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MASTER OF BUSINESS ADMINISTRATION IN ACCOUNTING AND FINANCE

FACTORS AFFECTING LOAN REPAYMENT PERFORMANCE IN MICROFINANCE: THE CASE AWACH SAVING AND CREDIT COORPORATIVES SOCIETY.

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DECEMBER, 2022

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A RESEARCH PAPER SUBMITTED TO ST. MARY'S UNIVERSITY SCHOOL OF GRADUATE STUDIES FOR THE PARTIAL FULFILLMENT OF MASTER OF BUSINESS ADMINISTRATION IN ACCOUNTING AND FINANCE

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DECLARATION

I declare that this Master of Business Administration in Accounting and Finance. Thesis is my original work, and has never been presented for the award of any degree in this or any other university and all source of materials used for the thesis have been duly acknowledged.

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ENDORSEMENT

This thesis has been submitted to St. Mary's University, School of Graduate Studies for examination with my approval as a University advisory.

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Acronomy

MFI	Microfinance Institution
ASCCS	Awach Saving and Credit Corporative Society
NGOs	Non-governmental organizations
ICA	International Cooperative Alliance
ACCOSCA	African Confederation of Co-operative Savings and Credit Association

Abstract

Microfinance institutions in Ethiopia are playing an important role in poverty reduction strategies to support lower-income groups, get funds for their business activities, and improve their lives. To address the main objectives of the study, Awach Saving and Credit Corporative Society was selected for the purpose of the study. This study was conducted with the objective of analyzing and identifying the factors that influence the loan repayment performance of the beneficiaries of ASCCS. In order to achieve this objective, we collected primary data from 100 randomly selected clients using a structured questionnaire and interview. For the data analysis, descriptive statistics, including frequency and percentages were used to describe the socio-economic characteristics of the borrowers. A binary logit model was used to analyze the socio-economic factors that influence loan repayment. A total of twelve explanatory variables were included in the regression. Out of these, six variables were found to be significant for the probability of being a defaulter. Sex, education level, marital status, family size, business success, and interest rate were important in influencing the loan repayment performance of the borrower. While Age, business experience, business type, training, distance from home, and marketing research is not a significant factor for loan repayment performance. Awach Saving and Credit Cooperative Society has a number of internal and external problems like a shortage of loanable funds for further expansion, competition, and improper interference of the third party in the decision of loan approval. In order to solve the internal and external problems of the institution, the main thing might be improve the financial capacity of the institution, increase loan size and expand the services.

***Key words**: loan repayment, defaulter, non-defaulter, descriptive statistics, business success*

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

A key tactic for reducing poverty in developing nations is microfinance. Since Muhammad Yunus began the Grameen Bank Project in 1976, it has gained in popularity (Cabraal, et al. 2006). Mohammad Yunus established the Grameen bank in Bangladesh, which was one of the first organizations to provide microcredit (MFIs). When Mohammad Yunus arrived, he found some villagers struggling to make good on their debt to a debt collector. He discovered that he could give them whatever they needed out of his own pocket. He started a lending service in response to this circumstance in order to avoid the high interest rates that the conventional moneylenders charged.

Most micro finance institutions offer low-income households small loans without collateral. Typically, these loans are meant to be used for self-employment and other revenue-generating ventures (Kono and Takahashi, 2010). Microfinance can be a key component of a successful strategy to fight poverty. Particularly for the poor, improved access and effective provision of saving, credit, and insurance facilities can help them control their spending, better manage their risks, accumulate assets over time, grow their microenterprises, and increase their ability to earn an income. Consequently, microfinance aids in fostering economic development and growth (ADB, 2000).

Microfinance Institutions have started to diversify their product offerings, such as microsavings, flexible loan repayment, and insurance, as they have grown more effective and improved their client-based service. The high rates of repayment are adequately explained by the theories of joint liability contracts, progressive lending, frequent repayments, and flexible collateral (Sengupta and Aubuchon, 2008).

Today, there are more and more effective microfinance organizations all over the world. These are mainly neighborhood organizations that are successfully expanding their clientele to include a sizable portion of the underprivileged (Evaluation office, 1999). Poverty reduction is one of the main development goals of the majority of microfinance institutions. As a result, donors and non-governmental organizations (NGOs) have a tendency to concentrate on social programs and

services for which they have a niche of expertise, such as initiatives to combat poverty (Basu, et al. 2004).

Loan repayment is the act of paying back money in maturity previously borrowed from a lender. Repayment usually takes the form of periodic payment that normally includes part principal plus interest in each payment (Alemut, 2002). Repayment performance thus serves as a positive signal for increasing the volume of credit availability to various sectors of the economy (Acquah & Addo, 2011). However, certain factors are considered before it is availed to the beneficiary and one of such factors is the beneficiaries‟ ability to repay the loan which in turn is also determined by many factors. According to Ugbomeh, Achoja, Ideh and Ofuoku (2008), credit repayment performance could be influenced by a myriad of factors such as interest rate, and the social relations and responsibilities of the borrower. Micro institutions' ability to efficiently and effectively collect their loans is a key factor in determining their viability. To put it another way, micro institutions must guarantee high collection quality based on full repayment, or at the very least low delinquency/default, cost recovery, and efficient lending, in order to be financially viable or sustainable. For all financial institutions, the incremental default rate has been one of the biggest issues.

Currently, Ethiopian microfinance institutions are playing crucial roles in improving the life of poor societies and economic development of the country as a whole. The National bank of Ethiopia (NBE) inaugurated the micro finance institutions. Awach Saving and Credit Cooperative Society (ASCCS) is legally registered public organization by Federal Cooperative Agency (FCA), associate member of African Confederation of Co-operative Savings and Credit Association (ACCOSCA) and member of International Cooperative Alliance /ICA/. Awach SACCOS has a vision to be a ‘ World Class Saving and Credit Cooperative Society in 2030’ with mission of ‘Improve socio-economic conditions of members & other people through mobilizing saving and creating access of credit & asset building using relevant technology and highly motivated staffs in consideration of social governance aspects’. At this time, it works in Addis Ababa and Finfinne Liyu Zone of Oromia Region, around Addis Ababa; it is serving more than 20,000 members through quality and fast service products of saving, loan, and training of business development skills using in ten branch offices. This study is to investigate the determinants of loan repayment in Awach Saving and Credit Corporative Society.

1.2 Statement of the Problems

In current microfinance practice, there is a significant emphasis on profit making (financial self-sustainability) (Drake and Rhyne, 2002). The main goal of MFIs is to offer financial services (credit and saving) to the underprivileged in order to ease their financial burdens and contribute to the reduction of poverty. Regardless of whether it is focused on making a profit, every MFI strives to maximize its repayment performance. The ability of borrowers to repay their loans is one sign of efficient MFIs (Sengupta and Aubuchon, 2008). High repayment rates have advantages for the MFI as well as the borrowers (Godquin, 2004). The MFI and their client will have a good working relationship if there is a high repayment rate because, according to Bond and Rai (2009), a high repayment rate makes it easier to get the next larger loan and other financial services. Conversely, if the repayment rate is low, both the borrowers and the MFI will suffer. In this scenario, neither the borrowers nor the lender will be able to obtain the next higher loan.

Loans obtained from financial institutions vary from nation to nation, region to region, and industry to industry. However, it was discovered that the majority of credits from developing countries suffered from a sizable amount of default rate (the amount of loans not collected on current and past due loans for the reference period) (Kashuliza 1993).

Improving repayment rates aids in lowering the MFIs' reliance on subsidies, improving sustainability. Additionally, it is asserted that high repayment rates demonstrate how well MFI services meet the needs of their customers (Godquin, 2004). The socio-economic and institutional factors that have a significant impact on the performance of loan repayment rates from various perspectives must be identified in order for MFIs to remain sustainable.

The socioeconomic and institutional factors that affect the MFIs' loan repayment rates are numerous. High frequency of collections, strict controls, good information system management, loan officer incentives, and good follow-ups are the primary factors from the lender's perspective (Breth, 1999). Limited research on the impact of borrower characteristics: While some studies have examined the impact of borrower characteristics such as age, gender, education level, and income on loan repayment performance, there is still a need for more research in this area. For example, it is unclear how factors such as marital status or occupation may affect loan repayment behavior. Lack of focus on lender-specific factors: Most studies on loan repayment performance have focused on borrower-related factors, but there is a need to examine the impact of lender-

specific factors such as loan terms and conditions, interest rates, and customer service on repayment behavior. Insufficient attention to macroeconomic factors: While some studies have examined the impact of macroeconomic factors such as GDP growth and inflation on loan repayment performance, there is still a need for more research in this area. For example, it is unclear how changes in interest rates or exchange rates may affect borrowers' ability to repay loans. Limited research on the role of social networks: There is growing evidence that social networks can play an important role in determining loan repayment behavior. However, there is still a need for more research to understand how social networks influence borrowers' decisions to repay loans. Lack of comparative studies across different countries and regions: Most studies on loan repayment performance have focused on specific countries or regions. There is a need for more comparative studies across different countries and regions to identify commonalities and differences in the determinants of loan repayment behavior. Therefore, this study examined the determinants of loan repayment performance in Awach saving and credit cooperative society.

1.3 Objective of the Study

1.3.1 General Objectives

The general objective of the study is to analyze and identify the major determinants of client loan repayment performance and the major challenges facing the institution.

1.3.2 Specific Objectives

The specific objectives of this study is

1. To identify the socio-economic factors that influence loan repayment rate of the borrowers of Awach Saving and Credit cooperative Society.
2. To assess the business related factors that influence loan repayment rate of the borrowers of Awach Saving and Credit cooperative Society?
3. To investigate a loan specific characteristics in the repayment process in Awach Saving and Credit cooperative Society.

1.4 Research Questions

This research answer the following basic question

- What are the major socio-economic factors that influence loan repayment rate of the borrowers of ACSI?

- What are the businesses related factors that influence the repayment performance of the clients?
- What are the loan specific related factors that influence the repayment performance of the clients?

1.5 Significance of the Study

MFIs are crucial for reducing poverty and fostering job opportunities, particularly in developing nations like Ethiopia. The existence of high loan repayment rates is one of the most important elements for the profitability and sustainability of MFIs. The socioeconomic factors that influence loan repayment rates are numerous. To expand the activities of MFIs in a sustainable way, it is crucial to analyze such factors and develop appropriate solutions. There hasn't been any empirical research on ASCCS to pinpoint the root causes of high default rates and develop upcoming tactics. With the help of both lenders and borrowers, this study aims to shed light on the factors that affect the ASCCS loan repayment performance. The primary advantage of this study is to establish a knowledge base that enables to makes a sound decision and take corrective action. In addition, the information will be useful for policy makers, other lending institutions and stakeholders.

1.6 Scope and Limitation of the Study

There are many factors affecting the sustainability of MFIs, such as outreach, repayment performance, policy support, and using innovative features. But this study covered the repayment aspects of microfinance in the case of ASCCS MFI and focused on the socio-economic factors that are associated with repayment. Moreover, the income and other assets of the borrowers were not included in the study. The information was gathered from two of ASCCS's five service delivery points. The delivery posts were limited to two due to logistical limitations. And also the study is limited to recent literature; the respondent didn’t fill and return the questionnaire on time.

1.7 Organization of the study

This study is designed to incorporate five chapters. The first chapter is introduces the general overview including the background of the study, statement of the problem, objectives, basic research questions, significance of the study, and scope of the study. The second chapter deals with literature review that presents the in-depth review of the theoretical perspective on factors

that would be identified to the repayment performance. Chapter Three deals with the research methodology where variables to be analyzed, sampling methods, data source of the study, and sample size determination method are explained. Chapter Four focuses on discussing the study area and give emphasis on the presentation, interpretation, and discussion of the major findings of the study. Finally, Chapter Five recapitulates the study in terms of summary, conclusions and recommendations.

CHAPTER TWO
RELATED LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 The functioning of credit market in developing countries

The fundamental feature that creates imperfection in credit markets is informational constraints. Ray (1998) stated that informational gap occur at two basic levels. First, there is lack of information regarding the use to which a loan will be put. Second, there is lack of information regarding the repayment decision of borrowers, as well as limited knowledge of the defaulter's subsequent needs and activities. All the important features of credit markets can be understood as responses to one or the other of these informational problems. In addition, Behrman and Srinivasan (1995) stated about the arising of agency problem in the functioning of credit market. This problem exists when there are different goals between creditors, shareholders and management. Financial intermediaries may reduce agency problem by monitoring borrowers and make wise investment choices.

Adverse selection and moral hazard are the two most important problems in the functioning of credit market; both are driving from the imperfect information. Kono and Takahashi (2010) also stated that imperfect information significantly increase default risks caused by adverse selection, moral hazard and strategic default. These are the theoretical micro foundations that have motivated the microfinance movement to fight poverty and promote growth by expanding access to credit. Billions of dollars of subsidies, and countless other resources, have been allocated to such efforts (Karlan and Zinman 2006). According to Armendariz and Morduch, (2010), both problems are made worse by the difficulty of enforcing contracts in regions with weak judicial systems.

The adverse selection occurs when the lender cannot easily determine which customers are likely to be more risky than others. Therefore, the lenders would like to charge riskier customers more than safer customers in order to compensate for the added probability of default. But the problem is the lender does not know who is who, and raising average interest rates for everyone often drives safer customers out of the credit market (Armendariz and Morduch, 2010). Those who are willing to repay high interest rate may, on average, be worse risky; they are willing to borrow at

high interest rates because they perceive their probability of repaying the loan to be low (stiglitz and wiss, 1981).

Moral hazard, arises because banks are unable to ensure that customers are making the full effort required for their investment projects to be successful. Moral hazard also arises when customers try to abscond with the bank's money (Armendariz and Morduch, 2010). In the absence of collateral, the lender and borrower do not have the same objectives because the borrower does not fully internalize the cost of project failure. Moreover the lender cannot stipulate perfectly how the borrower should run the project (Berhanu, 2005).

When the clients' borrow money from the lender, they were made promise to work hard and repay a loan. But, once the loan is disbursed the borrower might not be kept their promise and they were changing their behavior. On the other hand, during the activities the borrower's business was fails and he/she declared as a defaulter. In this case, a lender may not be able to know whether this failure was due to the uncontrollable factors or putting less effort on the business activities and borrowers mishandling of the loan.

Karlan and Zinman (2006) stated that better understandings of information asymmetries are critical for both lenders and policymakers. For instance, adverse selection problems should motivate policymakers and lenders to consider subsidies, loan guarantees, information coordination, and enhanced screening strategies. On the other hand, moral hazard problems should also motivate policymakers and lenders to consider legal reforms in the areas of liability and enhanced dynamic contracting schemes.

Armendariz and Morduch (2010) stated that the information asymmetry problems could potentially be eliminated if lenders had cheap ways to gather and evaluate information on their clients and to enforce contracts. However, lenders typically face relatively high transactions costs when working in poor communities since handling many small transactions is far more expensive than servicing one large transaction for a richer borrower. Another potential solution would be available if borrowers had marketable assets to offer as collateral. In this sense, any problem on the loan was covered by the borrower's asset. Thus, the lender could lend without risk. But the starting point for microfinance is that new ways of delivering loans are needed precisely because borrowers are too poor to have much in the way of marketable assets. However, Behrman and Srinivasan (1995) stated that one way for the government to improve

enforcement conditions for credit markets is to improve the possibilities for usable sources of collateral like implementation of land registration.

In addition, (Berhanu, 2005) stated that the problem of moral hazard is solved in formal sector poverty lending by tying credit and saving together, by having a built-in mechanism for emergency fund to handle unforeseen shocks due to market failure and price changes, and by its emphasis on borrower-initiated lending to avoid loan use in risky unknown ventures where markets or input supplies are uncertain.

In order to overcome the problems associated with the lack of information, the group lending scheme takes an advantage of local information, peer support, and, if needed, peer pressure. The group members may have better information about individuals' efforts and/or abilities than the lender (Besley and Coate, 1995). Besides, the joint liability element generates individual incentives to screen (mitigating adverse selection), monitor each other (mitigating moral hazard) and enforces repayment (Tesfay, 2009). Moreover, dynamic incentives are also helps to generate information by starting with small loans and gradually increasing loan size as customers demonstrate reliability (Armendariz and Morduch, 2010).

2.1.2 Microfinance in Ethiopia

People living in poverty, like in Ethiopia, need a wide range of financial services for consumption smoothing, running their business and building assets. But due to collateral problems, poor people in most cases have no credit access from Banks. Microfinance offers financial services such as loans, savings and micro insurance to the poor people either in individual or in a group basis. Lending to the poor usually means that a lender will not be able to get any collateral to secure the loan (Njoroge, and Eff 2009). Moreover, Kimentyi et al. (1998) argues that the most difficult aspects of lending to poor clients are borrower selection and repayment enforcement.

In addition Dejene (2003) argues in his study on the economic importance of the informal institutions in Ethiopia that the poor are often marginalized in the formal credit markets. This can be explained partly in terms of: 1) a lack of collateral, which makes lending to the poor a risky venture; 2) transaction cost of lending to and borrowing by the poor is often high; and 3) utility loss from repayment is higher for the poor as compared to the rich. So the poor don't have access

to the formal financial sources. Lack of access to institutional credit is one of the crucial factors impeding the poor from involving in operating small business and in particular and economic development in general.

The establishment of sustainable microfinance institutions that reach a large number of rural and urban poor, who are not served by the conventional financial institutions (such as the Commercial Banks) has been a prime component of the new development strategy of Ethiopia. Although the development of microfinance institutions in Ethiopia started very recently, the industry has shown a remarkable growth in terms of outreach, particularly in number of clients (Amha, 2000). Despite the obvious disadvantages of the microfinance industry in Ethiopia such as poor communication and infrastructure, weak legal systems, banking sector and lack of technical capacity as compared with other Sub-Saharan countries, the sector has been growing at a significant rate (Amha, 2000: MIX and CGAP, 2010).

As of 2005, about 1.2 million households, of which 38 percent were female headed, participated in the 26 microfinance institutions that operating in the country; they are receiving about 1.5 billion Birr1 credit. There was about half a billion Birr savings per year. Within five years (2001-2005), the industry grew by 263% in terms of number of clients, 479% in volume of loan portfolio and 206% in savings (Wolday,2005). By the end of 2008, the number of registered MFIs has reached 28, and they mobilized a total outstanding loan and saving of 4.7 billion and 1.7 billion birr respectively. 12 of the 28 MFIs operate in the capital city Addis Ababa and the rest are in the regional states (National Bank of Ethiopia, 2008).There is a fast growing both in terms of number of MFIs and outreach (Tesfay, 2009).

The success of microfinance activities in Ethiopia is particularly affected by the income of clients, which directly depends on crop harvest and the high risk due to drought for rural areas; also it depends on the effectiveness of the small business of borrowers who live in urban areas. The fluctuations of product prices, which are difficult to predict, also affect the performance of MFI (Amha, 2000).

2.1.3. Causes and the possible solutions of default

Default on borrowed funds could be voluntary and involuntary. Involuntary default on borrowed funds could arise from unfavourable circumstances that may affect the ability of the borrower to

repay. On the other hand, voluntary default, whereby a borrower does not repay even if he/she is able to do so (Stigliz and Weiss 1981). Therefore, the lender must understand the causes and the possible solutions of default. According to Norell, (2001) the most common reasons for the existence of defaults are the following: if the MFI is not serious on loan repayment, the borrowers are not willing to repay their loan; the MFI staffs are not responsible to shareholders to make a profit; clients' lives are often full of unpredictable crises, such as illness or death in the family; if loans are too large for the cash needs of the business, extra funds may go toward personal use; and if loans are given without the proper evaluation of the business (Norell, 2001).

In order to achieve self-sufficiency, reducing default rate is very crucial for any MFIs. MFIs can take a number of actions to reduce default rate or the amount of arrears. Norell (2001) writes about some stratagies for preventing or reducing default. Giving training to the clients prior to the transaction of each loan and financial incentives for the credit officers can be used to lower the default rates. Vento (2004) also defined the incentives from the promise to access to the subsequent loans is also helps to timely repayment and reducing default.

In addition, quick follow-up visits right after a missed payment and the formation of strong solidarity groups are also key to preventing high default rate. Limiting geographic scope reduces time and money wasted traveling from the office to clients' businesses. If credit officers have a specific geographic region, they can visit clients more often and it helps to develop relationships in their neighborhoods. Loan should be given to the borrowers who have been in business at least twelve months. Businesses are most likely to fail within the first year of operation. If the business existed for at least one year on the Owner's equity, the loan from MFI should be a lower risk than if the business is a start-up. Some MFIs use six months as a minimum, others three. The lower the number of months, the higher the risk for the MFI Norell (2001).

Norell agree on the four catagories of client in the MFIs: (1) willing and able to repay, (2) willing but unable to repay, (3) unwilling but able to repay, and (4) unwilling and unable to repay. For very late loans (group loans over five weeks without payment, individual loans at sixty days without payment), credit officers should visit each late payer and the credit officer should classify the client into one of the above four categories of client. Based on the classification of borrowers, the loan officer shoud take corrective action. The approprate action taken by loan officer in each catagory are: (1) having the credit officer and the supervisor visit the client's

business, (2) rescheduling should be considered for clients with a very good excuse, (3) the institution can pursue legal action or inform the community and influential persons of clients' unwillingness to repay. Because of religious and community leaders can push them to pay. Moreover, their names can be publicly posted and (4) following up on such groups is a poor use of staff time. They are best referred to debt collectors or written off the loan (Norell, 2001).

2.1.4. Characteristics of Microfinance products

Microfinance gives access to financial and non-financial services to low-income people wishing to access money for starting or developing income generation activities. Murray and Boros (2002) stated that the characteristics of microfinance products include: small amounts of loans and savings, short loan terms, payment schedules featuring frequent installments, easy access to the microfinance intermediary, simple application forms which are easy to complete, availability of repeat loans in higher amounts for clients who pay on time.

Credit is linked to savings, and in most cases loan sizes are related to the amount each borrower has saved. Saving can play a significant role in increasing levels of institutional sustainability and enhancing levels of outreach. Therefore, MFIs that offer savings facilities have a cheap source of funds for further lending to more sustainable operations. On the other side, voluntary saving builds the equity of poor households and protects them against unforeseen economic and personal crisis (AEMFI, 2010). Zeller (1996) also agree with the importance of saving to influence the repayment rate. It is expected that saving services offered by the program improves the repayment rate of the group. Saving may increase the financial discipline of group members and they can also serve as loan collateral.

The Microfinance Information Exchange (MIX) reports that African regional deposits made-up 54% of the MFIs gross loan portfolio. In contrast, voluntary savings represented merely 22% of the Ethiopian microfinance portfolios (AEMFI, 2010). In case of AdCSI, mobilizing voluntary saving is only 10% of their gross loan portfolio. Therefore, the microfinance sector in Ethiopia still depends on donated funds and has not been in a position to finance its future business by generating income operation (NBE, 2010).

One of the important requirements for the success of microfinance institutions is to create awareness among potential clients. The appropriate training has to be provided to new borrowers

about loan utilization, loan terms and obligations. Statham (2008) stated that training from MFI to the clients can be broadly classified into two areas; group formation and business development. Group formation training is concerned with the group dynamics of the borrowers. And business development training is aims to make the borrower's business more effective. In line with this, Admassie et al (2005) agree on the loan utilization and technical training should be given to improve the skill of potential and actual clients. Technical support is important to increase the productivity of borrowers

In addition to clients, it is important to provide training for loan officers. By giving various kinds of training for field officers, it will increase the skill and ability of the field officer. This leads to motivate the loan officers knowing that the MFI is concerned for their welfare and ongoing training requirements; thus they are less likely want to work for a competitor MFIs. The MFI will increase their capacity through training field officers (Statham, 2008).

2.1.5. Group lending

Since 1970s, group lending programs have been promoted in many developing countries (Zeller, 1996). The key feature of group lending is joint liability. This means all group members are treated as being in default if any one member of the group does not repay his/her loan. Therefore, each member is made responsible for repayment of loans of his or her peers (Besley and Coate 1995). Most schemes give subsequent credit only if the group has fully repaid its previous loan. Loan under joint liability shows, the threat of losing access to future credit incites members to perform various functions, including screening of loan applicants, monitoring the individual borrower's efforts, and enforcing repayment of their peers' loans (Zeller, 1996).

When performance is measured with a repayment rate, group lending shows a mixed success (Huppi and Feder 1990). Moreover, Besley and Coate (1995) points out that the group lending has both positive and negative effect on repayment rates. The existing theoretical models of peer monitoring assumes that the repayment performance in group-lending program is positively related to the homogeneity of group members with respect to the riskiness of their projects (Stiglitz 1990; Devereux and Fishe 1993; Besley and Coate 1995) cited by (Zeller, 1998). However, according to Zeller there is little empirical evidence to confirm or reject this hypothesis. Besley and Coate (1995) argues that if social sanctions are not sufficiently strong, group lending may encourage default by members who would have repaid under individual

lending. On the other hand, if social sanctions are sufficiently strong, group lending can improve repayment rates by encouraging borrowers to help each other.

Despite group lending has several benefits; there are many factors that may undermine the repayment performance in group lending. Zeller (1996) discusses that since the risk of loan default by an individual is shared by his or her peers, a member may choose a riskier project compared to that in the case of individual contract, and may count on other members to repay his or her loan (i.e. adverse selection of risky projects). He further notes that repayment incentives for a good borrower will disappear under joint liability, when he or she expects that significant number of peers will default. But in ASCI there is no group lending system.

2.1.6. Challenges of Microfinance

The first most typical challenges faced by any Microfinance institution is credit risk as mentioned earlier. Moreover, the cost of debt collection per loan amount is, on average, higher than in formal intermediation, specially in developing countries lending (Vento 2004). Similarly, high cost of service associated with the low-value, high volume and cash intensive nature of the business and also high fixed and variable costs (Basu, 2005).

A second source of risk for MFIs is represented by interest rate risk; it can be significant in the case of MFIs that collect deposits too. In most of developing countries, the average higher interest rate is volatile. Similar to interest rate risk, liquidity risk also appears more significant for deposit-taking MFIs; in fact, small savers tend to make frequent withdrawals and deposits, therefore, managing liquidity could become more difficult (Vento 2004). Moreover, Basu (2005) stated that the risk management challenges are associated with the high levels of information asymmetry.

Another sources of challenges in MFIs is ownership and governance risk. This risk concerns the weakness in internal control systems, which play an important role especially in case of lack of external regulation (Vento 2004). In addition, limited management capacity in MFIs and institutional inefficiencies also challenges (Campion, 2002). Moreover, inadequacy of well-trained personnel in their rolls and staff incentives within any formal organization paradigm (private or public) that seeks to deliver these services is challenges for Microfinance institutions (Basu, 2005).

2.2 Empirical Review

Loan repayment performance is affected by a number of socio-economic and institutional factors. While some of the factors positively influence the loan repayment, the other factors are negatively affect the repayment rate. Regarding to the loan repayment performance of borrowers several studies have been conducted in many countries by different authors. Some of the studies are summarized below.

2.2.1 Studies in Ethiopia

Berhanu (2005) studied on the determinants of loan repayment performance of smallholder farmers in North Gondar, Ethiopia. In order to analyze the factors that affect loan repayment, he employed the tobit model. A total of 17 explanatory variables were considered in the econometric model. Out of these seven variables were found to significantly influence the repayment performance. These were land holding size of the family, agro-ecology of the area, total livestock holding, number of years of experience, number of contacts, sources of credit and income from off-farm activities. The remaining variables (family size, distance between main road and household residence, purpose of borrowing, loan amount and expenditure for social festivals) were found to have insignificant effect on loan repayment performance of smallholder farmers.

Abafita (2003) analyzed the microfinance repayment performance of Oromia credit and saving institution in Kuyu, Ethiopia. According to his finding; sex, loan size and number of dependents are negatively related to loan repayment. On the other hand age was found to be positive, while age squared turned to be negative. Income from activities financed by loan, repayment period suitability and loan supervision are positively and significantly related to loan repayment performance. Moreover, loan diversion is significant and negatively related to loan repayment rate. The negative sign implies that the use of diverted funds for non-income generating purposes.

Assefa (2002) employed a logit model to estimate the effects of hypothesized explanatory variables on the repayment performance of rural women credit beneficiaries in Dire Dewa, Ethiopia. Out of the twelve variables hypothesized to influence the loan repayment performance of borrowers, six variables were found to be statistically significant. Some of these variables are

farm size, annual farm revenue, celebration of social ceremonies, loan diversion, group effect and location of borrowers from lending institution.

Abreham (2002) studied on the loan repayment and its determinants in small-scale enterprise financing in Ethiopia around Zeway area. The estimation result employing tobit model. He is found out other sources of income, education, and work experience related economic activities before the loan are enhancing loan repayment. While extended loan repayment period is influence the repayment performance negatively.

Abafit, 2003 employed probit model for loan repayment performance of women fuel wood carriers in Addis Ababa. His finding is frequency of loan, supervision, suitability of repayment period and other income sources are found to encourage repayment hence reduce the probability of loan default. While educational level is negatively related to loan repayment.

2.2.2 Studies in other countries

Bhatt and Tang (2002) studied the determinants of loan repayment in microcredit evidence from programs in the United States. Their study showed that women has low repayment rate because some women entrepreneur in the study might have been engaged in high risk and low return activities. Godquin (2004) also examined the microfinance repayment performance in Bangladesh. His result is female borrowers did not proven to have a significant better repayment performance. The size of loan and the age of the borrower showed the negative impact on the repayment performance. On the contrast, Abreham (2002) showed in his study male borrowers are the undermining factors for repayment.

Zeller (1996) analyzed the determinants of repayment performance of credit groups in Madagascar. His finding is groups with higher level of social cohesion have a better repayment rate. Moreover, the programs that provide saving service to their members have a significantly higher repayment rate. Olagunju and Adeyemo (2007) and Oke et.al. (2007) also analyzed the determinants of repayment decision among small holder farmers in southwestern Nigeria. The result showed that the number of visits made by loan officers to the borrowers, higher level of education, and time of loan disbursement would have a better repayment performance. Moreover, borrowers with lower number of household members would meet their repayment obligation better than those with high number of household members. And having access to

business related information and providing training to the clients are increasing the loan repayment rate of the borrowers.

As mentioned above, various studies were conducted on the determinants of loan repayment performance in different countries. Most of these studies were focused on the credit associated with agricultural activities and they identified the socio-economic factors that affect the loan repayment rate of rural household. However, in the literature review nothing was indicated about the factor influencing the loan repayment performance of urban borrowers. Thus, this research could focus on the borrowers who made various types of business in urban area.

2.3 Conceptual Framework

To identify and analyze the determinants of loan repayment in ASCCS, the conceptual model is drawn based on the literatures reviewed. The determinants of loan repayment categorized as borrowers' related factors, business related & loan related factors.

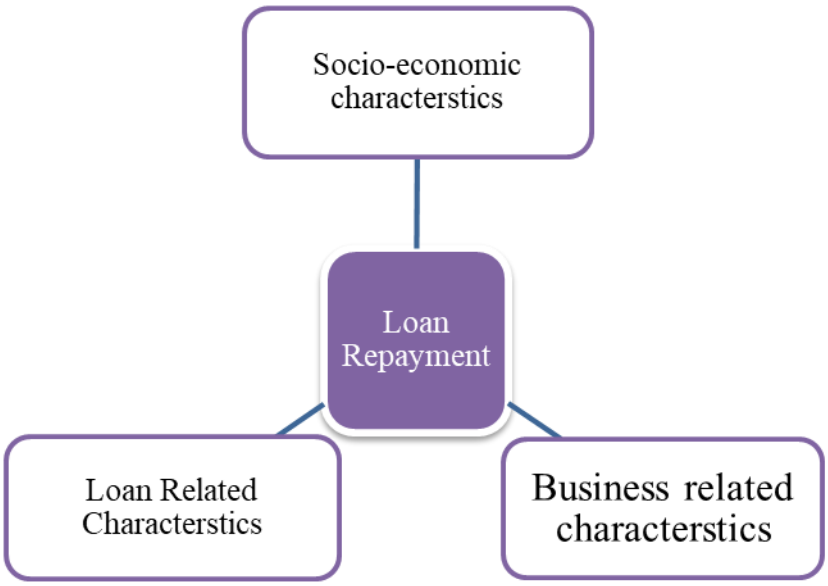

Figure 2.1 Conceptual framework adopted from Ayele (2016) with modification

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research Approach

Three common approaches to business and social research, namely qualitative, quantitative, and mixed methods approaches, are used in investigative studies. In order to inductively develop a theory or pattern, qualitative research examines and understands the meaning that individuals or groups attribute to social or human problems (Creswell, 2009).

Comparatively, quantitative research uses the relationship between variables to test objective theories (Creswell, 2009). To enable statistical analysis of numbered data, these variables can be measured, typically using instruments. This type of research is predicated on the idea that theories can be tested deductively, that bias can be eliminated, that alternative explanations can be controlled for, and that the results can be generalized and replicated.

As of Morse (1991), a deductive (quantitative) approach is the best method for identifying factors that affect an outcome, assessing the effectiveness of an intervention, or understanding the best predictors of outcomes. It is also the best method for testing a theory or explanation. Additionally, according to Creswell (2003), a theory is tested by the researcher by defining specific hypotheses and gathering data to confirm or deny the hypotheses.

Finally, mixed methods approach is an approach in which the researchers emphasize the research problem and use all approaches available to more complete understand the problem (Creswell, 2003). Hence, based on the above discussions of the three research approaches and by considering the research problem and objective, in this study, both quantitative and quantitative research approach were appiled.

3.2 Research Design

Research design provides the framework for the collection and analysis of data (Bryman & Bell, 2011), or it is the plan and structure of investigation so conceived as to obtain answers to research questions (Cooper & Emory, 1995). This indicates that it provides the process required for obtaining the data required to address the research problems. Business problems could be studied using a variety of research methodologies (Hair et al., 2011). The research design can be divided into three categories, namely exploratory, descriptive, and explanatory studies, based on how researchers frame their research questions and explain their purpose (Saunders et al., 2009).

When a researcher lacks knowledge or when the research problem is not well understood, an exploratory study is conducted (Hair et al., 2011). (Ghuari & Gronhaug, 2005). Clarifying your

understanding of a problem is especially helpful when you are unsure of its exact nature (Saunders et al., 2009).

The objective of descriptive studies is to collect information that describes the characteristics of the research topic (Hair et al., 2011). The research problem is organized and clearly defined in descriptive research (Ghuari & Gronhaug, 2005). In contrast to an exploratory study, a descriptive study would offer readers a valid response to the research question. To put it another way, it is utilized for testing hypotheses (Hair et al., 2011).

The final group includes explanatory studies, also known as scaled "causal research designs" in some books (Saunders et al., 2009), and (Hair et al., 2011). The problems are organized in this type of research in a similar manner to descriptive studies. In contrast to descriptive studies, "causes and effects" issues are faced by the researcher. The primary task is to identify these causes and determine the degree to which they contribute to these effects (Ghuari & Gronhaug, 2005). In other words, it is to explain the causal relationship between variables (Saunders et al., 2009). Based on the above discussion, to achieve the intended objective of the paper, this study was applied explanatory research design. Explanatory analysis has enabled to establish a cause-effect relationship between the independent and dependent variables of the study, which has constructed an econometric model to identify and examine the determinants of loan repayment in ACSI. To examine determinant of loan repayment performance, Tobit model is selected.

3.3 Population of the Study

Currently, Awach Saving and Credit Cooperative Society operate in 10 different branches of operation. The researcher selected two branches from the total service delivery posts based on seniority, credit default, size, and share of company status, namely Stadium and Aware, which were considered using the purposive sampling technique. The total population who had get credit in ASCI is 24,635. Out of these 4,953 borrowers are defaulter and 19,682 borrowers are non-defaulter (ACSI).

3.4 Sample size and Sampling Technique

The respondents were chosen using a stratified sampling technique. ACSI currently operates 10 service delivery branches in Addis Abeba. The initial investigation concentrated on the two key service delivery hubs based on seniority, credit default, size, and market share. The records of the

institution's two service delivery centers contained a list of loan customers. The respondents were initially divided into two groups, defaulters and non-defaulters. All microfinance credit borrowers who paid off their debts on time were categorized as non-defaulters, while those who did not do so three months after the due date were categorized as defaulters. Finally, the researcher will apply systematic random sampling because the list of borrowers is available.

In order to determine the representative sample sizes for the total target population of this study, the researcher applied Yemane (1967) simplified formula. Accordingly, the required sample size at a 95 % confidence level with a degree of variability (the more homogenous a population the smallest sample size required to be, to obtain a given level of precision). The required sample size can be calculated according to Yamane's formula the uppermost part is for 5%, and the lower one for 10% level of significance. For this study the level of precision the lower part equal to 10 % is used to obtain a required sample that represents a true population.

$$n = \frac{N}{1+N(e^2)} \qquad n = \frac{24{,}635}{1+24635(0.10^2)} = 100$$

Where "n" is sample size, "N" is the total population and "e" is the level of precision. From the total population, 100 respondents will be selected from ASCI by simple random sampling technique. In addition, during data collection, 10 employees (6 loan officers and 4 other supportive staff) will be contact.

3.5 Data Type and Sources

This study is collect data from primary and secondary sources. Secondary sources include published and unpublished materials about microfinance institution activities. These materials will collect from the Association of Ethiopian Microfinance Institution (AEMFI), head office, as well as sub-city and local district posts. In order to assess the determinants of loan repayment performance, primary data were obtained by direct interview with the respondents. The respondents are borrowers and loan officers of ASCCI.

The primary data were collected by interviews using structured questionnaire. The questionnaire includes both closed and open ended questions. The closed-ended questions used to collect background information about the respondent. It covered the personal information, institutional, group lending, loan and repayment related questions. The open-ended questions dealt with the

challenges in repayment process and institution, the perception of clients towards the ASCCS and microfinance institution as a whole. The questionnaire was pre-tested before conducting interview for the whole sample. Besides, discussions were made with selected loan officers and branch managers and relevant documents were reviewed.

3.6 Methods of Data Analysis

For this research descriptive statistics is one of the techniques used to summarize the data collected from the sample respondents. Frequency, table, graph and percentages were used for comparing defaulters and non-defaulters in various explanatory variables.

In addition an econometric regression model is applied for analyzing the data. Loan repayment is a dependent variable, while different socio-economic and lender related factors considered as independent variables. In this case the value of this dependent variable is 0 and 1, which stands for 0 if the borrower is a non-defaulter and 1 if the borrower is defaulter. Therefore, loan repayment treated as dichotomous dependent variable.

Loan repayment is, therefore, a non-continuous dependent variable that does not satisfy the key assumptions in the linear regression analysis. When the dependent variable to be modeled is limited in its range, using ordinary least squares (OLS) may result in biased and inconsistent parameter estimates. To examine the factors affecting the loan repayment, discrete choice model should be used. Thus, the most widely used and appropriate qualitative response models are the logit and probit models (Verbeek, 2008). Assume that there exists a latent (unobserved) variable such that:

$$Yi^{*} = \beta Xi + \varepsilon i$$

$$Yi = \begin{cases} 1 \; if \; Yi^{*} > 0 \\ 0 \; if \; Yi^{*} \leq 0 \end{cases}$$

Where

Yi^{*}= a vector of the latent variable that is not observed for values less than zero and greater than one,

Yi = the observed variable, representing the proportion of loan repayment,

β **=** the unknown parameters that reflecting the impact of change in variable X,

$\boldsymbol{Xi} =$ Explanatory variables that determine the dependent variable,

$\boldsymbol{\varepsilon i} =$ Error terms that is distributed normally with mean 0 and variance σ2,

$\boldsymbol{i} =$ 1, 2, 3….n, represents the number of observations.

The specification would provide us with a Cumulative Density Function (CDF). In practice there are two choices of distribution; such as, standard normal and standard logistic CDF. The probit model is associated with the cumulative normal probability function, whereas the logit model assumes cumulative logistic probability distribution. Maddala (1983) reported that the normal and logistic CDFs are very close in the mid-range, but the logistic function has slightly fatter tails than the normal function. Hosmer and Lemeshew (1989, cited in Assefa, 2002) agree with the advantage of logistic distribution in the analysis of dichotomous outcome. Therefore, the logistic function is selected for this study. The cumulative logistic probability is specified as follows (Verbeek, 2008).

$$\textbf{Prob (Y=1)} = \frac{1}{1+e^{-zi}}$$

Taking the natural logarithm

$$\boldsymbol{Zi} = \ln\left(\frac{Pi}{1-Pi}\right) = \alpha + \beta 1X1 + \beta 2X2 + \cdots + BkXk$$

If the error term (ε) is taken in to account, the logit model becomes:

$$\boldsymbol{Zi} = \alpha + \sum_{i=1}^{k} \beta i Xi + \varepsilon i$$

The unknown parameters $\beta's$ are estimated by likelihood function.

In this case the dependent variable loan repayment is the function of socio-economic loan specific, business and lender related factors. The function specified as:

$$\boldsymbol{Zi} = \boldsymbol{LRi} = \boldsymbol{f}(\boldsymbol{S}, \boldsymbol{Lo}, \boldsymbol{B})$$

Where:

LRi = loan repayment for the i^{th} borrower (LRi = 0, borrower repaying loan on time; LRi = 1, borrower did not repay loan on time)

f = a cumulative density function (CDF)

S = represent the individual client's characteristics that affect the decision whether to repay their loan or not

Lo = stands for the loan specific characteristics of the individual clients

B = represent business specific characteristics of each clients

There are many factors that determine default. In this study the default rate is determined by the following explanatory variables, used to explain repayment performance. These variables are: sex, age, educational level, family size and number of dependents out of the household business type and dependency ratio.

From the above explanatory variables; age and business experience are continuous variables measured in years. Moreover, family size, dependency ratio and number of dependents in the household are also continuous variables measured in numbers. After the estimation of the model, the marginal effects of those continuous explanatory variables will be calculated in order to know the probability of loan repayment.

Binary choice model assume that individuals are faced with a choice between two alternatives and their choice depends on their behavior and action. In this study there are seven discrete explanatory variables which take the value of 0 and 1. Therefore, the literate respondents took the value of 0 if they learned primary education and junior school and 1 if they were learned secondary education and graduated from college and/or university. Respondents were engaged in various businesses, but for simplicity we categorize in to seven main types of business such as; Baltina and petty market, kiosk and shop, service provision (like barber, beauty salon, parking, municipality services, and consultancy) construction, urban agriculture, the sixth business type is textile and tailor, and the last category is metal and wood work. All these seven business types are considered as explanatory discrete variables, which takes 0 if they were not engaged in that business and 1 if they were engaged in that specific business. In addition, respondent who are able to get related business information took 1 and 0 otherwise.

CHAPTER FOUR

RESULT AND DISCUSTION

4. Introduction

This chapter discusses the main findings from the descriptive and econometrics analysis factors affecting loan repayment performance of Awach Saving and Credit Corporative Society. The section has two parts; in the former part; the result of the explanatory variables have been described based on the findings of the study in the descriptive statistics. In the latter part of the section the variables have been analyzed in the econometrics regression model by using the logistic regression model.

4.1 Descriptive Statistics Analysis

This chapter deals with the analysis and interpretation of the collected data through questionnaires, which included demographic information of the respondents; descriptive analysis and logistic regression analysis are presented through SPSS version 20. A total of 100 questionnaires were distributed and filled out by ninthly six (96) of the company's customers, with a response rate of 96%. As a result of the questionnaire collecting, it can be concluded that enough questionnaires were returned to analyze the data and draw conclusions.

Table 4. 1 Socio- Economic characteristics of respondents

Variables	Category	Defaulter	Non Defaulter	Total
Sex	Male	24(43.6%)	31(56.4%)	55(57.3%)
	Female	17(41.5%)	24(58.5%)	41(42.7%)
Age	18-29	7(63.6%)	4(36.4%)	11(11.5%)
	30-39	9(40.9%)	13(59.1%)	22(22.9%)
	40-49	18(36.7%)	31(63.3%)	49(51%)
	50 and above	7(50.0%)	7(50.0%)	14(14.5%)
Marital status	Single	10(38.5%)	16(61.5%)	26(27.1%)
	Married	26(48.1%)	28(51.9%)	54(56.3%)
	Divorced	2(22.2%)	7(77.8%)	9(9.3%)
	Widowed	3(42.9%)	4(57.1%)	7(7.3%)

Number of family	1-2	12(40.0%)	18(60.0%)	30(31.3%)
	above two	29(43.9%)	37(56.1%)	66(68.7%)
Residence place similar	Yes	29(40.3%)	43(59.7%)	72(75%)
	No	12(50.0%)	12(50.0%)	24(25%)
Source of income	From one business	32(45.1%)	39(54.9%)	71(73.9%)
	From additional (more) business	3(37.5%)	5(62.5%)	8(8.3%)
	From more household member salary	6(35.3%)	11(64.7%)	17(17.7%)

Source: Survey result (2022)

4.1.1 Socio- Economic characteristics of respondents

Descriptive statistics were used to examine the respondents' demographic, socioeconomic, and institutional characteristics, including sex, age, level of education, marital status, family size, sources of income, residence of borrower, amount of loan, and other variables related to loan repayment (defaulters and non-defaulters).

According to the findings of the survey, male borrowers made up 57.3% of the total, while female borrowers made up 42.7% of the total. Of the aggregate - defaulters, 43.6 % and 41.5 % of them were guys and females individually. Additionally, males and females made up 56.4 and 58.5 of the total non-defaulters, respectively. The two groups' differences were statistically significant. So that female borrowers had a higher default rate than male borrowers.

Table 4.1 above indicates that the age of borrowers, out of the total 51% of them were in the age group of 40-49 followed by 22.9% under the age 30-39, 14.5% of them are above 50 years old and only 11.5% were under the age of 18-29 years. In the case of defaulter, 40.9% and 36.7% of the borrowers were under the age group of 30-39 and 40-49 respectively.

As displayed in Table 4.1, the survey results showed that 56.3 % of the total borrowers were married, followed by 26.7%, 9.3% divorced, and 9.3% widowed. The defaulters were married, single, divorced, or widowed in 48.1%, 38.5%, 22.2%, and 42.9% of the cases, respectively; the

difference between the two groups was statistically significant; thus, married borrowers were more likely to default than single borrowers, indicating that married borrowers were less responsible for loan repayment.

The family size of the borrowers has been categorized in four ranges; 0 up to 2 and greater than 2 family members. About 68.7 percent of respondents have above two family members, and 31.3% of the respondents have less than or equal to 2 family members (Table 4.1). Out of the total defaulters, 43.9% of them were more than two family members and 40% were less or equal to two family members. Thus, borrowers have more family members were less responsible for loan repayment as compared to less family members.

The survey result revealed that most of the borrowers (75%) residence and business place were near to the lender office. This helps to make continuous follow-up and supervision for loan officers of the institution (Table 4.1). According to the survey result, 73.9% of the total respondents had only one sources of income which is from the business financed by the loan.

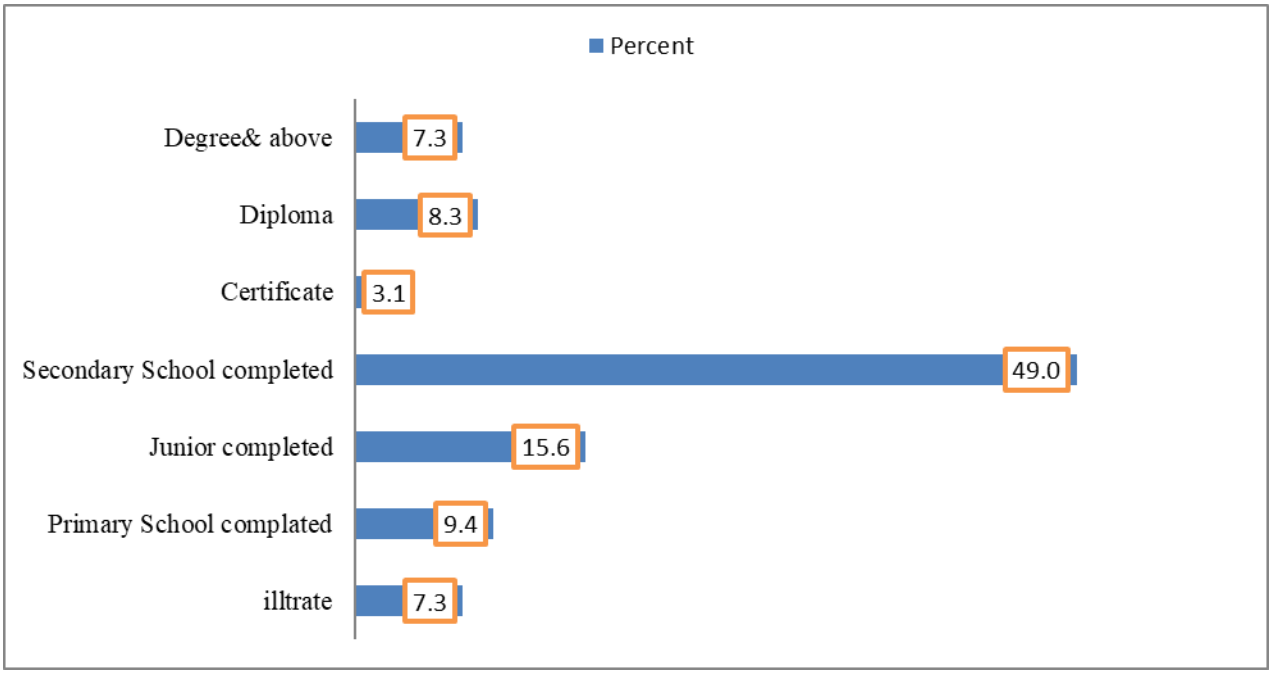

Figure 4.1 Educational levels of borrowers

In terms of educational level, (49%) of the borrowers have secondary school completed, 15.6%, 9.4% have junior completed, primary school completed respectively. Only 7.3% of the borrowers were illiterate. Based on this, the majority of the borrowers were educated. But some studies rivals that the education levels of borrowers increase less responsible for repayment their loan.

4.1.2 Business related characteristics

Clients of ASCCS engage in a variety of business activities, as shown in table 4.2. A sizable proportion of borrowers engaged in service provider (Baltina and petty market activities kiosk and shop), food processing, Animal husbandry, poultry and metal work.

Table 4. 2 Business types of defaulters and non-defaulters

Variables	Defaulter	Non Defaulter	Total
Animal husbandry	5 (71.4%)	2(28.6%)	7(7.29%)
Poultry	2(12.5%)	14(87.5%)	16(16.67%)
Service provider (Baltina & petty market, kiosk and shop)	21(47.7%)	23(52.3%)	44(45.85)
Food Processing	11(45.8%)	13(54.2%)	24(25%)
Metal work	2(50.0%)	2(50.0%)	4(4.17%)
Construction	0(0.0%)	1(100.0%)	1(1.04%)
Total	41(42.7%)	55(57.3%)	96

Source: Survey result (2022)

According to the aforementioned table, the majority of borrowers who defaulted on their loans worked as service providers (Baltina and petty market, kiosk, and shop) with a 47.7% market share, followed by food processing with a 45.5% market share, and metal work business activities. Out of the entire group, 45.8% of the borrowers were working as service providers. However, only 1.04% of the borrowers were involved in the construction industry.

Table 4. 3 Business specific characteristics

Variables		Defaulter	Non Defaulter	Total
Conduct marketing survey	Yes	18(50.0%)	18(50.0%)	36
	No	23(38.3%)	37(61.7%)	60
Access business information	Yes	19(51.4%)	18(48.6%)	37
	No	22(37.3%)	37(62.7%)	59
Business successful	Successful	4(90.7%)	39(9.3%)	43
	Not successful	51(96.2%)	2(3.8%)	53

Source: survey result (2022)

The majority of non-defaulters had access to business information. They claimed that media outlets like TV and radio as well as friends were the main sources of information. From the standpoint of market assessment, more than half of the respondents didn't evaluate the market before starting a business (Table 4.3). The finding of the survey indicates that the reasons for not conducting a market study before starting a business are: they already had an experience before; they started the business when they had no choice of income generation, and no idea about the market study.

About 90.7 % of defaulter's business was successful but due to many reasons, they were not willing to pay their loan. As Norell (2001) described this is one category of clients unwilling but able to repay. In the contrast 9.3% of non-defaulters' business was not successful; however, they were paying their loan from other income sources. There was a significant percentage difference (Table 4.3)

Contrarily, defaulters cite the following reasons for not repaying their loans: high costs of doing business compared to profits or losses, lack of supervision by the institution's loan officer, personal issues with the borrower, such as illness, which Norell (2001) also noted in his article as

one of the reasons for default, improper use of the loan, which is also another reason for default (Norell, 2001), a lack of working capital shortage, and problems with working.

4.1.3 Loan specific characteristics

Table 4. 4 Loan specific characteristics

Variables		Defaulter	Non Defaulter	Total
Repayment period suitability	Yes	33(41.8%)	46(58.2%)	79((82.29%)
	No	8(47.1%)	9(52.9%)	17
Training	Yes	10(52.6%)	9(47.4%)	19(19.79%)
	No	31(40.3%)	46(59.7%)	77
Training usefulness	Yes	35(41.7%)	49(58.3%)	84(87.5%)
	No	6(50.0%)	6(50.0%)	12
Customer services	Yes	39(42.4%)	53(57.6%)	92(95.83%)
	No	2(50.0%)	2(50.0%)	4

Source: survey result (2022)

According to the above (table 4.4) 82.29% of the borrowers agreed that the payment period is suitably, even though 41.8% of them were not pay their loan. Whereas 18.8% of borrowers argued that the payment schedule is not suitable for both defaulter and non-defaulter. This indicates that the institution arrange the payment period to minimize the defaulters.

As shown in the table above the percentage of training given for the business purpose of defaulters and non-defaulters respectively are 52.6% and 47.4%. On the other hand, 43.3% and 59.7% of the borrowers have not gee access any training that prepared by the institution. This indicates that borrower who was taken the institution training was not significant defaulters therefore; training is crucial for borrowers. At the meantime 41.7% of the defaulters accepted the usefulness of training that delivered by the proper institution.

4.2 Econometric result

Loan repayment is a dependent variable that is added to a list of categorical variables in SPSS version 20.0 and coded using dummy variables with values of 0 and 1. The analysis in this study ensures that the independent variable is a categorical variable. The researcher also takes into account the first choice as the first reference and the last choice as the last reference for continuous variables.

4.2.1. The Goodness-of-Fit Model

The results of the binary logit model demonstrated that the effectiveness of microfinance loan repayment was influenced by the interaction of various demographic and socioeconomic factors, factors related to borrowers, and factors related to lenders.

Table 4. 5 Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	95.960	12	.000
	Block	95.960	12	.000
	Model	95.960	12	.000

The chi-square was computed using the data in Table 4.5 above to test the logistic regression analysis's measure of goodness of fit, and it revealed that the model was significant at a 1% significance level. Consequently, the null hypothesis stating the coefficients of independent variables to be equal to zero was rejected and the alternative hypothesis of the non-zero slope was accepted. The probability of obtaining the chi-square statistic under the null hypothesis is indicated by the value in the Sig. column. In other words, if there is no effect of the independent variables taken together on the dependent variable, then this is the probability of obtaining this chi-square statistic (95.960). The p-value, of course, is what determines whether the entire model is statistically significant and is compared to a critical value, perhaps.05 or.01, to make that determination. The model is statistically significant in this instance because the p-value is less than 5% (Table 4.5).

Table 4. 6 classification table (A&B)

A) Classification Table [a, b]

Observed			Predicted		
			Loan Repayment		Percentage Correct
			Non Defaulter	Defaulter	
Step 0	Loan Repayment	Non Defaulter	55	0	100.0
		Defaulter	41	0	.0
	Overall Percentage				57.3

a. Constant is included in the model

b. The cut value is .500

B) Classification Table [a]

Observed			Predicted		
			Loan Repayment		Percentage Correct
			Non Defaulter	Defaulter	
Step 1	Loan Repayment	Non Defaulter	52	3	94.5
		Defaulter	2	39	95.1
	Overall Percentage				94.8

a. The cut value is .500

The other measure of goodness-of-fit in the logistic regression model was checked by observing the value in the prediction table to verify whether the model correctly predicted it or not. The fit is said to be good if the overall correct prediction rate exceeds 50% (Shewhart and Wilks, 2013).

A classification table is a simple tool that indicates how good the model is at predicting the outcome variables. To characterize our model as use full, to compare the overall percentage accuracy rate produced SPSS version 20.0 classification table at step"0" and at step"1" or overall %(Table 4.8). Accordingly, the result indicated that the overall accuracy rate computed by SPSS at step"0" was 57.3% and the accuracy rate computed by SPSS 20.0 at step"1" was 94.8% were correctly predicted at the cut value of 0.5; and overall, (above Table 4.6). Hence, the criteria for classification accuracy are satisfied. In general, the fitted binary logistic regression model shows the higher the overall percentage of correct predictions, in this case 94.8 percent.

4.2.2 Model summary

Table 4. 7 Model summary

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	35.075[a]	.632	.849

a. Estimation terminated at iteration number

7 because parameter estimates changed by less than .001.

Model summary shows the Psuedo R-square. Psuedo means that it is not technically explaining the variation. But they can be used as approximate variation in the criterion variable. Normally used Nagelkerke's R^2 is an adjusted version of Cox and Snell R-square that adjusts the scale of statistics to cover the full range from 0 to 1.

In this case we can say that 84.9% change the criterion variable can be accounted the predictor variable in the model.

4.2.3 Discussion on the Effect of Explanatory Variables

In table 12, the estimated logit model is displayed. The economic model took a total of 12 explanatory variables into account. 6 of these were found to significantly affect the likelihood of

defaulting at various levels of significance. For instance, sex, education, marital status, family size, business successful and interest rate is statistically significant effect on loan repayment performance whereas age, business type, training distance and marketing research is not statistically significant effect on loan repayment performance.

Table 4. 8 Logistic regression result

Variables	B	S.E.	Wald	df	Sig.	Exp (B)	95% C.I.for EXP(B)	
							Lower	Upper
Sex	4.066***	1.510	7.247	1	.007	58.312	3.021	1125.566
Age	-.066	.090	.544	1	.461	.936	.784	1.116
Education	.3.13***	.112	7.766	1	.005	1.367	1.097	1.703
Marital Status	3.898**	1.550	6.320	1	.012	.020	.001	.424
Family Size	-.223**	.106	4.414	1	..036	1.250	1.015	1.539
Business type	.733	1.193	.377	1	.539	2.082	.201	21.587
Business Experience	1.647**	2.609	4.399	1	.028	3.192	1.031	863.144
Training given	.779	1.254	.386	1	.535	2.179	.186	25.468
Business Successful	6.682***	1.666	16.076	1	.000	797.672	30.431	20908.677
Distance from Home	-2.365*	1.421	2.768	1	.096	.094	.006	1.524
Marketing Research	.156	1.305	.014	1	.905	1.169	.091	15.075
Interest rate	-.245***	.092	.7.118	1	.008	.782	.653	.937
Constant	.554**	0.490	3.315	1	.043	1.575		

a. Variable(s) entered on step 1: Sex, Age, Education, Marital Status, Family Size, Business engaged, Business Experience, Training, Business Successful, Distance, Marketing Research, and Interstate.

****, **and * represent level of significantat1%, 5%and 10% respectively.*

Sex

The economic model result revealed that being male borrowers increase the odds a non-defaulter by 58.312 times more likely to repay than female borrowers. The reason behind this is that male borrowers have better understanding in loan repayment, this enabling them to pay loan than female. This variable is significant at 1% level and is not consistent with the prier expectation. The result supported by the finding of Fikirite (2011) in Addis Ababa male are twice more likely to pay loan than female), the difference in value is, this study finding included rural female borrowers, hence urbanization and related factors may differ value. In addition Bahata and Tang (2002) they reported men were most likely to repay than female, but the study oppose the result of Jemal (2003), in his study the number of women being served particularly in the rural parts of the district is very small.

Education Level

The study found that the odds of the non-defaulter borrowers offering literate is 1.367 times more likely to repay loan than illiterate or decreasing the probability of default with 95% CI of 1.097 to 1.703. This variable was significantly influence on the loan repayment performance at 5% level of significant. From this result literate borrowers are better performance of loan payer than illiterate and also the result shows attending the level of education is increased, the default might be decreased. This finding is supported by Michael (2006), Retta (2000) and Fikirte (2011) in his study "Micro-finance Repayment Problems in the informal Sector" in Addis Ababa. Borrower who has attended, primary, secondary or tertiary level education has a lower chance of falling under the default category and increases probability of being under good credit risk category.

Marital Status

The economic model result revealed that being married borrowers increase the probability of non-defaulter (Odds ratio 0.20, 95% CI=0.001, 0.424) by 0.20 times more likely to repay the loan than single borrowers. The reason behind this is that married borrowers have better responsibility and understanding in loan repayment, this enabling them to pay loan than single at 5% level of significant. This result is in agreement with findings of the borrowers who were married

non defaulters Ewunetu (2022) Firafis, (2015) and yakob (2011) this implies that the sign of coefficient the indicated variables positive relation with the loan repayment performance. But the result in contrary with yodit (2017) borrowers who are single may have higher repayment rates.

Family Size

The logistic regression result revealed that being small number of family borrowers increase the probability of repay their loan (Odds ratio 1.250, 95% CI=1.015, 1.539) by 1.250 times more likely to repay the loan than large number of family borrowers. The reason behind the performance of loan repayment is affected by family members, this enabling them to pay loan than single at 5% level of significant. The result of this finding supported by Fikirite (2011) stated that family size and number of dependents out of the household are also matter the repayment performance of the borrowers. If there are many family members in the household, they need more income in order to cover the expense of their household members. Therefore, the borrower may use the loan directly for their daily consumption and other expense. In this case the default rate will be increased.

Business experience

From the regression result business experience is one factor for loan repayment performance as a result has positive relationship with the loan repayment performance. Business experienced borrowers have 1.647 times more likely to repay their loan than less or no experience borrowers. This supports Mulualem (2011) based on the assumption of small business entrepreneur are becoming more knowledgeable in business practices and increases their level of income. And Abraham (2017) the good experienced the borrowers are the more they can succeed their business and repay the loan timely. On the other hand, the less they are experienced the highest the probability of being defaulters. Hence the variable expected to have positive coefficient to influence the probability of being creditworthy borrower.

Business Successful

The results of this study demonstrate that the odds of non-defaulters offering successful business are 797.672 times higher than those of non-defaulters, with a 95% confidence interval (CI) of 30.431 to 20908. This indicates that the business borrowers are successfully managed because it improves the repayment status of defaulters. It is a significant level at 1%.

Interest Rate

The study found that the odds of low-interest rate (OR, .782, 95%, CI (.653, .937) were .782 times more likely to be non-defaulter than high-interest rate or decreasing the probability of default. This variable was significantly influencing the loan repayment performance at a 5% level of significance. From this result, a low-interest rate is better for loan payers than a high-interest rate. This study is consistent with Fikirite (2011) the source of risk for MFIs is represented by lending interest rate risk next to default risk.

On the other hand, age, training, distance from home, and marketing research were statistically insignificant for loan repayment performance in this study. Even though the result of this variable is statistically insignificant in this study, it is a significant factor from some other researcher for Ewunetu (2022), medihn (2015), Yakob (2010), Assefa (2008), Nell(2001) and Abrham (2017).

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

Today, poverty is a significant issue in many developing nations. Millions of people in these nations are severely impoverished and lack access to even the most basic necessities for survival. In both rural and urban areas of Ethiopia, there are a lot of people who live in poverty. For the majority of the low income population, the creation of self-employment opportunities is greatly influenced by the accessibility of financial services. The high rate of loan default is the primary factor contributing to the poor performance of financial institutions in many developing nations.

The number of defaults at Awach saving and credit cooperatives society is occasionally rising. This study was intended to identify the determinants of loan repayment performance of Awach saving and credit cooperatives society. A total of 100 clients were included in this survey. In order to identify the socio-economic factors of the clients, descriptive statistics and logistic regression were employed. Descriptive statistics examined a large number of variables, whereas the econometric model only used 12 due to endogenous issues.

The majority of non-defaulters had access to business information. From the standpoint of market assessment, more than half of the respondents didn't evaluate the market before starting a business. The finding of the survey indicates that the reasons for not conducting a market study before starting a business are: they already had an experience before; they started the business when they had no choice of income generation and no idea about the market study. About 90.7% of defaulter's business was successful but due to many reasons, they were not willing to pay their loan. In the contrast 9.3% of non-defaulters' business was not successful; however, they were paying their loan from other income sources.

The result of the logistic regression indicates sex, education level, marital status, business success, family size and interest rate is statistically significant factors for loan repayment performance. On the other hand, age, business experience, training, distance from home and marketing research were statistically insignificant for loan repayment performance in this study.

Borrowers were identifying the major challenges in the loan repayment process. These are insufficient loan sizes, the unavailability of a grace period, and weak follow-up to retrieve loans. In line with this, the institution faces many internal and external challenges such as; financial problems, high turnover of employees, an insufficient working environment, competition, and improper interference by a third party in the decision of loan approval.

5.2 Conclusion

Based on the analysis of made in chapter four, the following conclusions are made on socio demographic characteristic of borrowers, loan repayment related factors and institutional related factors were as follows :-

The finding of this study has shown that men clients benefited more than women, which is agents the policy objective of institution. The elder borrowers have taken responsibility to repay their loan than younger. The findings in respect of educational level can be concluded from the result that, as educational level increases riskiness of loan repayment decreases. Especially borrowers with higher educational level are most likely to become low defaulters. Although continuous follow up and supervision is important for loan repayment, there is not enough supervision made by loan officers. This is due to the increasing number of clients in the institution.

Borrowers have more family members were less responsible for loan repayment as compared to less family members. The majority of non-defaulters had access to business information. More than half of respondents didn't evaluate the market before starting a business. The reasons for not conducting a market study are: they already had an experience before; they started the business when they had no choice of income generation and no idea about the market study.

The logistic regression result raveled that Sex, education level, marital status, business success, family size, and interest rate are statistically significant factors for loan repayment performance in this study. Age, business experience, training, distance from home, and marketing research were statistically insignificant for loan repayments in a study.

5.3 Recommendation

- ✓ Education levels have positive impact on loan repayment. Literate borrowers are better loan repayment rate than illiterates .Such borrowers did not receive formal education and are likely to have inadequate knowledge of loan acquisition and management, thereby making them unable to repay the loans, institution should provide short and long term awareness creation training with especial attention to rural clients and also include in strategic plan continuous supervision, monitoring and evaluation system.
- ✓ Default borrowers face serious consequences, at the time of default, outstanding interest is increased, resulting in a loan balance that is higher than the amount borrowed. I recommend that better to repay timely.
- ✓ The institution should work more in this regard by collaborating with different associations.
- ✓ The institution should improve loan repayment rate and also participation of women in large, because this contradicts the very objective of institution. The empowerment of women is one of its objectives, “supporting female means supporting the entire family”.
- ✓ I recommend that the institution better to revise loan installment period and expand collection period, so some loan financed activities require more than a year to get a return. .

Finally, the study remarkably recommends interested researchers to extend further study on the impact of defaulted amount related to the institution income and profitability.

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Appendix

QUESTIONNAIRE

Factors Affecting Loan Repayment Performance in Microfinance:

A case of Awach Saving and Credit Corporative Society in Addis Ababa, Ethiopia

I. Personal Details

1. Sex □ Male □ Female
2. Age _____
3. Are you literate? □ Yes □ No
4. If yes, your educational level is
   □ Primary School completed □ Junior completed □ Secondary School completed
   □ Certificate □ Diploma □ Degree& above
5. Marital status
   □ Single □ Married □ Divorced
   □ Widowed
6. Total number of family members (Family size) _____
7. Is your business and residence place similar? □ Yes □ No
8. What is/are your sources of income in the household?
   □ From one business
   □ From additional (more) business
   □ From husband/ wife's monthly salary
   □ From more household member salary
   □ Others _____

II. Institutional related questions

1. Is the repayment scheme set by Awach microfinance suitable? □ Yes □ No
2. If No, what are the reasons?
   □ The starting time to repay is too early
   □ The repayment period is short
   □ The amount of repayment in each month is too much
3. What do you suggest to make the repayment scheme suitable?
   □ To give enough time before starting to repay
   □ To make the repayment period longer
4. Interest rate for credit set by Awach microfinance is:
   □ High □ Medium □ Low
5. What happens if someone does not repay the loan (default)?
   □ Loss of personal asset
   □ Loss of social relationship
   □ Losing second time loan/repeated loan

6. Why would someone not repaying the loan?
   - □ Lack of follow up by loan officer
   - □ Weak legal enforcement for defaulters
   - □ Improper use of the loan
   - □ Lack of interest for doing business
   - □ Others _____
7. Did you take training from Awach microfinance? □ Yes □ No
8. Was the training useful? □ Yes □ No
9. How many times the loan officer visits your business and checks your repayment status?
   - □ Two times a month
   - □ Once a month
   - □ Once within two month
   - □ Once within three month
   - □ Others _____
10. Are you served in a good manner by the loan officer and other employees of Awach Microfinance? □ Yes □ No
11. If No, what is/are the reason(s)?
   - □ There is information gap
   - □ The loan officers are busy
   - □ The loan officers are not disciplined
   - □ Others _____

III. Business related questions

1. In which types of business currently engaged?

A. Urban Agriculture
   - □ Animal husbandry
   - □ Horticulture
   - □ Poultry
   - □ Bee farming
   - □ Others _____

B. Small enterprise
   - □ Textile
   - □ Food Processing
   - □ Metal work
   - □ Construction
   - □ Others _____

2. How long have your business experiences?
   □ 1 year □ 2 years □ 3 years □ 4 years □ others _____
3. Did you conduct market study (survey) before starting your business?
   □Yes □ No
4. Are you able to get (access) business information related to your business?
   □Yes □No

5. If Yes, how to get this information?
   - □ From various media (TV, radio, newspaper, etc.)
   - □ From friends
   - □ From the loan provider (Awach microfinance institution)
   - □ Others _____
6. Is your business successful? □ Yes □ No
7. If No, what do you use to repaying your loan?
   - □ From my personal asset (building, equipment...)
   - □ From other income source
   - □ Don't want to repay
   - □ Others _____

IV. Loan & Repayment related questions

1. Why do you borrow from Awach microfinance?
   - □ For doing new business
   - □ For expanding already existing business
   - □ Others _____
2. How many times did you borrow from Awach Saving and Credit Corporative Society?

   □ 1 □ 2 □ 3 □ 4 □ Others _____

3. How long it takes the first application and loan collection?

   □ One week □ Two week □ one month □ other _____
4. How much money do you borrow from Awach? _____
5. Did you spend the entire loan for running your business? □ Yes □ No
6. If No, for what purpose do you spent?
   - □ Consumption
   - □ Education for children
   - □ Health
   - □ Others _____
7. Do you take the preferred amount of loan from Awach microfinance as you requested?
   □ Yes □ No
8. If No, is it □ Lower □ Higher
9. Is the amount of loan taken from Awach Saving and Credit Corporative Society enough for doing all your business?
   □ Yes □ No
10. If No, what solution do you take?
    - □ Borrow from other Microfinance institutions
    - □ Borrow from family or friends
    - □ Borrow from informal money lenders
    - □ Borrow from formal banks
    - □ Used by the available amount of money
    - □ Others_____
11. Do you borrow from other sources for various purposes (consumption, emergency...)?

□ Yes □ No

12. If Yes, from where do you borrow?
    - □ Borrow from other Microfinance institutions
    - □ Borrow from family or friends
    - □ Borrow from informal money lenders
    - □ Borrow from formal banks
    - □ Others_____
13. Which loan do you repaid first and why?
    - □ Loan from Awach microfinance?
    - □ Loan from other Microfinance institutions
    - □ Loan from family or friends
    - □ Loan from informal money lenders
    - □ Loan from formal banks
    - □ Others_____
14. Are you repaying your loan? □ Yes □ No
15. If yes, what is your repayment status?
    - □ on time □ Too late
16. Are you benefited by fully repaying your loan? □ Yes □ No
17. If yes, what are the benefits?
    - □ Access to the next higher loan
    - □ Build good relationship with the loan provider
    - □ To make the family stable

V. General questions

1. If you face any difficulties and challenges during the repayment process, please mentionthe major challenges
2. What is your overall opinion about Awach Saving and Credit Corporative Society institution credit scheme?