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THE IMPACT OF CREDIT CONSTRAINT ON MICRO AND SMALL BUSINESS ENTERPRISES PERFORMANCE: THE CASE OF HAWASSA CITY ADMINISTRATION, SIDAMA REGION.

BY:

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The impact of credit constraint on micro and small business enterprises performance: The case of Hawassa city administration, Sidama region.

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CERTIFICATION

Addis Ababa University

School of Graduate studies

This thesis prepared by Simret Siyoum, entitled "The impact of credit constraint on micro and small business enterprises performance: The case of Hawassa city administration, Sidama region." and Submitted in partial fulfillment of the requirements for the degree of master of science in Financial Economics complies with the regulations of the University and meets the accepted standards to its originality and quality.

Signed by Examining Committee

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Declaration

I, SIMRET SIYOUM, declare that this thesis on the topic entitled **"The impact of credit constraint on micro and small business enterprises performance: the case of Hawassa city administration, Sidama region**." was carried out by me for the masters of economics under the guidance and supervision of Dr. Wassei Birhanu, Addis Ababa University, College of Business and Economics, Department of Economics. This paper is my original work, has not been presented for any master's degree program in any other university, and all sources of materials used for the thesis have been dully acknowledged**.**

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Acronyms and Abbreviation

ANCOVA	Analysis of Co variance
ATE	Average Treatment Effect
ATT	Average Treatment Effect on the Treated
BSC	Balanced Score Card
CSA	Central Statistical Authority
DID	Difference in Difference
EAC	East Africa Community
EU	European Union
FGD	Focus Group Discussion
FeMSEDA	Federal Micro and Small Enterprises Development Agency
GDP	Gross Domestic Product
ICI	Information and Communication Technology
IT	Information Technology
ILO	International Labour Organization
KII	Key Information Interview
MFIS	Micro finance Institutes
MSEs	Micro and Small Enterprises
MoTI	Minister of Trade and Industry
OECD	Organization for Economic Co-Operation and Development
OLS	Ordinary Liner Square
PSM	Propensity Score Matching
RBV	Resource Based View

ROT	Rate of Return
SME	Small and Medium Enterprise
SNNPRs	South Nation Nationalities and People Region
TVET	Technical and Vocational Education and Training

Abstract

Micro- and small-sized enterprises play a critical role in creating job opportunities for millions of young people and attaining Ethiopia's development goals. The study uses a sample survey of 348 operators selected using multistage random sampling procedures to investigate the factors that influence the performance of MSEs in the Hawassa city administration. The cross-tabulated descriptive statistics revealed that personal/managerial characteristics, MSE characteristics, networking, and borrower economic resources all had an impact on MSEs' access to credit. The study investigates the effects of credit on the performance of MSEs in the Hawassa city administration. Propensity score matching was utilized to determine the impact of credit on MSE performance when comparing constraint and unconstrained MSEs. In this setting, it was found that credit had a positive and considerable impact on MSEs yearly average sales growth comparing with constraint MSEs but this finding does not find any significant relationship between the use of credit and employment growth. Hence, it was recommended that collaboration among enterprises, trade associations, and educational institutions should be encouraged. Moreover, enterprises should be able to receive non-financial support services like networking opportunities, business advice, and mentoring.

***Keywords**: MSE, Impact, Credit, Hawassa, Propensity Score Matching*

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Globally, micro and small enterprises (MSEs) are considered a major force behind social and economic growth (Ayalu et al., 2022). MSEs are essential for a nation industrial and economic success, claims Debela (2014).Contribute significantly to the economic and social development of a nation by creating large jobs, fostering innovation and entrepreneurship, increasing exports, and building an industrial base of varied sizes (Hailemichael, 2014). Small businesses are vital to the overall growth, potential, and strength of the economy because they use local resources, provide goods and services that meet the basic needs of a sizable portion of the population, serve as centers for the development of managerial, technological, and marketing skills, and encourage the adoption of new technologies (FeMSEDA, 2004).

MSEs have proven to be a powerful driver of rapid economic growth in most developing nations, due to their size, location, capital investment, and potential to create more jobs (Beluhu, 2021). According to Abdulmelike et al. (2018), MSEs employ approximately 22% of adult employees in developing nations. This demonstrates that the sector is also known as an instrument for economic transformation since it successfully utilizes people abilities and talents without the need for advanced education, large amounts of capital, or complex technology (Hurgessa, 2022).

According to CSA (2012), the industry contributed 3.4% of GDP in 2001, accounting for 52% of the manufacturing sector and 33% of the industrial sector's contributions. Furthermore, the MSE sector has contributed to economic change by hiring the expertise and capacities of many people without advanced training, a lot of money, or sophisticated technology, and by offering services and goods to numerous people at fair prices and acceptable quality (ILO, 2019). Even though MSEs are crucial to the Ethiopian economy by creating jobs and reduces poverty, but they face a number of challenges that limit their ability to contribute to the economy, including lack of access to credit, insufficient loan size, time delay and collateral (Ageba & Amha, 2006). Moreover, although MSEs, as compared to their larger counterpart businesses, can create more employment per unit of scarce capital, there

are many MSEs which dissolve after a short period of time of their establishment rather than growing.

External and internal factors have an impact on the growth of MSEs. Some of the obstacles that MSEs encounter are the absence of market demand for the service or product, restricted production/marketplaces, competition, accessibility to finance, and other trade restrictions (Abdulmelike et al., 2018). Credit is one of the most important barriers for MSEs. Due to resource constraints, these factors have an impact on business performance by reducing the number of investment options that have been considered (Buyinza & Bbaale, 2013).

Micro and Small Enterprises (MSEs) are commonly believed to have very limited access to credit facilities and other financial support services provided by financial institutions. This is because, these MSEs cannot provide the necessary collateral demanded by the financial institutions and financial institutions find it difficult to recover the high cost involved in dealing with small firms (Ageba and Amha, 2006). Finance is necessary to help MSEs to set up and expand their operations, build up new products, and invest in new staff or production facilities (World Bank, 2010). Availability of finance determines the capacity of an enterprise in a number of ways, especially in choice of technology, access to markets, and access to essential resources which in turn significantly influence the performance of a business. Securing capital for business start-up or business operation is one of the major obstacles of every entrepreneur, particularly those in the MSE sector (Solomon, 2009).

Access to fund is known as the most significant impediment to the growth of micro and small businesses in Ethiopia, as well as in many other developing and developed countries. While MSE enterprises frequently start with resources from the informal sector, they typically struggle to survive and grow without extra financial assistance from institutional lenders (Fetene, 2010). Formal financial institutions have not effectively serviced the credit demands of Ethiopia micro and small enterprises (MSEs). Due to exorbitant interest rates and collateral restrictions, many MSEs have turned to informal institutions for lending. In Ethiopia, the majority of MSEs rely on personal savings for launch and expansion capital, followed by iqub/idir, family, and friends/relatives. However, the availability of credit from informal institutions is often insufficient to meet the needs of MSEs (Admasu, 2012).Hence, this study mainly focused on identifying the impacts of credit constraint on the performance of the MSEs in Hawassa city administration using enterprises survey data from Hawassa city administration, Sidama region.

1.2. Statement of the Problem

The expansion of micro and small enterprises (MSEs) is widely known as critical to achieving overall development goals such as poverty reduction, economic advancement, and the formation of more democratic and diverse communities (Geremewe, 2018). This demonstrates that the core purpose of Ethiopia three major development plans implemented thus far has been to ensure broad economic expansion, which is the principal means of eliminating poverty because it produces jobs and stimulates the economy (FeMSEDA, 2015). However, among Ethiopia's 1,000 MSEs, around 69 percent are survival types (Gebru, 2009). According to Bekele and Worku (2008), the performance of micro and small businesses is still below expectations, and their role in poverty reduction has encountered various problems.

MSEs in Ethiopia face several challenges that they need to overcome in order to operate successfully. The major obstacles include access to finance, market access, competition, access to raw materials, and appropriate technologies (Getachew, 2018). However, a particular and highly critical problem for MSEs in developing countries is the lack of access to finance, both as seed and venture capital, as finance is the “glue” that holds all the different aspects of MSEs together. Obtaining finance is a major challenge for MSE operators seeking to expand their operations, particularly during their first stages of growth and establishment. This difficulty is compounded by the issue of knowledge asymmetry and the absence of ownership security (Schiffer et al., 2001).Without adequate credit facilities for small businesses, the economy will collapse and eventually crash. The private sector catalyzes economic change by providing financing facilities that enable businesses to innovate and expand. However, small businesses in Ethiopia face greater challenges in raising finance than large businesses (Meressa, 2022). The most significant factor contributing to the unimpressive performance and growth of MSEs is the limited availability and accessibility of finance (Tefera, 2019).

Despite the significance of micro and small enterprises (MSEs) in the Ethiopian economy, they have not achieved a commendable level of performance and have therefore not fulfilled the anticipated crucial and active role in the country's growth and development. The challenging financial limitations they encounter in their activities have had an adverse effect on their progress and have also restricted their ability to contribute to the national economy as anticipated (Sirad, 2023). According to the Growth and Transformation Plan set forth by the

Ethiopian government, micro and small enterprises serve as a crucial link to reaching the government objectives (MoFED, 2011). Many MSEs in the country struggle with a lack of qualified personnel to manage their activities effectively. This often results in a lower quality of financial information being produced compared to larger firms, making it difficult for them to provide audited financial statements a critical requirement for accessing credit from financial institutions. As a consequence, the information on their financial condition, earnings, and future prospects may be incomplete or inaccurate. This lack of transparency can lead to lenders denying credit to otherwise creditworthy MSEs (Admasu, 2011).

According to Sirad (2023), one of the most significant challenges that many MSEs encounter when seeking financing from financial institutions is a lack of sufficient capital to meet collateral requirements. Even when MSEs can provide some type of collateral, it is frequently insufficient for the amount of loans required. This discrepancy between collateral given and credit required creates a significant obstacle to obtaining borrowing. Researchers identified these characteristics as significant barriers to MSEs obtaining credit from Hawassa city banking institutions. According to Lader (1996), another major problem that MSEs often face is access to capital.

In contrast to the above reasons, Riba (1999) suggested that the greatest impediment to the growth, diversification, extension, and promotion of MSEs is not a lack of access to money. Rather, it is the lack of access to medium and long term credit (maturity of loans) that hinders MSEs. Some authors share the arguments of both sides. In their article, they stated that the main obstacles for MSEs are lack of access to finance and medium or long term credit, adequate loan size, technology and knowhow (Malhotra, 2006). The empirical studies indicate that inadequate loan size, loan maturities that do not match the maturity and cash flow patterns of the borrowers' activities financed by the loan, non-timely disbursement of loans and the tendency to demand group collateral are the problems faced by MSEs in expanding and diversifying their business (Ageba and Amha, 2006).

Numerous studies reveal that several internal elements (management system, financial outcomes, business operations, human capacity, etc.) and external factors (demand, competitive scenario, tax legislation, etc.) help to explain MSE performance (ILO, 2021). However, in the context of financial development, namely in sub-Saharan Africa (Gelbard and Leite1, 1999), one of these characteristics, namely "credit," has piqued the interest of

many scholars (Avouba and Gilles, 2022), because access to credit boosts a MSEs competitiveness and profits.

Evaluating the obstacles and prospects facing micro and small-scale enterprises (MSEs) in Hawassa City Administration is a multifaceted endeavor, given the diverse factors influencing their struggles and constraints. This research delves into pinpointing and comprehending these challenges to offer valuable insights and suggestions for enhancement. In Hawassa City Administration, micro and small-scale enterprises encounter a significant hurdle in accessing financial resources. Numerous small businesses grapple with obtaining loans from financial institutions due to their limited collateral or insufficient business track record. This limitation curtails their capacity to grow their operations or adopt new technologies. Moreover, the imposition of high interest rates and stringent loan prerequisites exacerbates the financial constraints confronting these enterprises (Anne, 2014).

Although significant number of researches in Ethiopia have identified finance as one of the main factors that affect success, performance and growth of MSEs (Admasu, 2012; Fetene, 2010; Gedam, 2010), there is little empirical evidence on impact of credit on performance of Micro and Small Enterprises. This study therefore aims to assess impact of credit access to on the performance of MSEs in Hawassa city administration. Therefore, the purpose of this study was to ascertain how credit limitations affected the achievement of small and micro businesses in Hawassa city administration, Sidama National Regional State using propensity score matching to answer the research questions.

1.3 Research Questions

In line with the study main objectives, the researcher aimed to address the following important research questions:.

- What are the determinants that influence the accessibility of credit by MSEs in Hawassa city administration?
- Is there any impact of credit constraints on the performance of MSEs in Hawassa city administration?
- What is enterprise perception on credit constraint in the Hawassa city administration?

1.4. Objective of the study

1.4.1 General Objective

The general objective of this study is to examine the impact of credit constraints on micro and small business enterprises performance in Hawassa city administration.

1.4.2 Specific Objectives

- To identify the determinants that influences the accessibility of credit by MSEs in Hawassa city administration.
- To assess the impact of credit constraints on the performance of MSEs in Hawassa city administration.
- To identify the enterprise perception on credit constraint in the Hawassa city administration.

1.5 Research Hypothesis

It is a fact that credit plays a significant role in improving MSE performance. Based on the previously mentioned objectives, the following hypothesis would be drawn:.

H_O Credit in the study area does not improve the performance of the MSEs.

H1. Credit in the study area improve the performance of MSEs

1.6. Significance of the Study

The results of the study are going to be important for the reasons that follow. Researcher may use the study results to accrue additional knowledge about success factors and promote MSE development. Academics, professionals, and government bodies may use the study to advance their research in the field. The study findings may be used in policy decisions and planning.

1.7. Scope of the Study

This study examined the impact of credit constraints on the performance of micro and small business enterprises performance in Hawassa City Administration, Sidama region. In other words, MSEs operating/located in Hawassa City are engaged in different economic sectors such as construction, urban agriculture, manufacturing, trade, textiles, and service sectors. Both explanatory and descriptive study designs with quantitative and qualitative research data were employed. The study period of this research was undertaken within two consecutive years (2022-2024).

1.8. Limitations of the study

The researcher faced various problems while conducting the study. One problem was locating the owners of MSEs, who may be busy during business hours. Some MSEs in Hawassa may close, while others shift or transfer to other businesses according to the nature of their operations. Institutional instability was the other factor in getting relevant data because of the separation of enterprise and job creation bureau from manufacturing at the federal and regional levels. Furthermore, Sidama regional, as well as Hawassa, separated from SNNPRs in recent a year, which has caused institutional instability.

1.9. Organization of the Study

The study is divided into five major chapters. The first chapter contains information about the study's background, problem statement, and study objectives, significance of the study, scope, and study limitations. The second chapter focused on a review of related literature. The third chapter deals with research methodology, including a description of the study area, research design, sampling design, study population, sample frame, sampling techniques, sample size determination, data collection methods, data analysis, reliability, and validity. The fourth chapter covered presentation, analysis, and interpretation of the data, while chapter five presented a summary of the main results, conclusions, and suggestions.

1.10. Definition of key Terms

Micro Enterprises: MSEs are defined as businesses having a paid in capital of less than Birr 20,000, without high-tech consultancy firms and technology establishments, and five or fewer employees, including family members (MSE's development strategy 2011).

Small Enterprises: Business enterprises with a paid-up capital of above Birr 50,000 but not exceeding Birr 500,000 (for services) or above Birr 100,000 but not exceeding Birr 1,500,000 (excluding high-tech consultancy firms and other technology establishments) with 6–30 employees, including family members (FeMSEDA, 2011). The working definitions used in this thesis are dependent on the number of personnel. Accordingly, microbusiness is a company with 5 or fewer employees, whereas a small enterprise has 6–30 employees, including family labor.

CHAPTER TWO
REVIEW OF RELATED LITERATURES

2.1. Introduction

2.1.1. Definition of Micro and Small Enterprises (MSEs)

According to Quartey and Kayanula (2000), there is no widely agreed definition of a micro or small business enterprise. The reason for this is because the standards and methodologies for classifying organizations as micro and small enterprises varied per country and are highly dependent on development levels. The definition of MSE varies each country, depending on its economic development and population. In the United States and Europe, MSE is defined by employees' number and turnover. The European Commission and the Organization for Economic Cooperation and Development define MSEs as enterprises with less than 250 employees (EU, 2003).

In developing countries, the definition differs slightly from that in industrialized countries. In Zambia, capital investment and annual revenue are the most important requirements; in Tanzania, for example, the most important variables for classification as an MSE are the level of employment and capital investment. Similarly, the definition of MSE in Ethiopia includes variables such as capital investment, employment, production capacity, technology level and sub-sector (World Bank, 2010). Even within a country, definitions shift over time due to price changes, technology advancements, or other factors (Emma , 2009). Companies differ in terms of capitalization, turnover, and employment. Therefore, definitions that use size measurements (number of employees, turnover, profitability, net value, and so forth) When applied to one industry, all businesses may be classified as small, but the same size definition applied to another sector may produce a different result (Boame et al., 2014). It also did not identify the average capital for the firms or differentiate between services and industrial (Zhang and Ayele, 2022).

Table 2.1: The Advanced Definition of MSE's in Ethiopia

Size of enterprise	Sector	Labor power	Total asset
Micro	Industry	≤5	≤ 100,000 birr($4630)
	Service	≤5	≤ 50,000 birr($2310)
Small	Industry	6_30	101,000-Birr 1.5m($4630-$69,500)
	Service	6_30	50,001Birr -500,000($2,310-$23,150)

Source: Ethiopian Micro and Small Enterprise Development Strategy (2016)

2.1.2. Credit and MSE

The difficulty in accessing financial services means the presence of barriers, such as costs and additional variables, which prevent the use of financial services (World Bank, 2010). Micro and small businesses (MSEs) can be classified into two types: those with simple access to financial services and those who face difficulties to acquiring them. MSEs that use financial services are guaranteed access to money, whereas those that do not may choose to avoid them for cultural or religious reasons, or because they do not require funds. On the other hand, involuntarily excluded MSEs require financial services but are unable to obtain them for a variety of reasons. This may include being considered 'unbankable' by commercial financial institutions due to low earnings or higher lending risk, as well as challenges related to the contractual and information framework that hinder outreach to MSEs. Additionally, physical access to banking services can be particularly difficult for MSEs located in sparsely populated areas. Furthermore, the cost of financial services may be prohibitive, or the product features may not be suitable for MSEs. For example, having collateral can enhance credit access, but traditional financial institutions often demand collateral when approving credit, which can be challenging for MSEs with limited marketable assets, leading to their exclusion from conventional financial markets (Ruslan, 2018).

2.1.3. Factors Affecting Access to Credit

According to Akudugu et al. (2009), credit access is defined as an individual's ability to make the proper attempt to obtain and decide whether or not to borrow. The researcher had been decided four success elements to assess and discuss following section of the research

on each factor of affect the credit access in this study. These are Owner/Manager Characteristics, MSE's characteristics, information /networking service of business, and borrower's economic resources.

i. Owner/Manager Characteristics

Some studies advance human capital theory by considering the owner's history, such as gender, age, experience, and education, when judging financial competence (Biggs et al., 2002; Umoh, 2006; Storey, 2004). The literature implies that the success of micro and small businesses is dependent on the manager's ability to run the business efficiently (Mahmood et al., 2013). As a result, owner/manager qualities are crucial drivers of loan access because they can influence MSE performance and financing (Ruslan, 2018). Previous research identified gender (Watson et al., 2009; Wellalage et al., 2017), age (Ibrahim et al., 2012; Ogubazghi et al., 2014), and marital status (Hoque et al., 2016) as the most widely utilized measures to determine MSE access to credit. Ruslan (2018) suggested that education level of the manager's is positively connected with the likelihood of obtaining external financing, as evidenced by many research papers.

ii. MSEs' Characteristics

In addition to owner characteristics, business characteristics may influence firms' credit access. Several characteristics of MSEs influence decisions to access finance and their financial behavior, for example, size, age of MSEs, and sector (Ruslan, 2018).

According to numerous researches, the age of a business influences its access to finance. Most freshly created and young firms struggle to secure external finance due to information asymmetries. Gertler (1988) noted that information asymmetries occur when creditors do not have enough time to monitor new businesses and develop mature relationships with lenders. Byers et al. (2010) agreed that steady enterprises have more lending options and are easier to oversee. Previous research, however, revealed that fledgling enterprises with a good track record may obtain financing. Banks and other financial institutions are hesitant to give credit to persons with a bad reputation (Abdulsaleh et al., 2013). As a result, startups are more likely than established enterprises to seek financing from informal sources, with the advantage of being able to get bank debt or stock (Nguyen et al., 2013).

According to Beck et al (2004), small enterprises typically used short-term bank loans or informal financing from sources such as family, friends, or moneylenders to fund a larger

portion of their investments. Depending upon Beck et al. (2008), Allen et al. (2012), and Nguyen et al. (2013), large businesses are more perhaps have less loan limitations because they have a diverse range of funding sources. Small businesses, however, face greater credit risk, which restricts their ability to get bank loans. Research carried out by Beck et al (2008) indicated that small businesses greater focus on internal and informal lender than borrowing from bank. Similarly, Hainz et al. (2013) demonstrated that small enterprises are 6% less likely than larger firms to request external financing. This suggests startups prefer internal resources or have lower loan demands than large businesses.

According to Kira et al. (2012), businesses in Tanzania's industry sector can acquire loan financing far faster than those in other sectors. However, Mulagas (2013) research found that processing industries are more likely than industry and services sectors to employ external financing. Tanaka and Molnar (2008) assert that manufacturing enterprises have easier access to funding than non-manufacturing companies, which is consistent with this. On the other hand, Beck et al. (2008) reported no disparities in loan funding across industries.

iii. Business Information/Networking of MSEs

Many African businesses have restricted access to information due to a lack of appropriate business support services and inadequate information technology infrastructure (Oshikoya & Hussain, 2007).The relationship between firms and creditors is critical for obtaining loans (Harhoff & Körting, 1998). Networking is important in the business creation process because it allows entrepreneurs to access the knowledge they need to start and grow their firms through their current social networks (Ruslan, 2018). Loan managers' trust in firms allows them to reduce information asymmetry, which can impede credit access. Networks also assist businesses overcome information imbalance.

Additionally, research suggests that the relationship between a creditor and a MSE’s can make it easier for the enterprises to access credit, as the network becomes the primary determinant in reducing financial constraints (Bougheas et al.,2006; Nguyen et al.,2013). Membership in a different bossiness association allows information exchange (Gemechu & Reilly, 2011). Overall, networking and building relationships within the business community can be beneficial for MSEs in accessing credit. It allows them to overcome information asymmetry and gain the trust of loan managers, ultimately improving their credit accessibility. However, information has not received the same level of attention as other

constraints related to improving MSE performance, such as access to economic resource, owner/manager characteristics and MSE characteristics (Kauffmann, 2005).

iv. Borrower's Economic Resources

Economic resources for MSEs are the numerous aspects and assets that support their economic activity and overall growth. Economic resources include all of the elements that a company uses to produce goods and services for its clients. The fundamental economic resources, also called as production elements, are labor and capital (Sultan, 2020). They serve as collateral for MSEs, allowing them to access loans and financing.

Many MSEs struggle to generate financing for the outright purchase of specific equipment and machinery, preferring to purchase such equipment on an installment basis (Ackah and Vuvor, 2011). Longenecker et al. (1994) noted that down payments of about 25 to 30 percent of the price of the respective equipment are usually made initially and the remaining amount can be spread out over a period of 3 to 5 years. This method is known as equipment loans. According to Ackah and Vuvor (2011) equipment leasing, this provides businesses with more investment flexibility and requires smaller capital amounts at any given time. Unlike conventional financial institutions, group-based MFI commonly provide loans to the poor, who lack assets that they hold as collateral or the competence in undertaking transactions for utilizing banking facilities (Geleta, 2014). However, the premises of MFI justify the feasibility of banking on the poor by taking the poor relevant social capital as collateral (Mayoux, 2001; Ito, 2003; Woodworth, 2008). This is especially true for Grameen type MFIs, which reduce the risk and expense of banking for impoverished women by providing them with credit based on "social collateral" earned through membership in borrower groups (Schreiner, 2003).

The significance of debt for labor supply has been seen as evidence that certain people are restrained by credit (Belkar et al., 2007).It is natural to predict that binding credit limits would result in an increase in labor supply, as working can assist reduce these constraints. For example, some people may be unable to borrow money from financial organizations, while others may be limited in the quantity of credit accessible from banks. In both cases, working can assist alleviate credit limits. Those with previous debt may have opted to labor in order to obtain credit at some point, particularly if they have no other sources of income. They may also find that credit constraints become binding due to unexpected changes in income or expenses. In such cases, increasing labor supply offers a way to ease the credit

constraint and may be less costly than renegotiating a loan or selling assets (Belkar et.al., 2007,).

2.1.4. Defining Business Performance

Two critical components of good corporate management are effectiveness and efficiency. Effectiveness is about creating appropriate goals that are validated by the market, whereas efficiency is about employing existing resources rationally. While short-term success can be achieved solely through effectiveness, long-term success is only guaranteed if both dimensions are met at a high level (Lekovic and Maric 2015).

Mulugeta (2014) defines performance simply in terms of output parameters such as quantifiable goals or profitability. Research on performance in small businesses has grown significantly (Sibhatu, 2018). Alasadi and Abdelrahim (2007) explain performance as follows. A business's performance can be measured using both financial and non-financial metrics. Turnover and profit before tax are financial metrics, whereas non-financial indicators include customer satisfaction and referral rates, delivery time, waiting time, and employee turnover. Recognizing the limitations of relying simply on financial or non-financial indicators, modern small business managers are employing a hybrid strategy that encompasses both financial and non-financial metrics (Chong, 2008).

2.1.5. Measures of Business Performance

The performance of a firm is mostly judged by its economic performance. According to Walker and Brown (2004), small business performance can be judged using both financial and non-financial factors, with the former receiving the majority of emphasis in the research. Traditional indicators of corporate success are focused on the number of people or financial performance, such as profit, sales, or ROI. These criteria presuppose growth and that all small business owners want or need to expand their operations. Walker and Brown (2004) also argued that businesses must be financially sustainable at some point in order to exist. However, given that some businesses have no interest in growing, this indicates that money gain is not their sole driving force, and these small business owners have to use other non-financial criteria to assess their business performance.

Due to the lack of widely acknowledged standard performance measurements, firms were able to select their own performance indicators, which may not correctly reflect their

performance. This study used sales and employment growth measures to assess the performance of MSEs in the study area.

2.2. Theoretical Literature Review

The micro credit theory, classical theory of output growth, human capital theory and the pecking order theory all provide the foundation for this study.

2.2.1 Micro Credit Theory

The Micro Credit Theory is based on the economic theory that governs the credit industry in non-communist countries (Ngugi & Kerongo, 2014). Adam Smith (1937) introduced the Micro Credit Theory in the 18th century, claiming that self-interested individuals use their labor, wealth, and abilities to benefit society through the "invisible hand." Karl Marx popularized Smith's Micro Credit Theory and later described the concept of material prosperity in non-communist nations. Yunus (1994) expanded on the Micro Credit Theory by developing the psychological component known as "the social consciousness driven capitalism". According to the thesis, it is possible to create a profit-making private venture that is concerned about the welfare of its clients. Theoretical underpinnings are necessary to explain concept. This study hinged on output growth theory and reviewed few other theories related to this study.

2.2.2. Classical Theory of Output Growth

A sensible entrepreneur, like all major firms operating in any market, is driven by the desire to maximize profits. The entrepreneur's goal is to increase the firm's profitability while leveraging available technology, labor stocks, and other resources. Several studies have looked at entrepreneur performance using the neoclassical growth model, with performance acting as a proxy for economic growth. Because the producer (business owner) has a variety of inputs, such as capital stock from borrowed sources and own savings, labor stocks from himself and other family members, and skills acquired through education, they are integrated to provide the best output for the entrepreneur (Akingunola, 2011; Ihua, 2009).

There are various ways in which resources can be combined in an organization to produce output. In this study, capital stock from credit received and MSEs characteristics, owner/manager characteristics and networking were combined to determine their effect on financial performance of the sampled enterprises. Using a Cobb-Douglas function to

represent the relationship between output and inputs, it is assumed that the entrepreneur has two resources; capital and labor that are combined to produce output as shown in equation 2.1.

$Y=AK^{\alpha}_{t} L_{t}^{1-\alpha}$……2.1

Where Y is the output produced

K and L are units of labor and capital used in production

α and 1-α are output elasticity with respect to capital and labor inputs respectively

A represents the firm's technical progress. The capital, labor, and skill stock in the firm are funded through personal savings and borrowing from diverse sources in the economy. Depending on the relative cost of labor and capital, the entrepreneur divides the available resources between the two inputs to optimize performance. It is critical for businesses to choose performance metrics that accurately reflect their current condition (Murphy et al., 1996). Despite this, there is no commonly accepted criterion for measuring performance. As a result business organizations have had the liberty to determine their own measure of business performance which might not be a true reflection of business performance. In this study, sale and employment growth was used to determine MSEs performance.

2.2.3 Human Capital Theory

The Human Capital Theory best explains the impact of owners/managers highest levels of education on the performance of their businesses. According to this theory, training and education are essential because they improve the owner/manager's efficiency and productivity by instilling knowledge and skills that are used to run business operations, thereby increasing enterprise productivity (Fairlie & Robb, 2007; Chiliya & Robert, 2012). Over the past decade, hundreds of studies have been conducted to estimate success of businesses in terms of Rates of Return to Education (RORE). Most of such studies have shown that formal, proper and precise academics is vital in determining the success in performance of businesses owned by different owner/manager in well developed countries (Cohn & Addison, 1998). Comparative studies have been conducted in some less developed countries, focusing on the investment in formal education While some studies (Fairlie & Robb, 2007) suggest that education or training raises productivity of owner/manager and the success of their enterprises, others provide different explanations on how education is related to

owner/managers' productivity and, hence, success of their businesses (Psacharopoulos, 1994).

The current study educational qualification variable is informed by the human capital theory, which describes the value of training and education in increasing organizational efficiency and productivity. In the case of MSEs, the educational qualifications of managers/owners and staff are important to their performance. MSEs with highly trained and skilled managers and staff are projected to be more profitable than those with unqualified and unqualified personnel. Therefore, the human capital theory helps to advance the educational qualification variable in the current study.

2.2.4. The Pecking Order Theory

According to the theory of finance, management prefers to finance first with retained earnings, then with debt, then with hybrid forms of finance such as convertible loans, and finally with externally issued equity, with bankruptcy costs, agency costs, and information asymmetries having little influence on capital structure policy (Norton, 1991). According to Zoppa and McMahon (2002), an ordered structure was used by 75% of the small enterprises examined when making financial decisions.

The Pecking Order Theory of corporate capital structure, developed by Myers (1984), was created to solve the challenges posed by Modigliani and Miller (1958) financing irrelevance proposition. This theory addresses the questions surrounding how firms choose their sources of financing and the impact of these choices on their capital structure. The pecking order has had a significant impact, and it is an essential component of the literature that seeks a logically clear and empirically successful theory of corporate financing (Frank and Goyal 2005).

Consider a business that makes money by using actual fixed assets, venture capital, and internal financial resources. It can be financed with loans, stock, or internal resources. Cash is generated through activity, external borrowing, and interest on the company's financial investments. Cash is used to invest in real estate and venture capital, as well as to pay debt interest and dividends to shareholders. The firm's cash holdings are adjusted based on the flow budget restriction, with cash in equal to cash out.

$$OPER_t + \square D_t + {}_{pt-1}cash_{t-1} = INV_t + \square workingcapital_t + \gamma_{t-1} + D_{t\,1} + D_{inv} + \square cash_t \quad \ldots\ldots\ldots\ldots\ldots\ldots (2.2)$$

$OPER_t$ is cash flow from operations

ΔD_t . is net debt issuance

$_{pt-1}cash_{t-1}$ is net equity issuance

INV_t is real asset investment

Δworking capital working is capital investment

D_{t-1} is interest paid

D_{inv} is cash dividends

$\Delta cash_t$ is change in cash holding

The budget limitation is an identity rather than a theory, and it remains valid due to how we define cash flow variables. Therefore, we define internal cash flow as,

$CF_t=OPER_t+_{pt-1}cash_{-1}- r_{t-1}D_{t-1}$.....(2.3)

$CF_t+\Delta D_t+_{pt}\Delta N_t=Inv_t+\Delta$working capital$+D_{invt}+\Delta cash_t$

Equation (2.3) is high-dimensional in the sense that debt, equity, investment, working capital, dividends, and cash holdings are all commonly regarded as firm decisions that define the firm's financing needs as,

$Needs_{t=}$ $Inv_t+\Delta$working capital$+D_{invt}+\Delta cash_t$.....(2.4)

The pecking order hypothesis treats the components of requirements as external forces. Working capital is computed as inventory plus accounts receivable minus accounts payable, and these variables are thought to be influenced by the operational side of the business (Le et al., 2018). Dividends are believed to be smoothed and heavily impacted by prior dividend payouts. While evidence supporting the concept of dividend smoothing dates back to Lintner (1956), the idea of treating dividends as wholly external is debatable. Similarly, framing fluctuations in monetary holdings as external variables simplifies the situation. It is debatable, as only a percentage of a company's cash may be required for day-to-day operations. Companies usually keep cash reserves for precautionary reasons and can cover any deficits by using these reserves. A company with substantial cash reserves can self-finance, whereas one with limited cash reserves may need to seek external financial support.

Substituting equation (2.4) into (2.3), the constraint of the budget can be re-expressed as:

$CF_t + \Delta D_t + p_t \Delta N_t = Needs_t$…….(2.4)

2.3. Empirical Review

2.3.1. Credit Access and Modeling Techniques

The difficulties MSEs face in obtaining credit have been identified in several studies (Harvie et al., 2010; Ajagbe, 2012; Akoten et al., 2006). The researcher used a probit model to identify the key variables influencing an enterprise's choose to accept a loan. In another study, Akoten et al (2006) used probit analysis to find out what factors affect an organization's decision to take out a loan.

The logit model was used in a study by Essien et al. (2012) to determine what factors affect small-scale agricultural finance access. Education level, size of family, year of establishment of the enterprise, size of firm, and kind of enterprise were among the primary predictors of the financial traits of firms' creditworthiness, industry, and geographical factors on firms' credit access (Le, 2012).

Likewise, Umoh (2006) applied the probit model to study the relationship between micro entrepreneurs' loan availability and a vector of household and business factors, such as age, educational level, enterprise age, family size, and type of enterprise.

2.3.2. Credit providers and Impact of Credit on MSEs

Several factors influence a borrower's choice of credit provider over another, including loan qualities, owner traits, and networking (Rusian, 2018). Credit providers have developed a variety of business models and techniques to reach MSEs in response to their diverse financial needs (Tuyon et al., 2011). For example, the loan amount secured through MFIs is quite small and may be insufficient to meet current business demands (Hassan et al., 2013). Similarly, Ngehnevu et al. (2010) discovered that micro finance programs provide a considerable boost to business by allowing enterprises to gain financial help and social inter mediation services. Durrani et al. (2011) found that an efficient supply of credit can help people experiencing poverty manage their risks, smooth their consumption, establish their enterprises, steadily build their assets, improve their quality of life by minimizing poverty, and increase their income-earning capacity. According to the authors, micro finance allows

entrepreneurs to develop their enterprises and adopt better technologies, encouraging productivity (Islam, 2007).

2.3.3. Impact Evaluation Methods

Participation observation, a sample survey, participatory learning, case studies and action, and rapid assessment engagement are some of the impact evaluation methodologies (Hulme, 2000). All methods can be split into two major groups: randomized experimental design and non-randomized (Baker, 2000). As an alternative, non-experimental procedures are used in program effect evaluation to generate control groups that are as comparable to treatment groups as possible based on observable characteristics utilizing a matching process (Caliendo et al., 2008). The average treatment effect on the treated (ATT) defined as the average difference between unconstrained and confined groups, is then calculated using changes in participant and non-participant outcome variables (Heckman et al., 1997). Only the region supported by different matching approaches, including radius, nearest neighbor, propensity score matching, and kernel matching, can be used to assess the treatment impact (Caliendo et al., 2008; Leuven et al., 2010). However, the approach ignores the observable characteristics.

2.3.4. Previous Studies on Impact Evaluation Problems

From 1992 to 1998, Nguyen (2007) investigated how borrowing activities influenced borrowers' consumption in rural areas. Nguyen's study used a variety of econometric approaches. First, the researcher ran a simple ordinary least squares (OLS) regression of household consumption on home-specific factors such as the age of the family head, gender, education level, employment, and land size. Because endogenous variable controls were not included, the author decided that the results could be biased and applied the PSM technique following probit regression.

Li, X et al. (2011) employed a panel data model that included a minimum of two observation periods and a consistent set of characteristics. Khandker (2005) investigated the impact of micro finance on poverty reduction in Bangladesh, using a panel data technique to quantify time varying borrowing effects on household welfare and a fixed effect method to prevent program placement bias.

Lyngdoh et al. (2013) employed a combination of DID and PSM methodologies to investigate the influence of micro finance on women empowerment in northeastern India.

Their findings indicate that micro finance has a positive impact on income, savings, and expenditure. Even if a study has such bias problems, Baker (2000) claims that selection bias cannot be eliminated, making it a significant barrier to effect evaluation.

2.3.5. Impact of Credit at the Enterprise Level

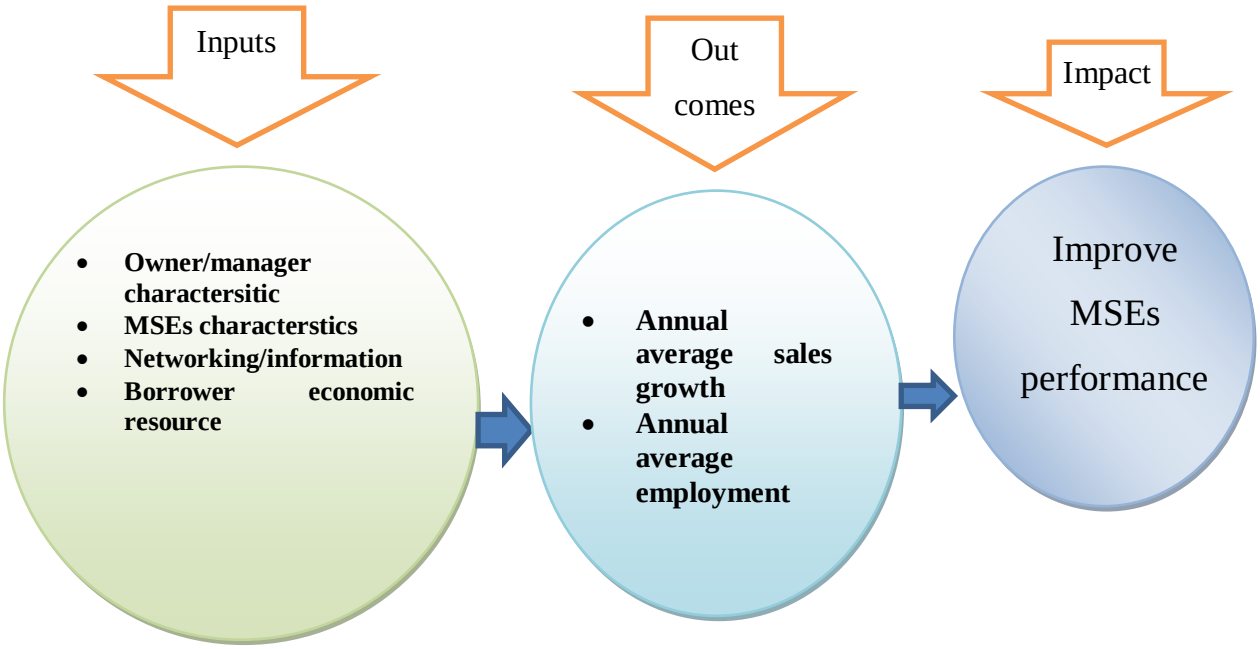
Credit is necessary for MSE expansion because it requires constant investments in working capital. However, at low income levels, accumulating such money may be challenging. In such instances, loans can help MSEs increase their income and capital (Atieno, 2001). Dunn and Arbuckle (2001) used co variance analysis (ANCOVA) to examine how credit affected participants and discovered that it considerably increased net income, assets, and employment for micro-enterprises. Although the study employed panel data to analyze the effect factors between 1997 and 1999, flaws in methods that account for potential selection bias may lead to inaccurate results. Hartarska et al. (2008) used the credit constraints technique to investigate the impact of micro finance on micro-enterprise loan access in Bosnia and Herzegovina. Their findings suggest that micro finance can help enterprises overcome financing obstacles. The logit model utilized in the study avoids methodological problems common in impact assessment, resulting in under or overestimating its results.

2.4. Research Gap

The impact of credit on the enterprises performance has not received adequate research attention in Hawassa. This means that, the study attempt to fill research gap by examining the situation in Hawassa and providing empirical evidence on the impacts of credit towards micro and small business performance within the city. The researcher discovered that studies conducted by the Hawassa city administration use a variety of interconnected criteria as measures, but none of these studies provide adequate information on factors such as firm characteristics, owner/manager characteristics, borrower economic resources, and networking relations related to credit access. According to the report, lending institutions and financial sources do not prioritize making financial resources available to micro and small businesses (MSEs). Furthermore, there is a paucity of financial facilities to serve all essential sectors of MSEs. Consequently, the researcher intends to aggregate and assess these aspects in regard to credit's impact on performance.

2.5. Conceptual Framework of the Study

The features of the owner/manager, MSE characteristics, business information/networking services, and borrower economic resources all have a substantial impact on the company's performance. It is critical to closely monitor these aspects and implement tight procedures at the appropriate time in order to capitalize on opportunities and reduce risks in the business environment. The dependent variable in the conceptual framework associated with the study's objectives is firm performance, whereas the independent variables include owner/manager qualities, MSE characteristics, the business's information/networking services, and the borrower's economic resources.



Source: Developed for this Study, (2024)

Fig:2.1 Conceptual Frame Work of the Study

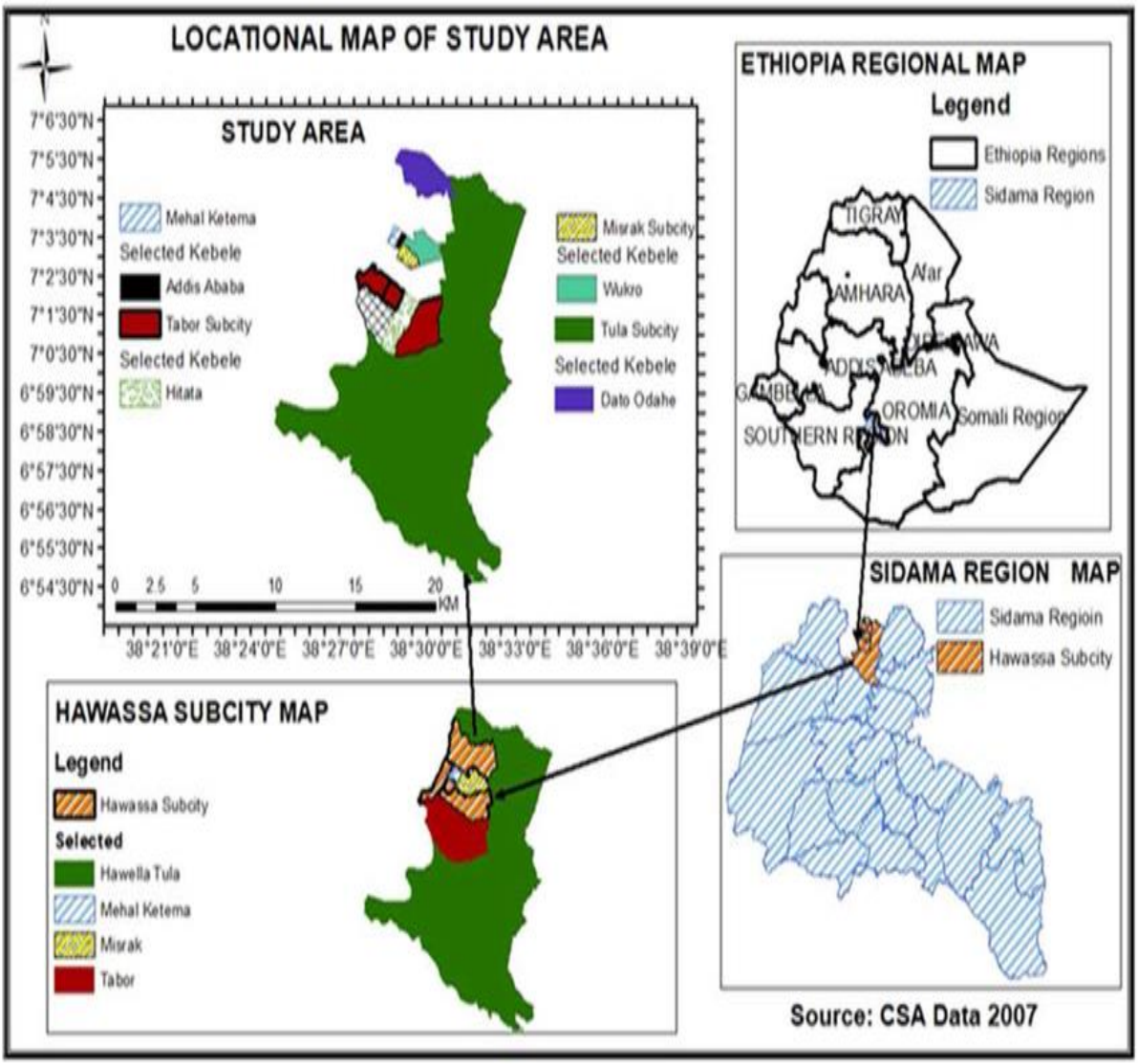
CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Description of the Study Area

Hawassa City, situated in Southern Ethiopia along the shores of Lake Hawassa, is a rapidly expanding urban center. Located in the Great Rift Valley region, it is positioned 275 km south of Addis Ababa via Debre Zeit and, 1125 km north of Nairobi. As the capital of the Sidama National Regional State, the city lies between 703’ latitude North and 380' longitude East. It is surrounded by the lake to the West, the Oromia region to the North, Wondogenet woreda to the East, and Shebedino woreda to the South (Hawassa City Administration Environmental Protection and Forest Development Office, 2019).

According to the Hawassa City Administration Environmental Protection and Forest Development Office (2019), Hawassa has a total area of 157.2 sq. km. divided into Eight (8) sub-cities divided into 32 Kebeles. These eight sub-cities are Hayek-Dare, Menehariya, Tabore, Misrak, Bahile-Adarash, Addis-Ketema, Hawela-Tula and Mehalketema sub city and the average annual precipitation in Hawassa is 933.4 mm, with temperatures ranging from 5 ^{O}C in winter to 34 ^{O}C in summer. The city has a subhumid climate known as 'Woyina-Dega' and experiences the highest and lowest temperatures of 34 ^{O}C and 3 ^{O}C, respectively. The average annual temperature is 20.3 ^{0}C. Hawassa receives rainfall twice a year, during the 'Belg' and 'Kiremt' (winter rainy seasons). The first rainfall occurs from 'Megabit' to mid-'Ginbot' (May), and the second from 'Sene' (June) to mid-'Meskerem' (September).



Source: Gedeno et al.,2022

Figure 3.1: Administrative map of Hawassa city

3.2 Research Design and Survey Instrument

Study design is the structuring of conditions for data collection, analysis, and interpretation in order to balance relevance to the study objective with procedural economy (Kothari, 2004). According to Owens (2002), survey research design provides the following advantages: uniqueness since the information gained is not available from other sources, unbiased representation of the population of interest, and measurement standardization because the same information is collected from each respondent. The study used both exploratory and descriptive approaches to characterize the situation as it was throughout the study period, as well as to explain the relationship between correlated variables in order to assess the

elements' overall impact on performance. Then, the study critically assessed and described the impact of credit on the performance of MSEs in Hawassa City Administration. To collect and analyze the data, a properly designed questionnaire was developed. A request for comments questionnaire was submitted to the adviser for approval on data confidentiality, primarily since accounting and financial information about businesses was revealed. The questionnaire was translated into Amharic before being delivered to the owners or managers of MSEs in Hawassa to make it simpler for respondents to understand the questions. From February to April 2023, the survey was conducted. Three hundred forty-eight surveys were issued to MSEs, and 343 responded. This study's overall response rate was 99% (343 usable responses). The responses were divided into two categories: credit borrowers (143 respondents) and non-borrowers (200 respondents). The structured questionnaire includes the following sections and information:. Part one asks a general question about the firm. Part two contains information regarding the size of the company. Part three covers company performance and challenges. Part four focuses on funding. Part five is about credit searches. Part six discusses the final demographics. The survey questionnaire is found in Appendix 1. The enterprise survey tries to identify characteristics that influence the economy's business climate. It investigates the credit-constraining elements influencing firm performance.

3.3. Sources of Data

This study employed a combination of secondary and primary data sources to collect information on the enterprise. The primary data was collected from the selected sample enterprise by handing out questionnaires to all respondents and translating them into Amharic. The researchers completed the questionnaires through direct interviews at the firms' workplaces. It encompasses the service, manufacturing, urban agriculture, construction, trade, and textile industries. Comprehensive ranges of quantitative and qualitative data were gathered through face-to-face interviews with managers and owners of chosen micro and small businesses in each sub-city. The secondary data source was obtained from the Hawassa City Industry Bureau, unpublished and published papers or documents, the website, and reports reviewed.

3.4 Study (Target) Population

According to information from the industry buero of Hawassa city administration, The population of this study covers 2653 MSEs located in Hawassa Sidama, Ethiopia, who are

engaged in different economic sectors such as trade, service, construction, textiles, manufacturing, and urban agriculture.

3.5. Sample Size Determination and Sampling Techniques

A multistage sampling procedure was used to get a representative number of enterprises in the study area. Stratified random sampling was employed to get a representative sample size for the current study. The stratified random sampling procedure is preferred because the resulting sample would represent the entire population proportionally from each enterprise size and distribute the questionnaires conveniently from the sampled enterprises.

The research has a confidence level of 95%; thus, from a total number of 2653 MSEs operating in Hawassa City, 348 sample sizes has been selected as respondents by adopting Yamane's (1967) formula. The formula of the sample size for the finite population is:

$$n = \frac{N}{1 + N(e2)}$$

Where: -

n = The desired sample size needed

N = Total population (2653)

e= error term (5%)

$n = \frac{2653}{1+2653(0.05*0.05)}$ =…….eq(3.1)

n=348

Thus, the required sample size for this study was n=348

After determining the sample size, proportional numbers of respondents from specific sectors were assigned using the Probability Proportional to Size (PPS) sampling approach and the proportionality formula (Kothari, 2004). Table 3.1 shows the results as

Table 3.1 Sample MSEs from Each Sector.

Sectors	Enterprises(MSE'S)	Probability proportion to sample size(PPS n1=$\frac{nN1}{N}$)
Service	320	42
Construction	419	55
Trade	300	39
Urban agriculture	457	60
Manufacturing	746	98
Textile	411	54
TOTAL	2653	348

Table 3.2 The Sample Sector from Each S/City.

NO	S/city	MSEs	Sample Taken From Each S/city	Sample Taken From Each Sector					
				Service	Construction	Trade	Urban-agriculture	Manufacturing	Textile
1	Addis ketema	525	69	8	11	8	12	19	11
2	Misrak	145	19	2	3	2	3	6	3
3	Hayk dar	333	44	5	7	5	8	12	7
4	Meneharia	340	45	5	7	5	8	13	7
5	Bahil adarash	268	35	4	6	4	6	10	5
6	Tabor	573	75	9	12	8	13	21	12
7	Mehal	306	40	5	6	5	7	11	6
8	Tula	161	21	3	3	2	4	6	3
	TOTAL	**2653**	**348**	**41**	**55**	**39**	**61**	**98**	**54**

Source: Researcher's Own Computation, 2024

3.6. Method of Data Analysis

The survey data was processed, coded, and uploaded into Stata version 14. The analysis used descriptive statistical approaches such as frequencies, means, standard deviations, percentages, and chi-square tests. Narration will be used to examine data collected from key informant interviews and focus group talks. For empirical data analysis, the study employs the regulation approach to identify the impact of independent variables on credit access, and the PSM technique to find the impact of credit limits on firm performance. Probit modeling was used to calculate the propensity score, and the results were presented in graphs and tables.

3.6.1 Impact Assessment at MSEs Level

Credit constraints have a significant impact on MSE performance, particularly in terms of employment and yearly sales growth. To measure the impact of credit limits, we adopt the methodology proposed by Piabuo et al. (2015), which compares annual sales and employment growth between enterprises with and without credit. Furthermore, the assessment must be adjusted at specified levels to account for variations in observable MSE characteristics. The program's impact is then assessed at each level based on average yearly performance, using the propensity score matching method to compare MSEs performance with and without credit.

3.6.2. Impact Assessment Approaches

When the study topic contains observational data, a balanced sample in both treatment and control groups is required to account for confounding factors, and causal effects must be estimated, the PSM method is preferred over other approaches. PSM can produce consistent and accurate estimates of treatment effects because of its capacity to construct comparable groups based on observable features and adjust for potential sources of bias in non-randomized settings. One of the primary reasons to choose the Propensity Score Matching (PSM) method over other approaches, such as Difference-in-Differences (DID), is the specific research question, data set, and hypotheses to test. The PSM approach offers some advantages and is better suited to specific research designs and analyses. Some reasons to choose PSM over alternative methods are:

Observational data: PSM is beneficial when dealing with observational data, where treatment assignment is not random. This method helps create a quasi-experimental study design by mimicking random treatment assignment, allowing researchers to estimate causal treatment effects without a fully randomized experiment.

Comparability of treatment and control groups: PSM ensures that treatment and control groups are as closely comparable as feasible in terms of observable characteristics. These address concerns about selection bias and minimizes differences between groups that could confound the estimated treatment effect.

Balance of covariant: PSM seeks to create a matched sample of observed variables (covariant) between the control and treatment groups. This balance of covariant reduces the possibility of biased estimates due to omitted variable bias.

Focus on causal effects: PSM enables researchers to estimate the average treatment effect on the treated (ATT) or the average treatment effect (ATE), which are relevant quantities of interest when studying causal relationships between an intervention and an outcome of interest.

Reduction of dimensional: PSM reduces the data set multidimensional by generating a single propensity score. This simplification allows for less complex analysis and a more accessible interpretation of results.

Robustness and sensitivity analysis: PSM allows for robustness and sensitivity checks, which help researchers, assess the stability and sensitivity of their estimates to unobserved con founders or alternative matching algorithms.

Different ways can be taken to evaluate the impact of credit limits on enterprise performance. In this study, Buyinza and Bbaale (2013) technique was utilized to assess the influence of credit limitations on MSE performance. These researchers investigated the characteristics that influence credit accessibility among industrial enterprises. They investigated the credit impact on micro and small enterprises (MSEs) by comparing their performance with and without credit limits. The researcher also evaluates the study conducted by Ruslan (2018), which investigated the credit impact of guarantees on the manufacturing firms using propensity score matching.

3.7. Model Specification

For micro and small enterprises (MSEs), there is a lack of formally reported business performance data. Researchers need to depend on self-reported measurements, which poses a greater problem because MSEs frequently lack formal records of their business transactions. The most commonly used indicators of MSE performance are sales and employment growth (Oh et al., 2009; Akoten et al., 2006; Ayyagari et al., 2010). This study, like Ayyagari et al. (2010), analyzes annual sales and employment data to develop the following growth indicators for MSEs. First, sales growth is defined as the log change in total sales by MSE I from the previous five years to the current period. Second, employment growth is calculated by taking the logarithm of the current number of workers in MSE I and comparing it to the past five years. The use of logarithms to adjust dependent variables has the advantage of restricting their range and making underestimates more susceptible to extreme values (Wooldridge, 2009).

3.7.1. Propensity Score Matching - Model Specification

Propensity Score Matching (PSM) is a statistical technique used to quantify the causal effect of a treatment by balancing the distribution of observable covariant across treated and control groups. It allows researchers to generate similar groups by assigning individual units to organizations depending on their likelihood to receive treatment. The researcher used the steps outlined below to determine PSM treatment and control groups. First, it is critical to determine the type of the treatment and the intended beneficiaries. The treatment group includes units that received a specific intervention or credit. On the other hand, a control group is a group of units that have not received the treatment or credit but are otherwise similar to the treated units in terms of their observed characteristics. The following needs data on variables that may affect the treatment assignment and the outcome variable. These variables, often called con founders or covariant, must be observed for all treatment and control group units. Examples of covariate can include demographic variables, Finance information of MSE businesses, credit borrower or credit unconstrained, Non-borrowers or credit constrained, MSE characteristics, owner/manager characteristics, borrower economic resource and other relevant contextual factors. Once the researcher has collected the relevant data, the next step is to estimate the propensity score. The propensity score, typically denoted as P(X), is the conditional probability of receiving the treatment given the observed covariant X. We use a statistical model such as probit regression to estimate the propensity score. In

Probit regression, the cumulative standard normal distribution function $\Phi(\cdot)$ is used to model the regression function when the dependent variable is binary, that is, we assume

$$E(Y|X) = P(Y=1|X) = \Phi(\beta_0+\beta_1 X) \quad \text{.....(3.2)}$$

Where Φ Is the CDF of the standard normal distribution

Probit uses a linear line to capture the Z-score, $Z=\beta_0+\beta_1 X$ in (3.2) plays the role of a quantile z. Remember that $\Phi(z) = P(Z \leq z)$, $Z \sim N(0, 1)$ Such that the Probit coefficient β_1 in (3.2) is the change in z associated with a one unit change in X. Although the effect on z of a change in X is linear, the link between z and the dependent variable Y is nonlinear since Φ is a nonlinear function of X Since the dependent variable is a nonlinear function of the regression, the coefficient on X.

Probit model is a type of regression where the dependent variable can only take two value which are 0 or 1.estimating model that emerge from normal cumulative distribution function (CDF) is popularly known as probit model.

In this model, the dependent variable is the treatment status (whether a unit belongs to the treatment or control group), and the independent variables are the observed covariant. With the propensity scores estimated, then match the treated and control units based on their propensity scores. There are various matching methods, such as nearest-neighbor matching, radius matching, stratified matching, and kernel matching.

Kernel matching: is a non-parametric method that establishes the weights for treated and control group units based on the distance of their propensity scores. This technique considers various covariant patterns by estimating the average treatment effect for each unit in the treated group using all control units.

Nearest Neighborhood Matching: Nearest neighborhood matching involves matching each treated unit with a control unit with the closest propensity score. It can be performed with or without replacement.

Radius **Matching:** In radius matching, each treated unit is matched to one or more control units based on a specified caliper (or range) of propensity scores. This method balances the trade-off between bias and variance by setting the caliper width.

Stratification: Divides the propensity score distribution into intervals and estimates treatment effects within each interval (stratum). Reduces biases within strata and does not require a specific matching technique. It requires sufficiently large samples within each stratum; different intervals can give different results.

The goal is to discover control units with similar propensity scores as the treatment units in order to form comparable groups. Following matching, it is critical to determine if the matching process adequately balanced the variables between the control and treatment groups. We can visually inspect the distribution of propensity scores and use statistical tests like standardized mean differences and t-tests to ensure that the groups have similar observed features. Estimate the treatment effects: Once the control and treatment groups have been created and the covariant have been balanced, we can estimate the treatment causal influence by comparing the treatment group average outcomes to those of the matched control group. Depending on the research question, we may be interested in average treatment effects and treatment effects on the treated. In order to demonstrate the reliability of the estimation, this study employed three matching methods.

The core concept of PSM is to pair constrained and unconstrained traits with the same observable traits (X). This model relies on three main components: the individual, represented by MSEi; the treatment, which is binary and represented by D (1 if the MSE received credit, and 0 if not); and the possible outcomes. The effect of treatment on MSE I can be expressed as follows:

$$\delta i = Y1i - Y0i \quad \text{.....eq(3.3)}$$

Two parameters are most typically utilized for estimation in the literature (Caliendo et al. 2008). Caliendo et al. (2008) define the average treatment effect (ATE) as the difference in expected outcomes for control and treated observations. Second, ATT refers to the variation in outcomes between those treated and those who were not treated. To illustrate:

$$\delta_{PSM}^{ATT} = E(Yi|X, D = 1) - Ex[E(Yi|X, D = 0)|D = 1] \quad \text{.....eq(3.4)}$$

Y_i Outcome of interest (MSE performance) sales growth and employment growth, Log differences between 2018 and 2022.

D is credit participation; = 1 if MSEs with credit; =0 otherwise.

X Covariant of the observed factors including MSE owner/manager characteristics (gender, age, marital status, and experience),MSE characteristics (age of enterprise, number of members and sector),Networking and Borrower economic resource.

$E(Yi|X, D = 1)$ Represents the expected outcome for the treated group (D = 1) given their observed characteristics (X).

$E(Yi|X, D = 0)$ Represents the expected outcome for the untreated group (D = 0) given their observed characteristics (X).

$Ex[E(Yi|X, D = 0)|D = 1]$ Is the expected outcome for the untreated group, but conditional on them having the same observed characteristics as the treated group.

The difference between these two expected outcomes, E(Yi|X, D=1) and Ex[E(Yi|X, D=0)|D=1], is the ATT using PSM, which calculates the impact of the treatment on the treated group by comparing their observed outcomes to the expected outcomes if they had not received the treatment, considering their characteristics (X). The difference between these two expected values estimates the average treatment effect on the treated group. Calindo et al. (2008) define the expected value of ATT as a variation in expected outcome values for individuals who participated in the treatment against those who did not. This study focuses on the ATT parameter (Ghalib et al., 2014; Peprah et al., 2016; Silva, 2012). The estimation of ATT must satisfy two underlying assumptions:

- **Conditional independence (Y_1, Y_0)⫫D|X:** This assumption, also known as observable selection, demands that all factors significant to the likelihood of receiving the treatment be observed and included in X, allowing the untreated units to be used to create an unbiased counter factual for the treatment group (Ruslan, 2018).
- **Common support or Overlap:** Indicates the positive possibility of being unconstrained or constrained for each individual value. The concept of common support demonstrates that enough overlap in the features of treated and untreated units to identify appropriate matches. Therefore, MSEs that fall beyond the common support zone are deleted, and the treatment impact of these MSEs is not examined (Ruslan, 2018).

Lastly, the average treatment effects were calculated by comparing the outcomes (y) between the matched treated and control observations.

Y = {(y_1 if D = 1) (y_0 if D = 0)}

In this expression, **y** represents the outcome variable, with **y1** being the outcome for the treatment group (unconstrained) and $\mathbf{y_0}$ being the outcome for the control group (constrained). The variable **D** indicator is 1 for the treatment group and 0 for the control group.

3.8. List of Outcomes and Explanatory Variables

3.8.1 Outcome Variable

The study includes two response variables. The first response variable represents MSE's sales volume, while the second is MSE's employee growth. Each response variable is measured using both controlled factors, such as gender, marital status, education level, sector, age, experience, age of the enterprise, number of members of the enterprise, source of credit, and payment term.

Table3.3. out Come Variable.

No	Outcome /dependent variable	Measurement type
1	Sales volume	Continuous
2	The growth of employees in the MSEs	Continuous

3.7.2. Explanatory Variables

A predictor variable is a variable used in regression to determine the outcome variable. A predictor variable is a variable used in regression to determine the outcome variable. It gives information about an associated dependent variable in relation to a specific result. As a result, the definitions and descriptions of the predictive variables included in the model for this study are as follows.

Table3.4. Explanatory Variables.

Explanatory variables	Measurement Type
Sex of the owner/manager	Dummy(0 = Female 1= Male)
Marital Status of the owner	Dummy(0= Single 1=Married)
Age of the owner /manager	Continuous variable
Experience	A vector of dummy variables of experience where: 1 if the owner/manager has business experience, 0 otherwise
Year of MSE doing Business	Continuous
Number of members in MSE	Continuous
Sector	Categorical 1=Manufacturing 2=Trade 3=Construction 4=Urban-Agriculture 5=Service 6=Textile
Access to Loan	Dummy (0= No 1= Yes)
Source of credit	Categorical 1=bank 2=MFI 3=credit-union 4= other
Term for payment	A vector of dummy variables of the term for payment where: 1 if a debt is a long term, 0 for short term

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, AND INTERPRETATION

This section analyzes the study findings based on the information collected. It is subdivided into descriptive and econometric results. The study's objective was to investigate the impact of credit on the performance of micro and small enterprises (MSEs) in Hawassa city administration.

4.1. Descriptive Data Analysis

4.1.1. Questionnaires Response Rate

The study targeted 348 respondents as the sample size for the study. Of the 348 questionnaires distributed, 343 were completed and returned, yielding a response rate of 99%, which is great for research. According to Mugenda et al. (2003), more than 70% is an excellent response rate, 60% is reasonable, and 30% is not practical. This estimate was large and significant for future studies.

4.1.2. Profile of the Respondents in Terms of Owner-Manager Characteristics

Table 4.1 shows the demographics of the sampled respondents. The relationship between credit-constrained and unconstrained groups was investigated using chi-squared. It reveals that 60 percent of the respondents (207) were men and 40 percent were women (136). The Chi-Square test found a significant connection ($\chi 2 = 153.831$, $N = 343$) between genders and credit usage, both unconstrained and constrained. The majority of credit borrowers and non-borrowers were men (87 unconstrained and 120 constrained) respondents (60%) against women (56 unconstrained and 80 constrained) respondents (40%). Out of 343 responses, 69% were under the age of 35, with a comparatively small proportion (31%) lying between the ages of 36 and 45. When categorized into two groups, unconstrained and constrained, a significant percentage (75% and 60%) of credit non-borrowers and borrowers were in the below-35-year-old age category. Concerning marital status, most of both groups were single (56%), with 37% married and 7% separated. The Chi-square test showed an important distinction in the status of marriage between unconstrained and constrained groups ($\chi 2 = 1.03$; $N = 343$), indicating that the majority of creditors are married or separated.

Respondents were asked for their level of academics. They were classified into four educational attainment categories: bachelor's degree, TVET, secondary school and primary school. According to the poll results, 51% of MSE owners have a bachelor's degree, while 4% have just completed primary school. Credit non-borrowers were more likely than borrowers to hold a bachelor's degree (51% vs. 43%). According to survey data, 51% of MSE owners hold bachelor's degrees, while 4% have just completed primary school. Credit non-borrowers were more likely than borrowers to have a bachelor's degree (51% against 43%). The chi-square test also reveals a statistically significant difference between credit-constrained and unconstrained groups at the 14% level. The majority of respondents (69%) had prior work or business experience in the role of owner/manager. Table 4.1 provides a summary of these findings.

Table 4.1: Profile of the Sample Respondents In Terms of MSE Owner/Manager

		Credit constrained (N1=200)		**Credit unconstrained (N1=143)**		**All Respondents(N=343)**		**Statistical test(χ2)**
		Count(n1)	**% to N1**	**Count(n2)**	**% to N2**	**Sub-total**	**% to N4**	
Sex of the owner/manager	Female	80	40	56	40	136	40	153.831
	Male	120	60	87	60	207	60	
	Total	200	100	143	100	343	100	
Age	Below 35 years	150	75	85	60	235	69	
	36–45 years	50	25	58	40	108	31	8.79483
	46–55 years	0	0	0	0	0	0	
	More than 55 years	0	0	0	0	0	0	
	Total	200	100	143	100	343	100	
Marital	Single	112	56	88	61	200	58	

status	Married	74	37	44	32	118	35	1.03143
	Divorce	14	7	11	7	25	7	
	Total	200	100	143	100	343	100	
Educational level	Primary school	8	4	13	10	21	7	14.05
	Secondary school	28	14	36	25	64	19	
	TVET school	62	31	32	22	94	27	
	Bachelor's degree	102	51	62	43	164	48	
	Total	200	100	143	100	343	100	
Experience	No	74	37	32	22	106	31	8.80265
	Yes	126	63	111	78	237	69	
	Total	200	100	143	100	343	100	

Sources: Author's calculations based on the survey, 2023

4.1.3. Profile of the Respondents in Terms of Characteristics of MSEs

Table 4.2 shows MSE characteristics by year of existence, sector, and number of members, full-time employees, and annual revenue. According to the survey results, the majority of non-borrowers (37%) and borrowers (39%) have been in business for less than five years. The sample's oldest MSEs had been in business for at least 16 years (6%). The statistical test reveals a significant difference in the year of MSE founding between credit-unconstrained and credit-constrained businesses at the 16% significance level. The manufacturing industry accounts for the bulk of firms (38%), followed by construction (22%), and services (20%). The poll also found that MSEs with three members were more likely to engage in credit operations. In 2018, the average yearly sales for the majority of loans, both unconstrained and constrained, were between $100,000 and $500,000. Between 2018 and 2022, the average yearly revenues of both credit-constrained and unconstrained enterprises fell. Table 4.2

shows an increase in the average number of workers from 3 to 7 persons. The results of the findings are shown in Table 4.2

Table 4.2: Profile of the Sample Respondents In Terms of Characteristics of the Sample MSEs

		Credit constrained (N1=200)		Credit unconstrained (N1=143)		All Respondent(N=343)		Statistical test	
		Count(n1)	% to N1	Count(n2)	% to N2	Sub total	% to N4	X^2	t
Year of MSE doing Business	less than 5 year	74	37	55	39	129	38	3.458	
	5-7 years	44	22	35	24	79	23		
	8-11 years	36	18	31	21	67	19		
	12-15 years	32	16	16	11	48	137		
	more than 16 years	14	7	6	4	20	6		
	Total	200	100	143	100	343	100		
Sector	Service	30	18	32	22	62	20		
	Urban agriculture	10	15	20	19	30	17	5090	
	Textile	30	17	26	18	56	17		
	Manufacturing	60	40	45	36	105	38		
	Trade	20	10	5	5	25	8		
	Construction	50	30	15	10	65	22		
	Other specify	0	0	0	0	0	0		
	Total	200	100	143	100	343	100		
Number of members in MSE	2	8	4	36	25	44	13		
	3	56	28	50	36	106	31		
	4	68	34	33	23	101	30	49.47	

	5	26	13	17	12	43	12	
	Over 5	42	21	7	5	49	14	
	Total	200	100	143	101	343	100	
	N	200		143		343		
Annual sale in 2018	Mean	478679.2		507706		490878.8		-0.646
	Standard deviation	407687.1		415037		410442.3		
	N	200		143		343		
Annual sale in 2019	Mean	467059		493206		478048.4		-0.587
	Standard deviation	404551		410617		406722.2		
	N	200		143		343		
Annual sale in 2020	Mean	467090		493236		478079.1		-0.587
	Standard deviation	404551		410617		406722.1		
	N	200		143		343		
Annual sale in 2021	Mean	226712		278935		2E+05		-1.438
	Standard deviation	308979		349207		327017.3		
	N	200		143		343		
Annual sale in 2022	Mean	467115		493262		478104.3		-0.587
	Standard deviation	404552		410617		406722.3		
No of full time worker	N	200		143		343		
	Mean	3.745		3.68276		3.71884		0.439

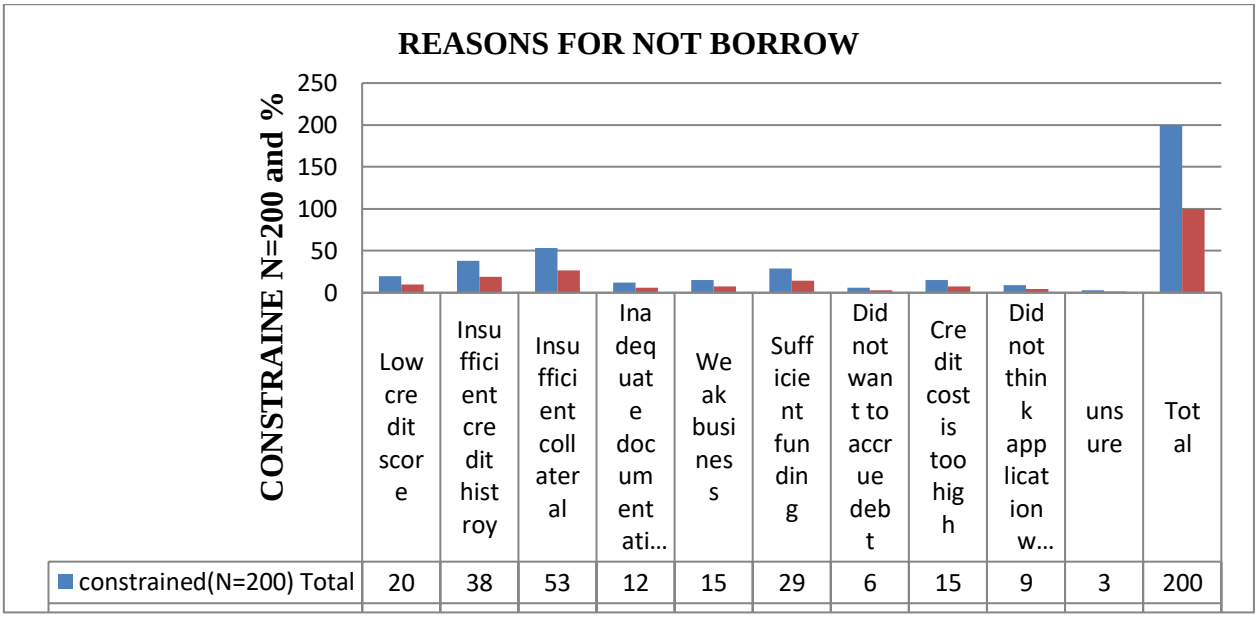
in 2018	Standard deviation	1.333743	1.27314	1.3071	
No of full time worker in 2019	N	200	143	343	
	Mean	5.095	5.13793	5.11304	-0.285
	Standard deviation	1.42694	1.34691	1.39204	
No of full time worker in 2020	N	200	143	343	
	Mean	5.395	5.22759	5.3264	1.099
	Standard deviation	1.40672	1.38817	1.39938	
No of full time worker in 2021	N	200	143	343	
	Mean	7.395	7.22759	7.32464	1.099
	Standard deviation	1.40672	1.38817	1.39938	
No of full time worker in 2022	N	200	143	343	
	Mean	7.095	7.13793	7.11304	-0.285
	Standard deviation	1.42694	1.34693	1.39204	0

Sources: Author's calculations based on the survey, 2023

4.1.4. Reasons for Not Borrowing or Being Constrained for Credit

From 343 surveyed respondents, 200 are constrained by credit or are non-borrowers. Constrained respondents were asked why they did not borrow, and a number of economic resource factors were discovered. Fig.4.1. Presents the critical reasons for MSEs not applying or being constrained after they apply for credit. The results show that 20 respondents said they had a low credit history. Other possible reasons include MSEs not asking for a loan or being constrained to credit because of the characteristics of the loan, the insufficient credit history (19%), insufficient collateral (26.5%), inadequate capital (6%), weak business (7.5%), sufficient funding (14.5%), not wanting to accrue debt (3%), not thinking the application

would be approved (4.5%), being unsure of the reason (1.5%), and the credit cost being too high (7.5%).



Source: Author's calculations based on the survey, 2023

Figure 4.1 Reasons for not borrowing or constrained for credit

4.1.5. Profile of the Credit Borrower

According to Table 4.3, 55% of MSEs borrow from micro finance institutions. MSEs choose large commercial banks (16%) and credit unions (25%).Based on the preferences of MSEs. According to the study's findings, the bulk of borrowers borrowed less than 100,000 birr (42%) and between 1,000,001 and 1,500,000 birr (12%) at one time. MSEs seek credit loans to cover operating costs (31%), expand their business sites (41%), examine new opportunities (15%), refinance or pay off debt (8%), and for other reasons (5%). According to the findings, the most common reasons borrowers chose credit were rapid processing time frames. (34%), followed by no collateral (25%), simple access (16%), low interest rates (13%), and lower transaction costs (12%). Finally, half of the borrowers obtained medium-term (51%), and short-term (40%).

Table 4.3 Credit Borrower Information

		Unconstrained(N=143)	
		Total	**%**
Type of institution	Large/commercial banks	21	11
	Credit union	36	18
	Micro finances	80	40
	Other	6	3
	Total	143	100
Single credit amount	<100,000	59	30
	100,001-500,000	39	20
	500,001-1,000,000	28	14
	1,000,001-1,500,000	17	9
	Total	143	100
Single credit amount Approved(in birr)	All (100%)	17	9
	Most (51%-99%)	73	37
	Some (25%-50%)	34	17
	Less than (25%)	19	10
	Total	143	100
loan purpose	Meet operating expenses	43	22
	Expand business	59	30
	Pursue new opportunity	22	11
	Refinance or pay down debt	12	6
	Other	7	4
	Total	143	100
Reasons for	No collateral	34	23

choosing the credit scheme	Low interest rate	20	14
	Fast processing time	49	34
	Easy access	23	16
	Transaction cost is less expensive	17	12
	Total	143	100
Duration of loan payment	Short term(<1 years)	58	40
	Medium(1-3 years)	74	51
	Long>3 years	11	8
	Total	143	100

Sources: Author's Calculations Based on the Survey, 2023

4.2. Econometric Analysis

4.2.1. Regression Analysis

Regression analysis was used to determine how much the independent variable explains credit access. It is also used to determine how much variability each independent variable accounts for in the dependent variable. The model summary in the table above shows how much of the variation in the dependent variable is explained by the model. The multiple coefficient of determination, abbreviated as R square, is 0.7309. The R square value indicates that the model accounted for 73.1 percent of the variation in the dependent variable. This shows that 73.1% of MSEs' credit availability is definitely determined by the independent variables, with the remaining 27% determined by additional unaccounted factors in the study. Adjusted R squared (adj. R2) is 0.7220. It means that 72.2 percent of the total variability of the credit access is explained by the stated 11 independent variables and 24 percent of it is explained by other variables. As the regression result in the table 4.4 shows the result F= 81.74 and p=0000<0.05, it can be concluded that the combination of independent variable have positive significant effect on dependent variable which is statistically significant. Consequently, this study rejects the null hypothesis.

Table 4.4. Regression Result of stata 14.

					No of Obs	343
					F(11,331)	81.74
					Prob > F	0.0000
					R-squared	0.7309
					Adj R-squared	0.722
					Root MSE	0.26035
Credit access	**Coef.**	**std.Err.**	**T**	**P>|t|**	**[95% Conf. Interval]**	
Gender	0.6635	0.09288	2.27	0.024	0.0087363	0.1239645
Age	0.05998	0.00411	6.33	0.000	0.0179144	0.0340822
Marital status	0.00587	0.09063	0.2	0.840	-0.0512983	0.063045
Education	-0.1092	0.01916	-5.7	0.000	-0.1468424	-0.0714585
Age of enterprise	0.04495	0.00533	8.44	0.000	0.0344715	0.0554356
Sector	-0.097	0.01116	-8.69	0.000	-0.1189122	-0.0750182
source of credit	0.1652	0.01374	12.02	0.000	0.1381606	0.1922264
Long term	-0.0089	0.04469	-0.2	0.840	-0.0959118	0.0780907
Short term	0.37306	0.0516	7.23	0.000	0.2715479	0.4745626
Experience	0.49008	0.16916	2.9	0.004	0.1573283	0.8841
no of members	-0.1483	0.13155	-1.13	0.260	-0.4071167	0.1104569
Cons	-0.3933	0.11269	-3.49	0.001	-0.6149984	-0.1716283

4.2.2. Propensity Score Matching

To assess the impact of credit at the enterprise level, adjustments must be made to account for the difference between enterprises that have access to credit and those that do not. To compare the control and treatment groups, the researcher applied propensity score matching to the observed data. Propensity score matching is an impact evaluation technique that

leverages observed features to better match control and treatment groups (Khandker, 2010). In the absence of baseline data, the model found and examined close correlations between the control and intervention groups. During the analysis, characteristics such as gender, age, education, marital status, number of years in business, sector, source of finance, and long-term and short-term experience were utilized to match the firms' control and intervention groups.

The outcome variables are being tested for change; therefore the log of annual sales and the log of employment growth are both continuous variables. The majority of economic research requires multicollinearity and heteroscedasticity testing. However, these tests were not used in this study because the heteroscedasticity error factor has little influence on the estimated intervention effect in propensity score matching (Williams, 2009). This study did not require multicollinearity tests since multicollinearity suggests a linear relationship between some or all of the regression model's explanatory variables (Gujarati, 2004).

To calculate the propensity score, a probit model was used where the outcome variables (log annual sales and log employment growth) were regressed against sex, age, marital status, education, number of years in a business, sector, source of credit, long-term and short-term experience, and number of member. The results for the regression are shown in Table 4.5 below.

4.2.4. Probit Regression Analysis

The top of the result shows that all 343 observations from our data set were considered in the study. The likelihood ratio chi-square of 417.5 with a p-value of 0.0000 indicates that our model as a whole is statistically significant, meaning it fits significantly better than a model without predictors. The table shows the coefficients, their standard errors, the z-statistic, the related p-values, and the coefficients' 95% confidence intervals. Age, education, age of firm, sector, source of finance, and short term are all statistically significant. The probit regression coefficients provide the change in the z-score or probit index for a single unit change in the predictor.

Table 4.5 Probit Regression

					No of Obs	343
					LR chi2911)	417.5
					Prob > chi2	0.0000
					Pseudo R2	0.8954
Log Likelihood	-24.367					
Credit access	Coef.	std.Err.	z	P>|z|	[95% Conf.	Interval]
Gender	0.709074	0.454228	1.56	0.1190	-0.181196	1.599344
Age	0.287225	0.064496	4.45	0.0000	0.160814	0.4136355
Marital status	-0.44332	0.443565	-0.55	0.5820	-1.113703	0.6250385
Education	-0.93837	0.280366	-3.35	0.0010	-1.487878	-0.388864
Age of enterprise	0.797975	0.22208	3.59	0.0000	0.3627074	1.233243
Sector	-1.19525	0.237693	-5.03	0.0000	-1.661124	-0.729383
source of credit	3.260045	0.971799	3.35	0.0010	1.355354	5.164735
Long term	2.788607	1.57557	1.77	0.0770	-0.299459	5.876673
Short term	6.44157	1.896637	3.4	0.0010	2.74232	10.15891
Experience	-0.40638	1.283662	-0.32	0.7520	-2.92231	2.109553
nu of members	4.714747					
Cons	-17.7405		-3.94	0.0000	-26.55475	-8.92628

Sources: Stata 14 Result Based on the Author's Survey, 2023

According to the estimated findings in Table 4.5, marital status, education, sector, and experience are all adversely associated. All other variables are positively connected with MSEs' access to credit. The balancing property was met, and 143 borrowers and 200 non-borrower groups were assigned to the predicted common support regions. The common support zone was between 0.03634323 and 1. This indicates that the greatest propensity score was one, and the lowest was 0.03634323. The average propensity score was 0.5, indicating that the respondent's chances of engaging in the credit scheme are 50%. The predicted

propensity score and common support are shown in the appendix. The final number of blocks calculated was six, guaranteeing that the mean propensity score does not differ between treated and controls in each block. The analysis uses this information as a basis for all matching methods. The strata of blocks used to satisfy the propensity score balancing characteristic.

Table 4.6 Common support region

	common support		
Treatment assignment	Off support	On support	Total
Untreated	0	200	200
Treated	114	29	143
Total	114	229	343

Sources: Stata 14 Result Based on Author's Survey, 2023

4.2.5. Impacts of Credit Constraint

4.2.5.1. Impacts of credit constraint on enterprises annual sale growth

The propensity score model was used to compare the data for each identified variable to the expected outcome. The aggregate scores were then used in the propensity score matching model to estimate the impact of loan limits on the targeted firms. The 200 credit non-beneficiaries were linked with 143 beneficiaries. The propensity scores are separated into intervals according to their range of values. Each interval includes treatment, but non-treatment subjects have nearly equal propensity scores. The average treatment impact is derived by comparing the outcomes of the treatment and control groups. It is the average of treatment outcomes per block, weighted by the distribution of treated patients throughout the blocks. For this study, we use three matching methods were used for the interpretation of the results. The result generated by employing a PSM indicates that the average log annual sale of beneficiary MSEs was higher by 0.0005 than the log annual sale of non-beneficiary MSEs, and it was significant.

Table 4.7 Summary of Credit Impact on the Enterprises Annual Sale Growth

Credit access=0					
Variable	**Obs**	**Mean**	**std.dev.**	**Min**	**Max**
Log annual sale	200	0.7470781	0.940972	0.4771213	1
Gender	200	0.545	0.4992205	0	1
Age	200	25.055	0.4955835	15	29
Marital status	200	0.575	0.4955835	0	1
Education	200	2.235	0.7433288	1	3
Number of years	200	5.42	2.688819	1	11
Sector	200	3.485	1.303175	1	6
Source of credit	200	0.52	1.031952	0	3
Long term	200	0.36	0.4812045	0	1
Short term	200	0.165	0.372112	0	1
Experience	200	0.025	0.1565167	0	1
No of member	200	0.025	0.1565167	0	1
Credit access=1					
Variable	**Obs**	**Mean**	**std.dev.**	**Min**	**Max**
Log annual sale	143	0.7466195	0.0960738	0.4771213	1
Gender	143	0.6153846	0.4882143	0	1
Age	143	30.30769	7.56589	13	44
Marital status	143	0.6153846	0.4882143	0	1
Education	143	2.048951	1.182791	0	3
Number of years	143	9.447552	5.395197	1	20
Sector	143	2.524476	2.132354	1	6
Source of credit	143	2.174825	0.744129	1	4
Long term	143	0.4895105	0.501647	0	1
Short term	143	0.2307692	0.422806	0	1
Experience	143	0.034965	0.1843369	0	1
No of member	143	0.0699301	0.2559255	0	1

Source: Stata 14 Result Based on the Author's Survey, 2023

Table 4.8 summarizes the estimated average treatment effect of credit participation on the treated (ATT). Using many matching algorithms eliminates any flaws that could occur if we relied solely on one strategy. It also aids in tracking the reliability of the estimated impact (Ghalib et al., 2014). In Table 4.8, the first column provides the outcome variables, while the second column reports the number of treatment and control groups employed in the matching procedure. The next three columns show the ATT for sales growth, standard errors, and t-statistics. ATT is the difference between estimated outcome values with and without therapy

for MSEs who took part in the treatment. The result generated by employing the matching approach indicates that the log of annual sales of unconstrained MSEs was higher by 0.105 to 0.127 than the log of annual sale of MSEs of constrained MSEs, and it was significant as t-values were greater than two and slightly two. This shows that credit enabled an increase in the log of annual sale of MSEs of unconstrained MSEs compared to constrained MSEs, and these results confirm the descriptive result explained before. Appendix 2 presents the results of credit impacts on the log of MSEs' annual sales using all matching methods. The findings of the PSM analysis show that credit has a positive and significant impact on sales growth.

Table 4.8 Average treatment effect on MSEs' sale growth using three matching method

Matching method	Treatment	Control	ATT	Std. Error	T
Nearest neighbor	143	8	0.127	0.068	1.86
Kernel	143	26	0.126	0.084	1.502
Radius	143	19	0.105	0.040	2.6

Source:Stata 14 Result Based on Author's Survey, 2023

Matching approaches are used in observational studies to quantify the causal effects of a treatment or intervention on an outcome while controlling for apparent confounding factors. The number of control and treatment variables may differ between matching methods depending on the method employed, the number of units in each group, and the level of covariant balancing in each method. Finally, changes in the number of control and treated variables could be explained by the specific matching method used, the data quality, and the covariant balance between the treatment and control groups. To minimize discrepancies between treated and control units and accurately estimate causal effects, one must select the most appropriate matching approach for their study and the available data.

4.2.5.2. Credit impact on employment growth

Table 4.9 presents estimates of the credit's influence on employment growth. The results obtained using a matching technique show that the average log annual employment growth of unconstrained MSEs was 0.01505 larger than the log annual employment growth of restricted MSEs, which was statistically significant.

Table 4.9 Summary of Credit Impact on the Enterprises Employment Growth

Credit access=0					
Variable	**Obs**	**Mean**	**std.dev.**	**Min**	**Max**
Log emplo growth	200	5.442989	0.4580157	4.175144	6.07917
Gender	200	0.545	0.4992205	0	1
Age	200	25.055	0.4955835	15	29
Marital status	200	0.575	0.4955835	0	1
Education	200	2.235	0.7433288	1	3
Number of years	200	5.42	2.688819	1	11
Sector	200	3.485	1.303175	1	6
Source of credit	200	0.52	1.031952	0	3
Long term	200	0.36	0.4812045	0	1
Short term	200	0.165	0.372112	0	1
Experience	200	0.025	0.1565167	0	1
No of member	200	0.025	0.1565167	0	1
Credit access=1					
Variable	Obs	Mean	std.dev.	Min	Max
Log emplo growth	143	5.458039	0.4884215	4.175144	6.07917
Gender	143	0.6153846	0.4882143	0	1
Age	143	30.30769	7.56589	13	44
Marital status	143	0.6153846	0.4882143	0	1
Education	143	2.048951	1.182791	0	3
Number of years	143	9.447552	5.395197	1	20
Sector	143	2.524476	2.132354	1	6
Source of credit	143	2.174825	0.744129	1	4
Long term	143	0.4895105	0.501647	0	1
Short term	143	0.2307692	0.422806	0	1
Experience	143	0.034965	0.1843369	0	1
No of member	143	0.0699301	0.2559255	0	1

Source: Stata 14 Result Based on Author's Survey, 2023

The results obtained using the matching approach show that the log of annual employment of unconstrained MSEs was -0.416 to 0.493 less than the log of annual employment of constrained MSEs, which was inconsequential because the t-values were less than two. This research demonstrates that credit has no effect on the log of yearly employment growth of beneficiaries versus non-beneficiaries. Table 4.10 shows how credit effects enterprise log yearly employment using all matching approaches..

Table 4.10 the Average Effect on MSEs Employment Growth Using three Matching Method

Matching method	Treatment	Control	ATT	Std. Error	T
Nearest neighbor	143	8	-0.493	0.029	-17.030
Kernel	143	26	-0.492	0.116	-4.25
Radius	143	19	-0.416	0.141	-2.951

Source: Stata 14 Result Based on the Author's Survey, 2023

4.3. Major Challenges for MSEs in Hawassa City Administration

Micro and small enterprises (MSEs) in Hawassa municipal government, as well as throughout Ethiopia, face the difficulty of growing their operations in order to function successfully and efficiently. MSEs in Hawassa confront a number of significant challenges, including limited access to funding, cumbersome government restrictions, and limited market access. These constraints make it difficult for MSEs to expand and thrive, limiting their capacity to make major contributions to the local economy. As a result, attempts to support and overcome these obstacles faced by MSEs are critical for their development and success, but they have been met with the following key problems:

Government regulations: The goal of government regulations is to guarantee that corporations act responsibly and ethically, and to safeguard citizens from damage or exploitation. These regulations are implemented by various government authorities and may include requirements for obtaining licenses, permits, and certifications, as well as consequences for noncompliance. Government rules are designed to create a fair and competitive marketplace while simultaneously protecting the public's well-being. However, there are concerns with the regulation of government in Hawassa, which are:

a) Administrative burden: The paperwork and administrative tasks associated with regulatory compliance can divert valuable time and resources away from core business activities.
b) Lack of awareness: MSEs may struggle to stay informed about changes in regulations, leading to potential non-compliance and associated penalties.
c) Inequitable treatment: Some regulations may disproportionately impact MSEs compared to larger enterprises, creating a perceived or actual imbalance in the regulatory burden.

Challenges to Credit Access for MSEs: The content is likely discussing the challenges that micro and small enterprises (MSEs) face in accessing credit. This could include barriers such as limited access to formal financial institutions, high interest rates, a lack of collateral, and a lack of credit history. These challenges can make it difficult for MSEs to secure the funding they need to grow and expand their businesses. The content may also discuss potential solutions or strategies to address these challenges and improve credit access for MSEs.

Cash flow problem of MSEs: The cash flow problem of MSEs (Micro and tiny Enterprises) refers to the circumstance in which these tiny enterprises have difficulty controlling their incoming and outgoing funds. This might happen for a variety of reasons, including late payments from consumers, high running costs, or insufficient sales revenue.

When MSEs face cash flow issues, they may struggle to pay bills, buy merchandise, or engage in growth possibilities. This can create a cycle of financial instability, impeding the company's overall growth and success.

To address cash flow issues, MSEs may need to enhance their financial management procedures, invoicing and collection systems, negotiate better payment terms with suppliers, or look into external funding possibilities..

a) Irregular income: MSEs often experience irregular or unpredictable income due to factors such as seasonality, fluctuating demand, or delayed payments from customers, making it challenging to maintain consistent cash flow.
b) Working capital management: Many MSEs struggle with effectively managing their working capital, including inventory, receivables, and playable, which can lead to cash flow imbalances and liquidity issues.
c) Limited access to credit: MSEs may face difficulties in accessing credit to bridge gaps in cash flow, leading to challenges in meeting operational expenses, purchasing inventory, or investing in growth opportunities.
d) Inefficient financial management: Some MSEs may lack the financial management skills and systems needed to effectively monitor and control their cash flow, leading to inefficiencies and potential cash shortages.
e) External shocks and unforeseen expenses: External factors such as economic downturns, unexpected expenses, or changes in market conditions can disrupt the cash flow of MSEs, posing additional challenges to their financial stability.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

Based on the presentations, discussions and findings reported in Chapter 4, this chapter draws conclusions and makes recommendations about the influence of credit limits on performance.

5.2 Conclusions

MSEs are the foundation of a country's economy. According to the literature, the most significant impediments to MSE expansion are insufficient financial support and limited access to financing. It is critical to remember that significant research shows that access to finance benefits businesses and supports growth. Without credit, MSEs' growth and development may be limited.

This study seeks to fill gaps in the existing literature by investigating the influence of credit limits on the performance of micro and small businesses (MSEs). To do this, the study compared the impact of credit activities on two groups: those without credit (the control group) and those with credit (the treatment group). The difference in performance between these two groups was calculated using propensity score matching. The study discovered that credit limits cause different modifications than would occur in the absence of such constraints. The study assessed MSE performance by examining sales and employment growth for both credit borrowers and non-borrowers. The findings were summarized as follows:

- Concerning marital status, most of both groups were single (56%), with 37% and 7% married or divorced, respectively. The –ve coefficient on the results show that most of the creditors are married or divorced.
- From the survey results, 51% of MSE owners with bachelor degrees, 4% of MSE owners completed only primary School. The proportion of credit non-borrowers with bachelor's degrees was higher than that of borrowers (51% versus 43%).this show that being educated or having bachelor degree is not the reason to get credit in Hawassa.
- Regarding owner/ manager experience, most respondents (69%) possessed work or business experience before starting their business.-ve coefficient on the result show that experience is not the reason to access credit in hawassa city.
- for marital status, education, sector and experience negatively correlated. All other variables are positively correlated with MSEs' access to credit.

- The result generated by employing the matching approach indicates that the log of annual employment of unconstrained MSEs was less by -0.416 to 0.493 than the log of annual employment of MSEs of constrained MSEs, and it was insignificant as t-values were less than two.

According to the data, credit boosts MSE sales growth but has no significant impact on employment growth. This study looked at three different forms of matching estimators: kernel, nearest neighbor, and radius matching, and all yielded similar results. The researcher considers all independent variables and their potential impact on outcomes, regardless of whether the effect remains constant after controlling for confounding variables. Although the balancing property is satisfied, the outcomes stay constant.

Credit access is crucial for businesses to develop, generate sales, and create jobs. However, it is not the only factor driving employment in the study region. As a result, H1 was accepted, while H0 was rejected in terms of sales growth. H0 was accepted for employment growth H1 rejected.

5.3. Recommendations

The results of this study are crucial for informing recommendations aimed at ensuring sufficient access to credit. Therefore, the study presents the following implications.

This study relies on a sample of MSEs located solely in Hawassa city administration and, therefore, generalizations cannot adequately extend to MSEs outside Hawassa city administration. The findings of this study may not be representative of the whole country. Future researchers can consider other geographical areas to see whether the findings remain consistent.

The study raises the question whether access to credit leads to better performance of Mses. The findings on the impact of access to credit show that credit borrowing has a significant impact on improving the MSEs' sales growth. In contrast, this study finds no strong evidence on the impact of access to credit on employment growth. The possible reason for the insignificant impact of credit on employment growth is that MSEs often employ only a few people, such as friends or relatives as workers. Further study is needed to discover the factors that contribute to accelerating the performance of MSEs.

Financial institutions aim to create a diverse financial sector that should suit the needs of various firms. This includes providing a wide choice of modern credit products and services that are tailored to the specific demands of different business sizes and industries.

Enterprises should have access to non-financial support services such as networking, business advice, and mentor ship alongside financial help. These services can assist business owners navigate challenges and make good decisions. The effect of credit availability on business expansion should be routinely observed and assessed by financial institutions. This can assist them in identifying possible problems, hazards, and opportunities that new financial product.

Encourage collaboration among firms, trade associations, and academic institutions networking can boost growth by facilitating cooperation, information sharing, and access to new markets.

Due to challenges in acquiring financial data from MSEs, the study examined the impact of loan access on sales and employment growth. Most Hawassa MSEs are especially hesitant to show their financial information; therefore they are less cooperative than they could be. Future research could examine other variables, such as total assets, stocks, or equity, in relation to MSEs credit provider selection. However, this study did not assess key credit attributes such interest rate and loan type (group or individual lending). Individual and group lending have become associated with micro finance, thus future researchers might add this variable and compare the two loan kinds.

MSEs access to finance is affected by a variety of circumstances. Recognizing their variability and developing policies and support programs to alleviate these issues is critical. Appropriate awareness of these aspects is therefore necessary in order to address MSEs financial needs help them prosper, and fulfill their goals of creating jobs and reducing poverty. It will also assist governments and non-governmental organizations in developing policies and strategies aimed at satisfying the financial needs of MESs. The necessity of fixed assets for collateral is preventing many MSEs from accepting loans from formal financial institutions and financing their businesses to stimulate growth and diversification of their firms.

Several factors influence MSEs' access to financing. Recognizing their unpredictability and implementing policies and support programs to address these concerns is crucial. Appropriate awareness of these issues is therefore required to handle MSEs financial needs, assist them in prospering, and achieve their goals of job creation and poverty reduction. It would also aid governments and non-governmental organizations in establishing policies and strategies to meet the financial needs of MSEs. Many MSEs are unable to accept loans from formal financial institutions and finance their businesses to stimulate growth and diversification due to the need for fixed assets as security.

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Appendices

Appendix

Addis Ababa University

College of Business and Economics

Department of Economics

Dear respondents,

This is a questionnaire that intended to assess the impacts of credit constraint on performance of MSEs in Hawassa city. **The questions are best answered by an owner or key managerial decision maker**. **Your answers are confidential, and results will be reported only in the aggregate.** The information you provide is totally sought for academic purpose and shall be kept strictly confidential. **The questionnaire takes approximately 10 minutes** Please feel free to share your comments and experiences regarding the credit.

Thank you in advance for your corporation.

Instruction: Circle the choices for closed ended questions and mention your suggestions for

Open ended questions in the space provided.

Part I: general questions

1. Which sub city is your business located in? _____
2. In what year was your business established? (YYYY) . _____
3. Which of the following best describes your business's primary activity? Please select 'ALL other' if you don't see your industry or if you are unsure.
   a) Service
   b) Urban agriculture
   c) Textile
   d) Manufacturing
   e) Trade
   f) Construction
   g) Other specify

Part II: a few questions about the approximate size of your business.

1. Does your business have any paid employees, excluding owner(s) and contract workers?

a) Yes

b) No

c) Unsure. Please explain: _____

2. How many people does your business employ (including owners)?

a) Full-time employees (30+ hours per week) _____

b) Part-time employees (less than 30 hours per week) _____

3. Has your business relied on any contract workers during the past 5 years?

a) No

b) Yes, please enter the number_____

4. What was the annual sales revenue your organization in the last 5 years?

Years	sales in birr			
	<100000	100001-500000	500000-1000000	1000000-1500000
2010				
2011				
2012				
1013				
2014				

PART III: A few questions about your business's performance and challenges.

1. At the end of the last five years, was your business operating at a profit, break-even or at a loss?

a) At a profit

b) At break-even

c) At a loss

d) Unsure

2. How did the following change over the past five years?

	Decreases	no change	Increased
Revenue			
Number of customer			
Production			
Employee			

3. How does your business expect the following to change over the next five years?

	Decreases	no change	Increased
Revenue			
Number of customer			
Production			
Employee			

4. Which of the following challenges, if any, did your business experience in the past five years? Select all that apply.
   a) Government regulations
   b) Taxes
   c) Credit availability
   d) Cash flow (for example, meeting payroll or paying for inventory)
   e) Costs of running business
   f) Growing Revenues/sales
   g) Hiring and/or retaining qualified staff
   h) Other. Please specify: _____
   i) None
5. Which was your business's BIGGEST challenge in the past 5 years? List populates based on selections in
   a) Government regulations
   b) Taxes
   c) Credit availability
   d) Cash flow (for example, meeting payroll or paying for inventory)

e) Costs of running business

f) Growing Revenues/sales

g) Hiring and/or retaining qualified staff

h) Other. Please specify: _____

i) None

part IV: Financing

1. Does your business have any outstanding debt?

   a) Yes

   b) No

   c) Unsure

   If business has debt:

2. How much amount of credit asked in the last 5 years?

Years	Birr			
	<100000	100001-500000	500000-1000000	1000000-1500000
2010				
2011				
2012				
1013				
2014				

If business has debt:

3. How much of credit received in the last 5 years?

Years	Birr			
	<100000	100001-500000	500000-1000000	1000000-1500000
2010				
2011				
2012				
1013				
2014				

4. Was any of the following used as a guarantee or as collateral to secure this debt? Select all that apply.
   a) Personal assets or guarantee
   b) Business assets
   c) Other. Please specify: _____
5. How does your business **primarily** fund its operations?

   a) Retained business earnings

   b) Personal funds of owner(s)

   c) External financing

   If business uses external financing:

6. Which type of external financing does your business **primarily** use?
   a) Equity investments
   b) Loans
   c) Lines of credit
   d) Investment or loans from friends and family
   e) Other. Please specify: _____

   If used external financing:

7. Which types of financing did the business use during its first five years? Select all that apply.
   a) Loans
   b) Business lines of credit
   c) Home equity line of credit
   d) Investment from family/ friends
   e) Other. Please specify: _____

PART V: Credit search

Next, we have a few questions regarding your business's experience seeking financing in the past 5 years.

1. Did your business seek advice on financing options from any of the following in the past 5 years? Select all that apply.
   a) Accountant, consultant, or business advisor

b) Loan broker

c) Banker or lender

d) Friends, family, or colleagues

e) Hawassa city job creation and enterprise buearo.

f) SBDC (Small Business Development Center)

h) Other. Please specify:

i) None

2. Did your business APPLY for any financing in the past 5 years? (Borrowing, leasing, or requesting equity investments – excluding financing provided by owner(s) of business)

a) Yes

b) No

c) Unsure

If selected yes, go to credit applicants section.

If selected no, go to non-applicants section.

If selected Unsure, go to final demographics section.

If business applied for credit

A) Credit applicants

1. For what purpose was your business seeking financing? Select all that apply.

a) Meet operating expenses

b) Expand business (hiring, new products or services, new location, contracts, or capital assets, etc.)

c) Pursue new opportunity (merger or acquisition, purchase of equipment or space that was previously leased, etc.)

d) Refinance or pay down debt

e) Other. Please specify: _____

2. What factors were most important to your business when evaluating credit options? Select all that apply. Please circle the suitable number from 1 to 5, where 1 indicates “strongly disagree” and 5 indicates “strongly agree”

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Existing relationship with lender					
Cost					
Flexibility of the credit product(s)					
Speed of the decision process					
Ease of the application process					
Perceived chance of being funded					

3. In the past 5 years, did your business apply for any of the following? Select all that apply.

   a) Loan or line of credit (including business loans and lines of credit, auto loans, commercial mortgages, cash advances, or non-traditional loans from online lenders)

   b) Equity investment

   c) Leasing

   d) Trade credit

   e) Factoring (the sale of accounts receivable to a third party at a discount)

   f) Other. Please specify: _____

If applied for loan or line of credit:

4. For which type(s) of loan or line of credit product(s) did your business apply? Select all that apply.

a) Business loan

b) line of credit

c) Commercial mortgage

d) Merchant cash advance

5. Where did your business apply for? Large banks operating in your area include: .

   a) Large bank

   b) Small or community bank

   c) Credit union

   d) Micro finances

   e) Other (including government loan funds and community development financial institutions) please specify: _____

If selected micro finance lender:

6. What was the name of the micro finance lender?

a) Name: _____

b) Unsure If applied to more than one product or source OR indicated business applied but did not give product or source information: _____

7. How much of the TOTAL financing dollars your business applied for in the past 5 years was approved?

a) All (100%)

b) Most (51%-99%)

c) Some (1%-50%)

d) None (0%)

e) Unsure

8. Overall, was your business satisfied or dissatisfied with the lender(s) it applied to? For the sources that approved your application, consider the application process as well as the terms of repayment. For sources that did not approve your application, consider only the application process.

	Satisfied	neutral	dissatisfied
large bank			
Micro finance			
credit union			
other lender			

If selected "dissatisfied."

9. Why was your business dissatisfied with it applied to? Select all that apply. For the sources that approved your application, consider the application process as well as the terms of repayment. For sources that did not approve your application, consider only the application process.

a) High interest rate

b) Unfavorable repayment terms

c) Difficult application process

d) Long wait for credit decision

e) Lack of transparency

f) Other, please explain_____

If business did not receive 100% of the financing it asked for:

10. What was the MOST important business impact, if any, of not receiving the full amount of financing for which your business applied?

a) Unable to meet operating expenses on time

b) Delayed a planned business expansion (for example, hiring, new products or services, new location, contracts, or capital assets)

c) Passed on a business opportunity (for example, merger or acquisition, purchase of equipment or space that was previously leased)

d) Funded business with personal sources

e) No significant impact

f) Other. Please specify: _____

If business did not receive 100% of the financing it asked for:

11. What were the likely reasons your business was not approved for the full amount of financing it applied for? Select all that apply.

a) Low credit score

b) Insufficient credit history

c) Insufficient collateral

d) Inadequate documentation

e) Weak business performance (for example, uneven cash flow or poor revenue)

f) Other factors. Please specify: _____

If business did NOT apply for credit

B) NON-APPLICANTS

12. What was the PRIMARY reason your business **DID NOT** apply for financing in the past 5 years?

a) Not needed; had sufficient funding

b) Did not think application would be approved

c) Did not want to accrue debt

d) Credit cost was too high

e) Loan search/application process is too difficult or confusing

f) Other. Please specify: _____

If did not apply because “did not think application would be approved”:

13. What were the likely reasons your business would not be approved? Select all that apply.
    a) Low credit score
    b) Insufficient credit history
    c) Insufficient collateral
    d) Inadequate documentation
    e) Weak business performance (for example, uneven cash flow, poor revenue)
    f) Unsure
    g) Other. Please specify: _____

Part VI: FINAL DEMOGRAPHICS

We have a few final questions about your business. If non-employer firm:

1. Why did you start or purchase this business? Select all that apply
    a) To generate extra income
    b) Had a new good/service to bring to market
    c) Start/continue family business
    d) Wanted a flexible work arrangement / preferred to be my own boss
    e) No other employment options
    f) Other. Please specify: If non-employer firm: _____
2. Does this business (or other businesses you own) provide one or more of the owner's primary source of income?
    a) Yes
    b) No
    c) Unsure
3. Have any of the owners previously owned another business?
    a) Yes
    b) No
    c) Unsure

4. Is more than half (at least 51%) of your business owned by ….

	yes	no	unsure
A woman?			
Male?			

5. Do you have any comments about availability of business financing or general business conditions?

6. Business name:

አዲስ አበባ ዩንቨርስቲ

ከ ቢዝነስ እና ኢኮኖሚክስ ኮሌጅ

ኢኮኖሚክስ ትምህርት ክፍል

ዉድ መላሻችን

ይህ መጠይቅ የተዘጋጀዉ በሃዋሳ ከተማ ዉስጥ ብድር ለማግኘት የሚያስቸግሩ ሁኔታዎችንና በ ኢንተርፕራይዞች ዉጤታማነት ላይ የሚያሳድረዉን ችግር ለማጥናት ነዉ።በእርሶ የሚሞላ ማንኛዉም አይነት መረጃ አላማዉ ለትምህርት ብቻ ነዉ።ስለዚህም ማንኛዉንም መረጃ በነፃነት እንድትሞሉ በአክብሮት እጠይቃለሁ።

ስለ **መመሪያ፡- ተገቢዉን ምላሽ ይስጡ**

ስለትብብሮ ከወዲሁ አመሰግናለሁ።

እባኮትን ተገቢዉን ምላሽ ይስጡን፡

ክፍል 1፡ ጠቅላላ ጥያቄ

1. ኢንተርፕራይዙ የሚገኝበት ክፍለ ከተማ ;_____
2. ኢንተርፕራይዙ የተመሰረተበት ዓመተ ምህረት;_;_____
3. ከሚከተሉት ዝርዝሮች ዉስጥ ኢንተርፕርያዙ የተሰማራበትን የስራ መስክ በደንብ የሚገልዉ የትኛዉ ነዉ?

   a) አገልግሎት

   b) የከተማ ግብርና

   c) ጨርቃ ጨርቅ

   d) አምራች

   e) ንግድ

   f) ግንባታ እና የግንባታ እቃ አቅርቦት

   g) ሌላ ካለ ግለፅ;_____

ክፍል 2: ስለ ኢንተርፕርያዙ መጠን

1. ኢንተርፕሪያዙ ተከፋይ ሰራተኛ አለዉ?

a) አዎ

b) አይ

2. ምን ያህል ሰራተኞች ይገኛሉ(ከባለቤቶቹ ጭምር)?

a) የሙሉ ጊዜ ሰራተኛ (30+ በሳምንት) _____

b) ግማሽ ጊዜ ሰራተኛ (30 ሰዓት በታች) _____

3. ባለፉት አምስት አመታት ዉስጥ እንተርፕርያዙ ምን ያህል የ ኮንትራት ሰራተኛ ነበረዉ?

a) የለዉም

b) አለዉ, ከሆነ መልሶት፤ ምን ያህል _____

4. ባለፉት 5 አመታት ዉስጥ አመታዊ ሽያጭ ስንት ነበር?

አመታት	ሽያጭ በብር ሲገለጽ			
	<100000	100001-500000	500000-1000000	1000000-1500000
2010				
2011				
2012				
1013				
2014				

ክፍል 3 : ስለ ንግዶ ዉጤታማነት እና ተግዳሮቶች

1. ባለፉት አምስት አመታት የንግዶ ደረጃ እንዴት ነበር?

a) ትርፋማ ነበር

b) ዋናዉን ይዞ ቆይታል

c) ኪሳራ ዉስጥ ነበር

d) እርግጠኛ አይደለሁም

2. ባለፉት አምስት አመታት የሚከተሉት ለዉጦች እንዴት ነበሩ?

	ቀንሣል	ለዉጥ የለዉም	ጨምሮአል
ጠቅላላ ገቢ			
የደንበኞች ቁጥር			
የምርት ብዛት			
ሰራተኞች			

3. በሚቀጥሉት አምስት የሚከተሉት ለዉጦች እንዴት ይሆናሉ ብለዉ ይገምታሉ? ?

	ቀንሣል	ለዉጥ የለዉም	ጨምሮአል
ጠቅላላ ገቢ			
የደንበኞች ቁጥር			
የምርት ብዛት			
ሰራተኞች			

4. ባለፉት 5 አመታት ኢንተርፕራይዙ የገጠመዉ ተግዳሮት….

a) የመንግስት ህግና ደንብ

b) ግብር

c) የብድር ግኝት

d) ካሽ ገንዘብ

e) ንግዱን ለማካሄድ የሚያስፈልግ ወጪ

f) የሚያድግ ሸያጭ

g) ባለሙያ ሰራተኛ መቅጠርና ማቆየት

h) ሌሎች. እባኮትን ያብራሩ : _____

i) ምንም የለም

5. ለንግዶ ባለፉት አምስት አመታት ትልቁ ተግዳሮት ምን ነበር

a) የመንግስት ደንብ

b) ግብር

c) የብድር ግኝት

d) ካሽ ገንዘብ

e) ንግዱን ለማካሄድ የሚያስፈልግ ወጪ

f) የሚያድግ ሽያጭ

g) ባለሙያ ሰራተኛ መቅጠርና ማቆየት

h) ሌሎች. እባኮትን ያብራሩ : _____

i) ምንም የለም

ክፍል 4፡ ስለ ገንዘብ

1. ኢንተርፕራይዙ ባለፉት አምስት አመታት ብድር አለበት?

   a) አዎ

   b) የለበትም

   ብድር ካለበት:

2. ባለፉት አምስት አመታት ምን ያህል ብድር ጠየቁ?

አመታት	ብር			
	<100000	100001-500000	500000-1000000	1000000-1500000
2010				
2011				
2012				
2013				
2014				

3. ምን ያህል የገንዘብ መጠን አገኙ?

አመታት	ብር			
	<100000	100001-500000	500000-1000000	1000000-1500000

2010				
2011				
2012				
1013				
2014				

4. ከታች የተዘረዘሩት ለብድር መያዣነት ተጠቅመዉ ነበር?

   a) የግል ንብረት

   b)የንግዱ ንብረት

   c) ሌሎች. እባኮትን ያብራሩ: _____

5. ኢንተርፕርያዙ መነሻ ገንዘብ ከየት አገኘ?

   a) ከዚህ ቀደም ከነበረዉ ንግድ

   b) ከግል ከተኝ ገንዘብ

   c) ከራስ ዉጪ የተገኘ ገንዘብ

   የገንዘብ ምንጭከዉጪ ከሆነ...

6. ከታች ከተዘረዘሩት ዉስጥ የትኞቹን የገንዘብ ምንጮች በመጀመርያ የተጠቀሙት?

   a) የንብረት ላይ የተደረገ ንግድ

   b) ብድር

   c)ተያያዥነት ያለዉ ብድር

   d) ከጋደኝ ወይም ከቤተሰብ

   e) ሌሎች. እባኮትን ያብራሩ: _____

7. ከታች ከተዘረዘሩት ዉስጥ የትኞቹን የገንዘብ ምንጮች ባለፉት 5 አመታት ተጠቅመዋል?

   a) የንብረት ላይ የተደረገ ንግድ

   b) ብድር

   c)ተያያዥነት ያለዉ ብድር

   d) ከጋደኝ ወይም ከቤተሰብ

e) ሌሎች. እባኮትን ያብራሩ: _____

ክፍል 5: ስለ ብድር ፍላጎት እና ጥየቃ

1. ባለፉት 5 አመታት ኢንተርፕራይዙ ምክር ዐገልግሎት አግኝቶ ያዉቃል? ከተዘረዘሩት ዉስጥ ከየት አገኘ

   a) አካንታንት እና የንግድ አማካሪዎች b) ከብድር ደላሎች

   c) ከባንክ ወይም ካበዳሪዎች

   d) ከጋደኞች፣ከቤተሰብ ወይም ከስራ ባልደረቦች

   e) ከሀዋሳ ከተማ ኢንተርፕርያዝና ስራ ክህሎት ቢሮ .

   f) ከጥቃቅንና አነስተኛ ንግድ ማእከል

   h) ሌሎች፤ እባኮትን ያብራሩ

   i) አላገኘዉም

2. የትኛዉ አማራጭ ለንግዶ ብድር ለመዉሰድ በጣም ጠቃሚ ነዉ? እባኮትን አማራጮት ላይ ምልክት ያድርጉ።

	በጣም አልደግፍም	**አልደግፍም**	**መሃከለኛ**	**እደግፋለዉ**	**በጣም እደግፋለዉ**
ካበዳሪ ጋር ያለኝ ግንኙነት					
ወጪ					
የብድር ትሩፋት ተስማሚነት					
ዉሳኔ አሰጣጥ					
ማመልከቻ መንገዱ					
ብድሩን የማግኘት እድል					

3. ባለፉት አምስት አመታት ከማንኛዉም ቦታ የገንዘብ ድጋፍ ጠይቀዉ ያዉቃሉ?

   a) አዎ

   b) አይ

c) እርግጠኛ አይደለሁም

መልሶ አዎ ከሆነ ፣ ብድር ጥየቃ ክፍል ይመልሱ.

መልሶ አይ ከሆነ፣ ብድር ያልጠየቁ ክፍል ይመልሱ

መልሶ እርግጠኛ አይደለሁም ከሆነ፣ የመጨረሻዉን ክፍል ይመልሱ።።

ብድር ጠይቀዉ የምያዉቁ ከሆነ

ብድር የጠየቁ

1. ኢንተርፕራይዙ ብድር የጠየቀዉ ምን ላይ ሊያዉል ነበር? ሁሉም መልስ ከሆነ ሉንም ይመልሱ።።

   a) ለስራ ማስኬጃ

   b) ንግዱን ለማስፋፋት

   c) አዳዲስ እድሎችን ለመሞከር

   d) ሌሎች ብድሮችን ለመክፈል

   e) ሌሎች ምንያቶች ካሉ ያብራሩ: _____

   2. የትኛዉ አማራጭ ለብድር ጥየቃ የተሻለ ነዉ?

   a) ካበዳሪዎች ጋር ያለን ቀደምት ግንኙነት

   b) ወጪ

   c) የብድር የሚሰጡ አመቺ ሁኔታዎች

   d) ለዉሳኔ ያለዉ ፍጥነት

   e) የመጠየቂያ መንገዶች

   f) ብድሩ እንደሚገኝ እርግጠኛ መሆን

   g) ሌሎች ምንያቶች ካሉ ያብራሩ: _____

3. ባለፉት አምስት አመታት ኢንተርፕራይዙ ከታች ተደረደሩትን የብድር አይነቶች በከፊልም ሆን በሙሉ ጠይቆ ያዉቃል?

   a) የገንዘብ ብድር,

   b) ንብረት

   c) ለረዥም ጊዜ የሚሰጥ የመሬት ብድር

d) የንግድ ብድር

e) ተሸያጭ ቅድመ ብድር

f) ሌሎች ምንያቶች ካሉ ያብራሩ: _____

4. የትኛዉን ብድር አይነት ነዉ የጠየቁት

e) የንግድ

f) ወቅታዊ

g) የቤት

h) በካሽ ከነጋዴ

5. በአቅራቢያ ካሉ የብድር ተቃማት የትኛዉን ተቻም ነበር የጠየቁት?

a) ባንክ

c) ብድርና ቁጠባ ተቃም

d) ማይክሮ ፋይናንስ

e) ሌሎች ያብራሩ _____

ማይክሮ ፋይናንስ ከሆነ የመለሱት

6. የማይክሮ ፋይናንስ?

a) ስም: _____

b) ከአንድ በላይ ማይክሮ ፋይናንስ ተቃም ብድር ጠይቀዉ ከሆነ፣የጠየቁት ሁሉ ለምን እንዳልሰቱ ምክንያት ይጻፉ። _____

7. ባለፉት 5 አመታት ከጠየቁት ብድር መጠን ምን ያህል ተፈቀደለት?

a) ሁሉም (100%)

b) በአብዛኛዉ (51%-99%)

c) ተወሰነ (1%-50%)

d) ምንም (0%)

e) አላዉቅም

8. ባበዳሪዎቹ አጠቃላይ ሁኔታ ….

	ደስተኛ	መሃከለኛ	ደስተኛ አይደለሁም
ባንክ			

ማይክሮ ፋይናንስ			
የብድር እና ቁጠባ ተቃም			
ሌሎች አበዳሪዎች			

መልሶት ደስተኛ አይደለሁም ከሆነ

9. ምክንያቶቹ ምንድ ናቸዉ?

a) ወለዱ ብዙ ነዉ

b) የአከፋፈል መንገዱ አይመችም

c) መጠየቂያ መንገዱ አስቸጋሪ ነዉ።

d) ለብድር ዉሳኔ ብዙ ጊዜ ይቆያሉ።

e) ግልፀኝነት የለም

f) ሌላ ምክንያት ካለ ያብራሩ_____

10. የጠየቁት ብድር በከፊል ወይም በሙሉ ባይሰጥ ኢንተርፕራይዙ ላይ የምያሳድረዉ ተጽኖ ምንድ ነዉ?

g) ለስራ ማስኬጃ የሚያስፈልግ በወቅቱ ማከናወን አይቻልም

h) የታቀደዉ እቅድ ይስተጋገላል

i) እድሎች ያመልጣሉ

j) የራስ ገንዘብ ይነካል

k) ምንም ተፅኖ የለዉም

l) ሌላ ምክንያት ካለ _____

የጠየቁት ብድር ሙሉ በሙሉ(100%) ካላገኙ

11. ያላገኙበት ምክንያት ምንድ ነዉ.

a) የብድር እስኮር ትንሽ ነዉ

b) በቂ የብድር ታሪክ የለኝም

c) በቂ ያልሆነ ማስያዣ

d) ያልተማላ መረጃ

e) ዝቅተኛ ንግድ ሁኔታ

f) ሌላ ምክንያት ካለ ይግለፁ _____

ብድር ያልጠየቁ ሚሞሉት

12. ላለፉት አምስት አመታት ብድር ያልጠየቁበት መጀመሪያ ምክንያት ምንድ ነዉ?

a) አስፈላጊ አልነበረም፣ በቂ ገንዘብ አለን

b) ብድሩ ይፈቀድልናል ብለን አንገምትም።

c) እዳ አንፈልግም

d) ለብድሩ የሚወጣዉ ወጪ ብዙ ነዉ።

e) መጠየቂያ መንገዱ ከባድ ነዉ።

f) ሌላ ምክንያት ካለ ይግለፁ _____

13. ብድሩ አይሰጠንም ብለዉ ካሰቡት ምክንያት ዉስጥ ከታች ከተዘረዘሩት የትኞቹ ናቸዉ ።

a) የብድር እስኮር ትንሽ ነዉ

b) በቂ የብድር ታሪክ የለኝም

c) በቂ ያልሆነ ማስያዣ

d) ያልተማላ መረጃ

e) ዝቅተኛ ንግድ ሁኔታ

f) ሌላ ምክንያት ካለ ይግለፁ _____

የማጠቃለየ ጥያቄ

1. ይሄንን ንግድ የጀመሩበት ምክንያት ምንድ ነዉ?

a) ተጨማሪ ገቢ ለመፍጠር

b) አዲስ ነገሮችን ወደ ገበያ ለማምጣት

c) ቤተሰብ ንግድ ለመጀመር

d) የራስ አለቃ ለመሆን

e) ሌሎች አማራጮች ስለሌሉ

f) ሌላ ምክንያት ካለ ይግለፁ _____

2. አሁን የሚሰሩት ሰራ የገቢ ምንጮት ነዉ?

a) አዎ

b) አይ

c) እርግጠኛ አይደለሁም

3. ከባለቤቶቹ ዉስጥ ሌላ ስራ ያለዉ/ ያላት አሉ?

   a) አዎ

   b) አይ

   c) እርግጠኛ አይደለሁም

4. ኢንተርፕራይዙ በአብዛኛዉ ባለቤቶቹ… (ብያንስ 51%)

	አዎ	አይ	እርግጠኛ አይደለሁም
ሴቶች?			
ወንዶች			

5. ባጠቃላይ ስለ ንግድ መስጠት የሚፈልጉት አስተያየት ካለ?

6. የንግድ ድርጅቱ ስም:

Appendix 2

Table.1

Estimated propensity score using probit model

Probit regression — Number of obs = 343; LR chi2(11) = 417.25; Prob > chi2 = 0.0000; Log likelihood = -24.367028; Pseudo R2 = 0.8954

creditaccess	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
gender	.7090738	.4542278	1.56	0.119	-.1811964	1.599344
age	.2872248	.0644964	4.45	0.000	.160814	.4136355
maritalsta~s	-.244332	.4435646	-0.55	0.582	-1.113703	.6250385
education	-.9383709	.2803658	-3.35	0.001	-1.487878	-.3888639
numberofye~s	.7979752	.2220795	3.59	0.000	.3627074	1.233243
sector	-1.195254	.2376933	-5.03	0.000	-1.661124	-.7293834
sourceofcr~t	3.260045	.9717988	3.35	0.001	1.355354	5.164735
longterm	2.788607	1.575573	1.77	0.077	-.299459	5.876673
shortterm	6.441572	1.896637	3.40	0.001	2.724232	10.15891
experience	-.4063783	1.283662	-0.32	0.752	-2.92231	2.109553
noofmember	4.714747	.	.	.	.	.
_cons	-17.74052	4.497142	-3.94	0.000	-26.55475	-8.926282

Table.2

Descripition of estimated propensity score in region of common support

Description of the estimated propensity score in region of common support

Estimated propensity score

Percentiles	Smallest		
1% .0366928	.0363432		
5% .0975487	.0366928		
10% .2075554	.0667521	Obs	169
25% .8634968	.0667521	Sum of Wgt.	169
50% .9990646		Mean	.8480299
	Largest	Std. Dev.	.2928253
75% .9999998	1		
90% 1	1	Variance	.0857466
95% 1	1	Skewness	-1.836998
99% 1	1	Kurtosis	4.771014

Table.3

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

The balancing property is satisfied

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

Inferior of block of pscore	creditaccess 0	1	Total
.0363432	12	3	15
.2	9	0	9
.4	2	1	3
.6	2	6	8
.8	1	133	134
Total	26	143	169

Note: the common support option has been selected

Table 4.

Different matching method result on identifying the impacts of credit on MSEs annual sale growth.

ATT estimation with Nearest Neighbor Matching method
(random draw version)
Bootstrapped standard errors

n. treat.	n. contr.	ATT	Std. Err.	t
143	8	0.127	0.068	1.865

ATT estimation with the Radius Matching method
Bootstrapped standard errors

n. treat.	n. contr.	ATT	Std. Err.	t
143	19	0.105	0.040	2.636

ATT estimation with the Kernel Matching method
Bootstrapped standard errors

n. treat.	n. contr.	ATT	Std. Err.	t
143	26	0.126	0.084	1.502

ATT estimation with the Stratification method
Bootstrapped standard errors

n. treat.	n. contr.	ATT	Std. Err.	t
105	64	-0.005	0.042	-0.114

Different matching method result on identifying the impacts of credit on MSEs employment growth.

ATT estimation with Nearest Neighbor Matching method
(random draw version)
Bootstrapped standard errors

n. treat.	n. contr.	ATT	Std. Err.	t
143	8	-0.493	0.029	-17.030

ATT estimation with the Radius Matching method
Bootstrapped standard errors

n. treat.	n. contr.	ATT	Std. Err.	t
143	19	-0.416	0.141	-2.950

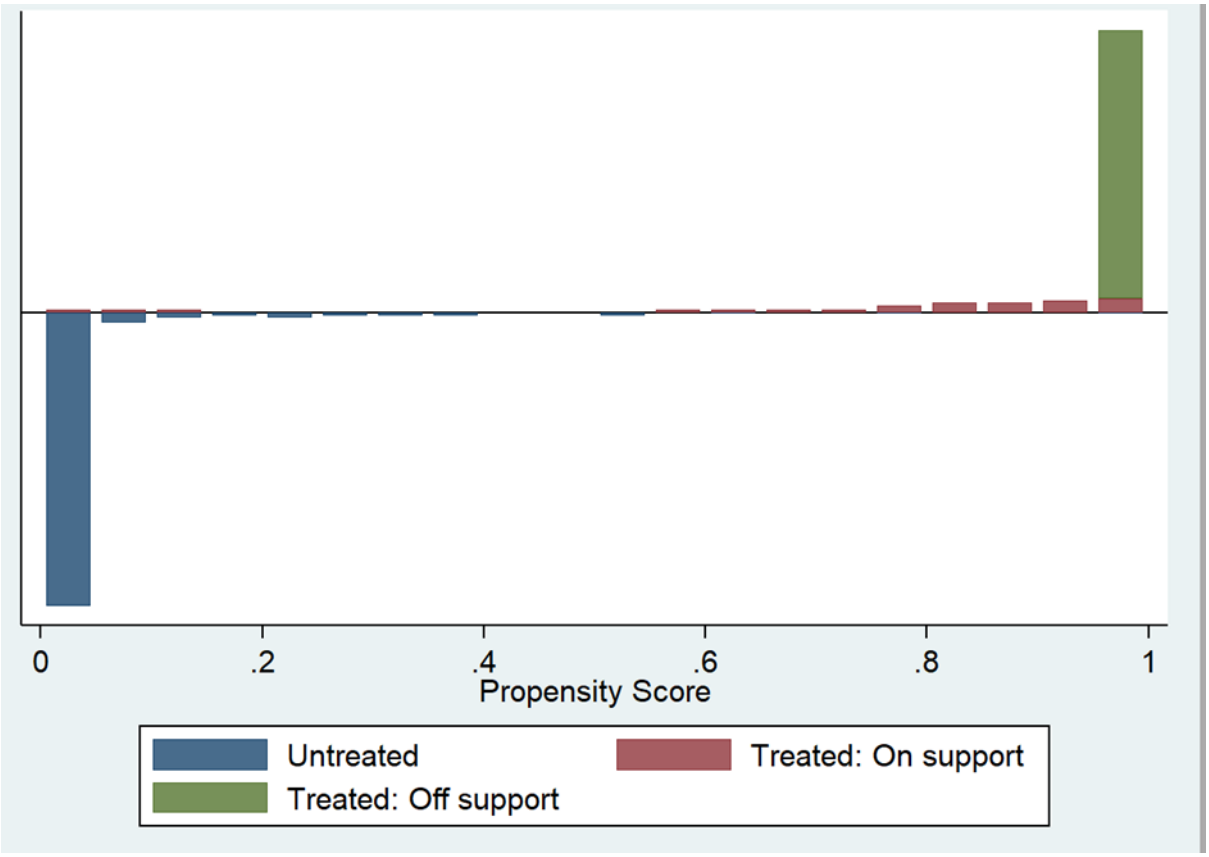
ATT estimation with the Kernel Matching method
Bootstrapped standard errors

n. treat.	n. contr.	ATT	Std. Err.	t
143	26	-0.492	0.116	-4.250

ATT estimation with the Stratification method
Bootstrapped standard errors

n. treat.	n. contr.	ATT	Std. Err.	t
105	64	-0.005	0.036	-0.130

Table .5 common support region



Perception of respondent about credit

Participants in the study were asked to share their opinions on networking with lenders and information about selecting credit providers, which were then analyzed using descriptive analysis. The survey employed a five-point Likert scale, ranging from "strongly disagree" (1) to "strongly agree" (5), to evaluate participants' degree of agreement with specific statements. The results are summarized in Table 4.3, showing mean scores for each item between 69 and 69.2, with standard deviations ranging from 55.4 to 84.5.

When it was stated, "No collateral required" took the greatest point, with an average outcome of 69.2. Furthermore, participants thought that the selection of credit providers is influenced by factors such as more favorable lending terms, a more straightforward lending process, quick loan processing, having a good relation with the creditor, and lower interest rates, with a mean score of 69. Establishing strong relationships with creditors may provide valuable information about credit needs. The results of this finding are shown in table 6.

Table.6 Perception of respondent about credit

	Frequency(N=343)	percent
Existing relationship with lender		
Strongly disagree	7	2
Dis agree	3	1
Neutral	97	28
Strongly agree	159	46
Agree	77	23
Cost		0
Strongly disagree	0	0
Dis agree	0	0
Neutral	72	21
Strongly agree	207	60
Agree	64	19
Flexibility of the credit product(s)		0
Strongly disagree	7	2
Dis agree	7	2
Neutral	97	28
Strongly agree	128	37
Agree	105	31
Perceived chance of being funded		0
Strongly disagree	7	2
Dis agree	3	1
Neutral	74	22
Strongly agree	135	39
Agree	122	36
Ease of the application process		0
Strongly disagree	7	2

Dis agree	36	11
Neutral	52	15
Strongly agree	146	43
Agree	100	29
no collateral required		0
Strongly disagree	3	1
Dis agree	4	1
Neutral	90	26
Strongly agree	148	43
Agree	98	29