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**Determinants of Growth Potential and Constraints of Micro and Small Enterprises in Lideta Sub City of Addis Ababa City Administration, Ethiopia**

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A Thesis Submitted to the School of Graduate Studies of Addis Ababa University  
in Partial Fulfillment of the Requirement for the Degree of Masters of Science in  
Development Economics

Advisor: Berhanu Denu (PhD)

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Addis Ababa, Ethiopia

## DECLARATION

I, Diro Soboka declare that this thesis is my original work and has not been submitted for a degree in any University; and all sources of materials used for this study have been duly acknowledged.

Declared by:

Name: Diro Soboka

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Signature

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Date

## STATEMENT OF CERTIFICATION

Here with, I state that Diro Soboka has carried out this research work entitled '**Determinants of Growth Potential and Constraints of Micro and Small Enterprises in Lideta Sub City of Addis Ababa City Administration, Ethiopia**' under my supervision. This study is original in nature and has not been presented for a degree in any university, which all sources of materials used for the study have been duly acknowledged and it is sufficient to submit for the partial fulfillment of Master of Science in Development Economics.

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This is to certify that the thesis prepared by Diro Soboka entitled **‘Determinants of Growth Potential and Constraints of Micro and Small Enterprises in Lideta Sub City of Addis Ababa City Administration, Ethiopia’** submitted in partial fulfillment of the requirements for the Degree of Master of Science in Development Economics complies with the regulations of the university and meets the accepted standards with respect to originality and quality.

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## ABSTRACT

The general objective of this study was to assess the growth potential and identify the constraints of MSEs operating in Lideta Sub City of Addis Ababa City Administration. The study was adopted descriptive and explanatory research design with qualitative and quantitative approaches of cross sectional data collected from primary and secondary sources through a structured questionnaire, observations and interviews. The sample size was determined by using slovin's formula and contained 162 samples of MSEs that are grouped into sectors of manufacturing, construction, service, trade and urban agriculture. These samples were selected from each sector using proportional stratified random sampling method. The data were analyzed with linear regression analysis of Ordinary Least Square technique and summary statistics. The findings revealed that current capital, gender and education are found to be significant factors that affect MSE growth positively and statistically significant. The findings also showed that initial capital and experience are statistically significant and negatively associated with the growth of enterprises by employment. However, source of finance, family size and age are found to be statistically insignificant variables in this study.

Policy makers and other stakeholders should reconsider financing strategy for MSEs and firms of MSEs with lower capital should take actions towards better improvement of their growth potential. The government actors and other stakeholders should give due attention to gender difference appearing in the participation of MSE operation. The potential limitations of this study were time and financial constraints. Finally, future panel surveys and availability of other data may call for further studies in order to have inclusive solution for the constraints of MSE growth.

**Keywords:** Constraints, Enterprise Growth, Micro and Small Enterprises

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## LIST OF ACRONYMS

MSEs: - Micro and Small Enterprises

MSMEs: - Micro, Small and Medium Enterprises

FeMSEDA: - Federal Micro and Small Enterprises Development Agency

MSEDP: - Micro and Small Enterprise Development Program

NBE: - National Bank of Ethiopia

CSA: - Central Statistical Agency

NGOs: - Non Government Organizations

ILO: - International Labor Organization

USAID: - United State Agency for International Development

GoFDRE: - Government of the Federal Democratic Republic of Ethiopia

EEA: - Ethiopian Economics Association

OLS: - Ordinary Least Square

VIF: - Variance Inflation Factor

CAGR: - Compound Annual Growth Rate

FDRE: - Federal Democratic Republic of Ethiopia

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# CHAPTER ONE

## 1. INTRODUCTION

### 1.1. Background of the Study

Micro and Small Enterprises (MSEs) have been accepted worldwide as one instrument of economic growth and development (Churchill et al., 2014). MSE play an important economic role in many countries and are recognized as important vehicles of economic diversification, employment creation, income generation and poverty alleviation. Moreover, MSEs in both developed and developing countries are seen as one of the most important alternative sector in fostering socio economic developments because of their high contributions to employment and poverty reduction, particularly in many developing countries where there is a challenge of unemployment and poverty (Abiyu, 2011).

Development refers to growth, success and expansion of business enterprises while constraints are situations that influence growth, success, performance and expansion of enterprises. Growth of MSEs has been found to have a link with economic growth and poverty reduction. Recently, growth of MSEs has been of great concern to many government policy makers and researchers globally because of the realization of the economic contributions of MSEs to GDP and economic growth. From an economic perspective, MSE represents a growing source of productive employment, especially for the lowest income groups, because these firms are more labor intensive than large industries and require fewer technical skills (Robert and Maria, 1985, cited in Solomon, et al., 2016).

In Ethiopia, a number of MSEs starts operation every year after they have received license from concerned government office; however only some of them grow and are promoted to medium

enterprises while others either remain at their initial level or even they go out of operation due to several problems.

Gebrehiwot and Wolday (2006) illustrated that MSE sector is exposed to many constraints related to policy such as weak legal enforcement, inability to use the institutional enforcement mechanism and bureaucratic requirements that obstruct sustainable growth of enterprises. In addition to this, the major regulatory constraints of the sector include high taxes, inefficient tax administration, inadequate business premise, lack of credit access and high collateral requirement.

Moreover, Mohammed et al. (2014) explained that constraints like current capital, current employment level, startup employment level, access to business services, and motivation are significantly affect MSE growth in employment. Yodit (2015) pointed out that firms in MSEs are restrained by many factors such as weak economic performance of the firms, problems of marketing, input constraints, access to finance constraints, ineffective human capital management and lack of relevant knowledge.

The performance of Small and Medium Enterprises has fallen due to various challenges like finance, access to market and low competitiveness, business information, working premises, poor acquisition of technical skills and managerial expertise, appropriate technology, and access to quality infrastructure ( EEA, 2015).

The growth of MSEs by employment is highly influenced by limited access to finance, marketing problems and business services constraints (Addisu, 2016). The Annual Report of National Bank of Ethiopia (2017/18) shows that new established MSEs and people employed in this sector were lessened for three consecutive years from 2015/16 year.

Table 1.1: Annual Reports of NBE on MSEs and employment opportunities

Years	New created MSEs	People employed
2015/16	190,587	1,665,517
2016/17	157,768	1,172,678
2017/18	144,107	187,945
2018/19	110, 253	882,098

(Source: NBE: Annual report, 2018 and Annual report, 2019).

This data indicates that the number of employment created and new established MSEs were decreased from the year 2015/16 to 2018/19 on average. Samuel (2019) stated that lack of finance, marketing problems, infrastructural, technological, business location and characteristics of entrepreneurs are the most constraints of MSE growth. These problems motivated the researcher to assess the determinants of growth potential and constraints of MSEs in Lideta Sub City of Addis Ababa City Administration.

## **1.2. Statement of the problem**

The importance of Micro and Small Enterprises (MSEs) as an instrument of poverty alleviation through employment creation and supply of affordable products has been implicitly and explicitly accepted by many countries and international development organizations. The Federal Micro and Small Enterprises Development Policy and strategy (2016) of Ethiopia noted that more than forty million people were employed in MSE sector in the Japan.

Moreover, experience from India shows that Micro, Small and Medium Enterprises created employment opportunities for more than eighty million people and the share of output from this sector to GDP is about thirty seven percent in 2017. In addition, over one hundred ten million

Indians were employed in micro, small and medium businesses across India in the Financial Year of 2019 (keelery, 2020).

Ethiopia is one of the countries that are working towards achievement of Sustainable Development and economic growth. To this end, in November 1997, the Ethiopian government issued the National Micro and Small Enterprises Development Strategy and established the Federal Micro and Small Enterprises Development Agency under the supervision of the Ministry of Urban Development and Construction to gain the benefit of such strategy. Consequently, the government formulated different policies and established many institutional implementation strategies to promote the smooth functioning of MSEs (FeMSEDA, 2016).

Similarly, the government of Addis Ababa City Administration began the Micro and Small Enterprises Development Program in 2004 with the objectives of reducing poverty and unemployment in the urban area through collaborations with NGOs, training institutes, and micro credit institutions. The Program aims to create job opportunities for unemployed and increase their income through expanding and supporting the sector by specifying the constraints of existing and newly formed MSEs in order to reduce poverty (MSEDP, 2015).

In fact, the MSE sector in Ethiopia has the potential to contribute towards creating employment opportunities, income generation and key policies to reduce poverty. Samuel (2019) argued that MSEs play significant roles in the creations of employment opportunities and generations of income for quite a large proportion of the population.

However, Mohammed (2016) stated that inadequate finance, poor management practices, inadequate infrastructures, multiple taxation and capital shortage are the challenges of Small Scale Enterprises in Addis Ababa City. Arega et al. (2016) noted that MSE operation and growth

have been persistently confronted by various internal and external factors, even a significant number of MSEs have collapsed and went out of operation in different parts of Ethiopia.

Hailai and Vermaack et al. (2019) argued that the major obstacles of MSMEs in Ethiopia are the question of sustainability, lack of credit, weak market linkage, insufficient training, weak human resources development schemes, dependency on government, oscillations in government policies, price variations and product development strategies.

Munir (2019) explained that marketing problems, poor infrastructures, lack of finance, management inefficiency are highly challenging and negatively effects the growth of Small and Medium Enterprises in Addis Ababa city Administration. As a result, MSEs were unable to grow at their full potential and not played an expected vital role in the development and economic growth of Ethiopia due to the existence of several constraints in the sector.

To the best of researcher's knowledge, most of the local studies focused on the factors of MSE growth measured by assets, revenue, sales and profitability. The study on Determinants of Growth Potential and Constraints of MSEs measured by employment growth is limited. Thus, this study intended to assess the growth potential and identify the constraints of MSE growth by employment in Lideta Sub City of Addis Ababa City Administration.

### **1.3. Research Question**

This research emphasized on the determinants of growth potential and constraints of MSEs in Lideta Sub City of Addis Ababa and the study attempts to answer the following questions.

- 1) What is the current level of growth potential and constraints of MSE growth by employment in Lideta Sub City of Addis Ababa City Administration?
- 2) What are the major determinants of firm growth of MSEs operating in Lideta Sub City?
- 3) To what extent the constraints affect the growth of MSEs in Lideta Sub City?

## **1.4. General Objective**

The general objective of this study was to assess the growth potential and identify constraints of Micro and Small Enterprises growth by employment in Lideta Sub City of Addis Ababa City Administration.

### **1.4.1. Specific Objectives**

This study has concerned with the following specific objectives.

To assess the current level of growth potential and constraints of MSE growth by employment in Lideta Sub City of Addis Ababa City Administration

To identify the major determinants of firm growth of MSEs operating in Lideta Sub City

To analyze the extent to what the constraints affect the growth of MSEs in Lideta Sub City

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

Understanding the determinants of firm growth and constraints of MSEs are very essential to policy makers, government actors, NGOs and other stakeholders to support, encourage, and promote the sector through minimizing the factors obstructing the growth of enterprises. Therefore, this study helps government actors, policy makers, NGOs and other stakeholders to address the determinants of MSE growth potential and their constraints in order to reduce unemployment and poverty problems.

In addition, the findings of this study also offer alternative actions just to focus on the most powerful constraints to enhance the growth potential of MSE sector in Lideta Sub City of Addis Ababa City Administration as well as in Ethiopia.

## **1.6. Scope and Limitations of the Study**

The scope of this study was limited to address the objectives stated in this research and focused on MSE sectors that are grouped into manufacturing, construction, service, trade and urban

agriculture. Geographically, this study was confined to Lideta Sub City of Addis Ababa City Administration. The potential limitations of this research were time and financial constraints.

### **1.7. Organization of the thesis**

The rest of this Paper was organized as follows: The second chapter presents the detail review of theoretical and empirical literature available in the area of research topic and conceptual framework of the model. The primary objective of this chapter is to give the reader fundamental background on the concept of MSE growth and their constraints.

The third chapter deals with research methodology that includes research design and approaches, data sources, data collection methods, area of the study, population of the study, sampling techniques, model specification, methods of data analysis and ethical consideration of the study.

The aim of this chapter is to make the reader clear understanding of the methodological choices made in the research.

The fourth chapter covered data analysis and interpretation of the findings of the study. The last Chapter was described conclusion and policy implication. This chapter also includes suggestions for further studies in the area. Finally, bibliography and appendices relevant for the study were attached.

## **CHAPTER TWO**

### **2. REVIEW OF THEORETICAL AND EMPIRICAL LITERATURES**

This chapter attempted to address relevant conceptual issues and theoretical frameworks that are related to the topic of the study. The researcher reviewed some theoretical and empirical studies on MSEs which have received a great deal of attention in contemporary development literature and national strategies of developing countries to reduce unemployment and poverty.

This is because it has been realized that most countries have different programs to develop MSE sector as it is believed that the sector is the engine of growth for every economy, especially in developing countries like Ethiopia. This chapter also presents conceptual framework of the study developed from reviewed theoretical and empirical studies.

#### **2.1. Conceptual definitions of Micro and Small Enterprises**

The definitions of micro and small enterprises vary across countries as well as across sectors and industries. There is no generally accepted definition of micro and small enterprises. MSEs in one country may be small or medium enterprises in the other country (Alemu, 2017). The European Commission defines MSEs using the combination of employee numbers, annual turnover and ownership (EYE support office, 2013).

Even though there is no universally agreed up definition of MSEs, the principal criteria that are applied either separately or in combination to define MSMEs internationally include the size of employment, total assets and net assets and paid up capital with annual sales turnover. In addition to these basic criteria of MSE definition, some countries and international organizations use the legal entity of enterprises as a supplementary criterion (FeMSEDA, 2016).

The definitions of MSEs also vary by country and international organization based on a range of criteria such as number of employees, value of sales and assets. Typically, micro enterprises are

defined as enterprises with up to 10 employees, small enterprises as those that have 10 to 100 employees, and medium sized enterprises as those with 100 to 250 employees (ILO, 2015).

Reeg (2015) noted that the most commonly referred criterion to define MSEs is its number of permanent employees. Carpenter (2003) forwarded that the major criteria used in the definitions of MSEs include various combinations of the number of employees, financial strength, sales value, relative size, initial capital outlay and types of industry.

## **2.2. Overview of MSEs Policies and strategies in Ethiopia**

Mulu et al. (2018) discussed that the Ethiopian economic system was market led in the imperial era ending about 1974. The main emphasis of industrial policy in the imperial regime was to promote large scale manufacturing, which was dominated by foreign nationals. As a result, the development of MSEs was retarded in Ethiopia.

In 1977, the government established the Handicrafts and Small Scale Industries Development Agency by Proclamation No. 124/1977 with the objective of improving the economy through the development of cooperatives in small business activities. However, it did not bring the desired result, as many cooperatives were insolvent and closed. The regime was forced to amend its economic policy from command to mixed economic system in the last two or three years of the Dergue period when the Council of States promulgated two declarations (Mulu et al., 2018).

The first one was Special Declaration on Small Scale Industry Development, No.9/1989, which allowed the establishment of small scale enterprises by business organizations, individual entrepreneurs, and cooperatives (PDRE, 1989). This declaration raised the capital cap of small enterprises from Birr five thousand to two-four millions.

The second was the Special Declaration on Investment, No.17/1990, through which the government declared the total removal of the previous restrictions on the number of licenses to

the private sector, and investors were allowed to invest in an unlimited number of business activities (PDRE, 1990). In short, the policy environment of this era was not enabling for MSE development in Ethiopia.

Since 1991, there has been significant improvement in the incentive system and the macroeconomic environment with positive implications for manufacturing activities. In 1991, the Ethiopian government inherited a centrally planned economy and faced some challenges similar to transition economies, including private sector development. The public sector reform program has been introduced with the main objective to privatize Small and Medium Enterprises that were nationalized in the 1970s (Abiyu, 2011).

These reforms have immensely improved the domestic policy environment for Small and Medium Enterprises. Gradually, the government of the FDRE has recognized and given due attention to the promotion and development of Micro, Small and Medium Enterprises as they are important vehicles to address the challenges of unemployment, economic growth and equity in Ethiopia. After all these reforms had made, Ethiopia announced its first full-fledged Micro and Small Enterprises development policy in 1997.

### **2.3. The Definitions of Micro and Small Enterprises in Ethiopia**

In Ethiopian context, two different definitions of MSEs were adopted. The definition used in the 1997 Micro and Small Enterprises Development Strategy and the definition used by the Central Statistics Authority of Ethiopia. The formulation of 1997 Micro and Small Enterprise Development Strategy took into account the experiences of South Africa and other countries. The definition provided to the MSEs during that time is limited to a single criterion known as paid up capital and there were difficulties of obtaining information about the number of employed workers in the sector. On the other hand, the definition by Central Statistics Agency of

Ethiopia is based on the type of technology adopted and the size of manpower focusing on the manufacturing sector; and it does not refer to other sectors and paid up capital as criteria (FeMSEDA, 2016).

Both definitions used by Micro and Small Enterprises Development Strategy in 1997 and by Central Statistics Agency have their own limitations. After specifying the limitations of existing definitions and reviewing international experience, a new set of definitions are provided by considering the number of employed workers, total assets and two broad sectoral classifications of industry and service.

Table: 2.1. The new definitions of Micro and Small Enterprises in Ethiopia

Enterprise Level	Sectors	Head count staff	Total asset (ETB)	Total asset (USD)
Micro enterprise	Industry	≤ 5	≤ 100,000	≤ 4,630
	Service	≤ 5	≤ 50,000	≤ 2,310
Small enterprise	Industry	6-30	101,000-1,500,000	4,630 - 69,500
	Service	6-30	50,001-500,000	2,310 - 23,150

(Source: GoFDRE: Micro and Small Enterprise Development Policy & Strategy of Ethiopia, 2016)

## 2.4. The role of MSEs in Employment generation

Churchill et al. (2014) discussed that Micro and Small Scale Businesses are catalyst in the socio-economic development of any country. They are a veritable vehicle for the achievement of national macroeconomic objective in term of employment generation at low investment cost and enhancement of apprenticeship training. Samuel (2019) argued that MSEs play significant roles in the creations of employment opportunities and generations of income for quite a large proportion of the population.

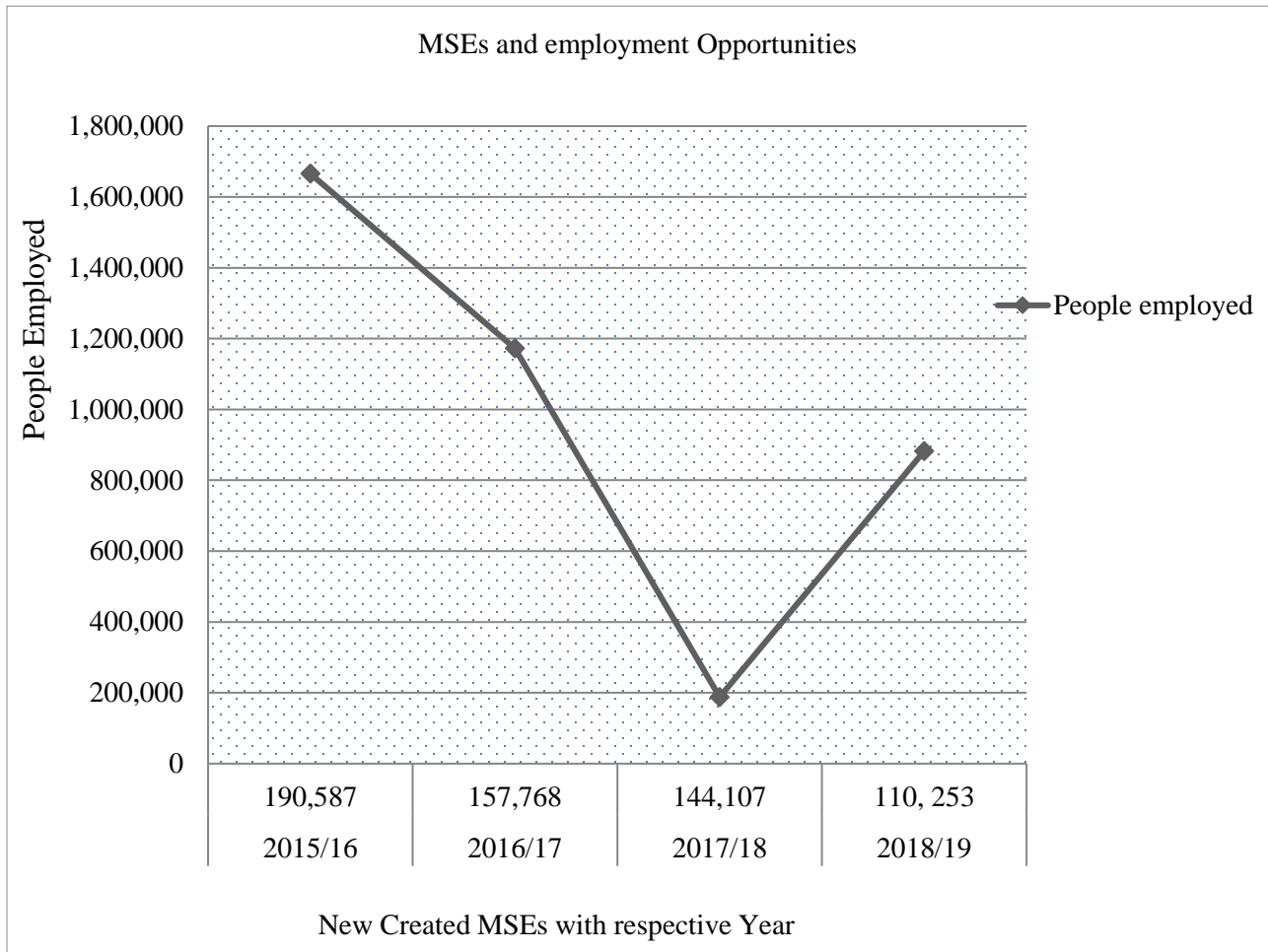
Reeg (2015) pointed out that MSEs can contribute to job creation in two ways: The first one is job contributions that arise by the creation of new MSEs through startups and self-employed, which implies the creation of enterprise. The second is employment creation as the emergence of new jobs in existing MSEs, which indicates enterprise growth.

The growth of MSEs can be defined by an increase in the number of employees over the time because the owners of MSEs are usually able to recall the number of employees over time, even if they fail to maintain reliable written records (Nichter and Goldmark, 2005 cited in USAID, 2006). A successful enterprise at growth stage is expected to achieve significant increases in the number of its employed workers and total assets.

According to Moreira (2016) an increase in credit accessibility support for Small and Medium Enterprises by government may significantly promote the growth, wealth, and employment rates in Europe. Because, it is believed that small and medium scale enterprises play an important role in the economic development of both developed and developing nations. However, the Small and Medium Enterprises are confronted with challenges of credit accessibility to pursue the business expansion and growth.

Mulu et al. (2018) posited that the total labor forces employed by Manufacturing MSEs in 10 largest cities of Ethiopia were estimated to 113, 705 in 2016/17 year. However, the quality of jobs created by MSEs are questionable since most of the positions are temporary, with low level of remuneration, minimal net employment addition per annum, high employees turnover, and low occupational safety and health. The annual report of National Bank of Ethiopia shows that new established MSEs and people employed in the sector were lessened relatively from 2015/16 to 2018/19 years.

Figure 2.1: Employment opportunities and new established MSEs in Ethiopia

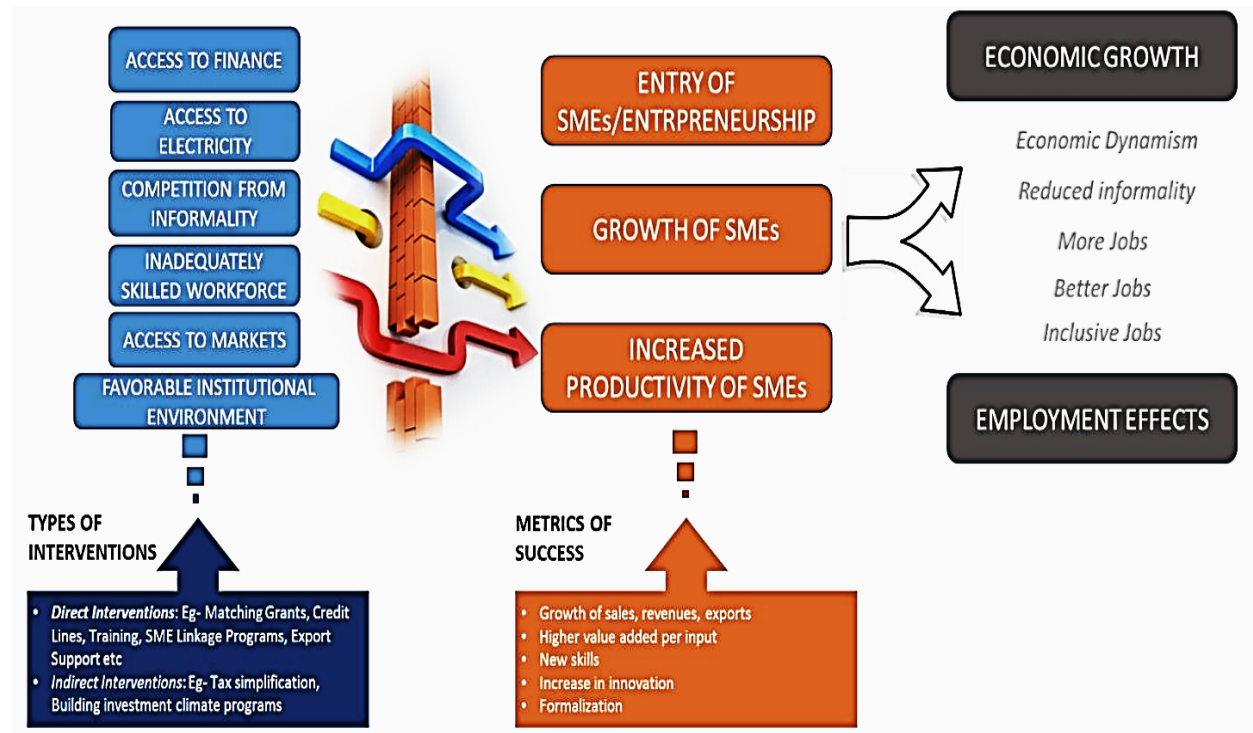


(Source: Researcher own computation based on NBE: Annual report of the years 2018 and 2019)

This figure clearly indicates that the number of employed people and new created MSEs in Ethiopia decreased on average for three consecutive years starting from 2015/16.

Kumar (2017) noted that there is a large body of literature that outlines the important role small and medium enterprises play in economies including supporting economic growth, innovation, reducing unemployment and informality. Even though the sector has various importance's they faces different constraints. Thus, minimizing the causal chain of these constraints to small and medium enterprises through facilitating access to finance, the sector contributes to economic growth and enhances employment opportunities.

Figure 2.2: The impact of MSEs on Economic growth and Employment



(Source: Ruchira Kumar, 2017: Developed from World Bank Enterprise Surveys 2010-2016).

The above figure 2.2 illustrates that easing the constraints to Micro, Small and Medium Enterprises leads the development of the sector which has an impact on employment and economic growth. In other words, if the causal chain of constraints of MSEs is addressed through facilitating financial supports and other interventions, the sector has positive impact on economic growth and employment opportunities.

## 2.5. Theories of Micro and Small Enterprises Growth

Arega et al. (2016) argued that no theory specific to Micro and Small Enterprises growth has been stated in developing countries. Traditional neoclassical economics hypothesize that workers are added until the value of marginal product of the last worker is equal to the wage paid to that worker. This implies that firm growth will occur as a reaction to changes in technology, wage rate, or price of product. As a result, if one is interested in why small firms in developing

countries grow, this simple theory suggests that one's attention must focus on the factors that have an impact on supply and demand for the product produced by Enterprises.

Minilek and Chinnan (2012) discussed that various theoretical models have been developed which describe the growth of small businesses. One class of theoretical models focus on the learning process either active or passive and the other models refer to the stochastic and deterministic approaches. In the passive learning model, a firm enters to a market without knowing its own potential growth and starts to learn about the distribution of its own profitability based on information from realized profits. In the active learning model, a firm explores its economic environment actively and invests to enhance its growth under competitive pressure from both outside and within the firm.

The other set of growth theories of firms include the stochastic and deterministic approaches. The stochastic model which is also known as the Gibrat's (1931) law argued that all changes in size are due to chance. On the contrary, the deterministic approach assumes that differences in the rates of growth across firms depend on a set of observable industry and firm specific characteristics (Pier, 2002 cited in Minilek and Chinnan, 2012).

The researches by many scholars (Tefera et al., 2013; Gebretsadik and Gagoitseope, 2020; Fissiha, 2016; Krasniqi and Lajqia, 2018) argued that the growth of enterprises or firms do not independent of its size, which contradicts the Gibrat's (1931) law that stated growth rate and firm size are independent in small firms.

Federal Micro and Small Enterprises Development Policy and Strategy (2004) of Ethiopia discussed that the strength of MSE sector is very essential for the overall economic development and future strength of economy since they utilize local resources, satisfying vital needs of large segment of the population with their products and services. The sector of small business also

serves as sprees of technological, marketing and management capacity, skill acquisition and enables technological process through adopting technology. Therefore, MSE sector development hold a strategic place in Industrial Development Strategy of Ethiopia.

The level of MSE development has two major dimensions. The first is the transition of an enterprise from micro to small and from small to medium enterprise level. The second is the process whereby MSEs maintain and strengthen their competitiveness within their own category. The experience from Malaysia shows that enterprises growth has four levels: startup, growth, expansion and maturity. The MSE growth stage refers to the situation where an enterprise is receiving enterprise development support services, demonstrates its competitiveness in the market in terms of price, quality and productivity as well as offers credible evidence as to its long term profitability (FeMSEDA, 2016).

## **2.6. Review of Empirical literature**

Many countries in Africa suffer from high rates of unemployment and low labor productivity because of demographic factors and large number of people enters into labor market each year (Iacovone et al., 2012). Empirical study shows that the role of MSEs in reducing unemployment and generating income has become highly recognized around the world (Liendholm, 2001).

MSEs are notably the engines that drive economic development and the sector accounts about 90 percent of businesses in both developed and developing economies through job creations, employment, tax provision and contribution to Growth Domestic Product.

However, in many African countries, MSEs face different challenges such as lack of capital, shortage of power supply, poor management skills, lack of competency and capability, negative perception, inadequate information, government support and corruption (Samuel, 2017).

In Ethiopia, MSEs are expected to play an important role for sustainable national growth and development particularly in reducing unemployment, income generation, poverty reduction and related social problems.

Fikite and Endrias (2015) conducted a study on Determinants of Growth and Diversification of Micro and Small Enterprises in Dire Dawa using compound annual growth rate to analysis employment growth of MSE. Multiple linear regression analysis had used for data analysis since annual compound growth rate of MSEs by employment used as the response variable takes a continuous measure in their study. The findings their study illustrated that the constraints of enterprises growth were insufficient capital, marketing and place of work.

Addisu (2016) conducted a study on Growth Potential and Business Constraints of Micro and Small Enterprises using three sets of models, which includes principal component analysis, the multiple regression analysis and the logistic regression analysis. The findings of his study revealed that MSE growth in employment influenced by constraints like insufficient finance sources, inadequate access to market and lack of working premises.

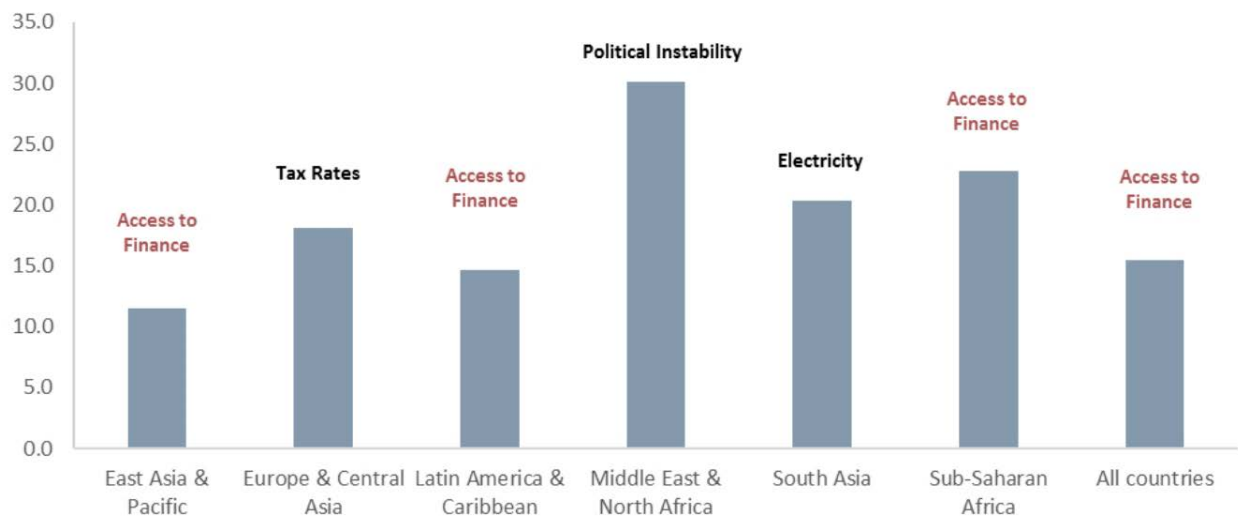
## **2.7. Determinants of Micro and Small Enterprises growth**

Identification of factors determines the growth of firms and the association between them is complex. Cognizant to this, several types of research in this field have developed various frameworks. According to Churchill and Lewis (1983), growth model breaks the growth continuum into stages of development. In a life of firms, at each growth stage we commonly conceive different factors like aim of the owners, managerial skill, access to credit, application of technology, and other growth determinants of the firms. Abiyu (2011) stated that in most developing countries, small businesses face a wider range of constraints and they are

unable to address the problems they face on their own, even in effectively functioning in the market economies.

These constraints are different from one country to another country as well as from region to region in the world. For instance, Kumar (2017) explained that among several constraints of MSEs, access to finance is usually mentioned as the most important constraint challenges the growth of SMEs in employment generation.

Figure 2.3: The biggest obstacle to Small and Medium Enterprises by region



(Source: Ruchira Kumar, 2017: developed from World Bank Enterprise Surveys 2010-2016)

From the figure 2.3, access to finance is the main constraint of MSEs in different regions like East Asia and Pacific, Latin America and Caribbean and Sub-Saharan Africa.

According to Federal Micro and Small Enterprises Development Policy and Strategy (2016) of Ethiopia, enterprises at growth stage suffer from different problems like financial constraint, lack of appropriate technology and technical skill, absence of sufficient working and sales premises and rent seeking behavior. Some of the dominant factors that are constraining the growth of small enterprises include startup and working capital, leadership and market issues, prosperity and succession crisis (Patel, 1995).

Mohammed et al. (2014) noted that current Capital, current employment and startup employment are important factors that positively affect the growth potential of micro and small scale enterprises. However, Becky (2019) argued that when employees have a negative attitude, they are more likely to be disengaged, work their job with less effort and with little concern for quality of their performance.

Tekle et al. (2016) stated that the role of education on growth is explained through its effect on exposure to new information and processing that could have positive impact on production and distribution of goods and services. Education is presumably related to knowledge and skills, motivation, self-confidence, problem solving ability, commitment, and discipline. Higher education is expected to increase the ability to cope with problems and seize opportunities (Papadaki and Chami 2002).

Tekle et al. (2016) posited that the age of enterprises has a substantial effect on growth because older firms have more experience and a superior financial position to perform their business activities than their counterparts relatively. Fissiha (2016) argued that the growth of firms and business experience has a positive relationship as the age of individual firm increases; a firm growth also increases. Older firms are more likely to grow faster than younger firms because of the social capital they have gathered over time through experience (Nathan et al., 2015).

However, many of empirical studies find that smaller firms grow more quickly. According to Meghana, Asli and Vojislav (2001) cited in Gupta et al. (2013) found that small firms with less than two years have the highest employment growth rates.

Mixed result of the study by Heshmati (2001) revealed that while older firms experience faster growth in assets and sales volume, younger firms experience faster employment growth in Sweden. Concerned to this issue, researchers usually give due attention to the effect of firm size

and age. In the late 1980s, a dispute emerged on the Gibrat's (1931) Law, which stated that a growth of firm is independent of size.

Krasniqi and Lajqia (2018) conducted the study on Gibrat's Law and Jovanovic's learning theory using an empirical test for small firms in a Post-conflict Economic setting in Kosovo. The findings of their study confirmed that smaller firms grow faster than larger firms, suggesting growth rate and firm size are not independent in small firms as predicted by Gibrat's (1931) Law. The study also illustrated that older firms grow slower than new firms because there is diminishing rate of return to experience over the time.

Hernandez-Trillo et al. (2005) conducted the study on Startup Capital, Microenterprises and Technical efficiency in Mexico by using stochastic frontier production function. The findings of their study revealed that access to adequate startup capital has been identified as an important deterrent to micro enterprise development and growth. Their finding also indicated that micro enterprises utilizing bank loans and moneylenders are more technically efficient than those relying on their own financial source.

Entrepreneurs across the global typically start business mostly through their own savings due to limited access to capital (Gebrehiwot and Amaha, 2006). For instance, a study over fourteen thousand MSMEs in Latin America found that owners mostly used their own resources and savings were 61 percent or those of their family and friends were 14 percent to launch their firms (Hernandez-Trillo et al., 2005).

Mulu et al. (2018) pointed out that the credit access for investment and working capital of MSEs is very much limited in which more than 70 percent of MSEs had no access to credit from any of the potential sources; thus, they must rely on their own funds. The most essential sources of finance for MSE operators are families and friends, personal saving and microfinance.

Availability of finance source provides convenience environment to the firms of enterprises as it injects working capital; i.e. if there is sufficient source of finance to the firm, the possibility of MSE failure is low.

Redfern and Snedker (2002) forwarded that access to finance was ranked as one of the firms' top three challenges. Even though active firms like MSEs tend to seek credit more actively, it does appear that small firms are affected more severely by capital constraints. Entrepreneurs own perceptions may not always correspond to actual growth trends. Lack of access to capital appears to be widely accepted as a growth constraint, yet few empirical studies explicitly test the link between access to finance and firm growth or success rates.

Minilek and Chinnan (2012) conducted a study using CAGR to assess the growth of MSEs by employment across the year and bottlenecks in the expansion of MSEs in Woldiya, North East Amhara region, Ethiopia. The findings of their study indicated that the growth of MSEs in terms of employment were hindered by several constraints such as working capital, marketing problem, working place, lack of awareness about the sector on employment creation and poverty reduction, inability to implement the trainings given by the government, and lack of determination and endurance by owners.

Solomon et al. (2016) conducted a study on determinants of growth of MSEs using descriptive and econometric analysis methods to analyze internal and external factors of the performance of MSE sector. The results revealed that MSEs suffer from internal and external factors such as weak human resources and other assets, access to finance, inadequate market facilities, policy and regulatory bottlenecks.

According to Minilek and Chinnan (2012) most of the time the common constraints of MSEs indicated by different researchers are include Poor banking services with high interest rates, high

tax and cost of premises, difficulty in obtaining loans for startups, government bureaucracy, insufficient working capital, marketing problem and fluctuation of external market conditions, which are the main reasons for the failures of MSMEs.

Gebretsadik and Gagoitseope (2020) conducted a research on Performance of Micro and Small Enterprises in Tigray Regional State of Ethiopia using multiple linear regression analysis to examine the performance of MSE in three zones of Tigray. The results of their study revealed that initial capital, gender and job type are found to be important factors that affect the performance of MSE positively.

In general, the researchers grouped these constraints of MSEs into finance, government, equipment and infrastructure, marketing and labor. To alleviate these specified challenges of MSE sector, Federal Micro and Small Enterprises Development Agency of Ethiopia has formed the national policy and strategy focused on the facilitation of financial support and skill, and technological development program.

Mohammed (2016) discussed that the current economic reform process ongoing in Ethiopia intended to reduce poverty, unemployment and strengthening of basic institutions and sub-sector of the economy target at improving and enhancing the capacity of small scale enterprises as an instrument of economic growth and development.

In general, MSEs to be the engine of national economic growth and mechanism of reducing unemployment and poverty, critical assessment on the determinants of growth potential and constraints of enterprises growth is very crucial to identify the most powerful constraints challenging the sector in specified area of the study as well as in Ethiopia.

## **2.8. Conceptual framework of the model**

The definition of MSE growth has led to different dimensions and unresolved debates even though in most cases the number of employees, sales, turn over and asset size are widely used as standard criteria to define MSE growth (FeMSEDA, 2016). In this study, the growth of MSEs is defined as the change in the number of employees from startup of enterprises.

Moreover, it is believed that the role and importance of MSE sector is very essential towards employment generation, poverty reduction, urban development and growth of various economic activities in the national economy even in global environment particularly in developing countries. One of the most significance of MSEs in the economy is creating employment opportunities because employment has a great concern in the economic growth and development as it helps to provide every individual the source of income to improve their living standards.

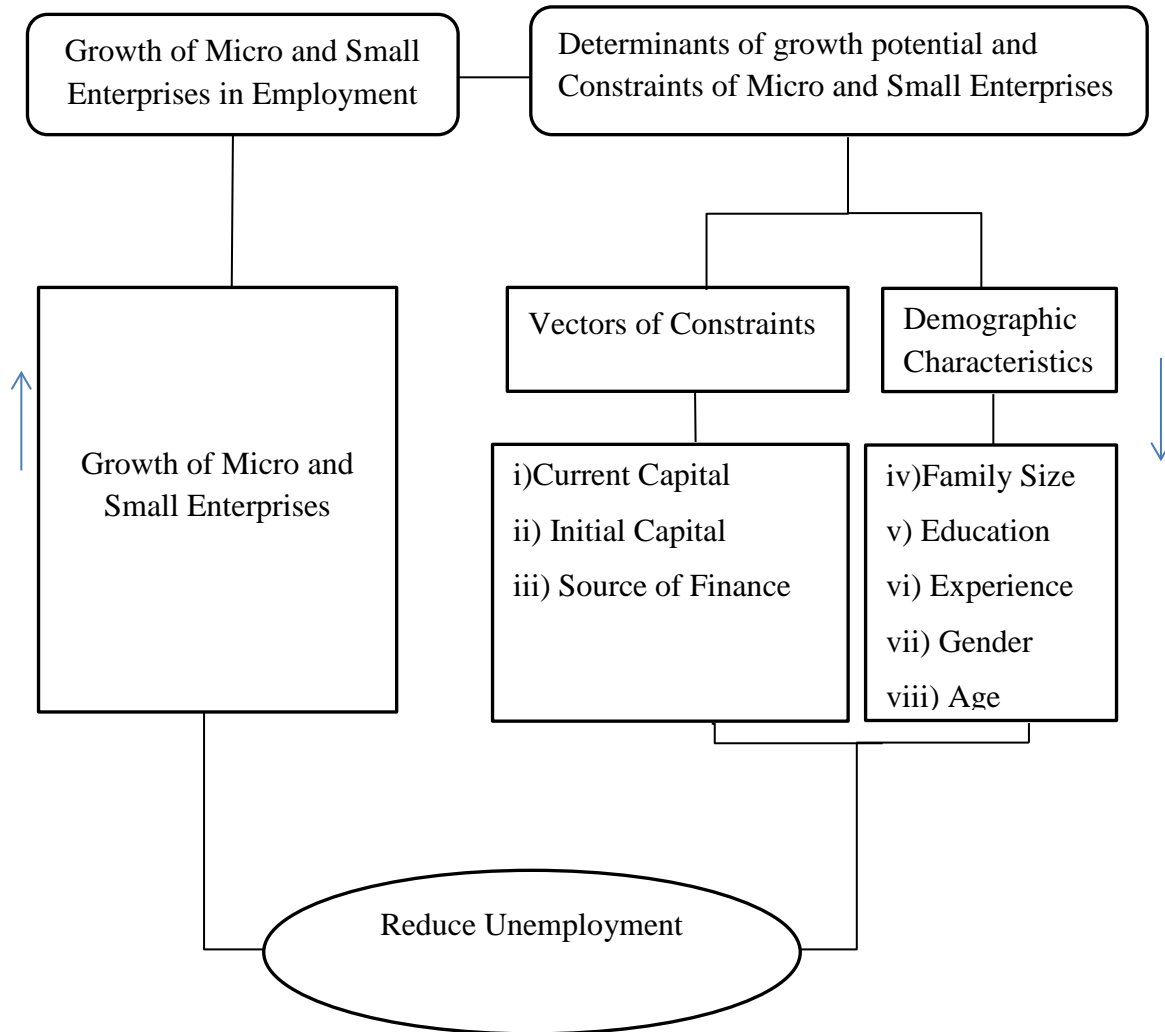
However, empirical evidence of many scholars (Redfern and Snedker, 2002; Gebretsadik and Gagoitseope, 2020; Mohammed et al., 2014; Solomon et al., 2016; Minilek and Chinnan, 2012; Mohammed, 2016) revealed that there are several constraints challenging the expansion and growth of MSE sector in different parts of the world including Ethiopia; and these constraints are grouped into internal and external factors.

After some theoretical and empirical literatures had reviewed, the researcher aimed to assess the determinants of growth potential and constraints of MSEs to identify the most influential factors challenging the sector in Lideta Sub City of Addis Ababa City Administration. Both descriptive and regression analysis were used for data analysis.

The growth of MSEs by employment is defined as a function of vector of constraints and demographic characteristics of enterprises owners. The linear regression model comprises

enterprise growth by employment as dependent variable; and the constraints refer to problems encountered by MSE and demographic characteristics of the owners as independent variables.

Figure 2.4 Conceptual Frame work of the Model



(Source: Researcher own Computation)

↑↓: Indicates increase and decrease respectively.

To sum up, minimizing the constraints of enterprises growth through supporting, encouraging, and promoting the sector results the growth of enterprises and reduce unemployment problem.

## **CHAPTER THREE**

### **3. DATA AND METHODOLOGY**

Research methodology is a way to systematically and scientifically solve some difficulties or tricky upraised in the research problem (Kothari, 2004). This chapter presents the nature and sources of data, research approaches, research design, model specification, data analysis method, definition and description of variables. In addition to this, the chapter also presents the issues related to area of the study, population of the study, sampling method, sample size determination, data collection methods and Ethical Consideration of the study.

#### **3.1. Nature and Sources of Data**

In this study, qualitative and quantitative data collected from both primary and secondary sources of data were used. The Primary data was gathered from selected samples of MSEs in Lideta sub city of Addis Ababa city Administration through observation, structured questionnaires and interviews. Secondary data were also collected from Federal Micro and Small Enterprise Agency, Addis Ababa Micro and Small Enterprise Development Agency, Lideta sub city Micro and Small Enterprise Development office, Annual reports of NBE and CSA, printed materials and books, research papers and official web sites. Moreover, cross sectional data type was employed in the sense that all relevant data were collected at a single point in a time. The reason for preferring a cross sectional study is due to the vast nature of the study and limitation of time.

#### **3.2. Research Approaches**

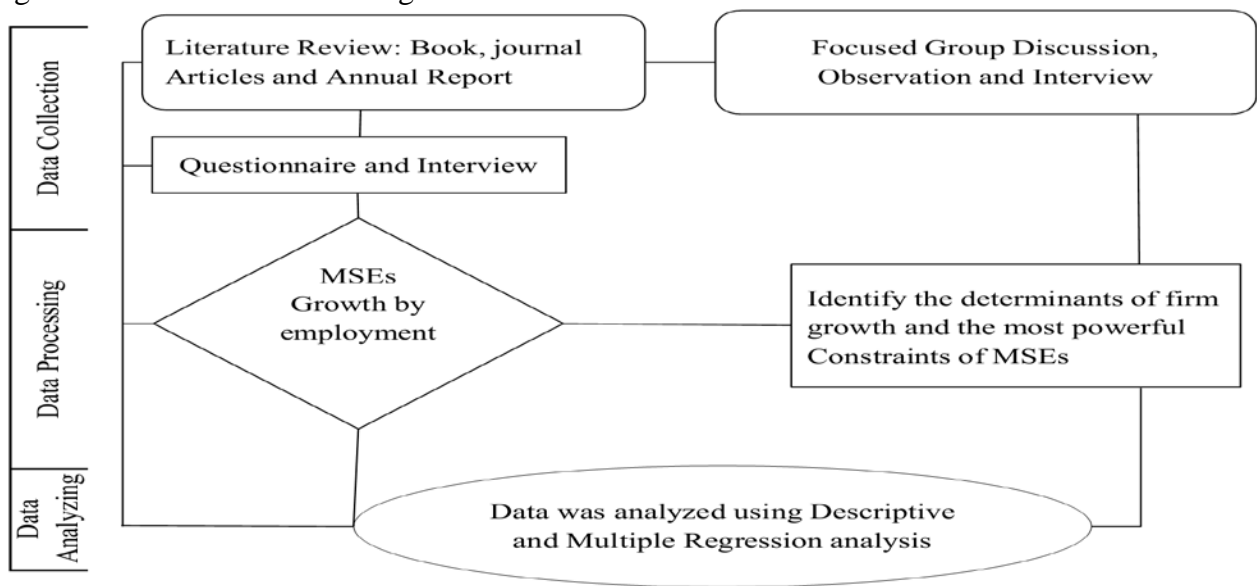
Being a descriptive and explanatory design, this research used a mixed type of research in which both qualitative and quantitative approaches were employed in order to achieve the intended objective of this study.

### 3.3. Research Design

Kothari (2004) stated that Research Design is developed to collect and value gathered facts in order to increase understanding of a specific topic. It is the method of building decisions before a situation arises in which the decision has to be carried out. This study was employed both descriptive and explanatory research design of cross sectional data collected through proportional stratified random sampling method from the samples of MSEs that are grouped into manufacturing, construction, trade, service and urban agriculture.

The study focused on the determinants of growth potential and constraints of MSEs measured by employment in Lideta sub city of Addis Ababa. The primary objective is to assess the growth potential and identify the constraints of the sector within specified area of the study. Moreover, to establish analysis method, review of different literatures related to the topic, findings of past studies and knowledge of researcher regards to MSE sector were used. Descriptive and multiple linear regression analysis have been selected as more appropriate model to estimate parameters so as to identify the most influential factors that affect the smooth functioning of enterprises.

Figure 3.1: Research methodological frame work



(Source: Researcher own design, 2020)

### **3.4. Area of the study**

Addis Ababa city is one of the two City Administrations found in Ethiopia. The administrative divisions of the city Governments follow somewhat a different hierarchy. Each city administration is grouped into sub cities and each sub city divided into Woredas, which is the lowest administrative unit in city administration structure. Similarly, Addis Ababa city Administration is divided into ten different Sub cities and these Sub cities have been grouped into those with high concentration and low concentration of MSEs to explain the location effects. Thus, Lideta sub city is selected as area of the study as it has high concentration of MSEs with complete information about the sector. The reason for choosing Lideta sub city of Addis Ababa city Administration as area of the study is that it can fairly be a representative of the major cities in Ethiopia in terms of MSE concentration.

### **3.5. Target Population**

Lideta Sub City is one of the ten administrative sub cities in Addis Ababa City Administration and has a large number of MSE. The target population for this study is all MSEs operating in Lideta Sub city. The total numbers of MSEs in Lideta Sub City are 1,668 as at October 2020 (Lideta Sub City Micro and Small Enterprises Development office, 2020).

### **3.6. Sampling Method**

According to Fissuh YH (2019) it is usually impossible to take and manage the whole population as it is due to lack of time, resources and cost. The selection of sample size depends on the type, objectives and significance of the study. In this study, the samples were taken from the total population of 1,668 enterprises currently operating in Lideta sub city of Addis Ababa City Administration. This total number of enterprises includes manufacturing, construction, service, trade and urban agriculture sectors.

Moreover, stratification method was used to create operational homogeneity within each sector to select a representative samples in which the entire population grouped into strata of manufacturing, construction, service, trade and urban agriculture sectors. The method of stratification made was based on the sectoral operation of enterprises. After stratification, proportional random sampling technique is applied to select the sample elements from each stratum. I prefer this technique as it is more appropriate to select representative participants from each stratum.

### 3.7. Sample Size Determination

To determine a representative sample size from the target population, different strategies can be used according to the necessity of the research work. Time and financial limitations are also considered in sample size determination for the survey. Taking this into account, the desired total sample size is calculated using Slovin's sampling formula from the given population as follows.

$$n = \frac{N}{(1+Ne^2)} \text{ (Arega et. al., 2016). Where,}$$

N - Population size = 1,668

e - The level of precision or sampling error = 0.075

n - The desired total sample size

$$n = \frac{1,668}{(1+1,668(0.075)^2)} = 161.65 \approx 162$$

Then, the samples contained 162 MSEs were selected using proportionate stratified random sampling from each stratum, where the entire population is divided into subgroup or strata of manufacturing, construction, service, trade and urban agriculture sectors. From each sector or stratum, the samples can be taken using the formula:  $n_i = \frac{n \cdot N_i}{N}$  (Hailai et al., 2019). Where,

N - Total Population size = 1,668

n - Sample size = 162

$N_i$  – The size of  $i^{\text{th}}$  stratum

$n_i$  – The number of participants selected from the  $i^{\text{th}}$  stratum and

$i = 1, 2, \dots, 5$

Hence, the distribution of samples taken from different sectors of enterprises, which includes manufacturing, construction, service, trade and urban agriculture, were given as follows

Table 3.1 Sample Distribution

S. No.	Sectors	Number of Enterprises	Sample Size	Percentage
1	Trade	539	52	32.10
2	Manufacturing	383	37	22.84
3	Construction	376	37	22.84
4	Services	330	32	19.75
5	Urban Agriculture	40	4	2.47
	Total	1668	162	100

(Source of data: Own design based on Lideta Sub City MSE Development Office, 2020)

### 3.8. Data collection Methods

Mixed types of data were gathered from primary and secondary data sources for this study. A structured questionnaires, observations and interviews of firms were used to collect data from the samples of MSEs in Lideta Sub City of Addis Ababa City Administration.

### 3.9. Model Specification

In this study, both descriptive and econometric analyses were used. With regard to MSE growth, the very important issue is about how enterprise growth is defined and measured. Regarding to this, turnover/revenue, sales/output, value added, assets, and number of workers are predominant

measures of MSE growth. Among these alternatives, the most frequently used one is a change in number of employees over the years since start up particularly in those studies of developing countries (Liedholm and Mead, 1999; USAID, 2002). Because, this indicator is the most easily and accurately remembered over time by respondents and also does not be deflated.

Addisu (2016) illustrated that the different techniques of measuring employment growth are Average Annual growth Rate, Average Annual Growth in Jobs and Compound Annual Growth Rate. Among these different methods of measuring the growth of enterprises by employment, Compound Annual Growth Rate (CAGR) was used as measurement tool in this research. It is the most widely used and it provides a much more accurate assessment of the timing of employment growth effects (Liedholm and Mead, 1999). CAGR is a rate of growth that tells the growth of enterprise in employment over the years on annually compounded basis and measured in percent.

Its formula is presented as:  $\left[ \left( \frac{CE}{IE} \right)^{\frac{1}{AE}} - 1 \right]$  (Addisu, 2016). Where, CE, IE and AE represent current employment, initial employment and age of enterprises respectively. Thus, the growth of MSEs in employment is defined as a function of constraints and control variables. The general regression model can be specified as:

MSE growth measured by employment (Entgrowth) = f (Initial capital, Current capital, Source of finance (Dummy), Family size, Education (Dummy), Experience, Gender (Dummy), age).

$$\text{Entgrowth} \left[ \left( \frac{CE}{IE} \right)^{\frac{1}{AE}} - 1 \right] = \beta_0 + \beta_1 \text{Ln (Initial Capital)} + \beta_2 \text{Ln (Current Capital)} + \beta_3 \text{Source of Finance (D}_1\text{)} + \beta_4 \text{Family Size} + \beta_5 \text{Education (D}_2\text{)} + \beta_6 \text{Experience} + \beta_7 \text{Gender (D}_3\text{)} + \beta_8 \text{Age} + \varepsilon_i$$

Where, Entgrowth refers to Enterprise growth measured by employment, which is the dependent variable, D<sub>1</sub>, D<sub>2</sub>, D<sub>3</sub> are Dummy Variables defined in table 3.2,  $\beta_1, \beta_2, \dots, \beta_{10}$  are parameters to be estimated,  $\beta_0$  is constant and  $\varepsilon_i$  is the error term. The independent variables are constraints

refer to problems encountered by MSEs which include variables of interest for analysis and control variables such as demographic characteristics.

### **3.10. Definition of variables**

#### **3.10.1. Response Variable**

The response variable is MSE growth measured in terms of employment that was regressed as dependent variable with independent variables specified in the model. Mohammed et al. (2014) stated that the growth of MSEs in employment is significantly affected by constraints such as current capital, level of current employment, level of startup employment, and access to business services. Hailai and Vermaack et al. (2019) posited that initial capital, access to credit and Business Development Service are the main determinants of Micro, Small and Medium Enterprises performance.

Among several constraints that have been related to MSE growth, the variables like Initial capital, Current capital, Source of finance, Family size, Education, Experience, Gender, Age are taken as predictor variables to explain the dependent variable defined as enterprise growth by employment in this study.

#### **3.10.2. Predictor Variables**

A Predictor Variable is a variable used in regression to predict the response variable. It provides information on an associated dependent variable regarding a particular outcome. Accordingly, the definitions and description of predictive variables included in the model for this study are given as follows.

Table 3.2: Description and Measurement types of explanatory Variables

Variables	Definition	Measurement Type
Initial capital	Initial Capital of Enterprises in Ethiopian Birr	Continuous
Current Capital	Working capital of Enterprises in Ethiopian Birr	Continuous
Source of finance	MSE's Source of Finance defined as 1 if enterprises have their own source of finance and 0 otherwise	Discrete
Family size	Family size of the operator	Continuous
Education	Education of MSE operator defined as 1 if the operator of Enterprises is Educated and 0 otherwise	Discrete
Experience	Experience of MSE's operator explained in year	Continuous
Gender	The gender of MSE operator defined as 1 if the operator of Enterprises is male and 0 otherwise	Discrete
Age	The age of MSEs owners or operators	Continuous

### 3.11. Expected Sign

The size of initial Capital positively affects the growth of MSEs in Lideta Sub city of Addis Ababa city Administration

The size of Current Capital positively affects the growth of MSEs in Lideta Sub city of Addis Ababa city Administration

The source of finance from the owners positively affects the growth of MSEs in Lideta Sub city of Addis Ababa city Administration

Experience of owners positively affects the growth of MSEs in Lideta Sub city of Addis Ababa city Administration

The owner's education positively affects the growth of MSEs in Lideta Sub city of Addis Ababa city Administration

Family size of owners positively affects the growth of MSEs in Lideta Sub city of Addis Ababa city Administration

The gender of owners positively affects the growth of MSEs in Lideta Sub city of Addis Ababa city Administration

The age of owners positively affects the growth of MSEs in Lideta Sub city of Addis Ababa city Administration

### **3.12. Methods of Data Analysis**

This study employed descriptive and multiple linear regression analysis to assess the growth potential and constraints of MSE growth measured by employment to identify the most influential constraints challenging the sector based on the model specified. The descriptive analysis which includes summary statistics such as frequency, means and percentages to analyze the nature and structure of MSEs operating in Lideta Sub City of Addis Ababa city Administration.

The regression model is used to identify the relationship between MSE growth and constraints while controlling other determinants. It also identifies which constraint is important and its degree of extent in influencing the response variable. The coefficients of explanatory variables indicate the extent to which the predictive variables individually influence the response variable. Moreover, the appropriate empirical Regression Model applied to analyze the determinants of firm growth potential and constraints of enterprises is Ordinary Least Square method since the

dependent variable enterprises growth (CAGR) is a continuous variable. For the purpose of data analysis, the latest version of Statistical Package for Social Science (SPSS) Version 20 and STATA 14 software package were used.

### **3.13. Ethical Consideration**

During the course of administering the questionnaires, names and any other identifying notes were not used. Participants were informed in advance about the research prior to give their consent. The confidentiality of the respondents was kept well in order to protect their privacy and the data received were only used for academic purpose. Finally, the data were analyzed based on the questionnaires rather than using the researcher opinion and input. The researcher stays honesty for the responses of participants and independent of any personal assessment.

## CHAPTER FOUR

### 4. DATA ANALYSIS AND DISCUSSION

This chapter presents the results and discussion of descriptive and regression analysis. In descriptive analysis, the nature and structure of MSEs were explained using summary statistics such as percentages, means and frequency. The determinants of growth potential and constraints of enterprise growth in employment were analyzed using Ordinary least square (OLS) technique of linear regression model.

#### 4.1. Response Rate

There were 162 samples of MSEs covered in this analysis and these enterprises were engaged in different sectors such as Manufacturing, Construction, Trade, Service, and urban agriculture. The respondents were given the aware of the study purpose and why it is conducted before providing the questionnaire to each respondent and make consensus during gathering the appropriate data. Then, the questionnaires prepared to collect data were distributed to 162 samples of MSEs operating in area of the study. Out of 162 questionnaires distributed, 160 were returned and filled appropriately, which counts 98.76 percent. The rest two questionnaires were not filled appropriately and have no full information required for data analysis.

Table 4.1: Response Rate of questionnaires

S. No.	Sectors	Total Sample Size	Fully Responded	Percentage
1	Trade	52	52	32.10
2	Manufacturing	37	37	22.84
3	Construction	37	36	22.22
4	Services	32	32	19.75
5	Urban Agriculture	4	3	1.85
	Total	162	160	98.76

(Source: Researcher own survey, 2020)

## 4.2. Descriptive Analysis

The descriptive design applied here is to explore the nature and structure of growth potential and constraints of MSE sector in Lideta sub city of Addis Ababa city Administration.

### 4.2.1. Gender of Participants

In Ethiopia, both females and males are working in MSEs at different development oriented positions as owners, managers or employees like other countries in the world. But, the percentage of their participation in such enterprises is not distributed in the same manner. According to Federal Micro and Small Enterprises Development Package there is a difference between males and females participation in MSE sector.

Table 4.2: Gender of Participants

Variable		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	57	35.60	35.60	35.60
	Male	103	64.40	64.40	100.00
	Total	160	100.00	100.00	

(Source: Researcher own survey, 2020)

Table 4.2 above shows that 64.40 percent of total samples were males and the rest 35.60 percent of total samples were females. This shows that the gender difference is appearing and most of the owners or operators of MSEs were found to be males and the taking part of the females in the sector seems to be limited.

### 4.2.2. The Age of participants

Most of the operators or owners of MSEs are relatively young people in their age as we can see from the table 4.3 below in area of the study.

Table 4.3: Age of Participants

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Age	160	23	49	32.63	6.317
Valid N (list wise)	160				

(Source: Researcher own Survey, 2020)

As indicated in the table 4.3 above, the average age of owners or operators of MSEs is 32.63 years. This shows that the participation of young people should be encouraged and need to be given due attention for their engagement in MSEs as they are the backbone of our economy.

#### 4.2.3. Educational Status of Participants

According to Global Business School Network (2013) education contributes to the overall economic growth by improving the efficiency of the work force and leading to higher rates of individual productivity, which in turn lead to a higher demand for qualified workers. Education can provide individuals with the necessary market skills to be relevant in the economy.

Table 4.4: Educational Status of Respondents

Variable Category		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Uneducated	24	15	15	15
	Educated	136	85	85	100
	Total	160	100	100	

(Source: Researcher own Survey, 2020)

Regarding to education, table 4.4 above indicates that 85 percent of the total sample respondents were educated and 15 percent of the total samples have no educational qualification. This result indicates that most operators of enterprises are relatively educated individuals.

#### 4.2.4. Experience of Respondents

The table 4.5 below illustrates that the average experiences of Participants in MSEs is 6.53 years.

Table 4.5: Experience of Respondents

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Experience	160	2	16	6.53	3.007
Valid N (list wise)	160				

(Source: Researcher own Survey, 2020)

#### 4.2.5. Family Size

Table 4.6 below shows that the average number of family size of MSE operators or owners is relatively 3.62 in area of the study.

Table 4.6: Family Size Owner

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Family Size	160	1	9	3.62	2.306
Valid N (list wise)	160				

(Source: Researcher own Survey, 2020)

#### 4.2.6. Source of Finance

Micro and Small Enterprises used different sources of finance to run their businesses. Finance is one of the critical requirements for startup and growth of enterprises so that firms need to have some finance sources, which supports them to startup business and to have sufficient working capital. These sources of finance can differ from one another based on different factors. The most common source of finance that operators of enterprises used to run their business is personal saving. Table 4.7 below illustrates the finance sources of MSEs to run their businesses.

Table 4.7: Finance Source of enterprises

Variable		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Other source	65	40.60	40.60	40.60
	Self	95	59.40	59.40	100.00
	Total	160	100.00	100.00	

(Source: Researcher own Survey, 2020)

The above table 4.7 shows that 59.4 percent or the majority of MSEs were financing their businesses from their own source and the rest 40.6 percent were from other source of finance. This result shows that encouraging the performance in saving habits and it needs further strengthening and scaling up. In addition, the result implies that the proportion of enterprises that finance their business through borrowing from other source is found to be insignificant as expected despite availability of financial institutions in Addis Ababa city Administration.

#### **4.2.7. Initial Capital of enterprises**

Over the life of the firms, growth can be constrained by lack of access to finance that limit investment to maintain or improve technology and their performance. Even after the startup hurdle is overcome, lack of sufficient source of finance or credit frequently hinders growth of MSEs during earlier years because younger firms tend to find financing even more difficult than older firms (Redfern and Snedker, 2002).

The table 4.8 below shows that the minimum and maximum of initial capital of MSEs are 2,000.00 and 180,000.00 respectively. The average initial capital of enterprises is 40,256.25 at the time of startup business. This result suggests that there is insufficient capital to startup business without having the facilities of access to finance.

Table 4.8: Initial Capital of enterprises

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Initial Capital	160	2,000.00	180,000.00	40,256.25	43,023.96
Valid N (list wise)	160				

(Source: Researcher own Survey, 2020)

#### 4.2.8. Current Capital of enterprises

The table 4.9 shows that the average Current capital of MSEs is 113,695.00 in birr. The minimum and maximum of current capital of MSEs are found to be birr 7,000.00 and 300,000.00 respectively.

Table 4.9: Current Capital of enterprises

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Current Capital	160	7,000.00	300,000.00	113,695.00	88,330.93
Valid N (list wise)	160				

(Source: Researcher own Survey, 2020)

From the perception of MSE owners, insufficient source of finance is recurrently the most obvious and pressing challenge deterring the growth of firms. The MSEs receive formal loans relatively infrequently and must rely on other types of credit (Carpenter and Petersen, 2002).

Table 4.10: The response of participants regards to initial and Current Capital

Variables		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Lack of Initial capital	70	43.750	43.750	43.750
	Lack of working Capital	68	42.500	42.500	86.250
	Inefficient business skills	19	11.875	11.875	98.125
	Lack of Employees	3	1.875	1.875	100.00
	Total	160	100.0	100.0	

(Source: Researcher own Survey, 2020)

The capital is one of the most highly required resources for expansion of enterprises. Table 4.10 illuminates that the major problems of MSEs are associated with lack of initial and working capital. Regarding to these constraints, 86.25 percent of total respondents are confirmed with getting lack of initial and working capital in area of the study.

To sum up, financing was ranked as one of the top three challenges of firms (Redfern and Snedker, 2002). Thus, Entrepreneurs own perceptions may not always correspond to actual growth trends. Lack of access to capital seems to be widely accepted as a growth constraint, yet few empirical studies explicitly test the link between access to finance and firm growth or success rates.

### **4.3. Regression Analysis**

Diagnostic tests for classical linear regression model assumptions were carried out first before starting the discussion on the Ordinary Least Square regression output to identify the constraints influencing the growth of Enterprise.

#### **4.3.1. Linearity Assumption**

This assumption states that regression model is linear in the parameters. This means that the relationship between the dependent variable Y and the independent variable (s) X is linear. Accordingly, the regression model in this study is linear in parameters.

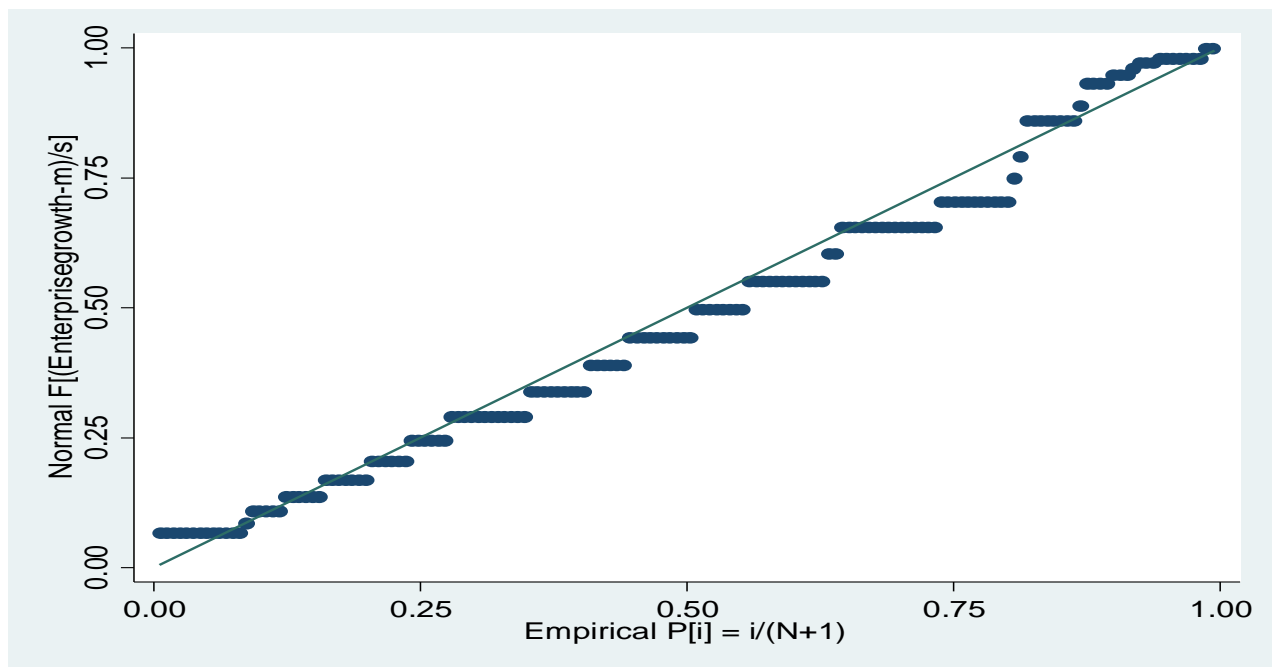
#### **4.3.2. Normality Assumption and Transformation**

Normality assumption is the first requirement in classical linear regression model. In order to have valid hypothesis tests about the model parameters, efforts have been made to assure the normality assumption. The values of each  $\varepsilon_i$  are normally distributed, which means that random term  $\varepsilon_i \sim N(0, \sigma^2)$ . Figure 4.1 below show the standardized normal probability plot (P-P plot) of

the residuals of the model. The plots indicate that no violation of the assumption of normality in the model as all points lie approximately on the 45° line.

Having checked the normality of the residuals, the appropriate data transformations on independent variables like initial capital and current capital have been made. Thus, data were analyzed after initial capital and current capital had transformed using natural logarithm, which was included in the model as Ln (Initial Capital) and Ln (Current Capital). The rest of explanatory variables included in the model are analyzed without any transformation.

Figure 4.1: A standardized normal probability plot (P-P plot) of a model



### 4.3.3. Multicollinearity Test

In multiple linear regression models, we need to be aware of certain features of the Multicollinearity. Multicollinearity appears when two or more independent variables are highly correlated with each other. The existence of Multicollinearity might cause the estimated regression coefficients to have the wrong signs and smaller t-ratios that might lead to wrong conclusions.

There are two measures that are often suggested to test the presence of Multicollinearity. These are: Variance Inflation Factor (VIF) for association among the continuous explanatory variables and contingency coefficients for categorical or dummy independent variables. The technique of variance inflation factor (VIF) was employed to detect the problem of Multicollinearity among the continuous variables.

According to Gujarati (2003), VIF can be defined as:  $VIF(X_i) = \frac{1}{(1-R^2)}$  Where,  $R^2$  is the square of multiple correlation coefficients that results when one explanatory variable ( $X_i$ ) is regressed against all other explanatory variables. The larger the value of  $VIF_i$  the more collinear the variable  $X_i$  is. As a rule of thumb, if the VIF of a variable exceeds 10, there is a Multicollinearity problem.

To avoid serious problem of Multicollinearity, it is quite essential to omit the variables with VIF value greater than or equal to 10 from Regression analysis. Based on the values of VIF given in the table 4.11 below, the data have no serious problem of Multicollinearity.

Table 4.11: Collinearity Diagnostics of Continuous explanatory Variables

Model	Variables	Collinearity Statistics	
		Tolerance( $\frac{1}{VIF}$ )	VIF
1	Initial Capital	0.206	4.85
	Current Capital	0.197	5.08
	Experience	0.604	1.66
	Family Size	0.388	2.57
	Age	0.342	2.92

a. Dependent Variable: Enterprise Growth

The estimation results of VIF for each continuous explanatory variable included in the regression model is fairly less than 10, which suggests the absence of Multicollinearity problem in the model estimated.

Similarly, the contingency coefficient, which measures the association between various dummy or categorical variables based on correlation, was computed in order to check the degree of association among the dummy or categorical explanatory variables or the existence of Multicollinearity problem.

The decision rule for contingency coefficients states that when its value approaches to one, there is a problem of Multicollinearity within dummy or categorical variables. The contingency

coefficient is computed as:  $\sqrt{\frac{\chi^2}{(n + \chi^2)}}$  Where,

C = Contingency Coefficient

$\chi^2$  = Chi-square random variable and

n = Total sample size.

Table 4.12: Collinearity Diagnostics of Discrete explanatory Variables

Model	Variables	Contingency Coefficients		
		Finance Source	Education	Gender
1	Finance Source	1.00	0.027	0.075
	Education	0.027	1.00	0.016
	Gender	0.075	0.016	1.000

The estimated results of contingency Coefficients for each discrete independent variable included in the regression model is fairly far apart from one, which suggests nonexistence of serious problem of Multicollinearity within independent variables of the model. In general,

Multicollinearity between the explanatory variables is not considered as a problem in the model of this study.

#### **4.3.4. Heteroscedasticity Test**

It is assumed that the variance of the errors is constant ( $\sigma^2$ ), which is known as the assumption of homoscedasticity. If the error terms do not have a constant variance, they are said to be heteroscedastic. Hence, this assumption is verified by conducting the Breusch-Pagan/Cook-Weisberg test for heteroskedasticity, which states the null hypothesis as  $H_0$ : Constant variance.

The estimated result shows that P-value = 0.0668 of the observed chi-square test ( $\chi^2$ ) is greater than 0.05 level of significance as we can see from appendices.

This result indicates that there exists a constant variance of error terms, implies the absence of heteroscedasticity problem. Generally, the result shows that the presence of equal variance of the residuals along the predicted line and meets the assumption of the Ordinary Least Square.

#### **4.3.5. Results of Regression Analysis**

The estimation results of multiple regression analysis are given in table 4.13 below. Regards to constraints related to enterprises growth in the model, variables such as initial capital, current employment, Source of finance, gender and education of operators were found to be important factors in explaining employment growth of enterprises.

The coefficients of these variables are positive in signs which revealing strong direct relationship between independent variables and employment growth of enterprises. In addition, the constraints of enterprises growth, variables like startup employment and experience of operator were found to be statistically significant and negatively associated with enterprises growth.

Table 4.13: The OLS results of multiple regression analysis

Source	SS	df	MS	Number of obs	=	160
Model	.230234253	8	.028779282	F(8, 151)	=	6.91
Residual	.628960122	151	.004165299	Prob > F	=	0.0000
				R-squared	=	0.2680
				Adj R-squared	=	0.2292
Total	.859194375	159	.005403738	Root MSE	=	.06454

Enterprisegr-h	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
InitialCapital	-.0254719	.0103885	-2.45	0.015	-.0459976	-.0049462
CurrentCapital	.0268229	.0116627	2.30	0.023	.0037798	.049866
FinanceSource	.0170388	.0105548	1.61	0.109	-.0038153	.0378928
Experience	-.0079957	.0022128	-3.61	0.000	-.0123678	-.0036236
Education	.0655772	.0150921	4.35	0.000	.0357583	.0953961
FamilySize	-.0035841	.0035673	-1.00	0.317	-.0106324	.0034641
Gender	.0276048	.010711	2.58	0.011	.006442	.0487676
Age	.0017967	.0014192	1.27	0.207	-.0010073	.0046007
_cons	-.0118211	.0689498	-0.17	0.864	-.148052	.1244097

Dependent Variable: Enterprise Growth, Significant at 5 percent level of significance

The coefficients of these independent variables explain the magnitude of the constraints towards affecting the growth of enterprises in employment.

$$\text{Entgrowth} \left[ \left( \frac{\text{CE}}{\text{IE}} \right)^{\frac{1}{\text{AE}}} - 1 \right] = \beta_0 + \beta_1 \text{Ln (Initial Capital)} + \beta_2 \text{Ln (Current Capital)} + \beta_3 \text{Source of}$$

$$\text{Finance (D}_1) + \beta_4 \text{Family Size} + \beta_5 \text{Education (D}_2) + \beta_6 \text{Experience} + \beta_7 \text{Gender (D}_3) + \beta_8 \text{Age} + \varepsilon_i$$

Estimated Model:

$$\text{Entgrowth} = -0.0118211 - 0.0254719 \text{Ln (Initial Capital)} + 0.0268229 \text{Ln (Current Capital)} + 0.0170388 \text{ Source of Finance (D}_1) - 0.0035841 \text{ Family Size} + 0.06555772 \text{ Education (D}_2) - 0.0079957 \text{ Experience} + 0.0276048 \text{ Gender (D}_3) + 0.0017967 \text{ Age}$$

#### 4.4. Interpretations and Discussions of Results

The constant or intercept of the model is interpreted as setting the values of all independent variables to zero, the growth of enterprises by employment decrease by 0.0118211. Although it is difficult to assume the values of all these variables to aggregate to zero, this may help to derive mean value of the errors to be zero and also partially capture the effect of variables in the model.

#### **4.4.1. Initial capital of enterprises**

MSEs tend to face more financial constraints than do larger firms for various reasons ranging from lack of collateral. From the perspective of MSE owners, insufficient credit is frequently the most obvious and pressing challenge hindering firm growth.

Tefera et al. (2013) noted that enterprises that started their operation with a higher initial investment are more likely to grow than their counterparts who started operation with a relatively smaller initial investment.

Gebretsadik and Gagoitseope (2020) conducted a study on Performance of Micro and Small Enterprises in Tigray regional State of Ethiopia. The result of their study revealed that initial capital is found to be important factor that affects MSE performance positively. In addition, a study by Fissiha (2016) on the Determinants of Micro and Small Scale Enterprises growth in Bahirdar City found positive relationship between initial investment and growth of enterprises. Krasniqi and Lajqia (2018) pointed out that firm size and growth rate are not independent in small firms.

On the contrary, Gibrat's (1931) law predicts that firm growth is a purely random effect and therefore should be independent of firm size. Gebreeyesus (2007) stated that enterprises with lower initial capital growth faster than those with higher capital, suggesting negative impact of initial capital on enterprises growth

From the definition of linear-log regression model, we have unit-percent relationship between dependent variable and explanatory variables respectively. Interpretation: keeping all variables constant, a percentage change in independent variable X results a unit change in the dependent variable Y.

The regression output evidence depicted in table 4.13 revealed that initial capital is statistically significant at 5 percent level of significance and negatively associated with employment growth of enterprises. Keeping all other determinants constant, a 0.0002547 percentage change in initial capital results a unit changes in the growth of enterprises by employment, which is dependent variable. This means that if initial capital of enterprises increased by 0.0002547 percent, the growth of enterprises decreases by one unit in the area. This result implies that MSEs which started their business operation with smaller initial capital grow faster than their counterparts those started business operation with relatively higher initial capital.

Hence, the result of this study is consistent with Gebreeyesus (2007) stated that enterprises with lower initial capital growth faster than those with higher capital, suggesting negative impact of initial capital on enterprises growth. The result of this study also similar with Gibrat's (1931) law which states firm growth is independent of their size. However, this result contradicts with the research by (Gebretsadik and Gagoitseope, 2020; Fissiha, 2016; Krasniqi and Lajqia, 2018).

#### **4.4.2. Gender of Participants**

A study by Gebretsadik and Gagoitseope (2020) on the Performance of Micro and Small Enterprises in Tigray regional State of Ethiopia revealed that gender is found to be important factor that affects MSE performance positively, which implies that men headed business owners have better performance than female headed business owners.

Nganda et al. (2014) noted that male owned firms have better growth than female owned firms. A number of justifications have been argued as to why female owned firms grow slowly than male owned firms. This may be due to the fact that women owners of firms in some countries have more problems regarding innumeracy, illiteracy and lack of business skills.

In line with this, the result presented in the table 4.13 above revealed that the gender of operator is statistically significant and positively affects the growth of enterprises. This suggests that MSEs led by male operators grow by 0.0276048 than those led by female operators.

#### **4.4.3. Educational status of Respondents**

Education is presumably related to knowledge and skills, motivation, self-confidence, problem solving ability, commitment, and discipline. Higher education is expected to increase the ability to cope with problems and seize opportunities (Papadaki and Chami, 2002). The role of education on growth is explained through its effect on exposure to new information and processing that could have positive impact on production and distribution of goods and services (Tekle et al., 2016).

In addition, it is believed that operators with higher educational qualification are expected to make better quality decisions to manage a firm in a way that reduces the likelihood of failure. Firms owned or managed by entrepreneurs with higher formal education experience higher growth than their counterparts (Yeboah, 2015). Similar to this, the result presented in table 4.13 above shows that education is statistically significant and positively affects the growth of enterprises by employment, suggesting that enterprises led by educated operators grow by 0.06557 than those led by uneducated operators in the area of the study.

#### **4.4.4. Current Capital**

Mohammed et al. (2014) pointed out that the growth of MSEs by employment is significantly affected by current capital. Similar to this, the result of this study shows that Current Capital is statistically significant and positively affects employment growth of enterprises. The regression output evidence depicted in the table 4.13 revealed that current capital is statistically significant and positively associated with employment growth of enterprises at 5 percent level of significance.

Keeping all other determinants constant, a 0.000268229 percentage change in current capital results a unit changes in the growth of enterprises by employment. This means that if Current Capital of enterprises increased by 0.0268229 percent, the growth of enterprises by employment increases by one unit in the area and this result is consistent with (Mohammed et al., 2014).

#### **4.4.5.Experience of Respondents**

According to Fissiha (2016) business experience and firm growth have a positive relationship, which means that as the age of individual firm increases, the firm growth also increases. Moreover, younger firms are more likely to grow lower than older firms because of the social capital they have gathered over time through experience (Nathan et al. 2015).

On the contrary, many of empirical studies find that smaller firms grow more quickly. For instance, according to Meghana, Asli and Vojislav (2001) cited in Gupta et al. (2013) found that small firms with less than two years have the highest employment growth rates. Krasniqi and Lajqia (2018) noted that older firms grow slower than new firms because there is diminishing rate of return to experience over the time.

Similar to this, evidence of regression output given in the table 4.13 shows that experience of operator is statistically significant and negatively associated with employment growth of enterprise. The employment growth of enterprises was negatively affected by their experience at 5 percent level of significance. This result suggests that younger firms grow better than their counterpart of older firms in employment size. The evidence of this study is consistent with the study by (Krasniqi and Lajqia, 2018; Gebreeyesus, 2007; and Tekle et al., 2016).

Finally, however, the regression output of empirical evidence in this study failed to show significant effect of Source of finance, family Size and age on employment growth of MSEs though the study conceptualized their influence based on literature.

## CHAPTER FIVE

### 5. CONCLUSION AND RECOMMENDATION

#### 5.1. Conclusion

This study provides new empirical evidence on the growth potential of MSEs in employment and identifies constraints influencing the sector using descriptive and regression analysis of Ordinary Least Square (OLS) technique based on the data collected from 160 enterprises in Lideta Sub city of Addis Ababa City Administration. The main objective was to assess the growth potential and identify constraints of MSE growth in area of the study. The results of regression analysis have shown statistically significant evidence of five explanatory variables at 5 percent level of significance out of eight variables used in the model as determinants of enterprises growth.

The current growth potential of MSEs are constrained and positively influenced by significant factors such as current capital, education and gender in area of the study. Because, estimated coefficients of these variables are statistically significant at 5 percent level significance and positively associated with MSE growth.

Evidently, the regression output revealed that MSEs operating their business with higher current capital grow faster than their counterparts those operating their business relatively with lower current capital. This implies that MSEs those have sufficient working capital grow better than their counterparts those have no sufficient working capital though majority of the firms face various challenges to get finance from formal institutions. The current level of MSEs in terms of working capital is therefore characterized by the absence of sufficient funds to sustain employment growth of enterprises and to improve their performance in the area.

The regression output also shows that education of the owner positively affects MSE growth and statistically significant. This suggests that MSEs operating by educated person grow faster than

their counterparts or uneducated person. In the same vein, regarding to gender, the result of regression analysis indicates that enterprises led by males better grow than led by females relatively.

The empirical findings also revealed that initial capital and experience are negatively associated with employment growth of enterprises. This implies that firms of enterprises started their business operation with lower capital grow faster than their counter parts those started their business operation with higher initial capital relatively. Regarding to experience, newly established MSEs are better growing than that of early established enterprises. However, explanatory variables like source of finance, family Size and age are found to be statistically insignificant variables in this study.

In general, the results of this study show that MSE growth by employment seems to be increased on average from the time of startup enterprises in area of the study.

## **5.2. Recommendation**

Depending up on the analysis made, results obtained and conclusions drawn, the following recommendations are forwarded to the firms, Policy makers, concerned government actors and other stakeholder.

Firms of MSEs with lower capital should work towards better advancement of their growth potential by means of creating strong linkage with financial institutions and improving their financial management practices to have sufficient finance in order to upraise employment opportunities and their contribution to the national economic growth.

To solve the problem of working or current capital for MSEs, concerned Government Actors, Financial Institutions and other stakeholders need to allocate sufficient amount of funds for expansion and growth of MSEs in order to reduce unemployment problem and poverty.

Policy makers and other stakeholders should reconsider financing strategy for MSE sector as long as finance is the backbone for smooth operations of the business.

The government actors and other stakeholders should give due attention to gender difference appearing in the participation of MSE operation and the females take part in the sector should be encouraged.

Finally, this research contributes to the current debate in MSE growth literature through its empirical investigation on determinants of growth potential and constraints of MSE growth by employment in area of the study.

### **5.3.Future Research Areas**

After conducting the study and assessing the determinants of growth potential and constraints of MSEs, the following area of the study is recommended to be carried out in the future. It should be noted that this study has used cross sectional data collected from 160 firms of enterprises and the outcomes may not be able to make generalization for other firms over a period of time. Therefore, it is suggested that future Panel surveys and availability of other data may call for further studies in order to have inclusive solution for the determinants of growth potential and constraints of MSE sector.

This is for the reason that panel data refers to the data containing time series observations of a number of individuals and these observations involves a cross sectional and time series dimension (Hsiao, 2003). It is more accurate inference of model parameters and usually more degrees of freedom as well as more sample variability.

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## APPENDICES

### Addis Ababa University



### College of Business and Economics

### School of Commerce Department of Economics

**Questionnaire:** This questionnaire is prepared by Diro Soboka, a student of MSc in Development Economics at Addis Ababa University. The purpose of this questionnaire is to collect primary data in order to conduct the study on “**Determinants of Growth Potential and Constraints of Micro and Small Enterprises in Lideta Sub City of Addis Ababa, Ethiopia**”. Your cooperation in providing genuine and timely response for the questions is very important for the success of this study. No need of writing your name on the questionnaire since the data is processed and analyzed in aggregation.

The researcher is grateful for your cooperation and assures you that all the information collected is merely for academic purpose and your response will be kept confidential. Therefore, you are kindly requested to provide accurate responses in order to obtain significant and reliable information. If you have any question and suggestion;

Mobile No. 0911754896

E-mail: [dirosoboka1@gmail.com](mailto:dirosoboka1@gmail.com)

With best regards,

Diro Soboka

**Instruction:** Please, simply mark (x) in the appropriate box and provide your opinion to open-ended questions on the given space.

### **Personal Information**

1. Gender: Male  Female
2. Your Age in year \_\_\_\_\_
3. Your Family Size \_\_\_\_\_
4. What is your Educational Level? Uneducated  Primary school  High school  College Certificate  Diploma  Bachelor degree  If others, specify \_\_\_\_\_
5. What is your experience in enterprise? Please specify in year \_\_\_\_\_

### **Business Information**

6. What is the type of your enterprise? Manufacturing  Construction  Trade  Service  Urban Agriculture
7. What is the age of your enterprise in year since start up? \_\_\_\_\_
8. What was your initial capital in Ethiopia birr? Please, specify \_\_\_\_\_
9. What is your current capital Ethiopian in birr? Please, specify \_\_\_\_\_
10. What was the number of initial employee (s) in your enterprise? \_\_\_\_\_
11. What is the total number of current employee (s) working in your enterprise? \_\_\_\_\_
12. What is/are the sources of your initial capital?  
Personal saving  Banks  Government Support  NGOs  Family and Friends  Ikub  MFIs  If others, Specify \_\_\_\_\_
13. What motivated you to start up this enterprise?  
Self  Family and friends  Experience  Training  Education  Others \_\_\_\_\_
14. What were/was the main constraint(s) of your enterprise at start-up?

Insufficient source of finance  Lack of initial capital  Lack of initial employee (s)  If others, specify\_\_\_\_\_

15. What is/are the main determinants of your enterprise growth currently?

Lack of working capital  Inefficient business skill  Lack of employee (s)  If others, please specify\_\_\_\_\_

16. To what extent can the constraints of MSE affect the growth potential of your enterprise?

Very high  High  Low  very low

17. Micro and Small Enterprises sector can reduce unemployment problem; and increase employment opportunities.

Strongly Agree  Agree  Disagree  Strongly disagree

18. Why are a number of MSEs in Lideta Sub City unable to grow at their full potential? Please, specify\_\_\_\_\_

19. Do you have any support from concerned government actors and other stakeholders since start up your enterprise? Please, specify\_\_\_\_\_

20. What do you suggest to concerned bodies to improve the performance of Micro and Small Enterprises? Please, specify\_\_\_\_\_

21. Any suggestion you want to add or opinion you have on the determinants of growth potential and constraints of enterprise growth.\_\_\_\_\_

## Stata Output

```
. use "C:\Users\Pc\Desktop\FINAL THESIS\ANALYSIS FOR FINAL THESIS.dta"
. regress Enterprisegrowth InitialCapital CurrentCapital FinanceSource Experience Education FamilySize Gender Age
```

Source	SS	df	MS	Number of obs	=	160
Model	.230234253	8	.028779282	F(8, 151)	=	6.91
Residual	.628960122	151	.004165299	Prob > F	=	0.0000
				R-squared	=	0.2680
				Adj R-squared	=	0.2292
Total	.859194375	159	.005403738	Root MSE	=	.06454

Enterprisegr-h	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
InitialCapital	-.0254719	.0103885	-2.45	0.015	-.0459976 -.0049462
CurrentCapital	.0268229	.0116627	2.30	0.023	.0037798 .049866
FinanceSource	.0170388	.0105548	1.61	0.109	-.0038153 .0378928
Experience	-.0079957	.0022128	-3.61	0.000	-.0123678 -.0036236
Education	.0655772	.0150921	4.35	0.000	.0357583 .0953961
FamilySize	-.0035841	.0035673	-1.00	0.317	-.0106324 .0034641
Gender	.0276048	.010711	2.58	0.011	.006442 .0487676
Age	.0017967	.0014192	1.27	0.207	-.0010073 .0046007
_cons	-.0118211	.0689498	-0.17	0.864	-.148052 .1244097

## Tables of Multicollinearity Test

### Discrete Variables

```
. correlate FinanceSource Education Gender
(obs=160)
```

	Financ-e	Educat-n	Gender
FinanceSou-e	1.0000		
Education	-0.0267	1.0000	
Gender	0.0756	0.0164	1.0000

### Continuous Variables

```
. estat vif
```

Variable	VIF	1/VIF
CurrentC-tal	5.08	0.197043
InitialC-tal	4.85	0.206022
Age	2.92	0.342188
FamilySize	2.57	0.388374
Experience	1.66	0.603702

## Heteroscedasticity Test

```
. estat hettest
```

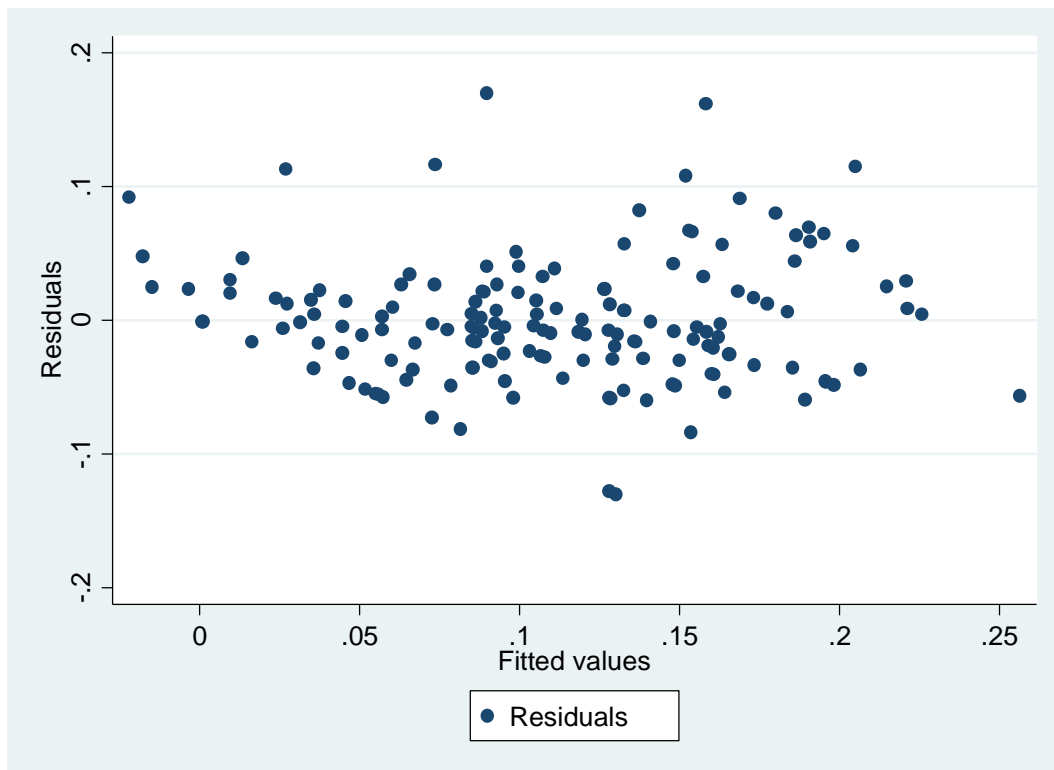
```
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
```

```
Ho: Constant variance
```

```
Variables: fitted values of Enterprisegrowth
```

```
chi2(1) = 3.36
```

```
Prob > chi2 = 0.0668
```



**የስራ ዕድል ፈጠራና ኢንተርፕራይዝ ልማት ቢሮ የኢንተርፕራይዝ ልማትና ድጋፍ ዘርፍ**

**1. የኢንተርፕራይዘች ዝርዝር መረጃ ማጠቃለያ**

**ክ/ከተማ ልደታ ወረዳ 03 መረጃዉ የተሰበሰበበት ወቅት 04/02/2013**

ልደታ ክ/ከተማ ወረዳ	ያሉ ኢንተርፕራይዝ ድምር	መስሪያ ቦታ		የእድገት ደረጃ			የተሰመሩበት ዘርፍ					የሚፈልገዉ ደጋፍ ዘርፍ								
		ድጋፍ ያገኙ	በግለሰብ የሚሰሩ	ጥቃቅን	አነስተኛ	መካከለኛ	መኑፋክቸሪንግ	ከተማ ግብርና	ኮንስትራክሽን	ንግድ	አገልግሎት	መስሪያ ቦታ		ብድር	መሳርዖ ሊዝ	አንድስተሪ	ኤክስቴንሽን	ገበያ	ጥሬ ዕቃ (ግብዓት)	BDS
												አድሰ	ማስፋፊያ							
1	334	245	89	278	46	10	66	8	59	142	59	25	183	51	30	308	114	28	11	
2	125	70	55	85	29	11	53	10	31	11	19	44	45	76	70	112	112	98	126	
3	178	57	121	157	19	2	58	5	56	43	16	19	6	39	23	91	145	14	178	
4	183	116	67	157	22	4	49	1	48	32	53	18	33	106	56	157	204	49	157	
5	107	39	68	97	10	0	33	0	38	17	19	23	1	54	7	79	91	1	79	
6	81	73	8	76	5	0	0	0	6	50	25	2	1	16	6	29	5	0	67	
7	141	102	39	124	15	2	47	4	36	35	18	3	60	87	31	120	147	35	1	
8	292	168	124	276	16	0	30	2	40	142	76	43	0	120	41	187	50	9	0	
9	58	31	27	41	15	2	9	1	14	6	25	4	1	2	0	73	30	4	0	
10	169	102	67	133	29	7	38	9	48	61	20	0	0	77	47	17	24	32	0	
<b>ድምር</b>	<b>1668</b>	<b>1003</b>	<b>665</b>	<b>1424</b>	<b>206</b>	<b>38</b>	<b>383</b>	<b>40</b>	<b>376</b>	<b>539</b>	<b>330</b>	<b>181</b>	<b>330</b>	<b>628</b>	<b>311</b>	<b>1173</b>	<b>922</b>	<b>270</b>	<b>619</b>	