MFIs (Bekele & Jacobs, 2008; Bekele, E. and Worku, Z., 2008; AEMFI, 2010). However, the participation of women in the MFIs are not at the desired level due to various factors including but not limited to the awareness and literacy level of women regarding the credit and repayments and the inability of women to provide collateral. Because of this, although the amount is too small and limited to petty trading, and informal sector activities, or are not enough to meet some personal social obligations, they involved in community based revolving credit and savings groups; that were much more convenient to them in terms of ease of access, and the fact that they dealt with people from close community (Bamlaku, 2006).

The introduction of VSLA, an informal microfinance institute which promotes locally self-managed savings and loan associations, in Ethiopia in 2004 created access to poorest of the poor people in rural and urban parts of Ethiopia. VSL is a complementary to microfinance institutions. MFIs have a conventional belief that credit is the most important service that they can offer, to enable the poor to invest their way out of poverty. On the other hand, VSL approach believes that what poor people require are the means to build their assets through savings rather than increase their risk exposure by taking out loans (Edengenet, 2016). Since 2004, VSL as a financing model has been adopted and promoted by Ethiopian government and different international NGO's to enable members to respond to economic opportunities as well as unforeseen shocks that may typically drive them into a cycle of uncontrollable and un-payable debt (Bamlaku, 2006).

Following the increases of VSLAs in Ethiopia, there are a number of studies which are conducted to document the processes, experiences and impacts of the VSLAs. Despite numerous studies, there is still limited information about the effects of VSLAs in urban areas. This is mainly because many studies focus exclusively on the VSLAs contribution for rural communities in Ethiopia. For instance, studies conducted by (Hossaena, 2013; Wosene, 2014; Fekadu, 2013; Edengenet, 2016) are few among many with exclusive focus on rural areas. In addition to this, there is a tendency to focus on assessment of VSLAs impact from empowerment point of view only. Thus, there is still need to assess and document the VSLAs effect in urban areas in Ethiopia. Therefore, this study tries to bridge the gap by conducting empirical research on effects of VSLAs on poverty reduction of the poorest of poor women and their families in Hawassa, Ethiopia.

1.4.2 Research Questions

Through the course of this research, the study answers the following research questions;

- To what extent is participation of women in VSLA contributing to economic and social wellbeing of their household?
- How participation of women in VSLA impact the level of household decision making and involvement in community activities?

1.4.3 Aim of the Research

The aim of the study is to assess the effect of village savings and loan associations in urban poverty reduction in Hawassa city administration at household and individual level, with focus on the poorest of the poor women and their households.

1.4.4 Objectives of the Research

The specific objectives to achieve the aim of the research are;

- To provide the study with a theoretical and conceptual framework through the discussion and/or analysis of applicable theories and concepts.
- To assess the effectiveness of VSLAs in helping the poorest of the poor women in their effort to get out of poverty as measured by income, health status, children's education, and household diet.

- To assess the extent to which VSLAs impact welfare of poor women in terms of household decision making and participation in community activities.
- To provide relevant conclusions and recommendations for stakeholders involved in the program, and other related programs in general.

1.5 Significance of the Study

Over the past twenty years, microfinance has become one of the hottest topics in development. In 2007, more than 100 million of the world's poorest families received a microloan (Daley-Harris 2009; 1). Microfinance encompasses the provision of financial services, including loans, savings and insurance, to low-income clients who generally lack access to more formal banking services. Although traditionally the provision of microloans has been the dominant feature of most microfinance programs, recently there has been an increasing appreciation of the importance of savings mechanisms. This led to the spread of VSLA models in various developing countries. As the number of microfinance institutions and VSLAs has increased across the globe, so has the interest in understanding the nature of the clients and how they are impacted by the program participation (Brannen, 2010).

Following the introduction of the village saving and loan association (VSLA) model in Africa in 1991, there was a growing demand by other Sub-Saharan Africa countries to replicate the model (Hugh, 2002, 1). Since 2004, this VSLA model has been implemented in different parts of Ethiopia including Hawassa city. Thus, conducting rigorous analysis of VSLAs effects on poverty reduction is needed both to improve the design of programs and to weed out ones that are not working. The results from this study contributes to understand the effects of VSLA in poverty reduction in Hawassa. The results of this research might be shared with the city authorities; concerned local and international nongovernmental organizations and others interested parties with the wish that it will be important to provoke a discussion on whether VSLA can reduce poverty in Ethiopia or not. Apart from these, the study aims to contribute to the body of knowledge on the village saving and loan associations. The findings of the research also serve as a reference for anyone who is interested in the field to conduct further study in the future.

1.6 Organization of the Study

The study is organized in six chapters each linked with the research objective. **Chapter One** deals with the introduction which mainly includes the background to the study, objectives, research questions, aims, objectives and significance of the study. The chapter ends with the overview of chapters throughout the study.

Chapter Two presents literature reviews related to concepts of urban poverty and village savings and loan associations. Besides, empirical studies on the experiences of urban poverty reduction and VSLA is reviewed.

Chapter Three presents the theoretical and conceptual frameworks used for the research. The village savings and loan approaches and vicious cycle of poverty constitute the theoretical framework for the study and is explained in the chapter. Furthermore, the conceptual framework applied to the study is also described. The chapter also describes the hypotheses of the study, measurement and operationalization of variables.

Chapter Four presents discussions about the research design and analytical tools applied throughout the thesis. In particular research design, description of the case study area, research approaches, methodology employed for sampling, data collection, and data analysis are presented. In the data analysis part, both quantitative and qualitative analysis methods are discussed in depth. Among others, the propensity scores matching formulas, procedures and various steps followed are thoroughly discussed under quantitative analysis. The chapter ends with ethical consideration made throughout the study.

Chapter Five consists results and discussion section. It comprises the analysis, presentation, and discussion of the empirical findings obtained from the research data. The findings consist quantitative analysis based on propensity score matching and hypothesis testing, while qualitative data obtained from focus group discussion are transcribed and presented in a systematic and meaningful way.

Chapter Six, the last chapter of the study, contains the summary of the research findings, conclusion and recommendations made based on the preceding chapter findings.

Chapter Two

Literature Review

2.1 Chapter Overview

In this chapter, the synthesis of the existing literature identified as relevant for village savings and loan association (VSLA), and poverty reduction is presented. The chapter starts with defining relevant concepts; then discusses the link between VSLA and urban poverty reduction; specifically, existing empirical studies are referred to.

2.2. Concepts and Definitions: Poverty

2.2.1 Definition of Poverty

The definition of poverty, as outlined in different literatures, provide many different interpretations. Based on different definitions, different implications on the incidence of poverty and policy analysis have been drawn. An operational and comprehensive definition of poverty has long been needed to fight poverty in a more effective way. However, it is fiercely a contested issue, and the concept of poverty has been widely defined by several institutions and scholars in many ways. Dinbabo (2011, 71) defined the term poverty in both narrow and broader sense. The term poverty, in a narrow sense, implies a shortage or absence of income to survive, whereas in the broader sense, poverty is seen as a multi-dimensional concept that includes other important aspects of human being including shelter, health, adequate education, access to information, power relations and others. The World Bank (1990, 26) also defines poverty as “the inability to attain a minimum standard of living”. Lipton and Ravallion (1995, 2553) stated that “poverty exists when one or more persons fall short of a level of economic welfare deemed to constitute a reasonable minimum, either in some absolute sense or by the standards of a specific society.”

Constance et al., (1995) as cited by Meron (2002, 18) define poverty as economic deprivation. A way of expressing this concept is that it pertains to people's lack of economic resources (e.g., money or near-money income) for consumption of economic goods and services like food, housing, clothing, education and transportation. Similar but a bit broader definition by Grieson (1973) as cited in Esubalew (2006, 22) conceptualizes poverty as a low quality in

health care, housing, calorie intake, clothing, recreation, education, entertainment, furniture, transportation, political representation and justice.

As clearly outlined by (Sen, 1985; 1987) cited by United Nations, (2009, resolution 1, annex II, p.8), poverty is not simply a lack of adequate income. It is a multidimensional phenomenon that extends beyond the economic arena to encompass factors such as the inability to participate in social and political life. In line with (United Nations, 2009, resolution 1, annex II, p.8) characterized poverty as follows:

“Poverty has various manifestations, including lack of income and productive resources sufficient to ensure sustainable livelihoods; hunger and malnutrition; ill health; limited or lack of access to education and other basic services; increased morbidity and mortality from illness; homelessness and inadequate housing; unsafe environments; and social discrimination and exclusion. It is also characterized by a lack of participation in decision-making and in civil, social and cultural life.”

(United Nations, 2009, resolution 1, annex II, p.8)⁹

Overall, the centerpiece of the debate about defining poverty is whether poverty is largely about material needs or whether it is much broader set of needs that permit well-being (Hulme and Mosely, 1996). Approaches focusing on the material need focus on consumption usually using income. However, Chambers (1994, p.18) has identified various forms deprivation that cannot be captured by income poverty measures. The levels or degrees of poverty are also of important consideration in defining poverty in a comprehensive way. Considering this, the study takes into account a multi-dimensional conceptualization of poverty. Hence, for this study, the definition of poverty incorporates lack of sufficient income to satisfy necessities of oneself and her/his household, lack of household decision making power, and low or no participation in formal and informal community activities.

2.2.2. Approaches in analyzing Poverty

In the literature, there are three main approaches in analyzing poverty. These approaches include the welfare approach, the basic needs approach and capability approach (Garza 2001, pp 143 - 144). Although each approach adopts different ways to define poverty and identify

⁹ <http://www.un.org/esa/socdev/rwss/docs/2010/fullreport.pdf> accessed on March 20th, 2018

the poor, there are areas in which they share some common meaning, which all approaches judge a person to be poor whenever he/she lacks with respect to a reasonable minimum standard. The details of each approach are discussed in detail as follows.

The Welfare Approach

In the welfare approach, poverty is associated with economic well-being of the society. It assumes that when societies are not able to attain a level of economic well-being deemed to constitute a minimum by the standard of that society, and then a person faces poverty. It sees income as a determining factor for the presence/absence of poverty (Lipton & Ravallion 1995 cited in Esubalew, 2006).

The welfare approach bases composition of well-being solely on individual utilities, which are based on social preferences (Lipton & Ravallion, 1995 cited in Esubalew, 2006). The approach refers to the numerous microeconomic precepts and postulate that economic actors are rational and that they behave in ways to maximize their benefit. The welfare approach bases comparisons of well-being solely on individual utilities, which are based on social preferences, including poverty comparisons. Nevertheless, this approach has been criticized that the approach is subjective in nature, and raises a problem of ethics (Garza, 2001).

The Basic Approach

The basic needs approach concentrates on “the degree of fulfillment of basic human needs in terms of health, food, education, water, shelter, transport” (Streeten et al., 1981, p. 7). It considers the things that are lacking in the lives of the poor as a set of goods and services specifically identified and deemed to meet the basic needs of all human beings. The goods in question are 'basics' in the sense that their satisfaction is seen as a pre-requisite to quality of life; they are not initially perceived as generators of well-being (Kabeer, 1994). Hence, this approach defines poverty when one lacks basic needs (goods and services). Nevertheless, this approach has some limitations mainly determining the set of basic needs is a challenge. The set of basic goods and services is different for different individuals depending on age, sex, type of activity, etc. of individual that is under consideration. Besides, measuring the costs of basic need is also problematic (Lipton and Ravallion, 1995).

The Capability Approach

Capability approach focuses on human freedoms and what is required to live a 'valued life'. In this approach, poverty is defined as "The failure to achieve certain minimal or basic capabilities, where basic capabilities include the ability to satisfy certain crucially important functioning up to certain minimally adequate levels." (Ruggeri Laderchiet et al, 2003, p.14). The approach has been shaped by the writings of Amartya Sen on human freedoms; entitlements and empowerment. For Sen's (1987), capabilities' approach, the thing that is missing is neither utility nor getting the basic needs; it is, however, human abilities or capabilities to achieve a set of functioning.

Capabilities' approach is closely related to the basic need approach, in motivation. However, the approach roots lie in the rejection of the "welfare" approach. Under Sen's 'capabilities' approach, commodities are viewed not as ends but as means to desired activities; welfare depends on a host of factors including personal and environmental circumstances of an individual (Sen, 1987). In relation to this, Sen (1987, p. 25) writes that the "value of the living standard lies in the living, and not in the possessing of commodities..." Sen (1987) defined poverty not only as a matter of low level of well-being, but also as lack of ability to chase well-being specifically because of lack of economic means. In a nutshell, poverty is interpreted as lack of capability.

Sen's capabilities approach to the definition and /or measurement of poverty suggests a broader set of criteria for assessing poverty than just income and/or consumption. The measure is said to include publicly provided but non-marketed services; like, sanitation, health care, education & life expectancy. For instance, Conradie, (2013) examined a five-year programme that aimed to support economically marginalized women in Khayelitsha near Cape Town in voicing and attempting to realize their aspirations. The programme gave a group of women from a very poor neighborhood the opportunity to express and reflect on their aspirations and the chance to work on these aspirations with a limited amount of support. Accordingly, the study findings show that aspirations can play a role in the field of poverty and development, and it was observed that by assisting women in a slow, continues, deliberate, and step-by step process of recovering, 23 out of 25 women were able to change their material circumstances to limited degree, gained self-confidence and achieve increased sense of autonomy. Hence, they gained new functioning's and extended their capabilities.

However, structural and institutional obstacles in South Africa, such as inadequate education system is identified as obstacle by women to realize their aspiration of improving income and class position. The study concluded that deliberate efforts to realize aspirations, accompanied by some facilitation, can increase capabilities, but structural constraints are hindrances to capability expansions.

The difficulties of capability approach lie in the application of the concept of capabilities in practical poverty assessments. This school assumes that if one is devoid of the right to participate and does not perform the functioning's, he/she is considered to be poor. It is said that it neither offered a practical criterion for evaluating the various capabilities to function nor sought any aggregation of social values of separate capabilities (Sallila, and Hiilamo, 2004).

2.2.3 Measurements of Poverty

When dealing with poverty study, it is imperative to deal with the different methods of measuring poverty. Ravallion (1998)¹⁰, argues, "a credible measure of poverty can be a powerful instrument for focusing the attention of policy makers on the living conditions of the poor." He further stated the poor might be ignored if they are statistically invisible. According to World Bank (2005) measuring poverty is useful to target interventions. The measure sets out the major facts on poverty, inequality, and examines the pattern of poverty, how it varies by geography (by region, urban/rural, mountain/plain, etc.), by community and household characteristics. Besides, measuring poverty is important to predict the effects of, and then evaluate, policies and programs designed to help the poor and evaluate institutions working to support the poor.

As stated on the preceding section, poverty measures are essential for obtaining a comprehensive view of the phenomenon and their complementary use is fundamental in the carrying out of in depth analyses on poverty. Though many alternative measures of poverty exist, the most commonly used include measures on poverty incidence, distribution, intensity, and severity.

¹⁰ <http://siteresources.worldbank.org/PGLP/Resources/PMch1.pdf> accessed on March 25th 2018

The incidence poverty measure provides information on the extent of the problem. Put in different words, it provides data on the quantity of people or households that are affected. Incidence of poverty also known as headcount index, is the share of the population whose income or consumption is below the poverty line, that is, the share of the population that cannot afford to buy a basic basket of goods. It is normally expressed as a percentage of the population and/or in all subgroups required so that the most impoverished can be seen. The headcount index can be also calculated for different population groups according to demographic or socio-economic variables: sex and age, level of education, professional situation, etc.

The **poverty distribution** measures indicate how poor people are distributed and the characteristics that they share. These measures provide descriptive information on a group of poor people. It is particularly important to carry out a study of poor people, their characteristics and their living conditions by studying the distribution of poor people by age and sex, by level of education, by their dwelling tenancy regime, etc. The poverty distribution measure allows to understand the characteristics of poor people and therefore facilitates the design of more efficient measures in the fight against poverty.

Most relative measures do not provide information on the degree of poverty suffered by poor people. It is therefore necessary to use some kind of measures that could provide information about the depth or intensity of poverty alongside the relative measures. Hence, depth of poverty (poverty gap) is the measure for this purpose. Depth of poverty (poverty gap) provides information regarding how far off households are from the poverty line. This measure captures the mean aggregate income or consumption short-fall relative to the poverty line across the whole population. It is obtained by adding up all the shortfalls of the poor (assuming that the non-poor have a shortfall of zero) and dividing the total by the population. In other words, it estimates the total resources needed to bring all the poor to the level of the poverty line (divided by the number of individuals in the population). This measure can also be used for nonmonetary indicators, provided that the measure of the distance is meaningful. There are another two measures related to the intensity of poverty that use poverty gap as a base element. These measures are; income gap, and relative poverty gap. The income gap is calculated by dividing the poverty gap among the minimum income poor people would have to stop being poor. Whereas, the relative poverty gap is calculated

as the coefficient between the poverty gap and the number of people in the poverty threshold, in other words, as though everyone was in the poverty threshold.

The poverty measure which is closer to the intensity is Poverty severity (squared poverty gap). The poverty severity measures of poverty take into account not only the distance separating the poor from the poverty line (the poverty gap), but also the inequality among the poor. That is, a higher weight is placed on those households further away from the poverty line.

Overall, the measures of depth and severity of poverty are important complements of the incidence of poverty. Depth and severity might be particularly important for the evaluation of programs and policies. A program might be very effective at reducing the number of poor (the incidence of poverty) but might do so only by lifting those who were closest to the poverty line out of poverty (low impact on the poverty gap). Other interventions might better address the situation of the very poor but have a low impact on the overall incidence (if it brings the very poor closer to the poverty line but not above it). Hence, from the preceding discussion, it can be clearly noted that the measures of poverty to be used differs depending on the purpose for which it is being employed and other underlying factors. Besides, as Chuhan (2006) posits the complex and multidimensional nature of poverty made it difficult to have a single and universal measure to it.

Beside the above-mentioned ways of measuring poverty, poverty can also be thought as either absolute or relative poverty measurement approaches (World Bank, 2000; Dinbabo, 2011). According to Dinbabo (2011,78), absolute poverty refers to “lack of an adequate amount of financial income of individuals or households in financial terms for fulfilling the basic needs such as foodstuff, clothes and shelter.” He further pointed out that absolute poverty is a set standard, which is the same in all countries and does not change over time. For Woolard & Leibbrandt (1999), absolute poverty is measured using an absolute poverty line which estimates the minimum living level required to ensure survival. International institutions such as World Bank has put a figure on absolute poverty. For instance, 1 USD per day (at 1999 purchasing power parity) and the 1.25 USD per day (at 2005 purchasing power parity) represent typical absolute poverty lines. However, there are some critics regarding measuring poverty using absolute poverty line. Among others, Bellu & Liberati (2005:4) pointed out that absolute measures of poverty exclude non-food items and ignore the fact that “minimum diet cost may vary among households as they do not all share the

same preferences of nutritional patterns”. Montgomery and Burr, (2003) as cited by Dinbabo (2011, 78) observed that the international definition of absolute poverty is difficult when it is applied within the world’s richest countries. Thus, understanding poverty in relative terms provides some information about the gap between the richest and the poorest in society.

Relative poverty, as defined by Dinbabo, (2011, 79), “describes poverty of a particular group or area in relation to the economic status of other members of the society.” Based on this definition, people are considered as poor if they fall below prevailing standards of living in a given society. Similarly, Lok-Dessalian (2002) posits relative poverty measure do not employ a specific quantitative measure in distinguishing the poor from the non-poor. Rather, it attempts a comparison of the incomes and consumption of persons or households in relation to that of other members within the same society, usually among persons or households within the lowest segment and those of the upper segments. Though measuring poverty either in absolute or relative means is debatable in poverty discourse, Seidl (1988:79) believes that “poverty is neither a strictly absolute or strictly relative concept”. However, Woolard & Leibbrandt (1999) argued that distinctions between these concepts are relevant because they shape and influence how individuals perceive poverty reduction strategies.

Having discussed the concepts of poverty, its definitions, approaches, and measures; the next section deals with village saving and loan associations; concepts and definitions, and its relationship with poverty reduction in general.

2.3 Concepts and Definitions: Village Saving and Loan Association (VSLA)

2.3.1 Definitions: Village Savings and Loans Association (VSLA)

The stimulus for VSLAs came from rotating savings and credit associations (so-called ROSCAs and was developed by CARE international and VSL Associates during the 1990s (Ashe, 2002) as cited by Ksoll (2016, p.7). The need to improve ROSCAs was to make the groups more sustainable and flexible. A series of accountability preventing theft of funds and elite capture was assumed to increase sustainability, while flexibility is increased as members can at any time borrow the amount they want up to three times their own level of savings – if funds are available.

VSLAs are formed initially after conducting awareness meetings with various community members in every targeted village mostly facilitated by government bodies or

nongovernmental organizations. The newly formed VSLAs are then visited every week in the first three months to set up the procedures by the government bodies or nongovernmental organizations. Associations work as a member-owned financial intermediary with savings, credit and insurance as main products. Savings are compulsory and are collected at the weekly meetings and are considered as buying shares. The share value and the number of share to buy by members is set by the group and written in the group's constitution (Allen and Staehle, 2007).

Different scholars have defined VSLAs in different ways. For instance, Ashe (2002) as cited by Augustus, (2009, p. 11), defined Village Savings and Loans Associations (VSLA) as an informal financial sector that are formed by self-mobilized and self-administered individuals or community groups who mobilize their savings at agreed intervals and make them available and accessible to their members in form of credit. Similarly, Jain (1996) stated village savings and loans as community-based organizations (CBOs) which links members together in order to save funds which eventually can allow them to borrow. Short-term borrowings that normally range from 1 – 3 months is given to members from VSL from which they are required to pay back with interest. VSL can be bound by time, meaning that after end of given time frame (typically yearly) the borrowed funds are divided among members of group, for their personal use. Innovations for poverty actions (IPA, 2012, p.12)¹¹ also defined VSLAs in terms of the different characteristics within it. Accordingly, an association is considered as village saving and loan if it fulfills the following characteristics;

- Money accumulates over time
- Members meet on a weekly basis
- Members are allowed to take a loan from the group
- Members have received or expect to receive a share-out
- Groups were formed with the help of a trainer
- Groups deposit funds in a box

For this study, definition by a Village Saving and Loan Associates (VSL Associates)¹² is used. Hence, Village Savings and Loan Association (VSLA) is defined as “a group of 15 to

¹¹ https://www.mangotree.org/files/galleries/1236_VSLA_Impact_Final_Report_September_2012.pdf accessed on April 20th 2018

¹² <http://www.vsla.net/> accessed on March 20th, 2018

25 self-selected individuals who save together and take small loans from those savings. In most cases, groups meet weekly and members save through the purchase of shares. The activities of the group run in cycles of one year, after which the accumulated savings and the loan profits are distributed back to members. These groups are formed primarily to provide simple savings and loan facilities in a community that does not have easy access to formal financial services such as banks and microfinance institutions.”

Overall, though village savings and loans vary in their degree of complexity, their purpose is mostly to enable the poor households address a wide range of critical needs other than relying on outside funds (Chambers, 1983). In this regard, Microfinance in Africa (2000) as cited by Augustus, (2009, p. 11), stated that the purpose of the VSL fund is to support members financially to start or improve their small businesses, acquire productive assets, or buy life enhancing consumer durables such as blankets; bicycles, household utensils and children’s school uniforms. Interest charged on loans contributes to building the group’s fund. “Through small loans advanced at low interest rates, VSL schemes play an important role in empowering women, who in most cases lack alternative source of income” (Karlan, 2007). “Experts view VSL schemes as the one glimmer of hope for the poor, a critical way out of poverty and a means to the empowerment of low income - earners, especially women” (Sachs, 2005).

2.3.2 Village Savings and Loans (VSL) and Women

According to Thuysbaert (2012)¹³, most of the world’s poor lack access to formal financial services, and this lack of access to reliable financial services are negatively affecting people’s welfare. Limited access to formal financial services differs highly by gender, According to The Global Findex¹⁴, “Women are less likely than men to have formal bank accounts. In developing economies women are 20 percent less likely than men to have an account at a formal financial institution and 17 percent less likely to have borrowed formally in the past year. Even if they can gain access to a loan, women often lack access to other financial services, such as savings, digital payment methods, and insurance.” To address this challenge,

¹³ https://www.poverty-action.org/sites/default/files/day_3_s2_thuysbaert.pdf accessed on 15th April 2018

¹⁴ <http://www.worldbank.org/en/results/2013/04/01/banking-on-women-extending-womens-access-to-financial-services> accessed on 22/04/2018

informal saving groups such as village saving, and loan are considered as an alternative. In relation to this, a global research carried out by the World Bank found that about 133 million people were involved in VSL activities and had benefitted from small loans from such schemes by the end of 2006. According to World Bank, 2007 as cited by Mochoge (2016), about 60% of VSL beneficiaries were women earning less than a dollar a day. Similarly, in his study, Robinson, (2004) stated that the strength of VSL scheme was founded on women`s proper utilization of funds, financial discipline and timely repayment of loans. He further mentioned that investing in women had proven to be the most effective way to increase household expenditure on health, nutrition, food, security, education and protection against emergencies (Robinson, 2004).

There are number of studies that shows links between village savings and loan and women. Among others, studies by Todd (2000), Barnes (2001), and Khandker (2003) are reviewed. Study by Todd (2000) found a positive correlation between access to VSL funds by women and child nutrition, maternal and child health, children`s enrolment in school and women`s participation in decision - making. Similarly, Barnes (2001) found a positive linkage between membership to VSL schemes and borrower`s household income, property ownership, children`s education and health. Barnes (2001) found that there is an increase in income, increase in number of schooling for boys aged 6 -16, improvement in both quantity and quality of food consumed and increase in durable assets. Khandker (2003) also found that among the earliest VSL beneficiaries, poverty rates decreased by more than 20 percent, over half of which was attributed to VSL loans. Women involved in VSL schemes were three times more likely to purchase land on their own than those not involved in such schemes. Due to the spillover effect of this impact on non - beneficiaries of VSL schemes, the study concluded that VSL directly accounted for 40% in reduction of poverty in rural Bangladesh.

2.4 Empirical Studies on VSLA and Poverty Reduction

A great deal of literature is available on the effects of microcredit and community managed saving and loan associations on poverty reduction, community and local development, both in developed and developing countries. These include (E.g. Allen and Hobane, 2004; Anyango, 2005; Dinbabo, 2005; Dinbabo, 2012; Dinbabo, 2013; Dinbabo, 2014; Dunn and Arbuckle, 2001; Hossaena, 2013; Hossain, 1988; Khandker, 2005; Morduch, 1998; Mutesasira and Mule, 2003; Terry, 2006; Wosene, 2014, Sherin, 2012).

In general, the impact of microcredit programs on reducing poverty and enhancing social wellbeing of the poor has been widely investigated. Reviewing the literature investigating the microcredit impact on poverty alleviation shows disparities between supporters and opponents. On one side of the argument there are significant positive effects for microcredit programs on household material and social well-being with further spill-over effects on the local economy while on the other side of the argument, there are well documented negative effects, particularly on the extreme poor (Sherin, 2012).

A number of studies (e.g. Hossaena, 2013; Terry, 2006; Khandker, 2005; Dunn & Arbuckle, 2001; and Hossain, 1988) have found that access to microfinance services decreases the incidence of poverty. According to this group of researchers, microcredit programs have a positive impact not merely on the poor household income and consumption level but on their social wellbeing as well, reflected by the impact of these programs on recipients' level of education, health and children nutrition. Furthermore, it extends to women's feelings of empowerment and independence. The positive impacts of microcredit on income and consumption levels have been well documented. For example, in his study on participants of Grameen Bank in Bangladesh, Hossain (1988) found significant impacts of the effect of microcredit programs on alleviating poverty in Bangladesh. This was reflected in higher income, capital accumulation and employment among loan recipients.

Dunn and Arbuckle (2001) found that only 28 percent of microfinance clients in Lima, Peru live below the poverty line compared to 41 percent of non-clients. Khandker (2005) also finds positive effects on poverty rates. He finds that between 1991/92 and 1998/99, moderate poverty in all villages declined by 17 percentage points: 18 points in areas where Grameen Bank or BRAC was active, and 13 points in non-program areas. Microfinance thus helps not only poor participants but also the local economy. Overall, Khandker finds that microfinance accounts for 40 percent of the entire reduction of moderate poverty in rural Bangladesh.

Terry (2006) finds that loans from FINCA-Tanzania create major positive changes in the lives of female borrowers, including an improvement in social status and self-esteem, and an increase in confidence. Women also feel empowered through an increase in income and the ability to accumulate savings, purchase household assets and contribute towards their children's education. The findings also suggest that members of the household and the community, at large, view female participants in a more positive way. However, Terry relies

completely on qualitative data and does not include a control group. Therefore, the results of the study are not necessarily reliable.

On the other side of the argument, Morduch (1998) in his study in Bangladesh found no evidence indicating higher consumption levels or educational enrolments for children of loan holders, but merely a reduction in consumption variability across the seasons for the participants. He has used a cross sectional survey of 180 respondents from participants and non-participants in microcredit programmes. Accordingly, microcredit programmes were not found to enable households to increase their consumption level but simply offered them “ways to smooth their consumption through smoothing income”. He mentioned that this benefit is negligible compared to the program costs.

There are also numerous studies on the village savings and loan associations, which are exclusively categorized under the community saving and credit groups, which collect members saving to provide loan and small insurance services to its members. Recent empirical evidence suggests that well developed VSL schemes can help individuals to improve incomes, broaden investment opportunities; thus, reduce poverty as well lower income inequality between women and men (Wosene, 2014).

Allen and Hobane (2004) concluded that the VSLA have contributed to increased household productive and non-productive asset levels. The study further noted that there has been a significant reduction in the use of formal-sector and traditional savings instruments. The number of income-generating activities per household increased and income generating activities (IGA) became more stable, while household labour allocated to IGAs increased. Eighty-one percent of respondents felt that their status in the community had improved due to their association with their VSLAs. Anyango (2005) reached similar conclusions. The findings showed that the VSLA program had helped to improve the livelihoods of its members and alleviate poverty, particularly for women who constitute the majority in the VSLA groups. The number of economic activities that members of VSLA were engaged in at the baseline had increased, as had the magnitude of other activities.

Mutesasira and Mule (2003) in their study in Uganda concluded that most VSLAs were comprised of very low-income people. The average savings per member and the average loan size provided some evidence of the depth of outreach.

Wosene (2014) in her study on poor women and their social capital, which is an exploratory study of the village saving and loan groups' (VSLGs) contribution to women's empowerment in Ethiopia, West Harergie, she found that VSLG contribute positively on the social capital, children schooling, enhance the decision making power of women, economic empowerment of poor women, harmony within the family, improvement of saving culture, ensures security, change in social status, increase in social interaction, enhanced self-confidence and hope of a better future.

In the context of Ethiopia, (Dinbabo, 2005; Dinbabo, 2012; Dinbabo, 2013; Dinbabo, 2014) also undertook an evaluation study on community development and poverty reduction using a case study area in the Southern Region. His methodology employed both quantitative and qualitative approaches. Dinbabo, (2014) argues that participatory development can significantly enhance the effectiveness of any microfinance activities in terms poverty reduction at the community level. Respondents who participated in the study found that it went far in supporting their work and in creating awareness among a range of stakeholders about the needs of the intended beneficiaries (i.e., the poor). Furthermore, they believed that the costs of participation were small as compared with the gains. Dinbabo (2012; 2014) further argues that stakeholders' participation strengthens the effectiveness of microfinance and sustainability of any kinds of poverty reduction at the community level.

Hossaena (2013, 54 - 83) in his study entitled "Women empowerment through microfinance: the case of village saving and loan association in Kurfa Chelle district, East Hararghe Zone, Oromia Regional state, Ethiopia", found that the empowerment status of the village savings and loan association members were better than the non-members most at 1% levels of probability. The results of the econometric model outputs showed that marital status, dependency ratio, distances from the nearest market have negative influence on women empowerment. On the other hand, family size, level of formal education, years of experience in income generation, years of membership in village saving and loan associations, livestock ownership, and extension participation have positive contribution to influence women empowerment. The descriptive statistics results on saving and loan use pattern of the sampled respondents of the association members indicated significant changes on saving and credit uptakes. He concluded that village savings and loan association microfinance products has

creating wider opportunity for members to engage in productive activities and linkage with formal MFI institution enhanced access to credit services.

2.5 Chapter Summary

In this chapter, an in-depth review of literature concerning definitions, concepts, approaches and measures of poverty are presented. Poverty has been conceptualized in a multi-dimensional perspective. The three different approaches used in poverty analysis i.e. welfare, basic and capability approaches are also discussed. Besides, some reviews about village saving and loan association were presented. The chapter ends with review of an empirical studies conducted to assess the links between various community managed saving and loan initiatives including VSLA, and microcredits and poverty reduction from various countries context. The review shows that the effectiveness of microcredit and VSLAs on individual and household social and economic wellbeing is mixed. One cannot identify a clear positive or negative impact for microcredit and VSLAs that applies everywhere. In the next chapter, the theoretical and conceptual frameworks of the study are presented.

Chapter Three

Theoretical and Conceptual Frameworks

3.1 Chapter Overview

This chapter provides the theoretical framework for the study by examining vicious cycle of poverty and how this can be applied to reduce urban poverty. In addition, it also provides a conceptual framework designed to understand the link between village saving and loan associations and urban poverty reductions within the context of this study.

3.2 Theoretical Framework

The theoretical framework is the “structure that can support a theory of a research study. Besides, it also describes the theory that explains why the research problem under study exists” (Richard et al 2013, p.2)¹⁵. Accordingly, this study is guided by the theory of vicious cycle of poverty.

The Theory of Vicious Cycle of Poverty

The vicious cycle of poverty states that the poor man is poor because he is poor, or a country is underdeveloped because it is underdeveloped. The vicious cycle of poverty is a kind of curse which is feared by individuals and countries because it is said that an individual/country is poor because it is poor. The theory states that there are circular relationships known as the “vicious cycle of poverty” that tend to perpetuate the low level of development in less developed countries (LDCs). The trajectory is that poverty is caused by low income. Low income engenders low savings and this in turn leads to low investment. The latter provokes low productivity and the cycle continues (Taiwo, 2012).

According to Jhingan (2003), the basic vicious cycle stems from the facts that in LDCs total productivity is low due to deficiency of capital, market imperfections, economic backwardness and underdevelopment. Jhingan (2003), stressed that vicious cycle operates both on the demand side and supply side. On the demand side of the vicious cycle, the low level of real income leads to a low level of demand which in turn leads to a low rate of investment and hence back to deficiency of capital, low productivity and low income. On the

¹⁵ <http://libguides.usc.edu/writingguide/theoreticalframework> accessed on 10th February 2017

supply side, low productivity is reflected in low real income. The low level of savings leads to low investment and to deficiency of capital. The deficiency of capital in turn leads to a low level of productivity and back to a low income. Accordingly, this theory views poverty as being self-perpetuating.

According to Kuncoro (2000) as cited by Rohima, (2013 p.35), the vicious cycle of poverty begins with the poverty of retardation and lack of capital market imperfections. These two factors affect the low productivity of the total population. Low productivity results in lower incomes of the poor receive. The low income will have implications for the low savings and investment trend lower. Subsequent impact, low investment will further aggravate the economy and result in socio - economic underdevelopment and backwardness of the community. Therefore, every effort should be focused on the fight against poverty 'cut' the circle of poverty traps in the long run and reduce the poverty in short term.

In the context of this study, promotion of associations and group formation among the poor is considered as a tool to path the way out of poverty. Formation of village savings and loans associations and participation of women in these associations are vital to reduce poverty and maintain a better living standard of participants and their households. Considering these, the study used vicious cycle of poverty as a founding theoretical framework.

The next sub-section in depth discusses the conceptual framework of the study. It also details how the theoretical framework is applied and contextualized to fit for the study purpose.

3.3 Conceptual Framework of the Study

According to Miles and Huberman (1994:14), "a conceptual framework explains either graphically or in a narrative form, the main things to be studied- the key factors constructs or variables and the presumed relationships among them". Usually expressed abstractly through word models, a conceptual framework is the conceptual basis for many theories.

The conceptual framework for this study is depicted in the following figure;

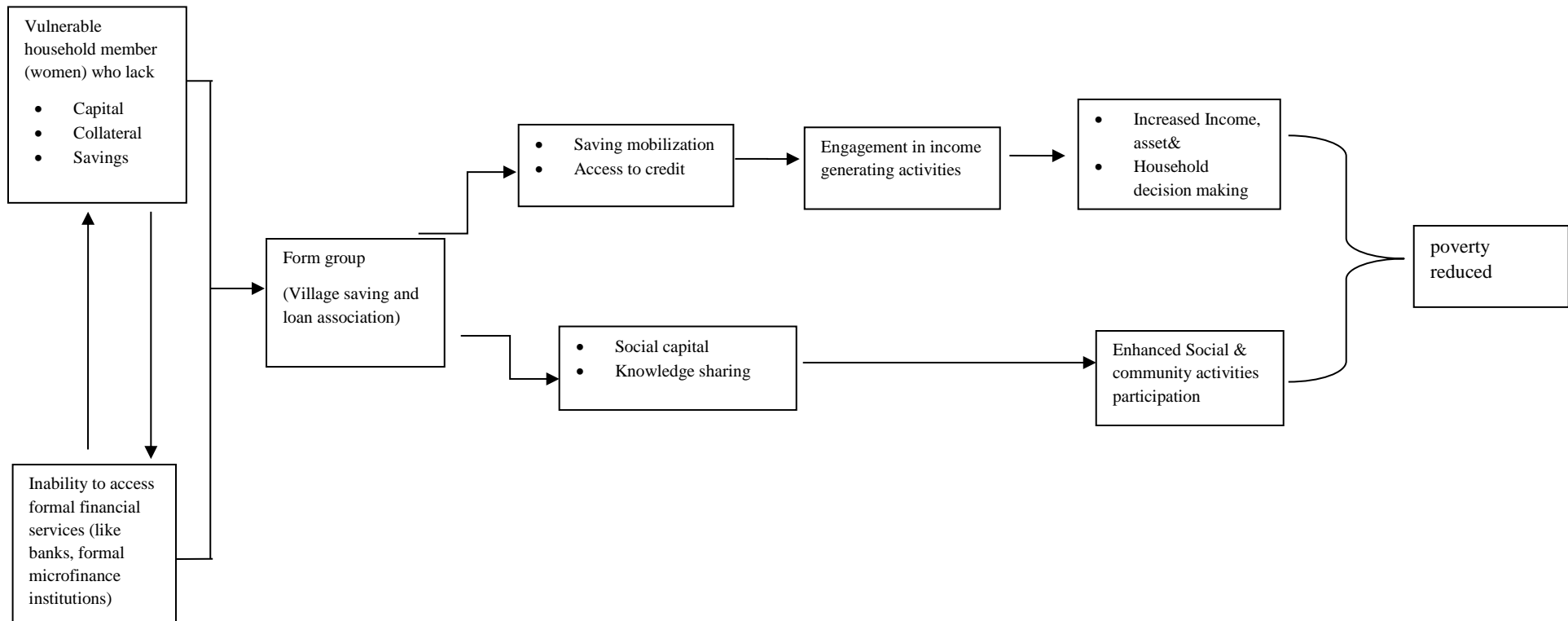


Fig 3.1 Conceptual framework of the study (Researcher own formulation based on literature reviews, May 2017)

The conceptual framework demonstrates that the poorest of the poor women have no or sufficient capital, savings or collateral to get access to loans from the formal financial facilities such as banks, and microfinance institutions. Because of this, the poor women mobilize themselves into convenient self-selected groups called village saving and loan associations. On one hand, VSLAs aimed at mobilizing savings and pooling their own financial resources to create a credit facility for the members to use in form of capital for income generating activities, emergency or to buy items to meet their household basic needs. On the other hand, the members advise each other on how to break the vicious circle of poverty, which economic ventures to invest their money to avoid loss of capital and to maximize returns. Sometimes they attend workshop, which educate them on income generation and how to improve market accessibility, decision making and general welfare knowledge. This in general helps them to build their social capital and facilitated smooth knowledge sharing among members.

The concept further illustrates that, with increased income generating activity engagement, there will be increases in sales and revenues that results in profits. The profits from the income generating activities will increase the poor women income level. The profits are partly used to purchase household assets, increase expenses for better children schooling, health, and food consumption of their household. Some portion of the profits, due to knowledge and understanding and/or peer pressure, remit as savings to the group fund, and for re-investment in income generating activities. In addition to this, the increased income will enhance the bargaining power of the woman in the household which increases their decision-making power of women in the household. Apart from these, as the continuous interaction of VSLA members enhances knowledge sharing and their social capital, the members of VSLA will be encouraged to take part in formal and informal community activities. In general, the combined effects of the VSLA members increase in household incomes, their ability to meet household basic needs, asset acquisition, general household welfare, and education of their children improve household health and productivity, raise self-esteem and consequently initially reduce household income poverty and in long term results in poverty reduction.

3.4 Hypotheses of the Study

The main hypotheses to be tested in this study are;

- Participation of the poorest of the poor women in village saving and loan associations (VSLAs) results in the improvements of the economic well-being of households, as measured by average monthly household income.
- Participation of the poorest of the poor women in VSLAs results in improvements of the social well-being of households as measured by household members' health status, diet and children education.
- Participation in VSLAs would result in women increased household decision making.
- Participation in VSLAs would result in increased women participation in community-based organizations and activities.

3.5 Operationalization/Measurement of Key Variables

Operationalizing a variable means “finding a measurable, quantifiable, and valid index for your variable (independent and dependent variables), and (sometimes) finding a way to manipulate that variable in such a way as to have two or more levels” (Macmillan, 2011). Variables that are in line with the conceptual and theoretical framework will be used to assess the effects of VSLA on urban poverty reduction.

The definition of poverty, how it is measured and who constitute the poor are fiercely contested issues (Haughton & Khandker, 2009). In this study, poverty reduction and women participation in VSLA, are the two core dependent and independent variables respectively. In the study, poverty is measured at two different levels using a set of proxy variables. The levels considered are poverty at household level as measured by household income, household diet, health status, and children education (Khandker, 1998). While, poverty is also measured at individual level mainly via proxy variables – household decision makings, and participation in community activities. the following paragraphs deals with the proxy variables, their corresponding indicators and operationalizations.

Impact of VSLA on poverty reduction at household level: the proxies used to measure include; household income, household diet, health, and children education.

- **Household income:-** this proxy measures the income situation of the household. The study mainly asked respondents their monthly income for the past 12 months and made an average of it.
- **Household diet:-** this proxy measures both the quality and quantity of food consumed by household members in the past 12 months. The proxy is measured mainly by asking respondents perception concerning the quality and quantity of food consumed whether improved or not (remain the same, worsened, and I do not know).
- **Household Health:-** measured by asking respondents their perception whether their household members health situation is improved or not in the past 12 months. Besides, the the level of their expenditure on treatment and drugs is also taken into consideration.
- **Children Education:-** This is measured by taking respondents perception towards their children education , whether improved or not, since women joining VSLA.

Impact of VSLA on poverty reduction at individual level: the proxies used to measure include; participation in household decision making, and participation in community activities.

- **Participation in household decision making:-** this proxy measures the level of woman's participation in their household. This is measured by asking respondents who made decisions in the household as woman only, woman and spouse jointly, spouse only, someone else, someone else and others.
- **Participation in Community activities:-** this measures women participation in both formal and informal community based organizations. This is done mainly by asking respondents if they are participating in community based organizations or not.

Apart from the above mentioned variables; the effects of VSLAs were assessed using a set of explanatory variables will be assessed using a set of explanatory variables and control variables.

The study mainly considered two groups for further analysis. The first group are women who are actively participating in VSLA for more than 6 months, who are both taking loan and save regularly. These groups are labeled as participants throughout these study and considered as treatment group. While, those women who are in VSLA for less than 6 months, in early stage of VSLA formation, who only started saving but have not yet accessed loan are labeled non-participants throughout this study and considered as control group.

The researcher selected control variables which are assumed to affect the household and respondents poverty status. These control variables include age of the respondent, marital status of respondent (married or otherwise), education level of respondent (educated or not), household size, work status of women prior to VSLA, household head (woman or otherwise), number of people earning income in household, and number of dependents in household. Overall, the researcher has selected the proxies, corresponding indicators, and control variables based on local understanding of poverty in the study area.

3.6 Chapter Summary

Overall, in this chapter, the theory of vicious cycle of poverty is discussed as a theoretical underpinning of the study. Besides, the researcher has developed a conceptual framework that shows the links between women participation in village savings and loan associations and the expected effects on their household and themselves. Following this, the main hypotheses of the study, operationalization and measurement of key variables used throughout the study are in detail discussed. The next chapter provides details of the research methodology employed throughout the thesis.

Chapter Four

Research Methodology

4.1 Chapter Overview

This chapter begins with an overview of the research design and research approach; then discusses the sampling techniques used for this study including the sample size and sampling procedure. Following this; methods of data collection are discussed. The chapter ends dealing with method of data analysis, and ethical statements considered in the study.

4.2 Description of the Case Study Area: Hawassa City

Hawassa city is selected as the study area for examining VSLA effects on urban poverty reduction. A combination of the following reasons made the city ideal for the study: a) the city is characterized by economically active women, who may lack start-up capitals for undertaking small scale trading activities. This significant level of women potential for economic activities is somewhat associated with a potential demand for credit among low income societies leading to the formation of number of VSLAs, and (b) researcher's prior work experience in the city.

Hawassa city was founded in 1960. The city is situated on the shores of Lake Hawassa in the Great Rift Valley. Located 270 Km South of Addis Ababa, Hawassa is the capital of the Southern Nations, Nationalities, and Peoples Regional State (HCAFEDD, 2013). The population of Hawassa is 258,808, of this 133,123 are men and 125,685 women (National Population and Housing Census, 2007). The total surface area of Hawassa city is 157.2 square kilometers; with its population density of 1,646.36/km². The city is divided into 8 sub-city administrations which are Addis Ketema, Hayikdar, Mehal Ketema, Bahel-Adarash, Misrak, Menharya, Tabor and Tula Sub-city. Each of them has varied number of administrative units known as 'Kebele' which collectively adding to 32. Since the last 10 years, Hawassa city is rapidly growing due to the high level of migration (HCAFEDD, 2013, 3).

In Hawassa city, the total number of people (both male and female) who aged 10 and above is 201,316; out of this 118,480 are economically active. The proportions of male and female who are economically active are 58.7% and 41.3% respectively. Hawassa city's unemployment rate for

both sexes is 11.6%, where male unemployment is 8.2% and female unemployment is larger i.e. 15.9%. Majority of the city's employment includes government, private, NGOs, domestic works, self-employments, unpaid family works, and cooperative membership works (CSA, 2007: pp.454-589).

4.3. Research Design

Parahoo (1997:142) describes a research design as “a plan that describes how, when and where data are to be collected and analyzed”. In the context of this study, a cross sectional research design is used. Accordingly, for the study, data is collected from two groups of VSLA members; a treatment group that include old VSLAs where VSLAs are formed and stayed longer than three months and members already started taking loans and mobilizing savings. These old VSLAs are labeled as ‘participant’ throughout this study. On the other hand, the comparison groups include VSLAs who are in association formation stage and are less than three months of operations, mobilizing savings but have not yet started loan disbursement to members.¹⁶ The comparison groups are labeled as ‘non-participant’ throughout this study. The research design often describes the methodology of research, sampling and data collection, the processes and tools for data collection and analysis as outlined below.

4.4 Research Approach

The study employed a mixed research methodology, which involves both quantitative and qualitative approaches, to make intensive investigation on the effects of village saving and loan associations on poverty reduction in Hawassa city. Since quantitative analysis cannot always reveal the perception of people involved in VSLA, the quantitative analysis of the survey data in the present study has been complemented by qualitative data gathered from focus group discussion with selected VSLA women beneficiaries. From the research questions, the effects of VSLA on household income, education, health, household diet, and women participation in household's

¹⁶ Throughout this study, the treatment groups are those VSLA members who are in operation for three months and more. These group have started mobilizing savings and disbursing loan. For ease of use, the study labels the **treatment groups as - participants**

The comparison groups used in the study are those VSLAs in early stage of their formation (less than 3 months). These groups are in the stage of setting up association constitution, taking some initial trainings from village agents, and on process of saving but have not yet started disbursing loan to the members. Throughout the study, **the comparison groups are labeled as non-participants.**

decision making and community activities are examined quantitatively, while perceptions of beneficiaries about the effect of VSLA in the selected proxies of poverty is also explored qualitatively. Creswell (2009, pp. 222-223) also added that mixed research method will help for triangulation, seeking convergence and corroboration of results from different methods studying the same phenomenon.

4.5 Sampling Technique

Sampling is defined as “a strategy which enable the researcher to pick a sub-group (sample) from a larger group (population) and then use this subgroup as a basis for making judgment about the larger group.” (Tejero, 2006; 43).

4.5.1 Sample Size

A sample is defined as a proportion or subset of a larger group called a population. A good sample is a miniature version of the population of which it is a part – just like it, only smaller.’ (Fink, 2003, p.1). Using the statistical data obtained from Hawassa City Administration Women and Children Department (HCAWCD), there are a total of 49 VSLAs in 6 sub-cities which consists of 859 members (9 male and 850 female). Hence, manageable sample size with due consideration on time and financial constraints is determined using Yamane (1967:886) sample size determination formula; assuming $p= 0.5$ (maximum variability), the researcher desire a 95% confidence level and $\pm 5\%$ precision level. Hence, the study sample is 272.

$$n = \frac{N}{1 + N(e)^2} \quad \text{Source: (Yamane, 1967,886)}$$

Where;

n = Total sample size

N = Total population (i.e. total new and old VSLA members in Hawassa city), N=850 is taken for this research as the focus of the study is on women VSLA members only. (It excludes 9 males in the population, so does for the sample).

e = Level of Precision

4.5.2 Sampling Procedure

A sampling technique is “the name or other identification of the specific process by which the entities of the sample have been selected.”¹⁷ This study used three stage sampling methods, namely, purposive sampling, cluster sampling and simple random sampling methods to select final sample respondents for questionnaire. The following paragraph presents how the study applied these three sampling methods in each stage.

The researcher applied purposive sampling to select the study area, Hawassa city, considering the justifications outlined under section 4.2. Following this, a cluster sampling method has been applied. According to Kothari (2004; 62), In case the cluster sampling units do not have the same number or approximately the same number of elements, it is considered appropriate to use a random selection process where the probability of each cluster being included in the sample is proportional to the size of the cluster. In this study, the number of VSLAs and their members’ size are not equally distributed in Hawassa city. Thus, there is a rational to apply sampling with probability proportional to size (Kothari, 2004; 62). In line with this, the study clustered sample VSLA women participants by sub-cities and in accordance with their member size as shown below;

Table 4.1: Coverage of sample VSLA women participants categorized by sub-cities

Sub-city	Number of VSLAs	Number of women members in the VSLAs (Sample Frame)	Sample Size	% Share
Tabor	10	176	56	20.7%
Menahariya	9	142	46	16.7%
Mehal	10	147	47	17.3
Misrak	11	212	68	24.9%
Hayek Dar	2	41	13	4.8%
BahelAdarash	7	132	42	15.6%
Total	49	850	272	100.0

Source: HCAWCD & Researcher Own Computation, 2017

On the third and last stage, to draw the final respondents from old (treated group) and new VSLA (comparison group) women participants with the help of the samples obtained with probability

¹⁷ <https://stats.oecd.org/glossary/detail.asp?ID=2380> accessed on December 15th, 2018

proportional to size (Kothari, 2004; 62), a simple random sampling is used. In the selection of final respondents, the number of VSLA groups and their size of members are given due attention.

4.6 Methods of Data Collection

Data collection is the systematic approach for gathering and measuring information from a variety of sources to get a complete and accurate picture of an area of interest. It enables a person or organization to answer relevant questions, evaluate outcomes and make predictions about future probabilities and trends.¹⁸

The relevant data for this study are obtained from both primary and secondary data sources. The primary data is gathered from VSLA members (new and old) in Hawassa city through questionnaire and focus group discussions. The study also used secondary data mainly obtained from journals, books and internet. Moreover, unpublished documents that are obtained from different offices of the city are used.

4.6.1 Questionnaire

A questionnaire is defined as a document containing questions and other types of items designed to solicit information appropriate to analysis (Babbie, 1990, p.377).

In this study, a questionnaire which includes both open and close ended questions were used to collect data from respondents. The questions mainly centered on the socio-demographic characteristics of respondents, and number of self-prepared questions measuring VSLA effect on reducing poverty of VSLA women participants in individual and household level (see annex II). Before the questionnaire were disseminated for the final collection, a pre-test has been conducted with 10 randomly selected respondents and necessary adjustments are made afterwards. The study planned to collect data from 272 VSLA women members (new/ non-participants and old/participants) through questionnaire. However, the researcher collected data from 254 i.e. 127 new and 127 old VSLA members. This is 18 respondents (6.62%) less than the initially planned, which is mainly due to unavailability of respondents in their homes and work places during survey times and some respondents were asking for payments to participate in the survey while other respondents were partially answering some questions. The questionnaires were distributed to the

¹⁸ <http://searchcio.techtarget.com/definition/data-collection> accessed on January 15th, 2018

sample respondents, and data collected by the researcher with the help of enumerators. The enumerators were selected based on their educational background and were above tenth grade. Training on data gathering techniques and over all ethical acts were given for the enumerators in advance.

4.6.2 Focus Group Discussion (FGD)

The focus group discussion (FGD) is a rapid assessment, semi- structured data gathering method in which a purposively selected set of participants gather to discuss issues and concerns based on a list of key themes drawn up by the researcher/facilitator (Kumar 1987). According to Thomas et al. (1995), one of the distinct features of focus-group interviews is its group dynamics; hence the type and range of data generated through the social interaction of the group are often deeper and richer than those obtained from one-to-one interviews.

In this study, the researcher conducted one focus group discussion with 6 randomly selected old VSLA members from different VSLA groups of different sub-cities. Initially, the study planned to conduct 2 FGDs with both new and old VSLA members. However, despite repeated trials to meet new VSLA members for FGD, the researcher was not able to conduct FGD. The FGD was done with the aim of supplementing information obtained in individual questionnaire survey. The FGD was intended also to have open discussion with issues such as group formation and membership, general group dynamics, challenges and limitations, behavioral changes, social and economic impact, benefits and/or negative consequences of participation, impact on the community, and the sustainability of the VSLAs. In the FGD conducted with old VLSA, the researcher mainly employed retrospective questioning to enable participants reflect on the situations before and after being VSLA member and able to access loan and consequently determine whether or not any positive individual and household welfare benefits have been realized upon the use of loan for further income generation. This technique thus supported the researcher to obtain much deeper insights on the effects of the VSLA loan and saving on women and their household welfare and served as a way of verifying the patterns of information provided in the questionnaire.

4.7 Data Analysis and Presentation

Data analysis is a process of bringing order, structure and meaning to the data collected so that they can be synthesized, interpreted and communicated in a research report (Marshall & Rossman

1999, p.148). As explained above in section 4.4, the study applied both qualitative and quantitative research approach and analysis.

4.7.1 Quantitative Data Analysis

The quantitative data available for this research were coded, entered, cleaned and analyzed with the help of Stata version 14.0. The study applied propensity score matching (PSM) and comparative analysis (using Pearson's Chi-square test and independent t-test) through 'with' and 'without' and using treatment group being old VSLA women members (labeled as participants in Chapter 5 for analysis) and comparison groups – new VSLA women members (labeled as non-participants in Chapter 5 for analysis purpose) scenario. The propensity score matching was used to assess the impact of village saving and loan (VSL), while the comparative analysis was done with the aim of assessing the similarities and differences between the old (participants) and new (non-participants) VSLA members in terms of various individual and household poverty indicators including women participation in community works, decision making in household, household members health status, children education, and household diet. The analysis was used by assuming the two groups (old members – as participants and new members in VSLA as non-participants) and their household have common characteristics and poverty profile with the only difference being the disbursement of loan in old VSLA women members, which was used by the loan takers for income generation purpose. As such, the comparison analysis helped to understand the effects of women participation in village saving and loan and the subsequent income generating activities on individual, and household poverty reduction, that lead to urban poverty reduction. The next sub-sections provide details about the propensity score matching and comparative analysis through hypothesis testing.

4.7.1.1 Propensity Score Matching

The analysis in this study relied on the use of propensity score matching (PSM) primarily due to the nature of the program and data available, and the recognition that PSM is an influential approach to estimating impact in a straightforward manner (Dillon 2011). Although the 'gold standard' in evaluating impact is implementing randomized control trials (RCTs), this technique is not viable in this setting due to program placement/targeting (Dercon et al. 2009) and self-selection. The alternative approaches to dealing with attribution of impact to interventions and

determining the counterfactual outcome of participants are quasi-experimental techniques, one among them is the PSM (Caliendo and Kopeinig 2008).

Propensity-score matching (PSM) is a quasi-experimental option used to estimate the difference in outcomes between beneficiaries and non-beneficiaries that is attributable to a particular program. The basic idea of PSM is to match program participants (old village saving and loan women participants) with non-participants (new village saving and loan women participants). But matching in terms of covariates, the exogenous variables, is very difficult since it is hard to find women which are exactly the same but different only on receiving of loan (Khandker, et al. 2010). To solve this problem the matching process is done in the probability of participating in the program on the basis of observable characteristics (Khandker, et al. 2010). It means PSM constructs a statistical comparison group of VSL women participation and VSL women non-participation based on the propensity score of VSL women participation. Thus, the following paragraphs presented the propensity score matching, its model and Average Treatment Effect on the Treated (ATT) Estimation techniques.

The first step in propensity score estimation (PSE) technique is estimation of propensity score. According to Rosenbaum and Rubin (1983), matching can be performed conditioning only on $P(X)$ rather than on X , where $P(X) = \text{Prob}(D=1|X)$ is the probability of participating in the program conditional on X , X being a set of observable characteristics. The same authors explained that, if outcomes without the intervention are independent of participation given X , then they are also independent of participation given $P(X)$ which reduces a multidimensional matching problem to a single dimensional problem.

To obtain the estimated propensity score, we have to choose the model for the estimation and variables that should be incorporated in the model. The models which commonly used to estimate the probability of participation against non-participation households are logit and probit models. Moreover, the two models provide the same result (Gujarati, 2004, pp. 595-596). According to Caliendo and Kopeinig (2005), Logit model is easier to compute than that of probit model and it is widely used. Hence, due this merit in this study the logit model was used for estimating the propensity scores.

In estimating the logit model, the dependent variable is participation which takes a value of 1 if the household participated in a program and 0 otherwise (Gujarati, 2004, pp. 595-596). Thus,

mathematically the logit model is formulated as follows:

$$P_i = E(Y = 1|X_i) = \beta_0 + \beta_2 X_i \quad (1)$$

Where X is the target outcome and Y=1 means a woman participates in VSLA

Now reconsider equation (1) as

$$P_i = E(Y = 1|X_i) = \frac{1}{1+e^{-(\beta_0 + \beta_2 X_i)}} \quad (2)$$

For ease of exposition, we write equation (2) as

$$P_i = \frac{1}{1+e^{-z_i}} = \frac{e^{z_i}}{1+e^{z_i}} \quad (3)$$

Where,

P_i is the probability of woman participating in VSLA

Z_i represents cumulative logistic distribution function

$$Z_i = \beta_0 + \sum \beta_i X_i + U_i \quad (4)$$

Where,

$i = 1, 2, 3, \dots, n$

β_0 = intercept

β_i = regression coefficients to be estimated

U_i = a disturbance term, and

X_i = pre-intervention woman and their household characteristics

If P_i , the probability of woman participating in VSLA, is given by equation (3), then $(1 - P_i)$, the probability of woman not participating in VSLA, is ;

$$1 - P_i = \frac{1}{1 + e^{z_i}} \quad (5)$$

Then the odds ratio can be written as:

$$\frac{P_i}{1 - P_i} = \frac{1 + e^{Z_i}}{1 + e^{-Z_i}} \quad (6)$$

The left-hand side of equation (6), $(P_i/1-P_i)$ is simply the odds ratio in favors of participating in VSLA. It is the ratio of the probability that the household would participate in the VSLA to the probability that he/she would not participate in the VSLA. Lastly, by taking the natural log of equation (6) the log of odds ratio can be written as:

$$L_i = \ln \left[\frac{P_i}{1-P_i} \right] = z_i = \beta_0 + \sum_{i=1}^n \beta_i X_{ji} + \varepsilon_i \quad (7)$$

Where, L_i is log of the odds ratio in favor of participation in the VSLA, which is not only linear in X_{ji} but also linear in the parameters, and β_0 is the propensity score of the observable individual and household characteristics.

Propensity Score Matching estimation generated through the logit model should include predictor variables that influence the selection procedure or program participation and the outcome of interest (Rosenbaum and Robin, 1983; Bryson *et al.*, 2002).

Matching estimators/algorithm:

The next step after the estimation of propensity score is choosing between different matching estimators. There are various matching estimators of PSM are available¹⁹. Below, only the most commonly applied matching estimators were described for this study.

Average Treatment Effect on the Treated (ATT) Estimation

ATT Estimation is the last steps of the PSM estimation procedure. Its empirical specification is explained as Caliendo and Kopeinig (2005). In this case estimating the effect of womens' participation in the VSLA saving and loan on a given outcome (Y) is specified as

¹⁹all estimators described here provide consistent estimates of the average treatment on treated ATT under the Conditional Independence Assumption (CIA) and the overlap condition (see further) (for details Caliendo and Kopeinig, 2005).

$$Ti = Yi(Di = 1) - Yi(Di = 0) \quad (8)$$

Where Ti is treatment effect (effect due to participation in VSLA), Yi is the outcome on women's household i , Di is whether woman i has got the treatment or not (i.e., whether woman participated in the VSLA saving and loan or not).

On the other hand, it is understood $Yi (Di =1)$ and $Yi (Di =0)$ cannot be observed for the same woman household at the same time. Moreover, estimating individual treatment effect Ti is impossible and one has to shift to estimate the average treatment effects of the population rather than the individual one. As described in Caliendo and Kopeinig (2005, p.3) and Becker and Ichino (2002), the most commonly used average treatment effect estimation is an average Treatment Effect on the Treated (ATT) which is specified as:

$$T_{ATT} = E(T|D = 1) = E[Y(1)|D = 1] - E[Y(0)|D = 1] \quad (9)$$

This helps to know; how much the woman and their respective households are benefited due to woman's participation in the VSLA saving and loan as compared to those do not participated (Caliendo and Kopeinig 2005, p.3). As the counterfactual mean for those being treated, $E[Y(0)|D = 1]$ is not observed, one has to choose a proper substitute for it in order to estimate ATT. One may think to use the mean outcome of the untreated individuals, $E[Y(0)|D = 0]$ as a substitute to the counterfactual mean for those being treated, $E[Y(0)|D = 1]$. However, this is not a good idea especially in non-experimental studies because it is likely that components which determine the treatment decision also determine the outcome variable of interest.

In this particular case, for instance, variables that determine women's participation in the VSLA could also affect our outcome of interest (e.g. average monthly household income). Hence, the outcomes of individuals from treatment and control group would differ even in the absence of treatment leading to a self-selection bias.

By rearranging and subtracting $E[Y(0)|D = 0]$ from both sides of equation 9, ATT can be specified as:

$$E[Y(1)|D = 1] - E[Y(0)|D = 0] = T_{ATT} + E[Y(0)|D = 1] - E[Y(0)|D = 0] \quad (10)$$

From the above equation 10, both terms in the left hand side are observables and ATT can be identified, if and only if $E[Y(0)D = 1] - E[Y(0)D = 0] = 0$. i.e. when there is no self-selection bias. This condition can be ensured only in a randomized experiment (i.e., when there is no self-selection bias). Thus, in non-experimental studies like PSM, statistical techniques is used to construct artificial control group. More specifically we match every possible treatment with non-treatment observation with most similar (observable) characteristics (Gertler et al., 2011).

4.7.1.2 Hypothesis Testing

Pearson's Chi-square test was also used to examine if there is a statistical significant association between two categorical variables. In the context of this study, Pearson's Chi-square test was used to assess whether there was statistically significant association between health status of VSLA members households (1- household members health improved or 0 – otherwise /remain the same, worsened or I do not know/) and VSLA membership status (new as participants or old members as non-participants); children education status (1- children education improved or 0 – otherwise /remain the same, worsened or I do not know/) and VSLA membership status (new or old members); household diet : quality and quantity of food consumed by household members (1- household diet improved or 0 – otherwise) and VSLA membership status (new or old members); women participation in community activities (1 – improved or 0 otherwise) and VSLA membership status (new or old members).

As the samples are randomly derived, and the group variables (VSLA status – new and old) and the test variables (household members' health status, children education, household diet, and women participation in community activities) are nominally scaled, Pearson's chi square test is the appropriate statistical tool for testing the hypotheses. The decision rule is that, if the significance value is higher than the significance level (0.05 in this study), then the null hypothesis has to be accepted, meaning that the analyzed variables are independent from each other, in other words, the difference between the groups is not significant. On the contrary, if the significance value is less than or equal to the significance level (0.05), then the null hypothesis must be rejected, meaning that the analyzed variables are dependent on each other, and in other words, the difference between the two groups is significant. Beside these, independent t-test is applied to check whether there is statistically significant difference or not for metric test variable, and group variable that is nominal. Same decision rule is applied to decide on the significance.

4.7.2 Qualitative analysis

In addition to the quantitative data analysis, qualitative data that is generated from focus group discussion is organized in meaningful way, analyzed qualitatively by transcribing and categorizing, and presented in narrative way.

4.8 Ethical Statement

Ethical statements, as defined by Polit et al (2001, 75), is related to moral standards that the researcher should consider in all research methods in all stages of the research design. This study was conducted in accordance with the research ethical standards of the University of the Western Cape. Accordingly, the study is undertaken after approval granted by the University of the Western Cape Senate, the Arts Faculty Board and the Institute for Social Development. Permission was also requested from the concerned Hawassa city administration government offices, office of Hawassa city Women and Children Department and sub-city level sector offices, and VSLAs in which the beneficiary respondents were drawn. As precisely defined by Bryman (2012;135), all the four main criteria of ethical principles to consider in research: whether there is harm to participants; whether there is lack of informed consent; whether there is an invasion of privacy; whether deception is involved were checked and ensured to maximum level. Hence, the study did not cause any harm to participants and participation of respondents were only based on their freewill upon informed consent. The researcher also ensured anonymity, and all gathered information are kept confidential and used for the intended purposes only.

4.9 Chapter Summary

In summary, the study applied a cross sectional research design. Data is collected from 254 (127 new and 127 old VSLA members) through questionnaire. Besides, one FGD is conducted with 6 old VLSA members. To analyze the quantitative data, the study used both propensity score matching and statistical hypothesis testing by comparing the treatment (old VSLA members – participants) and comparison groups (new VSLA members – non-participants) in some indicators of individual and household poverty. Among others, independent sample t-test and Pearson's chi-square test are used for hypothesis testing. On the other hand, qualitative data are transcribed and presented in narrative form. The next chapter presents the analysis results in detail. The chapter

mainly contains both qualitative and quantitative analysis and findings with regards to the effects of VSL on poverty.

Chapter Five

Assessing the Effect of VSLA on Poverty Reduction: Empirical Findings

5.1 Chapter Overview

This chapter deals with analysis of the results from the data collected and made further discussion on it. The chapter is mainly divided into three sub-sections; the first section consists of the results and discussions from propensity score matching, while the second part focuses on discussion on results from hypothesis testing using chi-square and independent t-test to make comparison between treated and comparison groups. The last section contains transcriptions of results from focus group discussion.

5.2 Effect of VSL on Poverty Reduction: Quantitative Analysis

The study mainly used propensity score matching and comparative analysis through hypothesis testing to make a quantitative analysis.

5.2.1 Propensity Score Matching Analysis

Propensity score matching (PSM) presents a unique set of techniques for reconstructing an experimental environment from non-random, quasi-experimental conditions. The technique entails forming matched sets of treated and untreated subjects who share a similar value of the propensity score (Rosenbaum & Rubin, 1983, 1985). Propensity score matching allows one to estimate the average treatment effect on the treated (ATT) (Imbens, 2004). The most common implementation of propensity score matching is one-to-one or pair matching, in which pairs of treated and untreated subjects are formed, such that matched subjects have similar values of the propensity score (Ibid). The following paragraphs present the findings of the study using propensity score matching.

As clearly explained the necessity of using propensity score matching in chapter 4, sub section 4.7, 4.7.1.1, the following section discusses the various procedures followed throughout the matching analysis. Thus, under this section; the choice of variables for propensity score matching, the determinants of women participation in village saving and loan (the descriptive statistics of covariates), and the estimation of the average effect of women participation in VSL on the outcome variable (impact estimates) are addressed. In addition to this, there are some discussions in relation to matching quality analysis.

5.2.1.1 The Choice of Outcome and Covariate Variables for PSM

The choice of variables mainly includes the choice of outcome variable and the covariates to be used in estimating propensity score matching. The selection of the outcome variables takes into account the primary goal of village saving and loan association in the study area and the literatures dealing with the relationship between villages saving and loan, poverty, poverty indicators and others. According to Hawassa Women and Children Affairs Department (2017), the primary goal of VSL is to enhance the income of poorest of poor women. This is intended to be achieved by supporting women to partake in village saving and loan association in her locality, start saving, take loan and engage in income generating activities. Numerous studies have shown that targeting women as client is an effective means to ensuring the benefits of increased household income that accrue to the general welfare of the family (Pitt and Khandker, 1998; Khandker, 2005). Thus, in light of these considerations, this study used average monthly household income as an outcome variable. Respondents have directly provided information related to their household average monthly income. The study operationalized average household income as the average total amount of money earned by members of the household for the past 12 months preceding the data collection.

With regards to the choice of variables (covariates) to estimate the propensity score, it is often advisable to rely on conditional independent assumption (CIA) that assumes given a set of observable covariates X which are not affected by treatment, potential outcomes are independent of treatment assignment (Caliendo and Kopeinig 2005, p.4). This implies that the selection of covariates is solely based on observable characteristics and only variables that influence simultaneously the participation decision and the outcome variable should be included. Only variables that are unaffected by participation (or anticipation of it) should be included in the model. It is also recommended to have a sound economic theory and detailed understanding of the program specifics and institutional settings while choosing the covaries (Caliendo and Kopeinig 2005, p.6). Beside this, Heckman, et al. (1999) as cited by Caliendo and Kopeinig (2005, p.6). also point out, that the data for participants and nonparticipants should stem from the same sources (e.g. the same questionnaire).

In this study, through reviewing both theoretical and empirical sources and other studies conducted using propensity score matching dealing with microfinance and poverty, the study included the

number of variables in the model to estimate the propensity score. Hence, the next section 5.2.1.2 deals with the descriptive statistics of these covariates.

5.2.1.2 Descriptive Statistics of Covariates

The descriptive statistics of covariates as shown on table 5.1 below, reveals that there exists a statistically significant difference between treatment and comparison respondents regarding age, marital status, education, household size, work experiences prior to village saving and loan, number of people earning income in household and number of financially dependent people in household.

Table 5.1 Descriptive statistics of covariates

Variable description	Overall	VSL status		t-test/Chi-sq. test
		Treatment (Old VSLA member/ participants)	Comparison (New VSLA/ non-participants)	
Number of observations	254	127	127	
Age of woman	42.83	44.64	41.02	-4.9835***
Married woman (1 if woman is married) %	50.0	59.84	40.16	9.8425***
Education (1 if woman attended school) %	41.73	56.60	43.40	3.1734*
Household size	3.48	3.94	3.03	-4.6402***
Woman work status prior VSLA (1 if woman worked) %	88.6	81.9	95.3	11.25***
HH head (1 if female headed the HH)	44.9	40.94	49.61	1.9227
Number of people earning income in HH	1.61	1.77	1.45	-4.7539***
Number of dependents in HH	2.61	3.01	2.20	-5.2279***

Source: Own calculation and estimation based on survey data

Note: Test of statistical significance of mean differences between treatment and control/comparison households: *** p < 0.01, ** p < 0.05, * p < 0.1.

In addition to the descriptive statistics of covariates, results of the logistic regression, as shown in table 5.2 below, also indicate that age of women, work experience prior to VSL, number of people earning income in household, and number of financially dependents in household are significant predictors of participation in village saving and loan.

Table 5.2 Propensity score estimation using logit model

Variable	Regression Coefficients
Constant	-5.270048*** (1.405599)
Age of woman	0.910 *** (0.268)
Married woman (1 if woman is married) %	0.010 (0.207)
Education (1 if woman attended school) %	0.216 (0.213)
Household size	-0.269 (0.200)
Woman work status prior VSLA (1 if woman worked) %	-1.484 *** (0.464)
HH head (1 if female headed the HH)	0.431(0.502)
Number of people earning income in HH	1.254 *** (0.456)
Number of dependents in HH	0.420 ** (0.211)
No. of Observations	254
Wald Chi-Square	42.64
Pseudo R-squared	0.1586

Source: Own calculation and estimation based on survey data

Note: Dependent variable: Woman participation in village savings and loans associations for more than 3 months, with saving and loans = 1 or not (= 0).

Standard errors in parenthesis. Statistical significance based on Z statistics. Significance at *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

As shown in table 5.2, in terms of age of woman, it seems that older women have better chance of participating in village saving and loan compared to the young ones. This could be because of the economic pressure that women face at higher ages and most look for alternative means of saving and loan to start income generating activities. Working experience of women prior to joining village saving and loan is negatively related to participation probably because working women might find other alternative means of saving other than village saving and loan. These women might also be able to take small loans from formal microfinance institutions by using some

collateral from their work. Number of people earning income positively affects participation. Finally, number of dependents in household positively affects participation, which may be because as the number of dependents increases in household, there will be increased demands from the dependents which could force woman to partake in village saving and loan and start income generating activities using loans.

5.2.1.3 Estimation of the Average Effect of Women Participation in Village Saving and Loan on Average Monthly Household Income

Estimation of the average effect of women participation in village saving and loan on outcome variable, average monthly household income, (ATT) was performed on Stata version 14.0 using psmatch2 (Leuven and Sianesi 2003). The results as presented in table 5.3 indicated that the average effect of participation in village saving and loan on average monthly household income of participant women is positive and significant at 5% significance level. The ATT results shows women participating in VSLA for three and more months accessing both savings and loans attributed higher average monthly household income ranging from 169.63 Birr/month (nearest neighbor matching) to 141.55 Birr/month (Kernel matching), on average as compared to non-participants (those women who are in less than three months and have not yet accessed VSLA loan).

Table 5.3 Estimation of average effect of participation in VSL on average monthly household income using nearest neighbor and Kernel matching

Outcome Variable	ATT estimates using nearest-neighbor estimator	ATT estimates using Kernel matching estimator
Average monthly household income	169.63 ** (66.517)	141.55 ** (86.029)
No. of observations	254	249
Treated	127	127
Comparison	127	122

Source: Own calculation and estimation based on survey data

Note: 127 treated and 122 comparison individuals on common support.

Standard errors in parenthesis. ** indicate statistical significance at the 5% levels.

As shown in table 5.3, there is convergence of results obtained using Nearest neighbor and Kernel matching. This implies that the results are robust. Hence, assuming there is no selection bias due to unobservable factors, women participation in village saving and loan has a positive and significant effect on average monthly household income. This finding is in line with study results from Shauri K.A (2013, 42) on Southern Unguja district, Tanzania that households participating in village savings and loan groups got an opportunity of receiving loans which transformed on running economic activities which are found to have strongly positive impact to the total household income and grow up by 0.705 per unit change considered other variables were *ceteris paribus*.

With respect to the matching quality and common support condition, the study implemented mean comparison (before and after matching), standardized bias, and overall measures of covariates imbalance to check matching quality. The mean comparisons between the two groups before matching indicate the existence of significant differences for most of the variables. However, the post-matching t-test results indicate that most of these variables are adjusted and shows non-significant differences, implying that the matching procedures enabled balancing the covariates (see Annex I, table 1). The variables age of woman, household size, number of people earning income in household, and number of dependents in household show high standardized percentage bias in the unmatched sample (see Annex I, Table 1) and the post matching results show a significant reduction in the percentage bias for most of the covariates making it below 30%. In addition to these, the overall measure of covariate balance as shown in (Annex I, Table 2), shows the mean bias of 41.6% in the unmatched sample is reduced to 20.3% in the matched one. The pseudo R-square, which is 0.159 in the unmatched sample is reduced to 0.048 implying that the matching procedure is effective in reducing existing biases (Annex I, Table 2).

5.2.2 Comparative Analysis via Hypothesis Testing

In this section, a quantitative analysis on the impact of the village saving and loan on poverty reduction both at household and individual level is presented. Comparisons are made between the treatment (women VSL participants) and comparison (women VSL non-participants) in relation to the predefined poverty indicators. For this purpose, the study used hypothesis testing as main statistical method.

5.2.2.1 Effect of Women VSL Participation on Household Diet

In the study, both women participants in VSL (treatment group) and non-participant women (comparison group) respondents were asked their perception regarding the household diet in terms of the variety, quantity and quality of food consumed by household members. The study assumed participants with access to loan from their village saving and loan associations will be able to partake in income generating activities through which they will be able to afford to purchase a better quality and quantity of food for their household as compared with non-participants. Thus, women VSL participants and their households are expected to have improved consumption of variety foods and face few challenges in satisfying the food needs of their family than non-participants. In light of these, table 5.4 depicts respondents' perception towards their household in the past 12 months (September 2016 – September 2017).

Table 5.4 Respondents perception towards their household diet (in the last 12 months)

Respondents perception regarding household diet	Participants in VSL	%	Non-participants in VSL	%
Improved	113	88.98	42	33.08
Stayed the same	7	5.51	56	44.09
Worsened	-	-	-	-
I don't know	7	5.51	29	22.83
Total	127	100	127	100

Source: Field survey, 2017

As can be seen from table 5.4, out of the total sample 127 women participants in village saving and loan, 88.98 % of them perceive that their household diet has improved in the last 12 months. While, only 33.08 of the total sampled non-participants perceive the improvement of their household diet. Only 5.51% of the total participant women perceive that there is no change in their household diet, while majority of sampled non-participants (44.09%) perceive the household diet stays the same in the last one year. Hence, the results from table 5.4 shows that women participants and their household members are enjoying a variety of food with better quantity than non-participants. This finding is somehow in line with Brannen, C., (2010, 97) study in Zanzibar, Tanzania, that found 75 percent of current members in VSLA reported that their household's diet has improved since joining the program. However, in order to conclude whether these observed

differences between participants and non-participants are statistically significant, the study applied hypothesis testing using Chi-square test. Chi-square test is selected as appropriate testing tool for the hypothesis testing as the two samples were randomly and independently derived. Besides, the study labeled women perception of household diet as improved to be 1, and the rest (stayed the same and I don't know) as 0, making the test variables nominal and the group variable (participant/non-participant) is nominal too. Thus, the hypotheses to be tested are;

H0 = There is no association between improvement on household diet and women participation in village saving and loan (VSL)

H1 = There is an association between improvement on household diet and women participation in village saving and loan

Based on the assumptions, the chi-square test result is presented in the following table.

Table 5.5 Chi-square test for perception towards their household diet

Perception on household diet	VSL status		Total
	Participants	Non-participants	
Improved	113	42	155
	77.5 (Exp. Freq.)	77.5	155.0
Otherwise (stayed same, I don't know)	14	85	99
	49.5	49.5	99.0
Total	127	127	254
	127.0	127.0	254.0

Source: Own calculation and estimation based on survey data

Exp. Frequency: expected frequency

Note: Pearson $\chi^2(1) = 83.4418$ Pr = 0.000

The results in table 5.5 shows Pearson's chi-square value of 83.4418 at 1 degree of freedom and a significant value at 0.000. According to the decision rule, the significant value (0.000) is less than the level of significance (0.05) used in the study. Therefore, we reject the null hypothesis in favor of the alternative hypothesis. This means that there is an association between improvement on household diet and women participation in village saving and loan, and the difference between the participant and non-participant women and their households are significant. This result also

confirms the results obtained in table 5.4 above, and it can be said that participant women and their household have an improved diet than non-participants, which led to the conclusion that women participation in VSL makes a positive impact towards household diet. This finding is in line with evidence from Bondo District, Kenya study by Hongo A. (2013, 92) which suggest that majority of women participating in village savings and loan association attributes their ability to ensure food quality at the households to their participation in the associations.

5.2.2.2 Effect of Women VSL Participation on Household Health

Women participation in VSL effect on women and their household health situation was measured by asking respondents (both participants and non-participants) perception towards their own and household members health status in the past 12 months (September 2016-September 2017). The study expected household members of women participating in VSL to achieve a better health status than non-participants. This is because participants taking part in VSL are more likely to generate income for the household, which the income earned would be used for expenditures of variety and balanced food, health treatments and purchase of medicines in time of sickness collectively enhancing the health status of participant household than their counterparts. Accordingly, as it is depicted in table 5.6, majority of VSL participant (91.34%) respondents perceive an improved health situation in their household members.

Table 5.6 Respondents perception towards their household health (in the last 12 months)

Respondents perception regarding household diet	Participants in VSL	%	Non-participants in VSL	%
Improved	116	91.34	53	41.73
Stayed the same	7	5.51	56	44.09
Worsened	-	-	-	-
I don't know	4	3.15	18	14.18
Total	127	100	127	100

Source: Field survey, 2017

Among the total sampled VSL non-participants, the majority (44.09%) perceived that their household health situation has made no change, while the remaining 41.73% and 14.8% of the total replied that the household health status is improved and 'I don't know' respectively. Whereas, only 5.51% and 3.15% of the total VSL participants perceive an improvement and 'I don't know'

respectively. From the results, it can be observed that participants' perception towards their household health is far better than non-participants. This finding conforms with Brannen, C., (2010, 97) study in Zanzibar, Tanzania, that the health of the household appears to be positively impacted by VSLA program participation, and the vast majority (80%) of the current members believe that the health of members of their households has improved since joining the VSLA program. However, in order to check whether this observed difference is statistically significant or not, the study made a hypothesis testing using chi-square test. As explained earlier in section 5.2.2.1, Chi-square test is appropriate as both test and group variables are metric scaled. The hypotheses to be tested are;

H0= There is no association between improvement on household health and women participation in village saving and loan

H1= There is an association between improvement on household health and women participation in village saving and loan

As shown in table 5.7 below, the chi-square test shows a significant association between improvement on household health and women participation in VSL.

Table 5.7 Chi-square test - respondents' perception towards their household health

Perception on household diet	VSL status		Total
	Participants	Non-participants	
Improved	116	53	169
	84.5 (Exp. Frq.)	84.5	169
Otherwise (stayed same, I don't know)	11	74	85
	42.5	42.5	85.0
Total	127	127	254
	127.0	127.0	254.0

Source: Own calculation and estimation based on survey data

Exp. Frq.: expected frequency

Note: Pearson chi2(1) = 70.1793 Pr = 0.000

The results of the chi-square test, as in table 5.7 above, shows a Pearson's chi-square value of 70.193 with 1 degree of freedom and a significant level of 0.000. The significance value is less

than the given level of significance (0.05) leading to the rejection of the null hypothesis in favor of the alternative hypothesis. Thus, there is an association between improvement in household health and women participation in village saving and loan, and based on the results from table 5.6, it can be concluded that women participation in VSL has a positive effect in improving the health status of women and their households as compared with non-participants.

The study also attempted to find out the average amount of money spent by respondents' household on health and treatments in the past 12 months. Independent t-test is applied to check whether there is statistically significant difference or not. This test is appropriate as the test variable, health care expense, is measured in birr and is metric, while the group variables are nominal. The study tested the following hypotheses;

H₀= There is no difference in the mean household health expenses of participants and non-participant in village saving and loan

H₁= There is difference in the mean household health expenses of participants and non-participant in village saving and loan

Based on the test (see Annex I, table 5), it was found that VSL participant households on average spent 147.54 birr with standard deviation of 7.78 birr, while non-participant households on average spent 105.24 with standard deviation of 11.90 birr. The t-test shows a computed t-test value of -2.9744 with 252 degrees of freedom and a significance value of 0.0032. The significant value is lower than the level of significance used in the study (0.05). Hence, the null hypothesis is reject and alternative hypothesis accepted. There is difference in the mean household health expenses between participants and non-participants, and it can be concluded that women participation in VSL contributed for the increased average amount of money used for household health treatment. This result can be also linked to results from table 5.6, in that participant women who perceive improved health status of their household owing to their potential to afford medical services including taking their household members to health center in times of sickness and ability to buy drugs. These findings agree with study in Zanzibar, Tanzania by Brannen, C., (2010, 89), that found households participating in VSLA spent almost twice as much than non-participants in VSLA on healthcare, implying a greater capacity of participating VSLA households to finance better healthcare and participation in the VSLA program appears to facilitate increased access to healthcare services.

5.2.2.3 Effect of women VSL Participation on Children’s Education

Like the preceding sections, the effect of women participation in VSL was measured by taking women perception towards their children education status. The study expected women participating in VSL and their children would have better educational status and achievement in relation to non-participants. This is due to the fact that women participating in VSL would generate income to the household, which can enable the household to afford basic school and school related expenditures that are vital for school enrollment, retention and excellence. Basic expenditures related to schooling in the study area include cost of exercise book, text book, uniforms, stationary books, and semester fees and contributions. Thus, based on the assumptions, the results from the study on the perception of participants and non-participants towards their children education status is presented in the following table.

Table 5.8 Respondents perception towards their children education status (in the last 12 months)

Respondents perception regarding household diet	Participants in VSL	%	Non-participants in VSL	%
Improved	65	58.03	10	12.5
Stayed the same	10	8.93	39	48.75
Worsened	1	0.89	0	-
I don’t know	36	32.15	31	38.75
Total	112	100	80	100

Source: Field survey, 2017

As it can be observed from table 5.8, out of sampled participants in VSL about 112 have children in school, while 80 non-participants have children in school. Their responses show that majority of participants (58.03) perceive that their children educational level has improved in the last 12 months, whereas only 12.5% of non-participants believe improved children education status. The remaining 36%, 10% and 1% of participants in VSL perceive ‘I don’t know’, ‘stayed the same’ and ‘worsened’. While 39% and 31% of non-participants with children in school revealed ‘stayed the same’ and ‘I don’t know’ with respect to their children educational status.

From table 5.8, it is observed that participants in VSL perceive an improvement in educational status of their children than non-participants. However, to make a conclusion, we need to conduct a hypothesis testing. The hypotheses used for the test are;

H0= There is no association between improvement on Children’s education and women participation in village saving and loan

H1= There is an association between improvement on Children’s education and women participation in village saving and loan

As the test variable, perception about children education is categorized as 1: improved, and 0: otherwise (including ‘stayed the same’, ‘worsened’, and ‘I don’t know’), and the group variable are both nominal, chi-square test is applied.

Table 5.9 Chi-square test - respondents’ perception towards their children education

Perception on household diet	VSL status		Total
	Participants	Non-participants	
Improved	65	10	75
	43.8 (Exp. Frq.)	31.3	75.0
Otherwise (stayed same, I don’t know)	47	70	117
	68.3	48.8	117.0
Total	112	80	192
	112.0	80.0	192.0

Source: Own calculation and estimation based on survey data Exp. Frq.: expected frequency

Note: Pearson $\chi^2(1) = 40.6505$ Pr = 0.000

The results of the Chi-square test as shown in table 5.7, The test shows Pearson chi-square value of 40.6505 with 1 degree of freedom and a significant value of 0.000. As the significant level (0.000) is less than the level of significance (0.05), the observed difference between participants and non-participants with regards to perception towards their children education is statistically significant. It can be said that there is association between women participation in VSL and improvement in children’s education. Thus, it can be concluded that women participating in VSL have a favorable effect on children’s education in relative to non-participants. This finding conforms with study by Brannen, C., (2010, 87), that found households participating in VSLA spend significantly more on education than non-participants and the difference in spending is statistically significant at 10% level of significance, implying participation in the VSLA program increasing educational attainment and/or improves the quality of education received.

5.2.2.4 Effect of women VSL participation on women’s household decision making and community participation

Participation on Women’s Household Decision Making

The study tried to observe women’s participation in VSL and its effect in household decision making. Women participants in VSL earning own income from their income generating activities are expected to make contributions to the total household income, which in turn help them to have say on household affairs. Thus, the study expected participants in VSL would have an enhanced role in household decision making. For this purpose, respondents were asked who in their household has a final word on decisions concerning the household members, including allocation of the household resource. The results from the survey is presented in the following table.

Table 5.10 Respondents participation in household decision making (in the last 12 months)

Decision making in household	Participants in VSL	%	Non-participants in VSL	%
Respondent only	49	38.58	43	33.86
Husband/partner only	2	1.57	13	10.24
Respondent and husband jointly	73	57.48	38	29.92
Someone else	1	0.79	11	8.66
Respondent and someone else jointly	2	1.58	22	17.32
Total	112	100	80	100

Source: Field survey, 2017

The results from table 5.10 shows that majority of women participants household decisions are made by respondent (women) and their spouse (57.48%) followed by women only (38.58%), while the majority decision in non-participants are made by women only (33.86%), followed by respondent and their spouse (29.92%). The results seem to indicate there is a small difference between the two groups. However, in order to check if this is statistically significant or not, a chi-square test is applied. The study used the following hypotheses to conduct the test;

H₀= There is no association between women household decision making and women participation in village saving and loan

H1= There is an association between women household decision making and women participation in village saving and loan

The chi-square test result (see Annex I, Table 6) shows that Pearson chi-square value of 44.4940 at 4 degrees of freedom and significant value of 0.000. The significant value is less than the level of significance (0.05) used in the study. Thus, we reject the null hypothesis in favor of the alternative. Hence, there is an association between women participation in VSL and household decision making. And women participation is positively impacting women to take active part in household decision makings.

Participation in Community-based Organizations

The study has tried to see the effect of women participation in VSL in community participation. The study expected women participants in VSL have an enhanced community engagement and participations in community-based organization. This is due to the fact that participants, who took loan for running income generating activities, earn own income which they use for paying monthly membership fee in the community-based organizations. Besides, the knowledge sharing and social capital that participants garner throughout the VSLA would help to boost their confidence to partake in community activities. Respondents were asked if they are participating in community-based organization such as Equb, and Idir. The following table shows the results from the survey.

Table 5.11 Respondents participation in community-based organizations

Participation in community-based organizations	Participants in VSL	%	Non-participants in VSL	%
Yes	121	95.27	116	91.34
No	6	4.73	11	8.66
Total	127	100	127	100

Source: Field survey, 2017

As can be seen from table 5.7, majority of participants (95.27%) and non-participants (91.34%) engage in community-based organizations. To see if this indifference between the two groups is statistically significant or not, the study used a hypothesis testing via chi-square test. The hypotheses are;

H0= There is no association between participation in community-based organization and women engagement in village saving and loan

H1= There is an association between participation in community-based organization and women engagement in village saving and loan

The chi-square test (see Annex I, Table 7) shows a Pearson's chi-square value of 1.5761 with 1 degrees of freedom and a significant value of 0.209. As the significant value (0.209) is higher than the level of significance (0.05), the null hypothesis is accepted. Thus, there is no association between participation in community-based organizations and women participation in VSL, and there is no statistically significant difference between participants and non-participants. It can be concluded that the effect of VSL participation has no effect on women participation in community-based organizations and activities.

5.3 Impact of VSL on Poverty Reduction: Qualitative Analysis

In the previous section of chapter five, quantitative analysis mainly using propensity score matching and hypothesis testing via chi-square test and independent t-test are discussed in depth. In this section, the qualitative analysis of the impacts of women participation in VSL on household poverty reduction is presented. The analysis mainly bases on findings from focus group discussion conducted with participant women. In the FGD, discussion questions were raised by the researcher mainly in retrospective way in order to get the participants view before and after joining the VSLA and determine if there is positive household and individual welfare benefits or not.

5.3.1 Effect of Women VSL Participation on Household Diet

To examine the effect of women participation in VSL on household diet, focus group participants were asked to discuss and reflect their views regarding their household diet by comparing before and after scenario. The various views reflected from participants during discussion shows that an improved diet have been achieved by women's households after their participation in VSLA. One of the focus group discussion participant has explained the household diet improvement as;

“Prior to joining VSL, I and my families were hardly able to eat 2 times a day. I tried everything to offer my children the quantities and qualities of food I can afford. Despite all my efforts, the food was not satisfactory to my family.

However, now I am working in income generating activities and earn money. As a result, we afford a meal three times a day. We are eating foods comprising vegetables and rarely meat, which I think is balanced and the quantity of food is fair enough for my family.” (FGD,2017)

Another participant also shared her views towards household diet after joining VSL as follows;

“After I joined the VSL, I took loan and started selling vegetables in local market. I use my profits for purchasing cereals and Teff for my family. In some circumstances, I also took vegetables from my own work for family consumption. This is something that I was not be able to afford before joining VSL.” (FGD,2017)

As can be seen from participants’ views concerning household diet, the effects of VSL on household diet both in terms of quality and quantity is positive. The participants emphasized that the loan from the VSL enabled them to earn own income and they are using their income to improve their household diet. This finding conforms with the results of a study by Barnes et al. (2001) on ‘Zambuko Trust’ in Zimbabwe that access to credit had a positive impact on consumption of nutritious food (meat, chicken, fish, or milk) in extremely poor client households compared to non-clients and those who had left the program. In addition to this, these findings closely relate to the result of an evaluation of VSLAs in Bondo district in Kenya by CARE (2010) that 87.9% of the interviewed VSLA group members reported that wages and income improved, which made food more affordable for their household.

5.3.2 Effect of Women VSL Participation on Household Health

To examine the effects of women participation in VSL in household health, participants in FGD were asked to reflect their views concerning the health situation of their own and their household members by comparing the before and after VSLA. Participants were also requested to show the situation using some example from their experiences. One of the participant in the FGD has explained her views towards VSL effects on household health as follows;

“The VSLA is really supporting us in various ways. Using the loan I took from the association, I am currently working in income generating activities mainly selling charcoal and cabbages in ‘Kochi’, a local market nearby our house.

Before I join this association, I was not earning income and often wait for the hands of my husband, which was not enough for living. When my family members got sick, we were unable to pay for treatment and drug costs. Because of this, we usually apply to 'Kebele' for 'free health cards, to get free treatments from health center. Even after treatment, we often face challenges to buy drugs. However, these situations have all improved after I joined the VSL. On one hand, we afford variety and healthy foods, keeps the household hygiene which contributed much to prevent diseases. On the other hand, whenever a household member gets sick, we do not apply for 'free health cards' anymore, we are in a position to pay for treatment and drug costs from our income and savings." (FGD,2017)

This finding agrees with study in Zanzibar, Tanzania by Brannen, C., (2010, 120), that found the VSLA program have a moderate positive significant impact on the health expenditures for the households of female members only, implying women are more likely to spend on the healthcare of their family when they have access to the necessary resources.

Another participant in the FGD also has this to say;

"In addition to strengthening our economic capacity to cover our treatment and drug costs in case of sickness, the VSLA has helped us to be aware of the preventive strategies in disease prevention, the consequences of female genital mutilation, and home birth. Before I joined the VSLA, due to intergenerational thoughts and trends, I and my fellows practiced female genital mutilation. Besides, most of us and even our daughters gave birth at home. We were practicing home birth and female genital mutilation due to cultural beliefs and trends. However, after joining VSLA, we were thought about the hazards of these unhealthy practices and we totally abolished these practices in our home and community. Therefore, our VSLA has increased not only our economy but also created awareness about preventions and abolishing traditional and backward practices that are hazardous to healthy life" (FGD,2017)

As reflected by various participants of the focus group discussion, women participation in VSL have greatly contributed for household health. The effect is a double fold. On one hand, women

earning income in the household ease ways to pay for treatment and drug costs during sickness. On the other hand, due to discussion in the VSLA and some thoughts from concerned local government officials during VSLA meetings, participant women are aware of disease preventive mechanisms and hazards of the various traditional practices including home birth and female genital mutilation.

5.3.3 Effect of Women VSL Participation on Children Education

Participants in the focus group discussion were requested to discuss about the effects of their participation in their children's education. The discussion was geared to find out the participants views about their children educational status by comparing the before and after VSL situation.

A participant in focus group discussion has shared this concerning her views towards participation in VSL and her children's education;

“Before, I was not able to send my children to school. This was mainly because I was not able to buy scholastic materials, uniforms and pay registration and semester fees. In some occasions, the city Women and Children Affairs Department together with some nongovernmental organizations such as Mary Joy have provided my children scholastic materials, and uniforms. Through these support, some of my children went to school for some time, but I was not able to retain them for long. However, currently all my children are attending schools. Thanks to VSLA, I took loan started small business and make my own earning out of which I am paying for my children school materials, pay school registration and semester fees.” (FGD, 2017)

These findings agree with study by Assefie W. (2014, 24) in West Harargie, Ethiopia, that majority of the participants in VSLA remarked that because of the loan and saving they have had from their membership they were able to send their children to school and be able to cover their children educational expenses from their petty trade.

Another participant in the focus group discussion shared her experience about her children academic results comparing before and after her participation in VSL.

“...Earlier, even if my children were going to school their results were not satisfactory. This poor result was mainly because they were attending school

half day and most of them work afterwards to earn some for the household. They often got tired on evenings and did not study their lessons. However, now things are improved. As I am earning income from my small business; I am not letting my children to work after school. They have time to play and study as well. Recently, I have seen that their academic results are improving and hope this will continue in future too.” (FGD, 2017)

Most of the views reflected by participants in the focus group discussion shows that women participation in VSL is positively contributing towards increasing the children enrollment in schools and improving their children academic results.

5.3.4 Effect of Women VSL Participation on Women’s Household Decision Making, Community-Based Organization’s and Community Activities

In the focus group discussion, participants were asked what role they play in the decision-making process of their household, and if there is any change after joining VSL. Most of the participants seem to agree that most decisions are made in consultation with their spouses. and women participation in VSL has increased their role in decision makings as well. In this regard, a participant has this to share;

“As far as I know, decisions in household are made depending on the urgency, importance and situation. There are decisions which are either made by me or my spouse, while others are made jointly and sometimes involving other concerned household members as well. Major decisions in the household particularly decisions concerning household income allocation and expenditure are made jointly with my spouse. Especially after I joined the VSLA and started to make money, most decisions are made after thoroughly discussion and mutual consensus with my spouse.” (FGD, 2017)

This finding agrees with results in a study in Cairo, Egypt by Taha S.H (2012, 47) that shows microcredit increases the probability that loan holders experience an improvement in harmony inside the household.

Participants were also asked to discuss concerning how the community were treating them before and after joining VSL. In this regard, a participant explained the situation as follows;

“During the early stage of our VSLA formation, we were not sure if we can achieve what we have now, and the community were also forwarding some discouraging words towards our initiative and association. However, through our hard work, we have now won the community support for our association and we made a positive influence on our fellows to form association, save, take loan and run their income generating activities.” (FGD,2017)

In addition, participants reflected about their participation in community activities by comparing the before and after situation. A participant has this to say with respect to her participation in community activities after joining VSL;

“VSLA association made a significant role in helping women to express their views and share social, economic, cultural aspects. For instance, throughout our weekly meetings, beside saving and discussions about loan, we usually have some agendas to discuss including security issues in our village, crime prevention, health, sanitation and hygiene, children education and others. Some of the agendas discussed in our association are passed to local administrative and community-based organizations like ‘Eder’ to get a higher emphasis and put the plans into actions. Members of the association sometimes also forward their best practices and challenges in their works. These all have greatly contributed for building our social capital, connectedness, and above all helped to actively engage in our community affairs.” (FGD, 2017)

In the focus group discussion, participants were asked if they have ever faced challenges, and limitations in their VSL participation and income generating activities. Most of the focus group discussion participants expressed that; despite their tireless efforts to change their own and family life, they are encountering some challenges. Among others, one of the participant in the focus group discussion has shared the changeless as follows, and most are shared by almost all participants;

“Most of us are working hard to change our life through VSLA. Despite our success in our engagement in income generation and raising income for our household, the support from government is loose. Local government is not providing the necessary support for us. We have not received any formal

training concerning business, saving and book keeping. In addition to this, most of us working in 'Kochi', local market nearby our village, do not have permanent working place. And no tangible efforts have been done from government side to support us in this regard. Though some members of the VSLA have also a desire to expand their business by taking extra loans from local microfinance institutions, the government played insignificant role to link us with microfinance institutions. Nongovernmental organizations are not also supporting our initiative. Hence, we would be grateful if government or nongovernmental organizations supported us to overcome our challenges and help us to get out of poverty and achieve a greater economic gain for our family." (FGD, 2017)

5.4 Chapter Summary

Overall, from the preceding discussion in the chapter, it is observed that women participation in VSL is positively contributing to poverty reduction. Women participation is found to have a positive effect on average monthly household income, and highly associated with improvements in household diet, health, children education, women's active role in household decisions. Both the qualitative and quantitative findings seem to converge on the findings and are complementary to each other. In the next section, the study presented the study summary of findings, conclusions, and recommendations.

Chapter Six

Summary Findings, Conclusions and Policy Recommendations

6.1 Chapter Overview

This chapter presents a summary and discussion of the main findings of the study, and conclusions. In addition, recommendations, limitations and possible suggestions for further research are presented.

6.2 Summary of findings and conclusions

As highlighted earlier, this study was begun with the broad aim of assessing the effects of village savings and loan associations in poverty reduction in Hawassa city at household and individual level, with focus on the poorest of the poor women and their households. Accordingly, an empirical assessment on the effects of VSLAs in helping the poorest of the poor women has been made; and an examination of the extent to which VSLAs impact welfare of poor women in terms of household decision making and participation in community activities are undertaken. The next paragraphs present the summary of the study findings and conclusions.

Though microcredit started to expand since 1970s as an instrument to eradicate poverty and empower women, its reach to urban poorest of poor and rural community was not intense. As a result of this, various community managed saving and loan mechanisms were underway. Among others, village savings and loan association took the lead in terms of its expansion in various countries, acceptance and applicability. On the basis, this particular study tried to examine the effects of village saving and loan association in urban poverty reduction with a case study in Hawassa city, Ethiopia. The study mainly aimed to empirically assess the effectiveness of VSLAs in helping the poorest of the poor women in their effort to get out of poverty as measured by income, health status, children's education, and household diet; and to assess the extent to which VSLAs impact welfare of poor women in terms of household decision making and participation in community activities. The study relied on vicious cycle of poverty approach and social capital theory as theoretical framework.

To achieve the research objectives, the study used both primary and secondary data. Primary data was collected using questionnaire and focus group discussion. The study also applied three stage

sampling comprising purposive sampling, cluster sampling and simple random sampling methods to select final sample respondents for questionnaire. A total of 254 samples (127 VSL participants and 127 non-VSL participants) were included for the study. The study used a mixed methodology for analyzing the data. Quantitative data analysis was done using propensity score matching technique and hypothesis testing using chi-square and independent t-test. While, findings from focus group discussion were qualitatively transcribed by looking at trends and commonalities.

The findings from the study shows that women participation in village saving and loan (VSL) has a positive effect on most key indicators of poverty identified by the study. Hence, the study found a positive effect of women participation in average monthly household income, improvements in household diet, health status, children's education, and women role in household decision. However, the study did not find a statistically significant association between women participation in VSL and participation community-based organization and community activities.

The quantitative analysis using a propensity score matching technique shows that the average effect of participation in village saving and loan on average monthly household income of participant women is positive and significant, ranging from 141.55 Birr/month (nearest neighbor matching) to 169.63 Birr/month (Kernel matching), on average. The hypothesis testing also shows similar results in favor of VSL women participants and their households on most poverty indicators. For instance, the study, using a chi-square test, found a statistically significant association between improvement on household diet and women participation in village saving and loan. Accordingly, participant women and their household have an improved diet than non-participants, which led to the conclusion that women participation in VSL makes a positive impact towards household diet. Similarly, the study found a statistically significant association between improvement in household health and women participation in village saving and loan. Besides, it is found that participant households on average spent 147.54 birr, while non-participant households on average spent 105.24 birr for health treatments annually. Using independent t-test, it is found that the difference between the two groups as statistically significant which shows the potential of VSL participant households to cover for treatment and drug costs is higher than the non-participants. These findings are consistent with Brannen and Connor (2012), whom they found participation in VSLA program positively impacting household and individual welfare in Zanzibar, Tanzania.

With regards to children's education, the study found a statistically significant association between women participation in VSL and improvement in children's education. And it can be concluded that women participating in VSL have a favorable effect on children's education in relative to non-participants. Women participation in VSL is also found to have a positive effect in impacting women to take active part in household decision makings. Unlike the outcomes discussed above, the study found a statistically insignificant difference between participants and non-participants with regards to VSL effect on women participation in community-based organization and community activities.

In conformity with most findings from the quantitative analysis, the results from qualitative analysis shows that participants witnessed they are in a better situation now than prior to joining village saving and loan association. Participants from the focus group discussion reflected their views towards household diet as improved in terms of quality and quantity. Participants are now able to afford to purchase variety of food as compared to prior period. In terms of health, participants and their household are enjoying a better health situation owing to their preventive strategies as a result of consuming healthy diet and keeping their sanitation and hygiene. In addition, the awareness they garner from VSLA with respect to home birth and female genital mutilation is a positive contributing factor towards healthy life of the household members after joining VSLA. Women participating in VSLA is now able to afford to buy scholastic materials, uniforms; pay school registration and semester fee for their children, enabling them to send their children to school. Besides, prior to joining VSL, children of participating women were obliged to work after school to earn income for the household leaving them no spare time to study. However, this is improved greatly after women join VSL, contributing to better academic results by children. With respect to household decision, unlike previous times, now most decisions are made through consultation jointly by women and their spouse.

Participants of the focus group discussion also shared their views towards participation in community activities as encouraging. However, participants raised some critical challenges they are encountering in their VSLA and income generating activities. Among others, loose government support to their VSLA and income generating activities; lack of trainings on business, saving, and book keeping; lack of permanent working place for small businesses; poor or no links of the VSLAs with formal microfinance institutions by government and nongovernmental organizations working in the city are the major ones raised by participants as challenges and imitations.

Overall, from the preceding discussions, it is important to note that the results found in the study are in line with the theoretical and conceptual frameworks. The findings on women participation in VSLA contributing positively to household income, household diet, health, children education, women role in household decision making are in conformity with the conceptual framework. Accordingly, as explained in the third chapter, figure 3.3, with women increased income generating activity engagement, there will be increases in sales and revenues that results in profits. The profits from the income generating activities will increase the poor women income. The profits are partly contributed to the household increasing the household income and some are used to purchase household assets, increase expenses for better children schooling, health, and food consumption of their household. Some portion of the profits, due to knowledge and understanding and/or peer pressure, remit as savings to the group fund, and for re-investment in income generating activities. In addition to this, the increased income will enhance the bargaining power of the woman in the household which increases their decision-making power of women in the household. Hence, based on the results of the study and its conformity to the theoretical and conceptual frameworks, the researcher strongly argues, if properly designed and implemented, informal savings and lending initiatives, like village saving and loan associations, equally have the capacity to contribute to urban poverty reduction by facilitating access to affordable credit through savings, further stimulating the engagement of women in income generating activities.

6.3 Recommendations

Based on the above findings, the following recommendations have been proposed by the researcher in order to enhance the implementation of village saving and loan association in Hawassa city.

- **Provide regular, timely and need based capacity building trainings for VSLA participants**

In order to maintain the sustainability of the outcomes secured by women through village saving and loan associations, providing capacity building trainings related to their activities is a must. In light of this, demand oriented, period/regular and timely trainings should be provided by either government, or nongovernmental organizations in the city. Trainings particularly on saving, business skill, entrepreneurship, book keeping are basic to their association and income generating

activities. It should be also noted that the trainings need to take into account the education level and the general context of the women.

- **Link village saving and loan association participants with formal microfinance institutions or credit unions**

Since VSLAs depend on members' limited savings capacity to provide loan, loan demand of VSLA members can outpace supply, it is imperative for government to link the VSLA participants with microfinance institutions. This linkage will have a double fold effect. On one hand, participants will be able to access microloan to expand their small businesses and make a giant step out of poverty. On the other hand, the participant, in addition to the VSLA, will get an extra convenient spot to save more money in small amounts in microfinance institution.

- **Regular monitoring and follow ups should be conducted by either the city or sub-city women children affairs department or concerned government body**

The monitoring and follow-ups will help to look for the challenges and other issues to be addressed on time. It is also important to document the best practices and lessons for the upcoming village saving and loan associations for government bodies working with the women and VSLA.

- **Different concerned stakeholders in the city including government, nongovernmental organizations, microfinance institutions and others need to work in coordinated manner to solve the recurrent challenges of village saving and loan association participants in Hawassa city.**

As participants explained in-depth during the focus group discussion, there are several challenges they are encountering throughout their work. Thus, it is the researcher strong recommendation for all concerned stakeholders in the city to work in coordinated manner to solve these recurrent challenges and support the women initiative in the desired level. Among others, concerned local government should act to provide the VSLA participants with a permanent working place. for VSLA participants. Apart from government, NGOs, and MFIs; the private sector, volunteers, household members of participant women need to play their decisive role in supporting VSLA women participants to achieve succeed in their small businesses.

- **Government and/or nongovernmental organizations need to take best practices and lessons from existing VSL and expand the VSLA initiative to address more impoverished women in the city**

As the researcher observed and understood from the focus group discussion, there are number of women who are destitute poor and need to take part in VSLA. Thus, it is the researcher strong recommendation to engage more impoverished non-participants into VSLA and support them to lift themselves out of poverty. Best practices need to be identified and scaled up to support the newly formed VSLAs, while lessons from previous VSLAs should be given due emphasis and used in constructive ways to strengthen VSLAs.

6.4 Limitations and suggestions for future research

The study fulfills its pre-intended aim of assessing the effects of women participation in VSLA on poverty reduction in Hawassa city. However, the study is constrained by some limitations. The researcher is aware of several limitations in social science researches. Thus, the researcher made the conclusions and the recommendation in light of these limitations. Some of the limitations of the study are explained in the following paragraphs;

As stated earlier, the study aims to assess the VSLA effect on poverty reduction. It is a fact that poverty is multi-dimensional, consists various concepts, and examined at various levels. Based on this, this study is only limited to poverty at individual and household levels focusing only in selected poverty indicators. The indicators considered in the study are household diet, health, children education, women role in household decision making, and participation in community activities. Besides, though there are various measures to each one of these indicators, the study designed its own way of measuring each indicator considering the context of the study area, target and data availability. Hence, the researcher is aware that considering multiple poverty indicators will enhance the results and suggest for further scientific studies.

As mentioned in the sampling process above, due to time and financial constraints, the study is limited to small number of respondents and the scope of the study is within only one specific area, Hawassa city. These combined makes it impossible to argue that the findings and recommendations applies to all regions and participants in Ethiopia and outside Ethiopia. In addition to this, the study uses propensity score matching (PSM) by assuming all unobserved

characteristics between participants and non-participants are similar. However, this assumption may not be realistic in some circumstances and result in self-selection bias. The study also did not fully exploit and consider other externalities which could potentially affect the outcome beside the VSLA. It is a fact that a randomized control trial (RCT) is a gold standard to conduct such an impact evaluation. However, in the absence of RCT, the researcher tried to find ways to examine the effects of VSLA on poverty reduction. Thus, conclusions of this study should be considered given these limitations.

Finally, in order to generate a conclusive result at big scale, the study recommends further studies to be conducted using large sample size and a mix of different methodologies. In addition to this, there are several areas which needs to be filled by upcoming studies in similar areas. Among others, the question such as “What are the effects of VSLA in the region’s or countries economy”, “what the pros and cons of working women in village savings and loan associations”, “The effects of women participation in VSLA in their empowerment”. These and other questions are not addressed by this study as it is beyond the scope and limitations in time and finance. Therefore, these questions can be a good starting point for further study in this field and for those interested to undertake an exhaustive impact evaluation in village saving and loan associations.

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Annex

Annex I: Statistical Outputs

Table 1: Matching quality analysis: t-test and percentage bias before/after matching

Variable	Unmatched Matched	Mean		%reduct		t-test		V(T) / V(C)
		Treated	Control	%bias	bias	t	p> t	
ageclient	U	44.638	41.024	62.5		4.98	0.000	1.40
	M	44.638	43.11	26.4	57.7	2.21	0.028	1.80*
maritalstatus	U	1.8031	1.9449	-13.4		-1.07	0.287	1.31
	M	1.8031	2.1339	-31.2	-133.3	-2.24	0.026	0.85
highestschooling	U	1.5827	1.4882	13.4		1.07	0.285	0.96
	M	1.5827	1.4409	20.2	-50.0	1.62	0.106	0.99
peopleinhh	U	3.937	3.0315	58.2		4.64	0.000	0.95
	M	3.937	3.5354	25.8	55.7	2.16	0.032	1.15
workbfrvsla	U	.8189	.95276	-42.9		-3.42	0.001	.
	M	.8189	.7874	10.1	76.5	0.63	0.530	.
q37	U	.40945	.49606	-17.4		-1.39	0.167	.
	M	.40945	.51181	-20.6	-18.2	-1.64	0.103	.
q40	U	1.7717	1.4488	59.7		4.75	0.000	1.21
	M	1.7717	1.7795	-1.5	97.6	-0.11	0.910	1.07
q41	U	3.0079	2.2047	65.6		5.23	0.000	1.00
	M	3.0079	2.685	26.4	59.8	2.09	0.037	0.99

* if variance ratio outside [0.70; 1.42] for U and [0.70; 1.42] for M

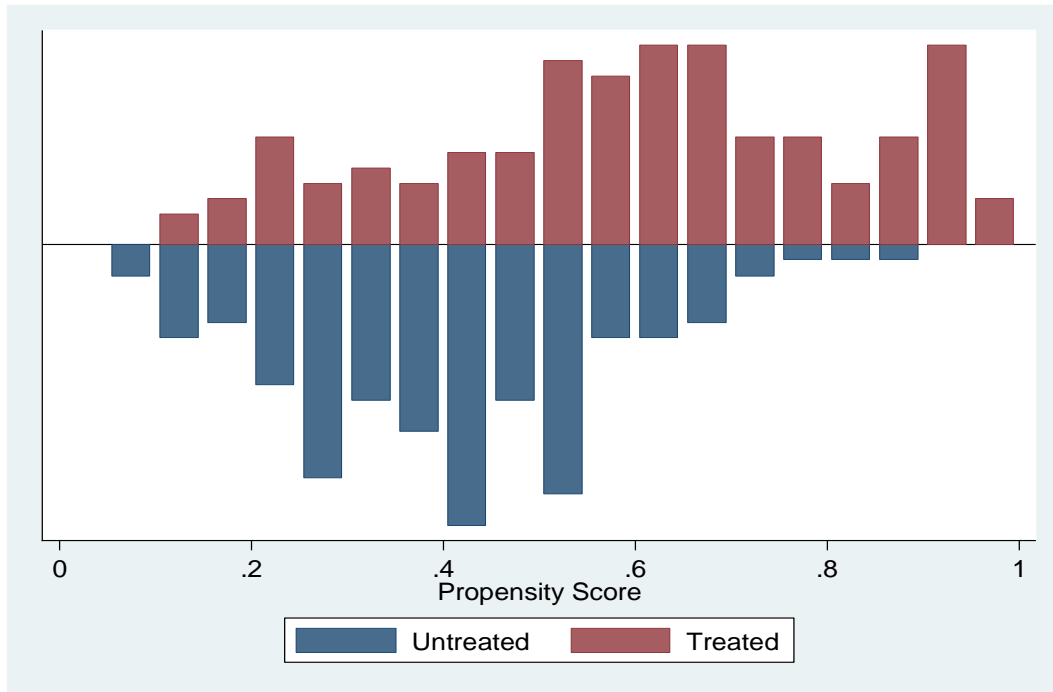
Source: Own Calculation via Stata based on survey data, 2018

Table 4: ATT estimation with Kernel Matching Method with bootstrapped standard errors

Treated	Controlled	ATT	Std. Error	t
127	122	141.555	72.788	1.945

Source: Own Calculation via Stata based on survey data, 2018

Figure 1: Distribution of propensity scores over comparison and treatment respondents.



Source: Own Calculation via Stata based on survey data, 2018

Note: Common support requirement was satisfied.

The region of common support is [.13408003, .98629752]

Table 5: Independent t-test with equal variance

VSL status	Obs.	Mean	Std. Err.	Std. Dev.	(95% Conf. interval
Non-part.	127	105.2362	7.78549	87.73802	89.82896 120.6465
Participants	127	147.5354	11.90045	134.1113	123.9848 171.0861
Total	254	126.2858	7.219891	115.0661	112.1671 140.6046
Difference		-42.29921	14.22092		-70.30621 -14.29221

Diff = mean (0) – mean (1)

t = -2.9744

Ho: diff = 0

degrees of freedom = 252

Ha: diff < 0

Ha diff = 0

Ha > 0

Pr(T<t) = 0.0016

Pr (T > t) = 0.0032

Pr (T > t) = 0.9984

Table 6: Chi-square test- Respondents participation in Household decision making

Decision in household	VSL status		Total
	Non-Participants	Participants	
Women only	43	49	92
	46.74	53.26	100.00
	33.86	38.58	36.22
Husband/spouse only	13	2	15
	86.67	13.33	100.00
	10.24	1.57	5.91
Women and husband jointly	38	73	111
	34.23	65.77	100.00
	29.92	57.48	43.70
Someone else	11	1	12
	91.67	8.33	100.00
	8.66	0.79	4.72

Respondent & someone	22	2	24
	91.67	8.33	100.00
	17.32	1.57	9.45
	127	127	254
	50.00	50.00	100.00
Total			

Pearson chi2(4) = 44.4940 Pr = 0.000

Table 7: Chi-square test- Respondents participation in community-based organization

Participation in CBO	VSL status		Total
	Non-Participants	Participants	
Yes	116	121	237
	118.5	118.5	237.0
No	11	6	17
	8.5	8.5	17.0
	127	127	254
	127.0	127.0	254.0

Pearson chi2(1) = 1.5761 Pr = 0.209

Annex II: Questionnaire and Focus Group Discussion Guide

Questionnaire

Dear Respondents:

My name is **Nardos Legesse Beyene**. I am studying M.A in Development Studies in University of Western Cape, South Africa. As a requirement for completion of my study, I am conducting research on ‘Analysis of the Effects of Village Saving and Loan Association (VSLA) on Poverty Reduction in Hawassa, Ethiopia’. Hence, this questionnaire is designed to gather data on new and old members of VSLAs in Hawassa. To achieve this purpose and to deeply investigate the case, your response to the questions given below has a crucial value. Therefore, you are kindly requested to give accurate and real data which exists on the ground. The answers you will provide for this survey are completely confidential. The results from the survey will be used only for research purpose, will not be shared with any official agencies and will not in any way affect your membership in the VSLAs. Moreover, your participation is completely voluntary. This questionnaire will approximately take 20 minutes to complete and thank you in advance for your valuable time.

Questionnaire for VSLA new and old members in Hawassa city

Instruction: Circle the number of your choice or fill the blank spaces for the following questions.

You may respond more than one answer if it is necessary.

- I. Questionnaire Number _____
- II. Enumerator Name _____
- III. Date of Interview _____
- IV. Name of VSLA _____

Section 1: Socio-demographic Information

1. Sub-city of the VSLA

- | | |
|------------------|-----------|
| 1. Bahel-Adarash | 4. Mehal |
| 2. Hayek Dar | 5. Misrak |
| 3. Menahariya | 6. Tabor |

2. Age of client _____

3. Marital status

- 1. Married
- 2. Single
- 3. Widowed
- 4. Divorced
- 5. Separated

4. What is the highest level of schooling that you have completed?

- 1. No education
- 2. Primary level
- 3. Secondary level
- 4. Above secondary level

5. How many people are there in the household? _____

Section 2: VSLA membership information

6. How long have you been member in the VSLA?

- 1. 0 – 3 months
- 2. 4 – 12 months
- 3. 1- 2 years
- 4. More than 2 years

7. Have you been working before Joining the VSLA?

- 1. Yes
- 2. No

8. If **yes** to Q. 7, what was your last job?

- 1. Maid
- 2. Petty business trader
- 3. Broker
- 4. Daily laborer
- 5. Tailor
- 6. Private sector job
- 7. Crafter
- 8. Government worker
- 9. Other, please specify _____

Section 3: Loan Information

9. Did you have access to loans before joining the VSLA?

- 1. Yes
- 2. No

10. If yes, did you ever taken out a loan from different association/organization/individuals?

- 1. Yes
- 2. No

11. If **yes** to Q.10, how many loans? _____

12. Have you ever taken loan from VSLA?

1. Yes
2. No

13. If **yes** to Q. 12, how many times did you take loan so far?

1. Once
2. Twice
3. Three times
4. Four times
5. Five times and more

14. What is the value of all loans taken from VSLA so far? _____

15. When did you take the first loan?

1. Less than 1 year
2. 1 year
3. 2 years
4. 3 years
5. 4 years
6. 5 years
7. 6 years and more

16. What is/are the main reason/s for taking loan? Multiple answers are possible

1. Starting new business
2. Expanding an ongoing business
3. Food/household expense
4. Repaying debts
5. Household assets
6. Family celebration/ceremony
7. House improvements
8. Medical fees/health
9. Children School fees
10. Emergency
11. Other, please specify _____

Section 4: Impact on individual economy

17. Are you currently engaged in any income generating activities (IGA)?

1. Yes
2. No

18. If **yes** to Q. #17, in how many IGA are you currently engaged in? _____

19. If **yes** to Q. #17, did you use your saving and loans from VSLA to set-up your income generating activities?

1. Yes
2. No

20. If **yes** to Q. #17, what type of IGA (s) are you currently engaged in? (Circle as many as necessary)

1. Urban agriculture (including livestock keeping, poultry, gardening)
2. Petty trade
3. Street coffee sale
3. Food processing and sales
4. Tailoring
5. Other, please specify _____

21. When did you start your income generating activity?

- | | |
|---------------------|---------------------|
| 1. Less than 1 year | 4. 3 years |
| 2. 1 year | 5. 4 years |
| 3. 2 years | 6. 5 years and more |

22. How much was your capital when you started the income generating activity? _____

23. How much is your income generating activity capital now? _____

24. Is your income generating activity the main source for your family income?

1. Yes
2. No

25. If your answer is **No** to Q.24, what other sources of family income do you have?

- | | |
|-----------------------|--------------------------------|
| 1. Another IGA | 5. Pension |
| 2. Government job | 6. Husband work |
| 3. Private sector job | 7. Other, please specify _____ |
| 4. House Rent | |

26. Is your income generating activity conducted in the same place as your home?

1. Yes
2. No

27. Where do you market your products?

- | | |
|---------------|--------------------------|
| 1. Shop | 4. Mediators |
| 2. Enterprise | 5. Streets |
| 3. Market | 6. Other, please specify |

28. Is your income generating activity legally registered?

1. Yes
2. No

29. Does your income generating activity make profits?

1. Make profits

2. No profits

3. Loss

30. If your answer is '**Loss**' to Q#29, what is the main reason for the loss?

1. Lack of business management skill
2. Low demand for the products
3. Lack of good product selling place
4. other, please specify_____

31. If your answer is '**Make Profits**' to Q# 29, in average, how much is your business profits per month? _____

32. What do you do with income generating activity profits?

1. Use in daily household expenses
2. Save it
3. Reinvest it all in my business
4. Reinvest part of it in my business
5. other, please specify _____

33. If your answer is '**Save it**' to Q# 32, where did you put your savings?

1. VSLA
2. Bank account
3. Microfinance institutions
4. In house
5. Other, please specify_____

34. How many people are working with you in the IGA?

1. 1
2. 2
3. 3
4. 4
5. 5 and more
6. 0

35. Who work with you in the IGA?

1. Family with wage
2. Family without wage
3. Rented workers
4. Others

36. If your answer to Q. 35 is '**Family with wage**', how much you pay per workers per month?

1. Less than 50ETB
2. 51-100ETB
3. 101-150
4. More than 150

Section 5: The Impact on the household

37. Are you the head of the household?

1. Yes

2. No

38. If your answer to Q# 37 is 'No', who is the head of the household?

1. Father

2. Wife

2. Mother

5. One of my children

3. Husband

6. Other, please specify

39. On average, what is the monthly income of the household? _____

40. How many people of the household earn income? _____

41. How many persons in your household depend on you financially?

1. 0

4. 3

2. 1

5. 4

3. 2

6. More than 4

42. Has the household average income changed since joining the VSLA?

1. Improved

3. Worsened

2. Stayed the same

4. I don't know

43. How much money on average does the household spend on the following items per month?

(a) Food _____

(b) Fuel & electricity _____

(c) House rent _____

(f) Transport _____

(g) Water _____

Section 6: Household assets

44. How many of the following does your household own?

No.	Type of asset	quantity	Were you a member of the VSL when you acquired the asset? 1= yes 2 = no	Have you acquired the assets from the savings or the loans from VSLA? 1= yes 2 = no
1.	Livestock			
1.1	Cows/ox			
1.2	Sheep/goats			
1.3	Chicken			
2.	Transportation			
2.1	Motorcycle			
2.2	Bicycle			
2.3	Cart			
3.	Electronics			
3.1	Radio			
3.2	Television			
3.3	Satellite Dish			
4.	Other goods			
4.1	Refrigerator			
4.2	Cell phone			
4.3	Sewing machine			

Section 7: Impact on social welfare

Housing

45. To whom does the house belong you are living in?

1. Ours 3. Rented

2. Shared 4. Other, please specify _____

46. Has your household made any house improvements in the past 12 months?

1. Yes
2. No

47. If 'yes' to Q# 46, were these improvements paid for by payout or loans from the VSLA?

1. Yes
2. No

Children Schooling

48. Do you send all you children to school?

1. Yes
2. No

49. If yes to Q.48, how much did your household spend on education expenses (fees, uniforms, books, or other materials) during the last 12 months? _____

50. Do you pay for these educational expenses using loans or payouts from the VSLA?

1. Yes
2. No

51. Have your kids level of education changed since joining VSLA?

1. Improved 3. Worsened
2. Stayed the same 4. I don't know

Household Diet

52. Has household diet improved (variety, quantity and quality of food) since joining the VSLA?

1. Improved 3. Worsened
2. Stayed the same 4. I don't know

53. Usual number of meals per day? _____

54. Frequency of problem with satisfying food needs in past 12 months?

1. Never

2. Sometimes

3. Always

Health care

55. Frequency of problem with accessing medical services and medication in past 12 months?

1. Never

2. Sometimes

3. Always

56. Has the health of members of the household changed since joining the VSLA?

1. Improved

3. Worsened

2. Stayed the same

4. I don't know

57. How much did your household spend on healthcare expenses in the last 12 months? _____

Section 8: Individual welfare and involvement in community activities

58. Who in your family usually has the final word on decisions that concern the household members?

1. Respondent

2. Husband/partner

3. Respondent & husband/partner jointly

4. Someone else

5. Respondent & someone else jointly

6. Decision not made /not applicable.

59. Who in your family usually has the final say on the following decisions about your child (ren)?

(Please kindly use the choices from Q. 58 to answer this question)

Any decisions about children's schooling?	Schooling	1	2	3	4	5	6
What to do if a child falls sick?	Medical	1	2	3	4	5	6
How children should be disciplined?	Discipline	1	2	3	4	5	6
Whether to have another child?	Another child	1	2	3	4	5	6

Please tick one of these which you think will reflect your status with regards to each question.

No.		Improved	Stayed the same	Worsened	I don't know
60.	Has your status in the community changed since joining VSLA?				
61.	Has your status in your family changed since joining VSLA? Such as Respect from the spouse/kids				
62.	Has your self-confidence changed since joining VSLA?				

63. Are you a member of any community-based organizations, associations, networks such as Equub, Eder and others?

- 1. Yes
- 2. No

64. If **yes** to **Q#63**, did you join after VSLA membership?

- 1. Yes
- 2. No

65. If **yes** to **Q#63**, do you hold a leadership position in the community-based organizations, or associations?

- 1. Yes
- 2. No

66. In the last 12 months, have you expressed your opinion in public meetings of men and women to talk about some common issue? (Other than a VSL regular meeting)

- 1. Yes
- 2. No

Focus Group Discussion Guideline

Dear Focus group discussion participants:

My name is **Nardos Legesse Beyene**. I am studying M.A in Development Studies in University of Western Cape, South Africa. As a requirement for completion of my study, I am conducting research on ‘Analysis of the Effects of Village Saving and Loan Association (VSLA) on Poverty Reduction in Hawassa, Ethiopia’. Hence, this focus group discussion is conducted to gain a better understanding of the effects of VSL program in Hawassa city.

I will conduct the discussion and ----- will observe and take notes. We invited you all to discuss on the effects of VSLA for poverty reduction in Hawassa. I will ask you several open questions. Your personal opinions and view are very important for us. There is no right or wrong answers. Please feel welcome to express yourself freely during the discussion. This conversation will be tape recorded, your responses will remain anonymous and no names will be mentioned in the report. The discussion will last for about one hour. We kindly ask you to give everyone the chance to express their opinion during the conversation. You can address each other when expressing your opinion; we are only here to assist in the discussion. Is everything clear about the course of the focus group discussion?

A. Basic VSLA information and membership experiences

1. Please share your name and from which VSLA you come from?
2. Tell us about your life before you joined the group?
3. How did you get to know about VSLA? What are your reasons for joining the VSLA?
4. How did you experience your participation in VSLA with regards to relationship with members, regular savings, loans, and others?

B. Assessments of VSLAs effects on household’s wellbeing, individuals’ welfare and community participation

5. What do you believe the benefits are to be belonging to a VSLA group? In what ways have you and your family’s life changed since you joined the VSLA? (could be in terms of health, children schooling, nutrition & others)

6. How many of your VSLA members engaged in income generating activities? Tell us any successful or unsuccessful stories from your group regarding income generating activity engagement?
7. What role do you play in the decision-making process of your household? Has it changed since you joined the group?
8. How does the community treat VSL members? Do they treat you differently than before you were members?

C. Challenges of VSLAs, supports provided and future plans of the VSLAs

9. Have there been any negative consequences of joining the VSL group? If so, what are they?
10. What are some of the challenges and limitations your group faces?
11. What kind of supports is provided by government, NGO and/or any other parties for your group?
(if any)
12. What is the future plan of your VSLA group?
13. Is there anything else you would like to discuss concerning the VSL program?