

ST.MARRY UNIVERSITY
INSTITUTE OF AGRICULTURE AND DEVELOPMENT
STUDIES
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**DETERMINANTS OF SMALL AND MEDIUM SCALE MANUFACTURING
INDUSTRIES PERFORMANCE IN CASE OF SEBETA CITY, ETHIOPIA**

**A Research Submitted for
Partial fulfillment of the requirements for the degree of Masters in
Development Economics**

By

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Submitted to: **Wondimagegne Chekol (PhD)**

June, 2017
Addis Ababa

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APPROVED BY BOARD OF EXAMINERS

As a member of the Board of Examiners of the Masters Thesis open defense examination, we testify that we have read and evaluated the thesis prepared by KetemaDegefa and examined the candidate. We recommended that this thesis be accepted as fulfilling the thesis requirements for the degree of Masters of Art in Developmental Economics.

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DECLARATION

I, the undersigned, declare that this study entitled “Determinants of Small and Medium scale manufacturing industries Performance in *Sebeta City*” is my own work. I have undertaken the research work independently with the guidance and support of the research advisor. This study has not been submitted for any degree or diploma program in this or any other institutions and that all sources of materials used for the thesis have been duly acknowledged.

Declared by

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Date: May, 2017

Place: Addis Ababa, Ethiopia

ENDORSEMENT

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

Advisor: WondimagegneChekol (PhD)

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Table of Contents

DECLARATION	i
ENDORSEMENT	v
ACKNOWLEDGEMENTS	x
Acronym	xi
List of Tables	xii
List of Figures	xiii
ABSTRACT	xiv
CHAPTER ONE	1
INTRODUCTION	1
1.1 BACKGROUND OF THE STUDY	1
1.2 Statement of the Problem	5
1.3 Research Questions	8
1.4 Objectives of the Study	8
1.4.1 General Objectives.....	8
1.4.2 Specific Objectives	8
1.5 Significance of the Study	8
1.6 Scope and Limitation of the Study	9
1.7 Organization of the Study.....	9
CHAPTER TWO	10
Literature Review.....	10
2.1 Theoretical Perspective on small and medium manufacturing industries	10

2.2	Empirical Perspectives on small scale manufacturing	13
2.3	Overview of small and Medium Scale Manufacturing.....	15
2.4	Manufacturing industrial Classification.....	17
2.4.1	Food and Beverage Products Industry	17
2.4.2	Wood, Paper and Pulp Products Industry	19
2.4.3	Metal and Engineering Products Industries	19
2.5	Importance of the Manufacturing Sector in Ethiopia	20
2.6	Ethiopians definition of SMSE.....	23
2.6.1	The 1998 definition of MSE.....	23
2.6.2	The New (2010/2011) Definition	23
2.7	Challenges Manufacturing Industries in Ethiopia	25
2.7.1	Manufacturing Technology	26
2.7.2	Access to Finances constraints	27
2.7.3	Infrastructure development problems	28
2.7.4	Market Opportunities constraints	28
2.7.5	Labor Skill Availability	30
2.7.6	Lack of Government support.....	30
2.8	The conceptual framework of the Study	30
	CHAPTER THREE.....	33
	RESEARCH DESIGN AND METHODOLOGY.....	33
3.1	Description of the Study Area	33
3.2	Research Design.....	35

3.3	Sample and Sampling Techniques.....	35
3.4	Source and Tools/Instruments of Data Collection	36
3.4.1	Survey Questionnaire.....	36
3.5	Procedures of Data Collection.....	37
3.6	Method of Data Analysis.....	37
3.7	Descriptive Analysis	37
3.7.1	Econometrics Model	38
3.7.2	Dependant and Independent variables of multiple regression models.....	38
	CHAPTER FOUR.....	42
	DATA PRESENTATION, ANALYSIS AND INTERPRETATION	42
4.1	General characteristics of the Enterprises in the study.....	42
4.1.1	Sex of respondents (owners of SMMEs industries).....	42
4.1.2	Educational Status of respondents (Owners)	43
4.1.3	Category of manufacturing scale.....	43
4.1.4	Manufacturing industries Category	44
4.1.5	Ownership of the Industries	45
4.2	Determinants of Small and medium scale manufacturing industries	46
4.2.1	Results of Measures of Central Tendency and Dispersion.....	46
4.2.2	Results of Measures of Central Tendency and Dispersion.....	46
4.2.3	Results of Inferential Statistics	56
4.2.3.1	Correlation Coefficient	56
4.3	Regressions Analysis	58

CHAPTER FIVE	65
CONCLUSIONS & RECOMMENDATIONS	65
5.1 Conclusions.....	65
5.2 Recommendations	67
REFERENCE.....	69
APPENDIXS	76
APPENDEX A.....	76
Questionnaire	76
APPENDIX B	82
Regression Matrix	82
Correlation Matrix.....	82
APPENDIX C.....	83
VIF Matrix	83
APPENDIX D.....	83
Omission of Variable test , heteroskedasticity and kernel density	83

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Acronym

AACCA	Addis Ababa Chamber of Commerce and Association
ADB:	Asian Development Bank
ADLI:	Agricultural Development Led Industrialization
CAE:	Computer Aided Engineering
CAD:	Computer Aided Design
CAM:	Computer-Aided Manufacturing
CAPP:	Computer Aided Process Planning
CNC:	Computerized Numerical Control Machines
CAS:	Central Statistical Agency
EDRI	Ethiopian Development Research Institute
FEMSD:	Federal Micro and Small Enterprises Development
FMS:	Flexible Manufacturing Systems
FDI:	Foreign Direct Investment
GDP:	Gross Domestic Product
GVP:	Gross Value of Production
IDRC:	International Development Research Centre
ISIC:	International Standard Industrial Classification
IMF:	International Monetary Fund
MRP:	Manufacturing Resource Planning
MRP:	Material Requirement Planning
MSME:	Micro, Small and Medium Enterprises
NBE:	National Bank of Ethiopia
SMSM:	Small and Medium Scale Manufacturing
UNIDO:	United Nation Industry and Development Organization
VAMP:	Value Added at basic price

List of Tables

Table 1 Definition MSE in Ethiopia	24
Table 2 New Definition of SMEs in Ethiopia	25
Table 3 Definition of MSMES by World Bank	26
Table 4 Sample Distribution	36
Table 5 Gov't Support Determinant.....	45
Table 6 Financial Determinant.....	46
Table 7 Market Determinant.....	47
Table 8 Infrastructure Determinant	48
Table 9 Technology Determinant	49
Table 10 Working Place Determinant	50
Table 11 Labor Skill Determinant.....	51
Table 12 General Determinant.....	53
Table 13 Correlation Coefficient	53
Table 14 Regression Analysis	54

List of Figures

Figure 1 The Conceptual Frame work of the Study	32
Figure 2 Map of Sebeta City	34
Figure 3 Sex of Respondents	41
Figure 4 Educational Status	42
Figure 5 Manufacturing Scale	43
Figure 6 Manufacturing Category	43
Figure 7 Manufacturing Ownership	44
Figure 8 kernel density estimate	60

ABSTRACT

This research was aimed at identifying determinants of small and medium manufacturing industries in Sebeta city. Small and medium scale manufacturing industries today face both internal and external determinants that hinder their performance to well accomplish their production capacity in the study area and country level at large. The study used a stratified random sampling method to select 105 small and medium scale manufacturing industries. This study used primary data using questionnaire through face-to-face interview and personal observation, and analyzed using descriptive and inferential analyses as well as econometric models. According to the study problem of working premises, financial constraint and market problem are the three top problems. The next major problems which determine the performance in the study areas were labor skill, technology and infrastructure. The average start-up capital of enterprise engaged in small and medium scale manufacturing is Birr 73,680 with an average of 4.18 employees and at the time of the study, the average current capital was 151,981 and the average current employees was 7.98. From the interview conducted the firm owner agreed with the problem of working premises, financial, market, labor skill, technology, infrastructure and lack of government support. . The correlation result shows positive relationship was found between dependent variables (performance) and independent variables (working premises ,financial ,technology ,infrastructure, market, government support and labor skill)) which are statistically significant at 99% confidence level . The findings of the study verified the importance of SMME in the creations of employment opportunities and generations of income for quite a large proportion of the population and engines for achieving national development goals such as economic growth and poverty alleviation .In general small scale manufacturing industries play a significant roles in the development of large industries and industrialization. The concerned body has to promote the performance and growth of small and medium scale manufacturing industries.

Keywords: SMMEs Performance Ethiopia, Sebeta City

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Micro and Small enterprises (MSEs) play significant roles in the creations of employment opportunities and generations of income for quite a large proportion of the population. Reviews of studies in the area confirm that the contributions of MSEs in this regard have long been recognized all over the globe (cf., Liedholm, 2001, ILO, 2003a, Vandenberg, 2004, Mazumdar, 2004, Haftu, et al, 2009). Beck and Demirguc-Kunt (2006), for example, report that small enterprises (along with medium) are major drivers of both employment and economic growth contributing to more than 50 % to GDP and 60 % to employment in developed economies, These type of enterprises, however, constitute less than 30% of employment and 17% of GDP in developing countries.

According to the study of Boaten (2012), the dynamic role of micro and small-scale enterprises (MSEs) in developing countries as “necessary engines for achieving national development goals such as economic growth, poverty alleviation, employment and wealth creation, leading to a more equitable distribution of income and increased productivity is widely recognized

When structural change is understood from a normative perspective, manufacturing becomes the engine of economic growth, and thus any shift of resources from low-productive activities (such as rural agriculture or urban informal services) towards manufacturing entails an important structural change bonus, in what some authors have labeled “growth-enhancing structural change” (McMillan and Rodrik 2011) The literature presents several arguments to support the idea that manufacturing is the main engine of economic growth. Perhaps the most influential came from Nicholas Kaldor in the 1960s. In his view what

distinguishes manufacturing from other sectors is the capacity to generate dynamic increasing returns and thus greater productivity through expanded production. Manufacturing is the main driver of productivity growth, due to improvements in the division of labor, technological change and economies of scale (Ocampo 2005).

In both developing and developed countries, small and medium scale manufacturing industries play important roles in the process of industrialization and economic growth (ADB, 2014). Apart from increasing per capita income and output, SMMs create employment opportunities, enhance regional economic balance through industrial dispersal and generally promote effective resource utilization considered critical to engineering economic development and growth. A paper by the International Development Research Centre (IDRC) on small manufacturing industries development pointed out that small and medium size manufacturing industries (SMMs), in addition to having high employment creation capacity, possess three other critical attributes which warrant the attention of development specialists and policy makers in developing nations. First, an economy with a large number of these firms will have a fair income distribution than that which is dominated by a small number of large- scale manufacturing industries as more people will own businesses. Second, development of small and medium size manufacturing firms entails accumulation of technological capability among a large number of people and firms. The consequence is that the extent of technological accumulation in economies with a large number of small and medium size industrial firms will be widespread. Third, because developing nations, like Ethiopia, have limited capital, it is more prudent to spread the available resources by promoting the development of efficient and dynamic small and medium size manufacturing industries (IDRC, 1993).

Manufacturing industry in Ethiopia started with a simple processing technology that produces agriculture-based products(Gebreeyesus, 2014). After Ethiopia's came up with the policy of Agricultural lead industrialization manufacturing sector is planned to be productive sectors of the economy identified under GTP I (2010-

2015) which can spur economic growth and development because of its immense potential for wealth creation, employment generation and poverty alleviation.

National Micro and Small Enterprise Strategy (2011) and National Manufacturing Strategies plan (2013) asserts that in Ethiopia, manufacturing industries are categorized under micro, small, medium and large scales based on the capital investment and number of employees and based on a variety of variables such as turnover, production capacity or number of employees (World Bank 2011). According to World Bank 2015 report of Ethiopian manufacturing in 2013/14 the three sector shares in GDP were: 40.2 percent (agriculture), 45.5 percent (services), and 14.3 percent (industry).and also the share of employment in the manufacturing sector has changed only slightly and is virtually unchanged between 4.4 and 4.7 percent of total employment between 1999 and 2013.The sector also contributes for export, employment and national output. The sector accounts for 70% of the industrial sector. Within the manufacturing sector, the agro-processing subsector (food and beverage subsector hereinafter) is the largest subsector, accounting for 36% of the total gross value of production (GVP) and 38% of the value added at basic price (VAMP) of large and medium scale manufacturing industry (CSA, 2014).

Small scale enterprises are important players in the sector employing about 91% of the labor force (World Bank 2011). Key actors in the value chain include small farmers, garment manufacturers, ginneries, collectors, state farms, and private commercial farms. Thus small and medium Scale Industry have been expected to be joined large scale of reducing poverty in long run can be achieved by and a semblance of social Inequality can be maintained is by generating well paying jobs for the fast increasing army of Unemployed youth that is occupying the urban space and developing light and small manufacturing enterprises that are globally competent and leading in Africa and establishing a foundation for further growth of the strategic heavy industries which ultimately enable Ethiopia towards an industrialized economy and to increase per capita income of its citizens by 2025.Having these long term mission small and medium manufacturing sector still face certain challenges: lack of managerial skills, lack of access to finance,

Inadequate supply of electricity, lack of Machinery and equipment, lack of well equipped technological innovation, Shortage of raw materials and inadequate information asymmetry and access to Market to compete for the local and global markets. World Economic Forum's Global Competitiveness Index (2014 and 2015), the top five problematic factors for doing business in Ethiopia are: inefficient government Bureaucracy, foreign currency regulations, access to finance, corruption, and inadequate supply of infrastructure. This is supported by results of a 2014 public-private dialogue for the National Business Agenda, where firms identified the top five critical and binding constraints as: tax administration, access to finance, limited access to land and availability and quality of electricity, and market/unfair competition.

As in many developing countries, various studies as well as government reports indicate that MSEs are largely believed to provide means of livelihood to quite a large proportion of the population in Ethiopia (MoTI, 1997; PASDEP, 2000; CSA, 2003; GTP, 2010). In a similar manner, CSA in its report on the informal sector survey indicates that the informal sector operators contribute to more than 50% of the urban employment (CSA, 2003).

However the medium and large scale manufacturing sub-sector however still remains very small accounting for less than 3 percent of GDP (MOFED, 2014).

The study identifies the bottlenecks of Small and Medium scale manufacturing industry which hinder manufacturing performance in the study area. Given this thought, the most important question addressed in this paper is manufacturing performance determinant of Small Scale and medium scale enterprise in Sebeta city. Sebeta is one of the Oromia cities and located 24 km far from the capital Addis on the Addis Ababa Jimma road. The total population of this town for the year 2003 E.C & 2004 E.C was 131,123 (68,258 males & 62,865 females) and 136,368 (70,988 males & 65,380 females) respectively (OFED, 2013) .

1.2 Statement of the Problem

Industrialization, particularly the expansion and increased sophistication of manufacturing production and exports, and also the expansion of manufacturing employment, remains an essential part of Africa's economic transformation. Unfortunately, manufacturing as a share of gross domestic product has declined over the past few decades in most African countries, even though in absolute terms it is growing (World Bank, 2011).

Different economists and scholars state a number of multi-dimensional reasons for the presence of underdevelopment in LDCs. Lack of sufficient capital and investment is expected to be among the major tangible reasons for the underdeveloped economic status of these countries (Todaro, M. P. and Smith S. C., 2003). In consideration of this, a number of policy measures were being taken to increase the rate of capital accumulation and to expand investments across these economies. However, initially much emphasis was being given to the expansion of investment on large scale economic activities which constitute a very little proportion of the aggregate economic activities of the countries. It is common that, in most LDCs, very large proportion of the people is engaged in small scale economic activities. Hence, all the efforts that were made for decades which neglect the small scale economic activities could not achieve the desired mission of the societies (White S., 1999). Therefore, different studies started to lay the thought of focusing on small scale economic activities. Consequently; recently, different developing country's governments begin to design economic policies and strategies that can broadly embrace these initially neglected economic activities.

In Ethiopia, MSEs sector is the second largest employment-generating sector following agriculture (CSA, 2005). A national survey conducted by Ethiopian Central Statistical Authority (CSA) in 2005 in 48 major towns indicates that nearly 585,000 and 3,000 operators engaged in micro and small scale manufacturing industries respectively, which absorb about 740,000 labor forces. Accordingly, the whole labor force engaged in the micro enterprises and small scale manufacturing industries is more than eight folds (740,000 persons) to that of the medium and large scale manufacturing industries (90,000 persons).

In most developing countries, like Ethiopians and in study area specifically Small and Medium Scale Industries face a wide range of constraints and they are often unable to address the problems they face on their own - even in effectively functioning market economies. The constraints relate amongst others to be lack of Managerial skills, lack of access to Finance, Inadequate supply of electricity, lack of Machinery and equipment, lack of well equipped technological innovation, Shortage of raw materials. One of the bottlenecks to the expansion of manufacturing in Ethiopia appears to be an inadequate supply of local inputs (Sutton et al., 2010; Dinh et al., 2012)and inadequate information asymmetry and access to Market which difficult to compute locally and in the world market.

For instance, the research conducted by Solomon (2004) also tried to analyze growth determinants of MSEs and found that product diversification is a major determinant factor for the growth of small enterprises in Addis Ababa. The finding revealed that business experience is associated with new start-ups calls for the promotion of the culture of apprenticeship and intern experience sharing for the young as a possible area of intervention in employment generation schemes to minimize the extent of unemployment The researcher holdup to see MSEs contribution in the development of medium scale enterprise by solving their challenges and using their opportunities. Girmay (2006) study on the title of Managerial Performance Measurement in Small Scale Industries, focus more on investigates whether SSIs can operate as successful and surviving firm and to formulate database model of managerial performance measurement. The researcher also tried to identify the challenges faced by MSEs in Addis Ababa. Some of the factors identified are: lack of access to capital and credit, lack of clear and pragmatic national policy to enhance the development of SSIS, lack of premises and land,lack of entrepreneurial, managerial and other skills, lack of skilled workforce, lack of information about separate supportive organization socio-cultural constraints, lack of sufficient marketing and promotional support. However, the study failed to investigate how small scale enterprise can develop to medium scale enterprise.

It is also argued that the constraints faced by small scale industries in developing countries are not only accentuated with ineffective policy design, but also by

market failures in the region .It is clearly known that Ethiopia is not well known by its competent manufacturing industries .Different reports showed that manufacturing industries in Ethiopia adds little value on the nation's development compared to other sectors but still they are not performed as they were planned. In Ethiopia specifically, Small and Medium Scale Industries have been confronted by many of these problems. The major obstacles are Access to finance remains a top obstacle for small and Medium Manufacturing in Ethiopia. , firmsConsistently identify access to finance as one of the top five obstacles to doing business in Ethiopia, rated as the third most binding constraint in the Global Competiveness Index 2015 and number one in the Enterprise Survey 2011.

The business environment affects the performance of all firms, irrespective of their size, however certain aspects such as and information asymmetry may be of particular consequence to SMMs. Access to finance is a top obstacle to SMMs as firms in Ethiopia are more likely to be credit constrained than global comparators. There is strong evidence that lending to larger firms in Ethiopia is relatively adequate, while SMMs are left behind (“Missing middle phenomenon”).The intensity of business operational constraints and entry barriers vary depending on whether firms are large, FDI financed, or domestic SMMs. Business entry regulations and processes are consistently highlighted by the private sector as burdensome and obstructive of firm entry and dynamism.

In the context of Ethiopia, the situation is somehow different as the industrial sector itself is at its fledgling stage of development with small number of manufacturing firms operating in the context relative to other developing countries (EEA, 2011). The existing manufacturing firms in the country largely are small and medium scale operators with limited number of employees (CSA, 2011) as well as limited scope of operations and technologies. Majority of the local manufacturing firms, hence, seem to be facing lingering competitive pressures and irresistible challenges from advanced foreign manufacturers (EEA, 2011). Oromia as a part of Ethiopian region that has better facility and access for industries than other regions, manufacturing industries adds only 5% to regional GDP (CSA, 2011). Besides, most industries are concentrated around periphery of Addis

Ababa from this Sebeta city one to be mentioned clustered as manufacturing industry zone and the study targeted.

The study assesses determinants of the Small and Medium manufacturing industries in the area and outlines their share for economic growth through their Manufacturing Performance, Employment generation, access to productive labor force / skilled and unskilled labor, Availability of material inputs, Technology utilization, Capacity utilization and Contribution to the Economy in general.

1.3 Research Questions

- What is the determinant of small and medium manufacturing performance?
- Which determinant of small and medium manufacturing scale highly happens?

1.4 Objectives of the Study

1.4.1 General Objectives

The main objective of the study is to understand determinants of small and medium manufacturing industry performance of Sebeta City.

1.4.2 Specific Objectives

- To assess the determinant of small and medium manufacturing industries.
- To identify determinants for small and medium scale manufacturing industries
- To recommend possible solutions to alleviate the problem of SMMEs

1.5 Significance of the Study

There are many MSEs in Sebeta city. Their potential to create employment and to generate income makes them crucial economic instruments. Small and medium manufacturing industries play a pivotal role in the innovation of technology and parts of input for large manufacturing industries and basic for industrialization and tools to initiate economic growth. Hence, the result of the research will provide relevant information to policy makers and local development planners working on

the development of better environment for SMSMEs. Furthermore, the study will provide additional information about the role of SMSMEs in the economic growth of city and the nation at large.

1.6 Scope and Limitation of the Study

The study covers Small and Medium manufacturing industry sectors of Sebeta city. A proportional stratified sampling technique were used and small and medium scale manufacturing industries identified to choose from each industrial category (strata), Food processing, wood and furniture, Agro processing and metallic products. .other Industrial categories not mentioned above, are beyond the scope of the study because of time and finance constraints.

1.7 Organization of the Study

The rest of the thesis is organized as follows. Chapter two presents the theoretical literature review on MSEs and empirical findings on determinants of small and medium scale manufacturing industries. Chapter three provides research methodology. Under this, description of the study area, sampling technique, methods of data collection and methods of data analysis are discussed. Chapter four presents the results of the study viz the descriptive statistics and econometric model results and chapter five presents the summary and conclusion and recommendations of the study.

CHAPTER TWO

Literature Review

2.1 Theoretical Perspective on small and medium manufacturing industries

According to Kaldorian Theory of Economic Growth there is a close relationship between manufacturing and GDP growth and a strong relationship between the growth of industrial productivity and industrial output (Verdoorn's law). Increasing returns in other sectors. The structure of the model also encompasses first faster growth of output leads to faster growth of productivity and increasing price and non-price competitiveness. The linear specification of Kaldor's first law is: Manufacturing subject to increasing returns to scale and Manufactures are the largest component of exports or export led growth. Kaldor's Second Law (or Verdoorn's Law) a faster growth of output causes a faster growth of productivity. Thus Kaldorian theory of economic growth outlines manufacturing becomes the engine of economic growth, and then small and medium industries become sources of raw materials and adoption of technological innovation for the largest industrial sectors.

According to Tambunan (2006), two theories were developed in connection with micro and small scale enterprise. These are: classical and the modern theories. The Classical theory - states that poverty and the importance of MSEs development correlate positively. In the course of rapid economic development, the economic share of MSEs declined; while those of large and medium enterprises dominate the economy. In other words, the higher the proportion of people living in poverty, the more will be the contribution of MSEs in reducing poverty. This theory however, is criticized for neglecting the economic growth of MSEs through networking and clustering, agglomeration. It only focused on the relationship between levels of income and the growth of MSEs. Because of these shortcomings of the theory, the modern view was developed in the 1980s. The Modern Theory- postulates that the major reason for the emergence of the notion of flexible specialization was the long debate of how to interpret the new global pattern of production caused by globalization forces and industrial restructuring. Global production had

transformed from mass to individual production system and flexible specialization is the result of this debate. Hence, according to Tambunan (2006) the modern theory has three characteristics: Flexible and Specialization -firms in the community form part of a bounded community which outsiders are largely excluded. High level of competitive innovation - there is a continuous pressure on firms in the community to promote innovation in order to keep an edge of their competitors and;

High level of cooperation - there is a limited competition among firms in the community over wages and working conditions encouraging greater cooperation among them.

In general, according to Tambunan (2006), the flexible specialization on MSEs states those MSEs grow faster than large enterprises with the process and are important source of invention, efficiency and innovation. They are also capable of standing the competition with large enterprises. Hence, in the courses of development, the economic share of MSEs increases or in other words, MSEs contribute a lot for poverty alleviation; while, it declines in the classical theories. The other theories are the firm growth theory, and the economic theory. The firm growth theory-The firm growth theory asserts that MSEs are more likely to disappear and be replaced by modern large-scale industry. This theory has, however, been shown to be inaccurate in the sense that MSEs do not normally compete directly with large enterprises; rather, they often tend to remain micro and small, co-existing with large multi-national companies, which phenomenon the World Bank, 1989 has identified as the „missing middle“ (Ryan, 2005). The most obvious activity where these niches exist is in distribution to areas or income groups where their costs would be prohibitively high for large enterprises. However, in a literature survey on macro analyses of micro enterprises in developing countries, Liedholm and Mead (1993) came to the conclusion that macro-level empirical evidence indicates that, as aggregate per capita income increases, there is a systematic pattern of evolution of MSEs towards larger firms based in larger localities, producing more modern products. The economic theory of the growth of small firms has been concerned with the relationship between

growth and firm size. The conventional wisdom in economic theory has long held that, due to economies of scale and scope, the growth of firms is positively related to their size. Large firms were typically expected to have advantages over small firms and so grow more rapidly. This process was expected to lead to a growing concentration of industry.

The manufacturing sector has long been considered the main engine of economic growth and structural transformation. Large industrial establishments are relatively advantageous in successfully reducing unit cost of production. Such establishments enjoy the benefits of economies of scale; and better labor productivity (through specialization). However, it is disadvantageous as it became difficult to absorb the less skilled unemployed labor in the economy and the inherent capacity of most developing economies to have large number of large and heavy manufacturing industries is also limited(Thorbeche, 2000; Eric Ronge, et al, 2002). According to Tulus T. 2006, the World Bank rationalizes its support for MSEs for three reasons. First, MSEs enhance competition and entrepreneurship through its external effects of economic efficiency, innovation and aggregate productivity growth. Second, MSEs are more productive than its counterpart larger enterprises. Third, expansion of MSEs boosts employment opportunities as compared to its larger enterprises.

Nogare, (2006) argues that a more comprehensive and elaborate explanation of the determinants of growth of business enterprises were made by Curran (1996). He presented a notion that growth is more than array of factors and a need for broader perspective covering founders' characteristics, innovation, and complexity of business environment in which MSEs operate. He also justified that small business owners/ managers fail to formulate and adopt deliberate business growth strategies (they often formulate survival rather than growth strategies) because of the following three reasons. First, most owners/ managers of small business enterprises have no awareness and skills of developing business growth strategies/ plans; Second, owners/ managers are not obliged to show a proof of long-term business growth strategies/ plans as small business enterprises have no or very few shareholders; Finally, most small business owners/ managers have limited exposure to formal business management skill trainings and such business growth

strategies are adopted largely to minimize effects of external factors and most small business managers feel unrealistic as they often operate in risky business environment with little room of influence to minimize such risks.

2.2 Empirical Perspectives on small scale manufacturing

In Ethiopia, manufacturing industry began to appear in the 1950's much earlier than in many of the Sub-Saharan African countries while modern industries began to emerge in the second half of the 1950s aiming at substituting imports (Afro Consult and Trading Plc 2002).

The early 1970s ushered a central planning system of economic management. This development, however, frustrated whatever little there was in private initiative that had appeared in the earlier period.

By the early 1970s, Ethiopia's industrialization policy included a range of fiscal incentives, direct government investment and equity participation in private enterprises. This government's policy attracted considerable foreign investment to the industrial sector. For instance, in 1971/72 the share of foreign capital in manufacturing industries amounted to 41 percent of the total paid-up capital and many foreign enterprises operated as private limited companies, usually as a branch or subsidiary of multinational corporations. The Dutch had a major investment (close to 80 percent) in the sugar industry while Italian and Japanese investors participated in textiles; and Greeks maintained an interest in shoes and beverages. Italian investors also worked in building, construction and agricultural industries (Gebreyesus, 2012).

In 1975, the main characteristics of the manufacturing sector inherited by the revolution included a predominance of foreign ownership and foreign managerial, professional, and technical staffing; heavy emphasis on light industries; inward orientation and relatively high tariffs; capital-intensiveness; underutilized capacity; minimal linkage among the different sectors; and excessive geographical concentration of industries in Addis Ababa.

The economic dislocation that followed the 1974 revolution had a significant impact on the manufacturing sector. Private sector capital investment ceased and labor's marginal productivity began to decline. A period of decline from 1974/75 to

1977/78 and an average annual growth rate of 18.9 percent for 1978/79 and 1979/80 was followed by a reduction of about 3.1 percent per annum between 1980/81 and 1984/85 and 3.8 percent per annum from 1985/86 to 1988/89 (Gebreeyesus,2012). The industry sector in general and the manufacturing sector in particular were given due national importance following the formulation of the national industry policy in 2002 by the FDRE.

The 2002 industry policy has identified priority sectors that deserve attention to build the platform for the industry to take its key leading role in the economy. These sectors include textile and garment, leather and leather products industry, chemical, metal, agro-processing industry and construction industry. The industry policy has continued to be the corner stone for future industrial development in Ethiopia. The industrial sector is one of the envisioned sectors expected to play a great role in GDP growth, job creation, foreign exchange earnings, small and medium scale Enterprise development, etc. In line with this, a particular emphasis is given to the promotion of Small and Medium enterprises as well as supporting the development of large-scale industries. Industry zones development and public enterprises management and privatization are also the focuses of GTP in industrial development strategy of the country. These Industrial Development strategic directions for which policy support was provided focused on industries which are labor intensive and having wide market; have broad linkages with the rest of the economy; use agricultural products as input; export-oriented and import substituting; and industries that can contribute for faster technology transfer.

Moreover, the policy direction and plan states that it is the private firms, not state-owned enterprises that must be the engine of production and investment.

According to the 2010/11 CSA report, there are 2,170 medium and large scale industries established in Ethiopia out of which more than 40% are located in Addis Ababa. The other national regional states have the following share: 23% in Oromia, 11% in Amhara, 11% in SNNP, 9 % in Tigray, and 3.23% in Dire Dawa, 1.01% in Harari, 0.6% in Somali, 0.37 % in Afar, 0.09% in Benshangul and 0.05% in Gambella regional states. Out of the total large and medium scale manufacturing industries in 2009/10, more than 40% were located in Addis Ababa followed by Oromia with almost 21% and S.N.N.P with 13% of the industries.

More than 26% of the manufacturing industries fell in the category of food products and beverages followed by non-metallic mineral products with more than 22% and the furniture industry with almost 13% (CSA, 2011)

2.3 Overview of small and Medium Scale Manufacturing

From a worldwide perspective, it has been recognized that micro, small and medium enterprises (MSMEs) play a vital role in economic development, as they have been the primary sources of job/employment creation and output growth, not only in less developed countries (LDCs) but also in developed countries. In Piper's (1997) dissertation, for instance, it states that 12 million or about 63.2% of total labor force in the United States (US) work in 350,000 firms employing less than 500 employees, which considered as MSMEs. According to Aharoni (1994), MSMEs make up more than 99% of all business entities and employ more than 80% of total workforce in the country. These enterprises, often called the foundation enterprises, are the core of the US industrial base (Piper, 1997). MSMEs are also important in many European countries. In the Netherlands, for example, these enterprises account for 95% or more of total business establishments (Bijmolt and Zwart, 1994). As in the US, also in other industrialized countries such as Japan, Australia, Germany, French and Canada, MSMEs, and particularly small and medium enterprises (SMEs), are an important engine of economic growth and technological progress (Thornburg, 1993).

In LDCs, MSMEs have also a crucial role to play because of their potential contributions to improvement of income distribution, employment creation, poverty reduction, industrial development, rural development, and export growth. For this reason, governments in these countries have been supporting their MSMEs extensively through many different programs, with subsidized credit schemes as the most important component. International institutes such as the World Bank, the Asian Development Bank (ADB) and the United Nation Industry and Development Organization (UNIDO) and many donor countries through bilateral co-operations have also played a crucial role in empowering MSMEs in these countries.

The development of micro, small and medium enterprises (MSMEs) and changes over time in their employment and output shares, output composition, market orientation and location are usually thought to be related to many factors, including the level of economic development, changes in real income per capita, population growth, and progress in technology. The primary principle of industry policy to create linkage between industry and agriculture. Industrialization is seen as a motor behind many of the processes usually termed “social transformation” and “modernization”, (UNIDO, 2003). It is seen widely as one of the most reliable means of raising a country’s standard of living.

There is an increasing awareness in the international community about the important role and potentials of small scale enterprises in fostering socio-economic development in both urban and rural settings. Industries consists of enterprises and organizations that produce and/or supply goods/or services It can be classified as primary, secondary, and tertiary. Primary industries are those that cultivate and exploit natural resources, such as agriculture, livestock, petroleum, mining, forestry, etc. Secondary industries convert the output of primary industries in to products such as apparel, basic metals, computers, paper, etc. Tertiary industries constitute the service sector of the economy such as banking, education, financial centre, insurance, real estate, etc. Basically these secondary industries constitute what we call manufacturing industries. Ethiopian Economists Association classify industry sandwiched in the economic sectors as agriculture sector, industry sector and service sector in which industry sector indicates traditional meaning for manufacturing industry (UNIDO, 2003).

Manufacturing industries came into being with the occurrence of technological and socio-economic transformations in the Western countries in the 18th-19th century. This was widely known as industrial revolution. It began in Britain and replaced the labor intensive textile production with mechanization and use of fuels (UNIDO, 2003). Manufacturing industries are broadly categorized into engineering, construction, electronics, chemical, energy, textile, food and beverage, metalworking, plastic, transport and telecommunication industries. However, the study is incorporated Small and Medium Scale manufacturing sector with the concern of Food and Beverage Products Industries, , Wood, Paper and Paper

Products Industries , Agro processing Industry , and Metal and Engineering Products Industries

There are eleven main groups of manufacturing industries as classified by Ethiopian industrial classification. Accordingly, 32% of them fall under the category of food products and beverages, 20% of them under engineering industries, and 19% of these industries are categorized under non-metallic products (CSA, 2011)

2.4 Manufacturing industrial Classification

In Sebeta City the classification of those enterprises are classified according to new definition of 2010/2011 of federal micro and small enterprise agencies. CSA also adopts its own definition based on the size of employment and extent of automation .In general the study takes place in accordance of this definition and in the city they used in the same fashion so.

- Large and medium scale manufacturing enterprises have been classified as establishments with more than ten employees using automated machinery.
- Small and medium enterprises are establishments that engage less than 10 persons using power driven machinery.
- Cottage/handicrafts are household type enterprises located in households or workshops normally using own or family labor and mostly manual rather than automated/mechanical machinery

2.4.1 Food and Beverage Products Industry

The first round GTP (2010-1015) ranked agro processing industries among top priority industries. The numbers of establishment under this subcategory are 670 and of this those under private ownership accounts about 96% of the ownership title (CSA, 2014).

The subsector comprises the following production industries: vegetables, animal oils and fats, dairy products, grain mill products, prepared animals feeds, bakery products, sugar and sugar confectionery, macaroni and spaghetti, wines, malt

liquors and malt, soft drinks and production of mineral water. Gross value of production in this subsector was almost 38 billion Birr² in 2012/2013 while value added generated amounts of Birr 8.2 billion, equivalent to 1% of the entire GDP in the same year (GTP annual progress report 2014). Food and beverage industries in Ethiopia comprise less export-oriented firms compared to other manufacturing sectors. Annual progress report for the first three years implementation of Growth and Transformation Plan (GTP) indicated that total foreign exchange earnings from food and beverage industries was only USD 173 million, despite relatively large number of manufacturer of this subsector were in operation nationwide. This might be attributed to high competitiveness requirement to penetrate in the world of food and beverage market complemented with high cost of plant establishment, lack of skilled manpower, inconsistent supply of raw materials in domestic market, interruption in supply of utilities like electricity and water and problems related to custom clearance (CSA, 2014).

Ethiopia's food-processing industry is the country's largest manufacturing subsector. The gross production value of industry's the large food-processing factories is about 15,792 million ETB (\$790 million), while small-scale food manufacturers contribute approximately 308 million ETB (\$16 million), excluding grain milling (CSA Ethiopia 2012).

There are about 560 large and medium size food-processing manufacturers in Ethiopia, providing over 60,000 jobs. These jobs account for 45% of all the jobs in the food-processing sector. Small-scale food processing, excluding grain millers, has 1,541 food processors, which employs about 4,748 people (Soethoudt et al 2013).

In sebeta city also there are small and medium scale manufacturing industries which producing food processing products. The comprises the following production outputs: bakery products, vegetables, dairy products, animal feeds and etc. However they are challenged because of working premises, working capital and market linkages.

According to the industrial Survey of (AACCSA, 2015) top mentioned constraints of Food and Beverage Products Industry are: Accessing to finance, Taxes

settlement Availability of production utilities, advice and information on business network and development, Incentive for export and domestic market and

2.4.2 Wood, Paper and Pulp Products Industry

Based on CSA's classification of medium and large manufacturing industries in Ethiopia, wood and wood products are under one subcategory and paper and pulp products in different category. According to the CSA data which was conducted in 2014, the number of establishment under this subsector reached 208 in the year 2012/2013 of which 83 are in wood and products of wood and corks (excluding household furniture made from wood) and 125 are in paper and pulp product industries. The major input bottlenecks facing the Wood, Paper and Pulp Products Industry (AACCSA, 2015) are enhancing access to finance and credit services, marketing, taxation and foreign exchange facility support and improve infrastructure and utilities. In study area there are small and medium scale manufacturing industries which producing wood products .the comprises furniture, products. However they are challenged because of working premises, working capital and market linkages according to the survey held.

2.4.3 Metal and Engineering Products Industries

The primary metal products produced by basic metal industries are subsequently raw materials for the downstream engineering industries. Downstream engineering opportunities exist in a diverse range of engineering products: farm implements and threshers, small scale agro-processing machinery, structures, pressure vessels, storage tanks and bins, silos, heat exchangers, conveyors, cranes, local assembled motor vehicles and automobiles, gas/ oil pipelines, electrical and electronic equipment, spare parts, components and other similar products.

Industrial statistical report of CSA for the year 2014 indicates that the total number of establishments under these groups estimated around 433 and of these 390 of them are under private manufacturers while the remaining 43 are under Ethiopian government preferably under METEC (F.D.R.E Metal and Engineering Corporation) management. Based on CSA's report on medium and large scale manufacturing and electricity industries (2014), the existing metal and engineering

industries total production for the year 2012/2013 fiscal year worth around 30.3 billion birr while based on information obtained from Ministry of Industry, this subsector account for around 0.8 percent of GDP in Ethiopia, equivalent to 3.9 billion Birr of value added.

Most frequently mentioned constraints and challenges identified through manufacture level survey (AACCSA, 2015) are Shortage of funds to finance ,high rate of tax to the production process ,availability of inputs ,overhands cost (due to obsolesce of technology, material cost and labor costs) transportation and other logistic costs and taxations system are major determinants of cost build up factors ,weak infrastructural development including transport and electricity ,high price competition in the regional market, lack of adoption of new technology .

2.5 Importance of the Manufacturing Sector in Ethiopia

The International Monetary Fund (IMF) ranks Ethiopia as among the five fastest growing economies in the world. After a decade of continuous expansion (during which real GDP growth averaged 10.8% per annum), in 2013/14 the economy grew for its 11th consecutive year posting 10.3% growth. Ethiopia's economy is based on agriculture, which accounts 40.2 % of GDP, 60 % of the export earning, and 80 % of total employment. The industrial sector accounts 14.3% of GDP, 9.5 % of total employment, and 21.2 % of export earnings. While the service sector accounts for 46.2% of GDP (CSA, 2014).

Ethiopian manufacturing sector contribute for export, employment and national output. The sector accounts for 70% of the industrial sector. Within the manufacturing sector, the agro-processing subsector (food and beverage subsector hereinafter) is the largest subsector, accounting for 36% of the total gross value of production (GVP) and 38% of the value added at basic price (VAMP) of large and medium scale manufacturing industry (CSA, 2014). The number of manufacture which was 408 in 1980/81 increased to 2,610 in 2012/13. Declining growth between 1980 and 1991(408 to 283), lower growth between 1991 and 2001 (283 to 909), modest growth between 2001 and 2013(909 to 2610).

Manufacturing is a wealth-creating sector of an economy, and closely connected with engineering and industrial design and provides important material support for national infrastructure. It involves the mechanical or chemical transformation of materials or substances into new products. It makes products from raw materials by the use of manual labor or machines and is usually carried out systematically with a division of labor. In a more limited sense, manufacturing is the fabrication or assembly of components into finished products on a fairly large scale (CSA, 2012). The government of Ethiopia liberalized the economy since 1991. The government has designed and adopted Agricultural Development Led Industrialization (ADLI) strategy to eradicate poverty.

The Industry Development Strategy of the country has put in place the principles that primarily focus on the promotion of agricultural-led industrialization, export led development, and expansion of labor intensive industries. As clearly stated in the country's industrial development strategy, value adding private sector is considered the engine of the sectors' growth. The industry sector received utmost emphasis by way of encouraging export based and import substituting industries. Vertical and horizontal linkages between agriculture and industrial sector have been promoted. This also stress the commercialization and agro-industrialization of the agriculture sector and value chain approach. Despite the tremendous efforts made and the economic growth achieved, the Ethiopian economy remains beleaguered by structural problems. The manufacturing sector in Ethiopia is still at its infancy. In comparison with the agriculture and service sectors, the manufacturing sector, for example, has a limited share in terms of production, employment, and exports. Thus, the Ethiopian economy needs a more dynamic growth so that it can reduce its dependence on the fragile, rainfall dependent, and climate change vulnerable agricultural sector.

The growth rate of the GDP by major industrial classification also indicates that agriculture, industry and services have registered growth rates of 9 percent, 15 percent and 12.5 percent respectively (MOFED, 2012).

Within the industrial sector, construction and manufacturing sub-sectors have registered high growth rate of 12.8 percent and 12.1 percent, respectively. Accordingly, the share of these two subsectors in real GDP averaged 5.8 percent

and 4.9 percent, respectively in the first two years of the GTP period. Whole Sale Trade, Hotels & Restaurants sub- sector and Real Estate, Renting & Business activities accounted for 12.8 percent and 10.7 percent of GDP in 2010/11, registering a growth rate of 5.9 percent and 22.1 percent, respectively. Table 4 shows the contributions of agriculture & allied activities, industry and services to the GDP. In terms of foreign exchange earnings from the manufacturing sector, it was planned to generate 471.3 million USD in 2011/12 while the achievement was 255.4 million USD, which is 54.2% of the plan. With regard to enterprise capacity utilization, many firms claim that their first major reason for their low capacity utilization is inadequate and poor quality of raw materials. Because of this and many other factors, the contribution of the sector to GDP has remained at less than 5 % for the last 20 years.

The average cost of the ratio of imported to total consumed raw materials was 70% for chemical industries, 92% for rubber & plastics, 80% for basic iron and steel, 85 % for fabricated metals and 60 % for paper. These challenges resulted in low local investment, low productivity, weak international competitiveness, weak technology transfer, low capacity utilization, high investment and production cost and slow progress in the country's industrialization (MOFED, 2012).

The primary principle of industrial policy is to create linkage between industry and agriculture. To this end, particular emphasis is given to the promotion of small and medium enterprises as well as supporting the development of large-scale industries. The role of small and medium scale is important to this country for they stimulate economic growth, create employment opportunity and reduce poverty. In order to achieve this purpose, a comprehensive manufacturing development strategy will needed by the government in consultation with all relevant actors.

According to (World Bank, 2016) on the Ethiopian Economic Outlook identify key areas where Ethiopia is looking to focus, in order to boost growth of Manufacturing, These were increase productivity through skills development, improve access to finance for firms especially for SMEs, address binding constraints including access to land and electricity. Improve tax administration and simplify the tax system, improve trade logistics, customs procedures and trade

regulations, to promote export and FDI, Simplify business entry regulations and processes to promote a dynamic and thriving business sector, Use a strategic and phased approach to develop Industrial Parks based on best international practices.

2.6 Ethiopians definition of SMSE

2.6.1 The 1998 definition of MSE

The old (1998) definition was based on paid capital only (see table below). An enterprise is categorized as micro if it's paid up capital is less than or equal to 20,000 ETB. Similarly, an enterprise is considered small when its paid up capital is less than or equal to 500,000 ETB.

Table 1: Definition of MSE in Ethiopian

Old Definition of MSE in Ethiopia		
Sector	Man power	Paid Up Capital
Microenterprise	-----	≤20,000 ETB (1200 USD)
Small enterprise	-----	≤ 500,000 ETB (30000 USD)

Source: FEMSEDA

The limitation of this definition is that it does not provide information on job creation, size and asset base. This is because employment and asset ownership are not part of the definition. Secondly, the definition does not differentiate between manufacturing (industry) and services (EDRI, 2014).

2.6.2 The New (2010/2011) Definition

The new definition considers human capital and asset as the main measures. The new definition addresses the limitations of the old definition. Minimum asset requirement for services and industry is different as shown in table below.

Table 2:New Definition of SMEs in Ethiopia

New (Current) Definition of MSEs in Ethiopia			
Level	Sector	Man	Total asset

		power	
Micro enterprise In	Industry	≤5	≤100000(\$6000 or E4500)
	Service	≤5	≤50,000(\$3000 or E2200)
Small enterprise	Industry	6-30	≤birr 1.5 million (\$9000 or E70000)
	Service	6-30	≤birr 500,000(\$30000 or E23000)

The CSA conducts survey on small scale industries. It has conducted surveys for the years 2001/2, 2005/6 and 2007/8. However, CSA adopts its own definition which is not well aligned with the MSE policy and the new definition. Hence, the data it collects is less useful in terms of analyzing the MSE policy. CSA's definition is based on the size of employment and extent of automation. Hence, according to CSA,

- Large and medium scale manufacturing enterprises have been classified as establishments with more than ten employees using automated machinery.
- Small and medium enterprises are establishments that engage less than 10 persons using power driven machinery.
- Cottage/handicrafts are household type enterprises located in households or workshops normally using own or family labor and mostly manual rather than automated/mechanical machinery

The limitations of the CSA definition are, it ignores the size of capital and the sectors outside manufacturing (EDRI, 2014).

The classification of enterprises into small, medium and large scale depends on a number of variables such as level of employment, turnover, capital investment, production capacity, level of technology and subsector. Accordingly, the following scales are referred to the classification of enterprises in the Ethiopian context.

The UNIDO also defines SMEs in terms of number of employees by giving different Classifications for industrialized and developing countries (Elaiian,

1996). Industrialized countries are given as follows: Large - firms with 500 or more workers; Medium - firms with 100-499 workers; Small - firms with 99 or less workers.

The classification given for developing countries is as follows: Large - firms with 100 or more workers; Medium - firms with 20-99 workers; Small - firms with 5-19 workers; Micro - firms with less than 5 workers.

In Africa, according to Oyelaran-Oyeyinka (1997), firms employing less than 10 persons are considered to be micro-enterprises. Firms employing 10 to 49 persons are usually considered to be small-scale, 50 to 199 medium-scale, and firms employing 200 or more persons are considered to be large-scale firms. On the other hand, SMEs can be classified as small firms that have 50 or less number of employees, and medium size firms that have 50 to 150 numbers of employees (Zealelem and Getachew, 2002).

Table 3: Definition of MSMEs by World Bank

Enterprise Indicators	Number of Employees	Total asset	Total annual Sales
Medium	>50; < 300	>\$3,000,000; <\$15,000,000	> \$3,000,000; < \$15,000,000
Small	>10; <50	>\$100,000; < \$3,000,000	> \$100,000; < \$3,000,000
Micro	<10	< \$100,000	< \$100,000

Source: Tom and Vander (2008)

2.7 Challenges Manufacturing Industries in Ethiopia

There are many constraints and challenges facing the emerging manufacturing Sector in Ethiopia concerning small and medium manufacturing industries.

According to the study of Mulugeta (2011) ,the critical problems of MSEs has recognized and classified in to market-related problems, which are caused by poor market linkage and poor promotional efforts; institution-related problems including bureaucratic bottlenecks, weak institutional capacity, lack of awareness, failure to abide policies, regulations, rules, directives, absence of training to executives, and poor monitoring and follow-up; operator-related shortcomings like

developing a dependency tradition, extravagant and wasting behavior, and lack of vision and commitment from the side of the operators; MSE-related challenges including lack of selling place, weak accounting and record keeping, lack of experience sharing, and lack of cooperation within and among the MSEs and finally society-related problems such as its distorted attitude about the operators themselves and their products.

2.7.1 Manufacturing Technology

Technological capability is defined as the knowledge and skills required for firms to choose, install, operate, maintain, adapt, improve and develop technologies (Romijn and Albaladejo, 2004). manufacturing technologies defined as the "master tools of industry that blow up the efforts of individual workers and enable production of all manufactured goods, with production tools including machine tools and other related equipment, their accessories, and tooling" (Sinha and Nobel, 2008).

Manufacturing firms faced a number of challenges since the nineties of the last century. According to Sun (2000), the most important issues that should be addressed by the manufacturing firm that can be met by the adoption of new manufacturing technology are; the reduction of lead time to satisfy consumers, getting new products to market more quickly, flexibility to adapt to changes in the market, improvement of product quality, cost reduction, and increased consumer services. The crucial role of technology in sustainable development becomes evident, since technological progress represents the main source of rising levels of factor productivity (UNIDO, 2004). Broadly the benefits of new manufacturing technology can be categorized as operational performance and organizational performance Swink and Nair (2007) identify three types of AMT, namely design technologies, processing technologies, and planning (administrative) technologies. Beside the above category, (Boyer et al. 1997, and Idris et al. 2008) categorize the manufacturing technologies under three variables: design technology, manufacturing technology and administrative technology.

The constraint that excludes small and medium manufacturing to adopt new technology is: lack of funds, insufficient information, lack of skills in evaluating

alternative technologies and difficulty in meeting government requirements for availing assistance:

2.7.2 Access to Finances constraints

The financing of small and medium enterprises (SMEs) has been a topic of keen interest in recent years because of the key role that SMEs play in economic development and their potentially important contribution to economic diversification and employment (Ayyagari et al., 2007 cited in Berg and Fuchs, 2013) improving SMEs' access to finance is significantly important in promoting performance and firm productivity (World Bank, 2015). In a similar way, comparing small and large firms the World Bank finds that small firms face more challenges in obtaining formal financing than large firms; they are much more likely to be rejected for loans, and are less likely to have external financing (World Bank, 2015).

Access to finance appear for various reasons ranging from a lack of collateral to bias against small firms MSEs tend to face greater financial constraints than do larger firms. MSEs in developing countries apply for and receive formal bank loans relatively infrequently; they thus typically rely on other types of credit such as trade credit, overdrafts, and informal loans. Microfinance institutions also provide important sources of financing for MSEs, but their outreach is typically more limited than that of traders who frequently provide working capital in cash or kind, especially in rural areas (Swinnen 2005). Also access to financial service and the amount of paid up capital in Birr during start-up have positive relationship to growth of MSEs.

One of the major challenges that hampers the growth and development of MSEs in Ethiopia is access to sufficient and sustainable market. Regarding access to finance, the problems are twofold. First, supply of credit is much smaller than demand. MFIs have only met about 50% of the demand for finance. Second, given that the prices of goods and services have been increasing, the real value of the loan is so small and does not provide Mses Much leverage (World Bank, 2015).

Financial institutions in Ethiopia lack a commonly agreed definition of MSMEs which leads to poor market segmentation, along with a lack of in-depth customer knowledge and proper business strategy while the majority of MFIs use the SME definition that is laid out in the Government's National MSME Development Strategy (World Bank, 2015).

2.7.3 Infrastructure development problems

One of the leading concerns of the manufacturing industry is the power supply. Indeed, poor electricity services and power interruption in manufacturing and other industries of the sector would result in under functioning of machineries which limit total production that could be supplied to the booming construction economy. Poor roads in and the way to industries also would increase the prices that are charged to the final products sold in the market. The government should alleviate the problem of power supply and interruption by investing more on project areas.

The availability of suitable infrastructure to the function of MSEs is important. Infrastructures like electric power supply, water supply, road, telephone, utilities and transports have a positive impact on the growth of MSEs and MSEs which have good and enough infrastructures grow fast (Solomon 2004). Lack of sufficient capital and investment is expected to be among the major tangible reasons for the underdeveloped economic status of these countries (Todaro, M. P. and Smith S. C., 2003).

Infrastructure is one of the most critical factors affecting firms' productivity in the long term and electricity stands out as one of the top bottlenecks highlighted by firms.

2.7.4 Market Opportunities constraints

This problem has its roots in the overall weakness of the country's economy. There are shortages of skilled personnel, lack of market, inadequate finance, obsolescence of machinery and equipment and low level of local technological development (Alemayehu, 2011). A major market challenge of the manufacturers is the competition from products produced outside the country or locally. The other challenge mentioned was the distance from the markets. Due to poor transport

Infrastructure, some parts of the market are inaccessible and transportation costs too high. Large challenge revolves around the need for infrastructure development. The problem of income growth has a bearing on the sales of the manufacturing enterprises. The point is that maintaining high quality and reasonable prices is a problem because incomes in the country are largely insufficient and the purchase of high quality goods can be inhibitive for many. Because of poverty, most people tend to go for low-priced commodities even when they are Aware that quality is not up to standard. This poses an important challenge and is a prerequisite for securing a stable market for countries quality industrial goods. It calls for poverty alleviation and increasing output and incomes, especially for farmers (who are the majority in the country). The income issue has explained the existence of a wide market for cheap manufactured goods imported from abroad.

Apart from market linkage with government projects, large private enterprises such as Mesfin Industrial Engineering, Metal Engineering Corporation, Sugar Corporation, and MAA Garment were noted as private market linkages that have significantly involved the sub-contracting of some of their works to MSEs. However, most of the market linkages created so far is government induced. Most of the government induced linkages create temporary employment opportunities. There is no strong market-driven linkage between MSEs and Medium and Large Enterprises. Thirdly, a number of bazaars and trade exhibition have been organized by Mses Development agencies to promote MSEs' products and to link them with large and medium enterprises and foreign buyers.

The main challenge with regards to market linkage is that MSEs depend to a great extent on the government to market their products. The government is the largest buyer and market linkage creator for their products. This has Made MSE operators to develop dependency and hence this kind of market linkage cannot be sustainable. MSEs need to gradually shift to market-driven market linkages on their own (EDRI, 2014)

2.7.5 Labor Skill Availability

The performance of manufacturing sector has been affected by low productivity of workers and use of obsolete technologies which is attributed to the poor state of physical infrastructure, limited access to finance, limited research and development, poor institutional framework, and inadequate managerial technical skills.

Shortage of skilled personnel at management and operational levels is one of the major problems of the firms in the industry. The constraint related to labor skill and availabilities among others are lack of well trained and experienced, lack of strategic skill adoption perspectives, resistance to acquire skill, high labor cost and lack of entrepreneurship training skill.

2.7.6 Lack of Government support

Government support different issues specially expected to be provided to small and medium scale manufacturing industries. Supports expected from the government to enhance the utilization capacities of small and medium scale manufacturing industries especially in developing countries like Ethiopia:- Maximum supports (for growth oriented sector) Working premises with least leasing price, Product display center with least leasing price, Technical and business management training, Counseling service Loan provision, Market linkage particularly with government development programs ,Exhibition, trade fair organization, Access to technology and Minimum support; Loan provision ,Exhibition, trade fair organization , Technical and business management ,training, and Counseling service. But government support provided to small and medium scale manufacturing industries insufficient and hindered with different constraints and challenges in the study area.

2.8 The conceptual framework of the Study

Conceptual framework means that concepts that relate to the research problem and determinants .manufacturing Performance is influenced in both internal and contextual determinants.. The contextual determinants are government support, working premises, financial, market, infrastructure and technology to be

mentioned. The following determinants are playing a great role to for the performance of manufacturing industries. In other way internal determinants (labor Skill) also have a significant in determining the concept of manufacturing performance in the studyis closely monitored to ensure that stringent measures are taken within the best time to either take advantage of the opportunities or combat the threats found in the external environment. The internal factors that influence the firm’s performance can be classified as management and entrepreneurial factors. To align the conceptual framework.

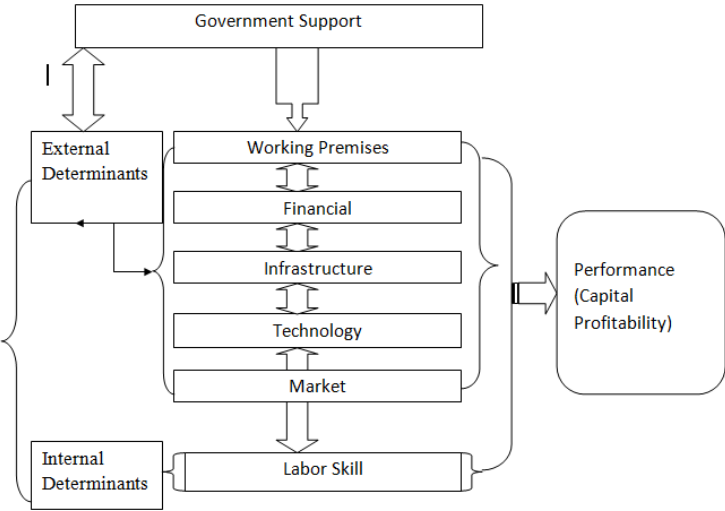


Figure: -1 Theconceptual framework of the research

Source: Field survey, 2017

Global entrepreneurship monitor (GEM) defined performance as the act of performing; of doing something successfully; using knowledge as distinguished from merely possessing it (GEM, 2004). However, performance seems to be conceptualized, operational zed and measured in different ways thus; making cross-comparison is difficult (Srinivasan et al., 1994). Among the most frequently used operationalisations are survival, growth in employees and profitability and capital increment. The most commonly adopted definition of success (good performance) is financial growth with adequate profits. Other definitions of success (good performance) are equally applicable. However, financial growth due

to increasing profits has been widely adopted by most researchers and practitioners in business performance models.

The study used the concept of success or good performance of firms through financial growth due to increasing profits as widely adopted by most researchers.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Description of the Study Area

According to the reports of Oromia Finance, Economic and Development Bureau (2017) and Office of Finance Economic and Development of Sebeta City (2017):- Sebeta is one of the Oromia cities that emerged before the Italian invaded Ethiopia in 1935; it is the capital town of SebetaAwas District of Oromia special Zone surrounding Finfinne situated at about 24 km south west of Addis Ababa along Jimma road. According to the master plan of the town which was prepared in 1999, Sebeta has 99 km² or 9900 hectares of a reserved total area. The total population of this town for the year 2003 E.C & 2004 E.C was 131,123 (68,258 males & 62,865 females) and 136,368 (70,988 males & 65,380 females) respectively. The location of the city extends from: 053°38.50'N_8059°58.17'N latitude and 38035°11.91'E_38039°33.75'E longitude. The shape and position across longest and shortest axes of the city boundaries measured from topographic map are 16.97 km and 8.64 km respectively. With regard to relative location, it shares common boundaries with Addis Ababa on the North, north east and east, Burayu town on the North and rural villages of SebetaHawas district to the south and west. Relief feature of the city has an altitudinal range of 2060 and 2670 meters above sea level. The northern part of the town is characterized by mountains ranges land form having an altitude lying between 2600_2670 M.A.S.L. The Sebeta Town area lay in the temperate climatic zone with a temperature range of 12.70c to 24.40c.

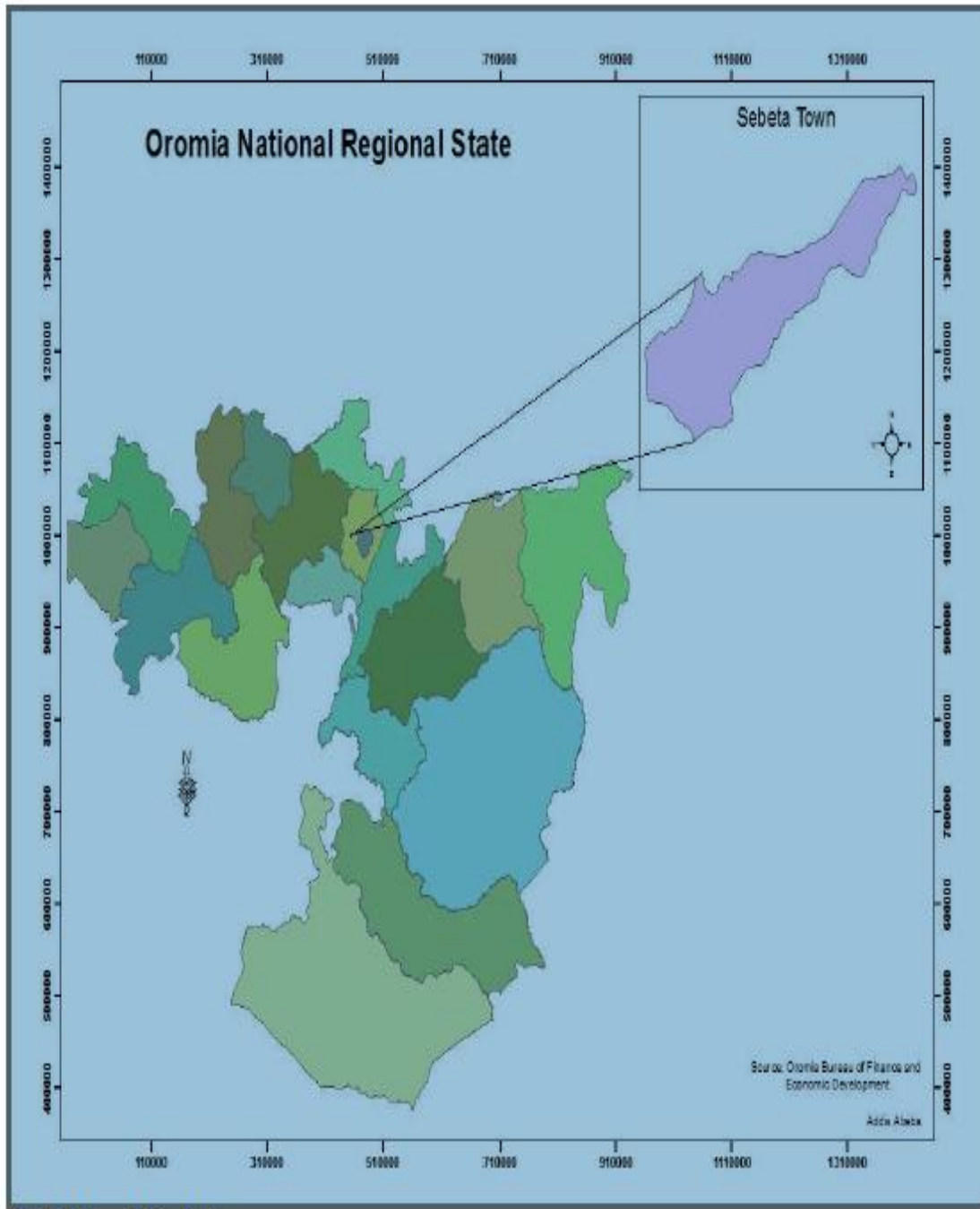


Figure (2) Map of Sebeta City

3.2 Research Design

The study used both quantitative and qualitative methods. The research questions that can be informed by both approaches develop rich insights into various phenomena of interest that cannot be fully understood using only a quantitative or a qualitative method (Venkatesh et al, 2013). Different authors believe that quantitative methods can be used to explore and generate new understanding, opening the door for qualitative methods to dig deeper into the research area, as well as complement existing research (Fatoki and Garwe, 2010).

3.3 Sample and Sampling Techniques

The population of the study was small and medium scale manufacturing industries in the four sectors (food processing, wood production, agro processing and metal work) in Sebeta city. The sample of that industrial classification is selected due to the well functioning of the firms from other sector. Stratified random sampling method was used for the study. The strata were the sectors: - Food processing, wood and furniture, Agro processing and metallic products and finally simple random sample is used in order to set the sample from the population. The distribution of sample taken from different sectors is as follows:-

Table 4: Sample distribution of the study

Business Category	Number of Enterprises	Sample
Food Processing	40	29
Wood and Furniture	44	32
Agro Processing	26	17
Metallic	32	27
Total	142	105

Source: Own design based on Sebeta city MSEs Development Agency (2017)

This study applied a simplified formula provided by Yamane (1967) to determine the required sample size at 95% confidence level, degree of variability= 0.5 and level of precision =5%. = e

$$n = \frac{N}{1+N(e)^2}$$

Where n is the sample size, N is the population size (equal to 142) and e is the level of precision (equal to 5%). A total of 142 MSEs (29 from food processing, 32 from wood and furniture, 17 from agro processing and 27 from metallic products) were randomly selected based on probability proportional to size.

3.4 Source and Tools/Instruments of Data Collection

The study used both primary source of data and secondary. To investigate the determinant of small and medium manufacturing industries primary source of data collection conducted. The data for this study will collected through the survey of manufacturing firms. Although study assessed literatures connected with the challenges and constraints in manufacturing firms as well as the models that help to understand the relationship between variable. Journals and published or unpublished bibliographies, academic journals, conference proceedings, government reports, and books are tapped that are related to the nature of the problem.

3.4.1 Survey Questionnaire

The layout of the questionnaire was kept very simple to encourage meaningful participation by the respondents. The questions were kept as concise as possible with care taken to the actual wording and phrasing of the questions. The reason for the appearance and layout of the questionnaire are of great importance in any survey where the questionnaire is to be completed by the respondent (John A. et al., 2007). Structured questionnaires are those questionnaires in which there are definite, concrete and pre-determined questions. The questions are presented with exactly the same wording and in the same order to all respondents. The forms of the question used in the questionnaire are multiple-choice questions and five-point

likert scale type questions. The type of scales used to measure the items on the instrument is continuous scales (strongly agree to strongly disagree).

3.5 Procedures of Data Collection

Structured questioner would talk place for those selected randomly from each industrial manufacturing category and then owners of the firms interviewed in order to harness the issue didn't gate from questioner.

3.6 Method of Data Analysis

The study employed descriptive and inferential statistical analysis to transform processed data and look for patterns and relationships among variables. The Statistical Package for Social Science (SPSS) version 20 and (STATA) were used to analyze the data obtained from primary sources. Specifically, descriptive statistics such as mean, standard deviation and inferential statistics like correlation and regression were used.

3.7 Descriptive Analysis

Descriptive method of analysis facilitates to describe the demographic characteristics of the respondents and the firm. It also used to reduce the data in to a summary format or the data arranged in a table format and measure of central tendency; mean and standard deviation and measure of central tendency; mean and standard deviation. Moreover, pie charts were used to describe the general characteristics of enterprise. The limitation with this analytical procedure is that descriptive statistics do not show the relationship among the variables and the influence that each variable may have on the response. Descriptive analysis does, however often provide guidance for more advanced quantitative analyses (Kothari, 2005). The reason for using descriptive statistics was to compare the different determinates. In addition, the interview questions were analyzed using descriptive narrations through concurrent triangulation strategy.

3.7.1 Econometrics Model

The study used inferential statistics which allows inferring from the data through analysis the relationship between two or more variables and how several independent variables might explain the variance in a dependent variable. The following inferential statistical methods were used in this study.

In multiple linear regression models, the dependent variable is explained by means of a set of independent variables. In this analysis, a multiple linear regression analysis was used to test whether or not the key independent variables were related to the dependent variable. The multiple linear regression analysis was chosen because capital growth and profitability measure, performance or success of SMMEs, used as the dependent variable takes a continuous measure.

For the analysis of the performance of SMMEs in Sebeta City, the multiple linear regression models that were used to estimate are formulated as follows:

SMMEs Performance = f (Access to finance, technology, marketing, Infrastructure, working premises, labor skill, Government support)

The general multiple linear regression models are specified as:

$$\ln(\text{per}) = \alpha_0 + \alpha_1 \ln(\text{Fin}) + \alpha_2 \ln(\text{WP}) + \alpha_3 \ln(\text{Mrkt}) + \sum \beta_i X_i + \ln \varepsilon$$

Where

$\ln(\text{per})$ = the logarithm of performance

α_0 = the intercept term

α_i = the coefficient of logarithm of finance, working premises and Market

β_i = the coefficient of X_i

$\ln(\text{Fin}) = \ln(\text{WP}) = \ln(\text{MRKT}) = \ln(X_i)$ = the logarithm of explanatory variables

$\ln(\varepsilon)$ = logarithm of the error term

m = number of explanatory variables

3.7.2 Dependant and Independent variables of multiple regression models

Review of literature on determinants of SMMEs, past research findings and the researcher's knowledge of the SMMEs of the study area were used to establish analysis of this study. In other words, among a number of determinants, which

have been related to performance (success) of SMMEs, in this study, the following access to finance ,working premises, infrastructure, market, technology government support and labor skill were factors hypothesized to explain the dependent variable (performance or successes in SMMEs).

Dependant Variables

Performance: - According to the definition of Global Entrepreneurship Monitor (GEM) defined Performance as the act of performing; of doing something successfully; using knowledge as distinguished from merely possessing it (GEM, 2004). However, performance seems to be conceptualized, operationalized and measured in different ways thus; making cross-comparison is difficult (Srinivasan et al., 1994). However, financial growth due to increasing profits and capital growth has been widely adopted by most researchers and practitioners in business performance models.

The study used the concept of success or good performance of firms through financial or capital growth due to increasing profits as widely adopted by most researchers.

Independent Variables

Access to finance -: For various reasons ranging from a lack of collateral to bias against small firms, SMMEs tend to face greater financial constraints than do larger firms. SMMEs in developing countries apply for and receive formal bank loans relatively infrequently; they thus typically rely on other types of credit such as trade credit, overdrafts, and informal loans. Microfinance institutions also provide important sources of financing for SMMEs, but their outreach is typically more limited than that of traders who frequently provide working capital in cash or kind, especially in rural areas (Swinnen, 2005). Thus, there exist a positive relationship between the firm growth and its access to finance.

Infrastructure -: The availability of suitable infrastructure to the function of MSEs is important. Infrastructures like electric power supply, water supply, road, telephone, utilities and transports have positive impact on the performance of

SMMEs and SMMEs which have good and enough infrastructures grow fast (Solomon, 2004).

Own premises -: It shows availability of own working place or industrial land. According to Fred (2003), access to industrial land has been major factors in firm growth and has a positive impact SMMEs performance.

Access to market -: It refers to availability of market or demand to the products/services of SMMEs. Esther (2008), showed that access to market plays a significant role in promoting SMMEs as result, in this study, access to adequate market is expected to positively correlate with enterprises performance.

Labor Skill: -It refers skilled personnel at management and operational levels. The constraint related to labor skill and availabilities among others are lack of well trained and experienced, lack of strategic skill adoption perspectives, resistance to acquire skill, high labor cost and lack of entrepreneurship training skill(Alemayehu, 2011). Labor skill is positively related to firm success.

Technology: - It refers knowledge and skills required for firms to choose, install, operate, maintain, adapt, improve and develop technologies (Romijn and Albaladejo, 2004).Adequately technological adoption positively increases firm growth.

Governments Supports:- It refers government assistance which refers maximum supports (for growth oriented sector) working premises with least leasing price, Product display center with least leasing price, technical and business management training, counseling service loan provision, market linkage particularly with government development programs ,exhibition, trade fair organization, access to technology and minimum support; loan provision ,exhibition, trade fair organization, technical and business management ,training, and counseling service.

Multicollinearitytest

As we are producing multiple regression models, we need to be aware of certain features of the multicollinearity. That means, when two or more independent variables are highly correlated with each other this is known as multicollinearity. 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 measures presence of multicollinearity. These are: Variance Inflation Factor (VIF) for association among the continuous explanatory variables and contingency coefficients for 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 “troublesome” or collinear the variable X_i is. As a rule of thumb, if the VIF of a variable exceeds 10, there is a multicollinearity problem.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

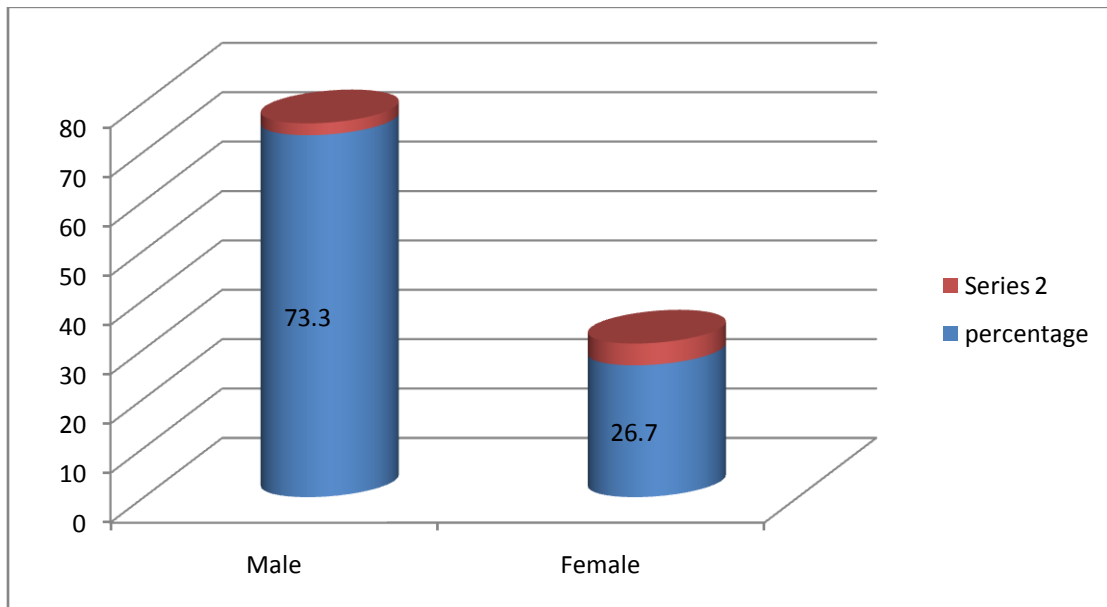
In this section, the data collected through different data collection methods and tools are discussed and analyzed carefully in order to show and assess determinants of small and medium manufacturing industries in the study area.

One hundred five questionnaires were distributed across the four small and medium manufacturing industries sectors, wood and furniture, food processing, metal and agro processing manufacturing industries all 105 respondents completed and retrieved successfully, representing 100% response rate.

4.1 General characteristics of the Enterprises in the study

4.1.1 Sex of respondents(owners of SMMEs industries)

Figure: 3 Sex of respondents



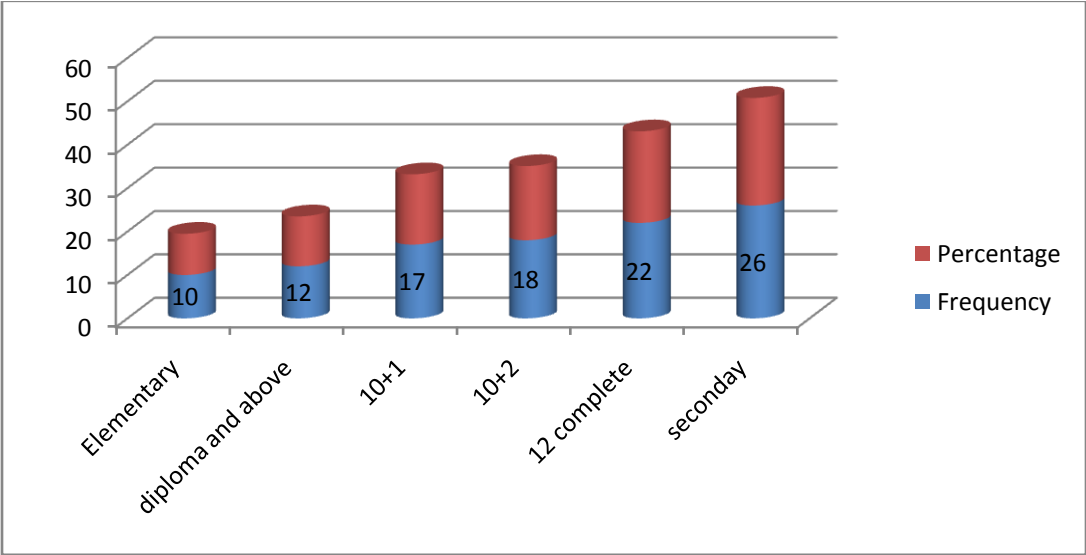
Source: Field survey, 2017

As far as sex of the respondents is concerned, a result indicates that there is low proportion of women compared to men in the small and medium manufacturing industries in the study area. In the sample the proportion of men in SMSEs covers

77 (73.3%) and women constitute only 28 (26.7%), demonstrating that there is a clearly observable gender gap and women engagement in manufacturing industries.

4.1.2 Educational Status of respondents (Owners)

Figure: 4 Educational Status



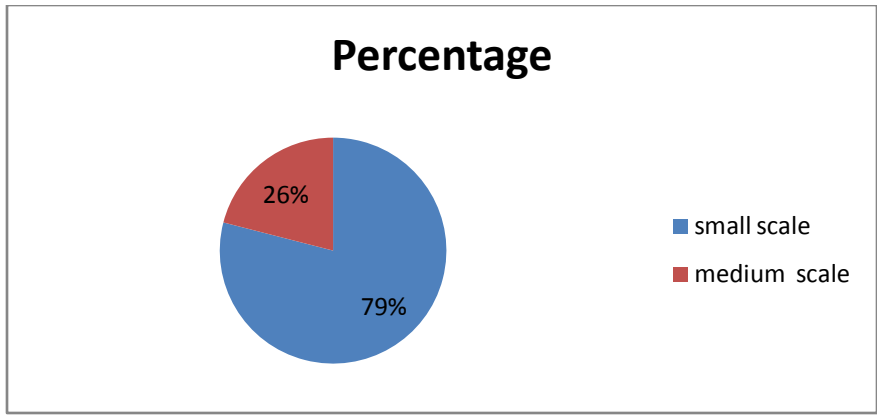
Source: Field survey, 2017

As shown on the above table (26 %) and (22%) of the sample respondents have completed secondary and 10+2 complete level of education ,respectively, whereas (18%) of respondents got 10+2 level of TVET and (17%) has 10+1 TVET level. On the other case (12%) and (10%) of the respondents have completed diploma and above and elementary level of education.

In General the table implies that most of the respondents (95%) attended from secondary up to Diploma or degree level education. While the remaining (10%) of respondents attended, Elementary level.

4.1.3 Category of manufacturing scale

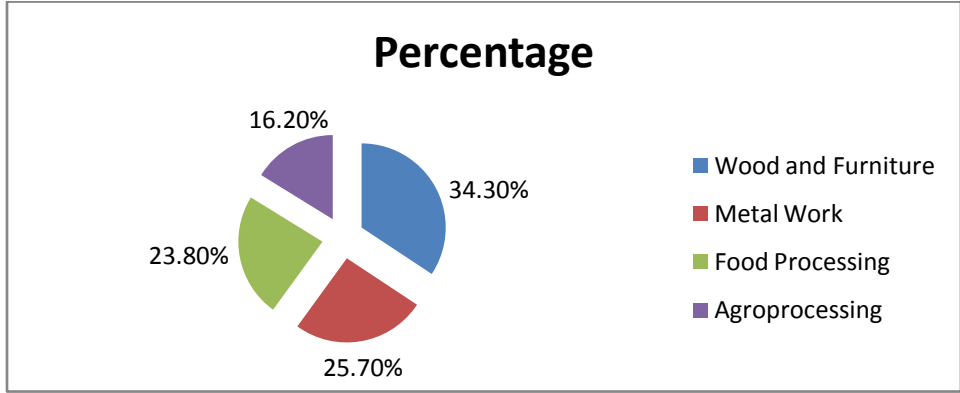
Figure 5 Manufacturing industries Scale



Source: Field survey, 2017

As shown in figure above, firms manufacturing scale were operating in to small scale manufacturing industries and medium scale manufacturing industries. Most of them are engaged in small scale manufacturing industries (79%) the remaining (26%) operating in medium scale manufacturing industries. The importance of classifying in their operating performance as small scale and medium scale manufacturing industries are vital to understand the determinant of each scale to their performance

4.1.4 Manufacturing industries Category
Figure 6: Manufacturing industries category



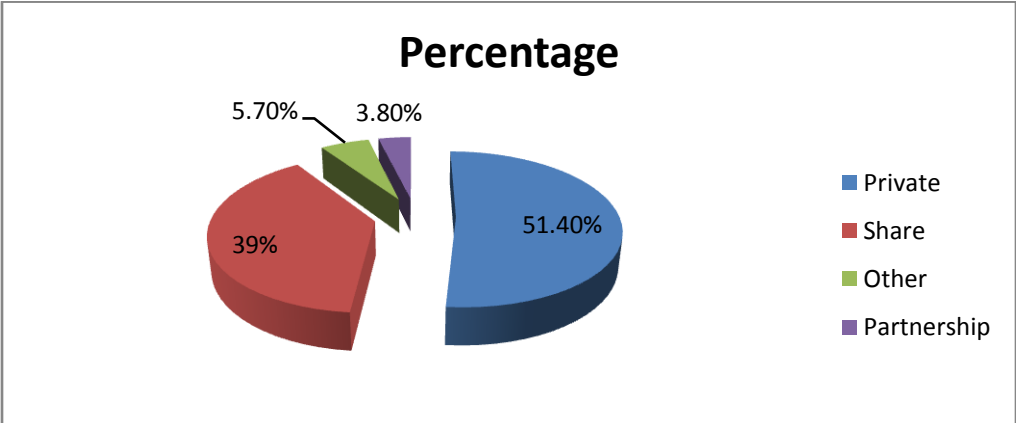
Source: Field survey, 2017

As shown in figure above, the sample firms were operating in four sectors of the manufacturing industries classification. Most of them are engaged in Wood and

furniture (34.30%) followed by Metal work (25.7%), food processing (23.8%) and agro processing (16.20%) . This division of SMSEs by sector type was believed to be helpful to study each sector critical determinant for the performance of SMSEs. This is because firms in different sectors of the manufacturing category face different types of problems. That means the degree of determinants in wood and furniture sector may differ from determinants that are critical to metal work, food processing and agro processing sectors

4.1.5 Ownership of the Industries

Figure 7: Ownership of manufacturing industries



Source: Field survey, 2017

As shown in figure above, ownership of small and medium scale manufacturing classified as private owned, share, partnership and other business type. Most of them are privately owned manufacturing industries (51.4%) and followed by share business (39%), other business ownership (5.7%) and partnership business (3.8%) respectively. Business relation type is important to understand the manufacturing performance of each business relation.

4.2 Determinants of Small and medium scale manufacturing industries

4.2.1 Results of Measures of Central Tendency and Dispersion

4.2.2 Results of Measures of Central Tendency and Dispersion

Table 5:- Government Support Determinants of SMSMEs

Items	Food proc.		Wood		Agro.pro		Metallic	
	MN	SD	MN	SD	MN	SD	MN	SD
Government Support								
Problems of incentives and operating environment.	3.10	0.72	3.22	0.91	3.53	0.80	3.12	0.78
Problems of obtaining finance from Financial Institutions	3.62	0.78	3.88	0.83	4.06	0.90	3.56	0.92
Problem of market and marketing services linkage.	4.07	0.88	3.91	0.96	3.94	0.90	4.16	0.94
Lack of Access land/working premise	4.34	0.72	4.22	0.75	4.00	0.94	4.24	0.60
Lack of formal training	4.14	0.88	3.78	0.83	3.59	0.87	4.00	0.96
Lack of accessible information on government regulations that important for the firm	4.10	0.94	3.97	1.00	3.76	1.03	3.68	1.22

Source: Field survey, 2017

MN=Mean, SD=Standard deviation

As it is indicated in table above, the mean and standard deviation for the government support were calculated. The table shows Lack of Access land/working premise has a mean score of 4.34 with a standard deviation of 0.72 for food processing, mean score of 4.22 with standard deviation of 0.75 for wood work and mean score of 4.00 with standard deviation of 0.94 for agro processing, mean score of 4.24 with standard deviation of 0.60 for metal work. Therefore, it may be concluded that lack of access land/working premise is the main determinant that affects the performance of all sectors. This is followed by average score of the respondent's response with regard to unreasonable tax and related issues.

According to the above table, enterprises engaged in food processing, wood work, agro processing and metal work sector, Lack of accessible information on government regulations. It is justified by the calculated means of 4.10, 3.97, 3.76 and 3.68 with standard deviation of .94, 1, 1.03 and 1.22 respectively.

Furthermore, the table indicates that Problem of market and marketing services linkage is another problem that affects the performance of enterprises engaged in food processing and wood and metal work with a mean of 4.07 and 4.16 and standard deviation of .88 and .94 respectively. The table also shows us Problems of obtaining finance from financial institutions manufacturing industries of food processing, wood work, agro processing and metal work sector with the means of 3.62, 3.88, 4.06 and 3.56 and with standard deviation of 0.78, 0.83, 0.90 and 0.92 respectively.

Table 6:- Financial determinant which determine the performance of SMMEs

Items	Food proc.		Wood		Agro.pro		Metallic	
	MN	SD	MN	SD	MN	SD	MN	SD
Financial determinant								
Lack of working capital	4.17	0.71	3.56	1.29	3.59	1.18	3.28	1.21
High collateral requirement from banks and other lending Financial institutions	3.97	0.87	3.59	1.16	3.47	1.07	5.28	1.23
Complicated application procedure to Banks and Financial Institutions	3.66	0.94	3.59	1.24	3.65	1.22	3.52	1.00
High interest rate charged by banks and other lending financial institutions	3.72	1.07	3.66	1.00	3.41	1.00	3.64	1.04
Lack of cash management skills	3.66	1.20	3.75	0.98	3.65	0.93	3.56	0.96
Inadequacy of credit institutions	3.79	1.15	3.59	1.07	3.65	1.22	3.40	1.22
Government and Private Financial institutions Lack common definition for small and Medium Enterprises	3.69	1.14	3.56	1.24	3.82	0.81	3.44	1.23

Source: Field survey, 2017
MN=Mean, SD=Standard deviation

The mean scores of 4.17,3.56,3.59 and 3.28 with standard deviation of 0.71,1.29,1.18 and 1.21 of the respondents in table 6 shows that those operators engaged in food processing, wood work, agro processing and metal work sector have faced the problem related to working capital respectively. Regarding High collateral requirement from banks and other lending financial institutions, the mean scores depicts that the respondents' of the four sectors agreement scale is as the issue determine their firms. The results show that the means 3.97, 3.59, 3.47 and 5.28 with standard deviation of 0.87, 1.16, 1.07, 1.23 respectively.

Moreover the table also indicates inadequacy of credit institutions among the firms of food processing, wood work, agro processing and metal work with the mean score of 3.79, 3.59, 3.65 and 3.40 and standard deviation of 1.15, 1.07, 1.22 and 1.22 respectively.

With regard to High interest rate charged by banks and other lending financial institutions the mean score of 3.72, 3.66, 3.42 and 3.64 with standard deviation of 1.07, 1, 1 and 1.04 for firms engaged in food processing, wood work, agro process and Metallic respectively. Similarly, lack of cash management skills with a mean score of 3.66, 3.75, 3.65 and 3.56 with standard deviation of 1.20, 0.98, 0.93 and 0.96 for operators of food processing, wood work, agro process and Metallic respectively.

Operators were interviewed to give their opinion on the nature of problem related to financial factors. It was found that, mainly ensuing from low market, the operators usually suffer of shortage of cash leading to their inability to cover their daily needs adequately. The other cause of this low cash presence at the disposal of the operators could be the increasing expense incurred by their respective MSEs in relation to purchase of raw materials and services such as transportation, in addition to cost of utilities consumed both at home and work place. The operators frequently mitigate this problem of cash shortage through borrowing and lending each other. The other mechanism of easing such cash shortage is through diversification of income generating activities.

The presence of affordable credit is essential for enterprise growth. According to the data earned from the respondents there is financial constraint in the study area. This finding supported by Currie (2009) stated that:

Majority of MSEs in countries such as Ethiopia operate at under capacity due to lack of credit or over-regulation. This problem has been exacerbated by the demand for collateral by commercial banks as a prerequisite for the approval of loan applications.

Table 7:- Market determinants which determine the performance of SMMEs.

Items	Food proc.		Wood		Agro.pro		Metallic	
	MN	SD	MN	SD	MN	SD	MN	SD
Lack market information.	3.66	1.20	3.81	0.93	3.71	0.99	3.40	1.00
Problems of marketing Strategies	3.52	1.33	3.66	1.12	3.53	1.28	3.48	1.05
Poor marketing services linkage.	3.45	1.33	3.59	1.24	3.41	1.12	3.48	1.08
Problem of demand of the product	3.62	1.08	3.69	1.03	3.71	1.10	3.40	1.26
Motion of buying Small scale products	3.48	1.15	3.59	1.13	3.41	1.28	3.68	1.11
Problem of Market advertisement and promotion	3.55	1.21	3.63	1.04	3.35	0.93	3.76	0.93
Poor customer relationship and handling	3.59	1.27	3.47	0.98	3.41	1.23	3.84	0.99
Absence of linkage with an organization that conduct marketing research	3.55	1.21	3.47	1.02	3.71	1.21	3.56	0.96

Source: Field survey, 2017
MN=Mean, SD=Standard deviation

As shown in the table above, marketing determinants is consisted of eight items. From these determinants lack of market information, problems of marketing strategies, poor marketing services linkage, Problem of demand of the product, motion of buying small scale products, problem of market advertisement and promotion, poor customer relationship and handling and absence of linkage with an organization that conduct marketing research are critical factors that affect the

performance of MSEs engaged in all sectors. The mean scores and standard deviations clearly show respondents agreement on the variables. That is mean scores of market information are 3.66, 3.82, 3.71 and 3.40 with standard deviations of 1.20, 0.93, 0.99 and 1 for SMMEs engaged in food processing, wood work, agro processing and metallic respectively. The respondents of food processing, wood work, agro processing and metallic work with a mean of 3.62, 3.69, 3.71 and 3.40 with standard deviation of 1.08, 1.03, 1.10 and 1.26 that there is difficulty of searching new market respectively.

In table 7 it can be seen that, problem of market advertisement and promotion is another marketing determinants that affect the performance of SMMEs. The arithmetic mean of 3.55, 3.63, 3.35 and 3.76 with standard deviation of 1.21, 1.04, 0.93 and 0.93 for SMMEs engaged in food processing, wood work, and agro processing and metallic respectively. Moreover, the table shows that poor customer relationship and handling. The mean scores are 3.59, 3.47, 3.41 and 3.84 and standard deviations are 1.27, 0.98, 1.23 and 0.90 for business enterprises engaged in food processing, wood work, and agro processing and metallic respectively. Similarly, majority of respondents agreed with absence of linkage with an organization that conducts marketing research. This agreement is justified by the mean scores of 3.55, 3.47, 3.71 and 3.56 with standard deviation of 1.21, 1.02, 1.21 and 0.96 for an operators engaged in food processing, wood work, and agro processing and metallic respectively.

In an interview conducted with an operator of the sectors, it was confirmed that absence of selling place has aggravated the already existing 'inadequacy and crowdedness' of the internal working space of the shades. The operators intelligently argued that lack of selling place is a direct contributor for their inadequate market hence low income of the studied SMMEs. Absence of selling place obviously narrows the chance to access new customers.

Table 8:- Infrastructure determinants which determine the performance of SMMEs.

Items	Food proc.		Wood		Agro.pro		Metallic	
	MN	SD	MN	SD	MN	SD	MN	SD
Inadequate supply of utilities such as water, electricity, and telecommunication	3.55	1.02	3.34	1.12	3.53	1.07	3.80	1.04
Inconsistent supply of utilities such as water, electricity, and telecommunication	3.48	1.15	3.38	1.04	3.41	1.28	3.44	1.2
Lacks and inaccessibility of transportation	3.55	1.38	3.44	1.13	3.65	0.86	3.28	0.1

Source: Field survey, 2017

MN=Mean, SD=Standard deviation

The result presented in table 8 shows that inadequate supply of utilities such as water, electricity, and telecommunication is the main problem followed by lack of sufficient and quick transportation service that hinders the business performance of all sectors. The mean scores of power interruption are 3.55, 3.34, 3.53 and 3.80 with standard deviations of 1.02, 1.12, 1.07 and 1.04 for food processing, wood work, and agro processing and metallic respectively.

. The mean scores of lack of sufficient and quick transportation service are 3.55, 3.44, 3.65 and 3.28 with the standard deviations of 1.38, 1.13, 0.86 and 0.1 for food processing, wood work, and agro processing and metallic respectively.

On the other hand, insufficient and interrupted water supply is the main challenges that hinder the performance of business operators engaged in food processing.

The other impediment, according to interviewees of the sector, there is problem of power interruption and inconsistency of electricity in the enterprise engaged in all sectors of firms.

Table 9:- Technology determinants which determine the performance of SMMEs.

Items	Food proc.		Wood		Agro.pro		Metallic	
	MN	SD	MN	SD	MN	SD	MN	SD
Technology determinant								
Lack of technical skill to adopt new technology	3.97	1.09	3.59	1.24	3.41	0.87	3.52	0.92
Problems of openness innovation culture	3.48	1.33	3.75	1.08	3.12	1.32	3.80	1.00
Problem of open communication system	3.52	1.09	3.97	0.93	3.41	0.87	3.88	0.97
Financial problem to acquire new technology	3.45	1.35	4.03	1.03	3.65	1.11	3.92	1.04
Lack of strategic perspectives to adopt new technology	3.41	1.18	3.34	1.18	3.47	1.28	3.68	1.25
Lack of appropriate machinery and equipment	3.52	1.18	3.09	1.42	3.53	1.07	3.24	1.27
Unable to select proper technology	3.31	1.17	3.31	1.28	3.53	1.18	4.24	1.63

Source: Field survey, 2017
MN=Mean, SD=Standard deviation

As it can be seen in table above, lack of technical skill to adopt new technology is the main problem of SMMEs engaged in food processing. The mean scores and standard deviations are 3.97 and 1.09 respectively. This is followed by lack of appropriate machinery and equipment. The mean score and standard deviation are 4.30 and .70 respectively. According to table 9, for operators engaged in wood, agro processing and metal work, unable to select proper technology is moderately affects their performance. That is a means and standard deviations of 3.31, 3.31 and 3.53 with 1.17, 1.28 and 1.18 respectively. With regard to lack of financial to acquire new technology, the mean scores and standard deviations are 3.45, 4.03, 3.65 and 3.92 with 1.35, 1.03, 1.11 and 1.04 for operators of food processing, Wood work, agro processing and metal work respectively.

On the other hand, the mean and standard deviation for lack of technical skill to adopt new techno wood work, agro processing and metal work with the mean score of 3.97, 3.59, 3.41 and 3.52 with the standard deviation of 1.09, 1.24, 0.87 and 0.92 respectively.

According to the interview with the operators, lack of technical skill to adopt new technology, problems of openness innovation culture , problem of open communication system, financial problem to acquire new technology, lack of strategic perspectives to adopt new technology, lack of appropriate machinery and equipment and unable to select proper technology are the determinants that related with technological adoption problems.

Table 10:- Working premise determinants which determine the performance of SMMEs.

Items	Food proc.		Wood		Agro.pro		Metallic	
	MN	SD	MN	SD	MN	SD	MN	SD
Working Premises determinant								
Absence of own Land, Shed or Working premises	3.24	1.53	3.31	1.18	3.94	0.90	3.92	0.91
High cost of rented land/house/shade	3.39	1.10	3.59	1.04	3.94	1.03	3.88	1.24
Inadequate of working premises from the market	3.76	0.79	3.69	0.93	3.71	1.05	3.48	1.16
Inconvenient of Working place	3.55	1.12	3.44	1.22	3.65	0.93	3.36	1.19

Source: Field survey, 2017
MN=Mean, SD=Standard deviation

The mean scores and standard deviations in table above shows, the premises determinants that hinders their performance are absence of own land, shed or working premises, high cost of rented land/house/shade, inadequate of working premises from the market and inconvenient of working place . As the mean score of absence of own premises indicate 3.24, 3.31, 3.94 and 3.92 with standard of 1.53, 1.18, 0.90 and 0.91 for respondents engaged in food processing, wood work, agro processing and metal work respectively.

With regard to high rent of house, the mean scores are 3.39, 3.59, 3.94 and 3.88 and standard deviations are 1.10, 1.04, 1.03 and 1.24 for food processing, wood work, agro processing and metal work respectively.

The respondents of agro processing and metal work agree with their current working place is not convenient to run business. Their mean scores are 3.94 and 3.92 and standard deviations are 0.90 and 0.91 respectively.

In an interview conducted with an operator of food processing it was confirmed that, they operated in rented house and high rental charges have impeded the performance of their businesses as some charges are higher than the capacity to pay. Similarly, in an interview conducted with owner managers of wood and metal work was confirmed this idea. According to them, this high rent of house is resulted from absence of own premises to do business

Table 11:- Labor skill determinants which determine the performance of SMMEs.

Items	Food proc.		Wood		Agro.pro		Metallic	
	MN	SD	MN	SD	MN	SD	MN	SD
Labor Skill Determinant								
Lack of well trained and experienced employees	3.48	1.18	3.56	1.27	4.00	0.94	3.48	1.08
Lack of strategic skill adoption perspectives	3.62	1.08	3.25	1.14	3.65	0.86	4.24	0.82
Resistance to acquire skill	3.45	1.38	3.53	1.08	3.71	1.05	3.48	1.23
High labor cost	3.41	1.27	3.56	1.08	3.59	1.23	3.80	1.04
Lack of entrepreneurship training skill	3.45	1.27	3.47	1.27	3.24	1.09	3.40	1.22

Source: Field survey, 2017

Among the labor skill , lack of well trained and experienced employees, lack of strategic skill adoption perspectives, resistance to acquire skill, high labor cost and lack of entrepreneurship training skill are issue related to labor skill determinants.

Lack of well trained and experienced employees scores the highest mean as 3.48, 3.56 and 4.00With standard deviation of 1.18, 1.27 and 0.94 for operators engaged in food processing, wood work and metal work respectively. On the other way important determinants that affect the performance of SMMEs is lack of strategic skill adoption perspectives. Their mean score of 3.62, 3.25, 3.65 and 4.24 with

standard deviation of 1.08, 1.14, 0.86 and 0.82 for food processing, wood work, agro processing and metal work respectively.

Furthermore, the arithmetic mean and standard deviation indicates that Lack of entrepreneurship training skill that hinders the success of entrepreneurs employed in all sectors. Given that a mean score of 3.45, 3.47, 3.24 and 3.40 with standard deviation of 1.27, 1.27, 1.09 and 1.22 for SMMEs engaged in food processing, wood work, agro processing and metal work respectively.

Regarding resistance to acquire skill are also the problem of labor skill development, the mean of 3.45, 3.53, 3.71 and 3.48 with standard deviation of 1.38, 1.08, 1.05 and 1.23 for SMMEs engaged in food processing, wood work, agro processing and metal work respectively.

According to interviewees, all sectors of the respondents agreed that lack of well trained and experienced employees, lack of strategic skill adoption perspectives, resistance to acquire skill, high labor cost and lack of entrepreneurship training skill is the main determinants for the SMMEs in the

Table 12:- General determinants which determine the performance of SMMEs.

Items	Food proc.		Wood		Agro.pro		Metallic	
	MN	SD	MN	SD	MN	SD	MN	SD
Performance determinant of small and medium manufacturing Enterprise								
Poor Government Support	3.62	1.08	3.81	0.93	3.24	0.83	3.68	1.25
Financial determinant	3.66	1.04	3.53	1.02	3.53	1.07	3.32	1.11

Market determinant	3.72	0.92	3.97	0.82	3.47	1.33	3.76	1.09
Infrastructure determinant	3.93	0.65	4.03	1.03	3.71	0.99	3.72	1.10
Technological Adoption determinant	3.97	0.87	3.63	1.31	4.06	0.66	3.64	1.08
Land or Working premises determinant	3.93	0.96	3.81	1.12	3.76	1.25	3.68	0.85
Skilled Labor determinant	4.21	0.82	3.78	0.94	3.71	1.10	4.00	0.96

It can now be seen that problem of labor skill, lack of Owen premises, financial problem and market problem are determinants has the biggest potential to contribute to the performance, followed by infrastructural, technology adoption and government support . This result is supported by World Economic Forum’s Global Competitiveness Index (2014 and 2015), the top five problematic factors for doing business in Ethiopia are: inefficient government Bureaucracy, foreign currency regulations, access to finance, corruption, and inadequate supply of infrastructure. This is supported by results of a 2014 public-private dialogue for the National Business Agenda, where firms identified the top five critical and binding constraints as: tax administration, access to finance, limited access to land and availability and quality of electricity, and market/unfair competition.

4.2.3 Results of Inferential Statistics

In the section below, the results of inferential statistics are discussed. In order to assessing the objectives of the study, Correlation Coefficient and regression analyses were performed. Using output from inferential Statistics and regression conclusions of the study drawn with regard to research question.

4.2.3.1 Correlation Coefficient

Correlation Coefficient was used to determine whether there is significant relationship between government support, technology, infrastructure, market, financial, working premises and labor skill variable with performance. The following section presents the results of Correlation on the relationship between independent variables and dependent variable. Correlation measures the strength and direction of the linear of the relationship between the dependant and independent variables.

The table below indicates that the correlation coefficients for the relationships between performance and its independent variables are linear and positive correlation coefficients.

Table:-13 Correlation coefficients of the variables

Independent variables	Correlation coefficient	Performance (Capital profitability)
Working Premises	Correlation	0.407
	P-Value	000
	N	105
Technology determinant	Correlation	0.206
	P-Value	000
	N	105
Infrastructure determinant	Correlation	0.283
	P-Value	000
	N	105
Market determinant	Correlation	0.347
	P-Value	000
	N	105
Financial determinant	Correlation	0.507
	P-Value	000
	N	105
Government support determinant	Correlation	0.585
	P-Value	000
	N	105
Labor skill determinant	Correlation	0.654
	P-Value	000
	N	105

The above table clearly indicates that there is positive relationship between dependant and independent variables. Positive sign indicators of as one score increase, so does the other. The table shows us positive relationship was found between working premises and performance and financial and performance ($r = .507$), and labor skill and performance ($r = .654$) and government support and performance ($r = 0.654$) which are statistically significant at 99% confidence level. This implies that at a 1% level of significance it was discovered that the working premises, labor skill, financial and government support plays a significant role in determining the performance of SMMEs in the study area. The table also indicates the moderate positive relationship of variables, infrastructure and performance ($r = .283$), technology and performance ($r = .206$) and market and performance ($r = .347$) which are statistically significant at 99% confidence level.

4.3 Regressions Analysis

This technique is used for finding causal effect relationship between variables and determining the extent to which the explanatory variables explain the variance in the explained variable.

Model Test

The model applied diagnostic tests multicollinerity test, hetrosdasticity, omission of variable test and kernel density test for normality and the model doesn't suffer from any serious problems

Multicollinearity test: - As we are producing multiple regression models, we need to be aware of certain features of the multicollinearity. That means, when two or more independent variables are highly correlated with each other this is known as multicollinearity. 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.

Variance Inflation Factor (VIF) for association among the continuous explanatory variables and contingency coefficients for independent variables. The technique of

variance inflation factor (VIF) was employed to detect the problem of multicollinearity among the continuous variables.

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 “troublesome” or collinear the variable X_i is. As a rule of thumb, if the VIF of a variable exceeds 10, there is a multicollinearity problem. As figure below shows the model have no problem of multicollinearity

VIF Matrix

. vif

Variable	VIF	1/VIF
md	1.81	0.551243
pgs	1.72	0.580410
fd	1.72	0.582330
letrs	1.57	0.635454
id	1.26	0.790819
td	1.22	0.820022
lwp	1.16	0.862052
Mean VIF	1.50	

Heteroscedasticity test: - one of the key assumptions of regression is that variance of the errors is constant across observations. According the test of Breusch-Pagan / Cook-Weisberg test for heteroskedasticity the model is free from the problem (Appendix D).

Omission of Variable test: - According Ramsey RESET test using powers of the fitted values the model has no omitted variables (Appendix D).

Kernel density Test: - Test for normality in which the units of the width are the units of the independent variables being analyzed. The model fulfills the criteria for normality distributions.

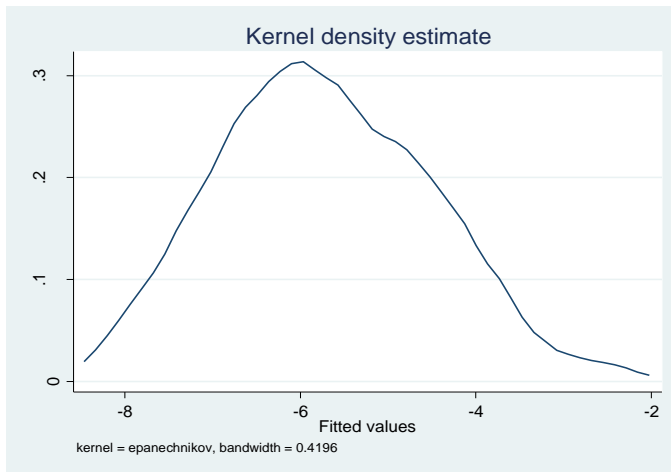


Figure (7):- Kernel density estimate

The result of regression analysis is discussed below.

Table:-14 Model summary of regression analysis

<i>Model Summary</i>				
<i>Variables</i>	<i>R-Squared</i>		<i>Adj R-Squared</i>	
	<i>.9075</i>		<i>.9008</i>	
	<i>Coefficients</i>	<i>Std. Error</i>	<i>t</i>	<i>Sig.</i>
Constant	-13.7	.299	-45.76	.000
Government support (X ₁)	1.76	.374	4.72	.000
Financial (X ₂)	2.42	.374	6.46	.000
Market (X ₃)	2.50	.386	6.48	.000
Infrastructure (X ₄)	2.14	.380	5.63	.000
Technology (X ₅)	1.61	.348	4.63	.000
Working premises (X ₆)	2.86	.293	9.75	.000
Labor Skill (X ₇)	2.659	.193	13.7	.000

Source: Model result, 2017

Multiple regression output analysis of performance against its variables for the sample of 105 firms. It also revealed the correlation between the observed value of performance and the optimal linear combination of the independent variables (government support, financial, market, infrastructure, technology, working premises and labor skill). The result of the analysis is presented in table 14.

A multiple linear regression analysis was employed by using the performance as the dependent variable and government support, financial, market, infrastructure, technology, working premises and labor skill as independent variable.

The R-squared is .9075 and it measures the proportion of variability in the response explained by the model. It realized that 90% of the variation in performance can be

explained by the independent variables. The remaining 10 % of the variance is explained by other variables not included in this study and the F-test is statistically significant at all levels. All of the explanatory variables were found to significant at influencing the performance of small and medium manufacturing enterprises at 1% probability level. This signifies the goodness of the model or best fit model for the data (Appendix B). The independent variables also explained as follows:-

Government Support: - statistically significant at 1% significance level and had positive relationship with the performance of the enterprise. According to OECD (2004a) if the culture of Government, education, regulatory authorities, banks, the professions and the large corporate sector lacks empathy with SMEs, then it will be unmanageable for the sector to survive and develop. The stakeholder environment must, therefore, be as entrepreneurial as the SME sector itself. Stakeholder organizations facilitating and supporting entrepreneurship are key components in the world of a level playing field and of a solid base for an enterprise culture.

Access to Finance: statistically significant at 1% significance level and had positive relationship with the performance of the enterprise. The financing of small and medium enterprises (SMEs) has been a topic of keen interest in recent years because of the key role that SMEs play in economic development and their potentially important contribution to economic diversification and employment (Ayyagari et al., 2007 cited in Berg and Fuchs, 2013). Numerous studies have discussed that SMEs are financially more constrained than larger firms in both developed and developing countries. In developing economies including Sub-Saharan Africa, SMEs are typically more credit-constrained than large firms, severely affecting their possibilities to grow (Beck et al, 2005; Beck and Demirguc-Kunt, 2006; Beck et al, 2006; Ayyagari et al, 2008; Beck et al, 2008; Ayyagari et al, 2012). Calomiris and Hubbard (1990) noted that when the company is smaller, the restrictions on credit are greater.

Brhane and mulugeta (2011) found that the majority of firms identified finance as one of the main factors that affect success performance and growth of SMMEs.

Access to market: Access to market for the products and services of the enterprises was statistically significant at 1% significance level and had positive relationship with the performance of the enterprises. This indicates that enterprises which have higher market access for their products and services have higher probability of having good performance in the business. In the same manner the finding of UNECE (2004) states that the decisive decision making of enterprises good or bad performance is in the hand of market. So the existence of market access for the enterprises products and services can improve the performance of enterprises to exist in the business.

Infrastructure: - Infrastructure development was statistically significant at 1% significance level and had positive relationship with the performance of the enterprises. The availability of suitable infrastructure to the function of MSEs is important. Infrastructures like electric power supply, water supply, road, telephone, utilities and transports have positive impact on the growth of MSEs and MSEs which have good and enough infrastructures grow fast (Solomon 2004). Lack of sufficient capital and investment is expected to be among the major tangible reasons for the underdeveloped economic status of these countries (Todaro, M. P. and Smith S. C., 2003).

Technology: - Technology adoption was statistically significant at 1% significance level and had positive relationship with the performance of the enterprises. The crucial role of technology in sustainable development becomes evident, since technological progress represents the main source of rising levels of factor productivity (UNIDO, 2004).

Working premises: - working premises was statistically significant at 1% significance level and had positive relationship with the performance of the enterprises. Enterprises which engaged in manufacturing and access to working premises are positively related for manufacturing performances (Yohannes, 2011)

Labor Skill: The Labor skill of the operators in the enterprises was statistically significant at 1% significance level and had positive relationship with the performance of the enterprises. The appreciation and initiation of entrepreneurial skills of the operators by different trainings and best practice sharing is advantageous to promote the performance of the enterprises. On the same way,

Fairozet *al.* (2010) found that there were positive correlations among proactiveness and enterprises operation with business performance.

The overall prediction of the model was found to be significant at 1% significance level and with the adjusted R^2 indicates that 90% of the variance in performance was due to the variables included in the model and the remaining 10 % are due to other variables not included in the model.

Table 14:- Also display all the explanatory variables included in this study significantly explains at 99% confidence level to the variation on the dependent variable. The coefficient value measure how strongly each independent variables influences the dependant variable. Beta measured in units of standard deviations. Thus, the higher the coefficient value the greater the impact of the independent variables on the dependence variable, (performance) according the study. The largest influence on the performance of SMMEs is from the working premises determinants (2.864), labor skill determinants (2.65) , market determinant (2.50) and financial determinant (2.44). However, government support with the beta value of (1.766) and technology with the beta value of (1.613) is the poorest predictor of performance when it compared with the other explanatory variables under study.

CHAPTER FIVE

CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusions

Taking the data analysis and the findings in to account the following conclusions could be drawn. Small and medium scale manufacturing industries play significant roles in the creations of employment opportunities and generations of income for quite a large proportion of the population and for the development of industrialization. This research was conducted in Sebeta city with the main objective of assessing the determinants of small and medium scale manufacturing industries. The study used a stratified random sampling method and analyzed using descriptive and inferential analyses through econometric method of regression analysis. Based on the objectives and findings of the study, the following conclusions are seated. According to the findings, it is possible to conclude that, the major determinants of small and medium scale manufacturing industries in the city are lack of working premises financial constraint and market opportunities respectively.

There are problems related to government bodies such as problems of incentives and operating environment, marketing services linkage and problem of accessing information on government rules and regulations. The problems of working premises widely observed. It was found that absence of own land, shed and high cost of rent for manufacturing production and inadequate of working place from the market. The descriptive result indicates that, there is the problem of working premises, financial and marketing are the major determinants that affect the performance of the manufacturing industries of small and medium sector. Labor skill, technology and infrastructure problems are also the determinant for manufacturing performance. Also this study indicates that, problem of inadequate and inconsistent supply of utilities such as water, electricity, telecommunication and transportation are the main infrastructural factors in the study area which need government attention.

According to the findings of the research SMMEs were constrained by lack of financial determinants like lack of working capital, high collateral requirement from the banks and private lending institutions, high interest rate charged and complicated application from credit institutions. On the other side the finding revealed that technological problems also determine the manufacturing performance of the sector in the aspect of financial problems to acquire new technology, lack of technical skill to adopt new technology and problem of strategic perspectives to adopt new technology.

The most important appropriate determinants identified by inferential statistics and regression analysis are problems of working place, financial, Marketing, labor skill, government support, technological and infrastructures constraints. The finding displays that all the independent variables are positively correlated with the dependant variables performance and they are major determinants for the performance of small and medium manufacturing industries.

In general, the findings of this research show that the SMMEs have great roles in development of industrialization. The determinants of small scale and manufacturing industries constraints which hinder the performance of manufacturing can be solved by government body and operators of the firms. Therefore, it is important to draw some recommendations that can reduce the determinants of SMMEs performance in order to provide full capacity manufacturing performance.

5.2 Recommendations

The studies take in to account the objective of assessing the determinants of small and medium scale manufacturing performance. On the basis of the major findings of the study, the following recommendations have been drawn with the view to improve the production performance of small and medium scale manufacturing industries in order to make sources of employment creation, inputs for largest industries and promote economic growth in the study area.

- The government should diversify root base policy framework to provide land or working premises for SMMEs in order to develop their performance in full utilization capacity.
- It is better if governments further provide affordable alternative sources of finance for SMMEs. By Considering common definitions for SMMEs with private lending institutions and put strong common consensus.
- Infrastructure development especially supply of electricity like power disruptions should take due attention for SMMEs from the government bodies in well organized manner.
- SMMEs should enhance their technological adoption strategies and technical skill development. On the other hand government also take in consideration mechanism of providing machinery and equipment in long term credit or full capacity utilization of machinery lease strategies for small scale manufacturing sectors.
- Functional marketing strategies skill for SMMEs and making market linkages with different largest scale industries expected from concerned body in sustainable way.
- To provide well trained and experienced employees the firms should develop strategies of skill adoption perspectives and short and long term training scheme and government bodies also provide experience sharing programs and consultancy service should important. Specially for infant small scale manufacturing industries.
- To make small and medium scale manufacturing industries in full capacity performance and inputs for the largest industries and in order achieve the long vision of industrialization government should take in consideration incentives (tax

break, duty free and etc) , providing access of working capital ,working premises ,infrastructure development and market linkage .

In General the study reveal that small and medium scale manufacturing industries are important as source of largest industrial and industrializations process if and only if determinates of manufacturing industrial performance is achieved in long run base or sustainably. Further research should take due consideration as if small and medium manufacturing industries are engine of economic growth and will make further analysis. Policy maker and concerned bodies should take in consideration the importance of small and medium scale manufacturing industries for national economic growth at large.

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APPENDIXS

APPENDEXA

Questionnaire

ST.MARRY UNIVERSITY
INSTITUTE OF AGRICULTURE AND DEVELOPMENT **STUDIES**
DEPARTMENT OF DEVELOPMENT ECONOMICS GRADUATE STUDIES



TITLE: *DETERMINANTS OF SMALL AND MEDIUM SCALE MANUFACTURING INDUSTRIES PERFORMANCE IN CASE OF SEBETA CITY, ETHIOPIA*

Date: April, 2017

The manufacturing sector has long been considered the main engine of economic growth and structural transformation. Small and Medium manufacturing industries above all play significant roles in being source of inputs for industrializations , creations of employment opportunities and generations of income for quite a large proportion of the population.

To analyze the above benefits I use questionnaire as one of the methodology. It contains both objectives and subjective type questions. The questionnaire is prepared for the partial fulfillment of MA degree in developmental Economics, to outline determinant of small and medium scale manufacturing industries in Sebeta City So, I thank in advance for your keen cooperation to fill this questionnaire patiently and be sure that data and information are confidential to me that is used only for the research.

Sincerely yours,

INSTRUCTION:

1. No need of writing your name
2. For likert scale type statements and multiple choice questions sign your answers with a check mark (✓) in the appropriate box.

SECTION 1: IDENTIFICATION FORMAT

1. Who is the Owner of the Industry?
A. Private B. Share C. Partnership Other Specify
please _____
2. Sex of the owner A. Male B. Female
3. What is the qualification of the owner?
A. None B. 1-8 grade C. 9-10 grade Preparatory complete
E. TVET 1 F. TV 0+2
G. TVET 10+3 H. University Diploma University Degree
4. Firm / Industry Established year _____
5. Capital During engagement in Birr _____
6. Current capital in Birr _____
7. Number of employees during engagement: Male _____ Female _____ Total _____
8. Current number of employees: Male _____ Female _____ Total _____
9. Category of Manufacturing industrial classification
A. Small Scale Manufacturing industries B. Medium Scale Manufacturing
Industries
10. Category of industrial classification
 1. Food and Beverage Products Industries
 2. Wood, Paper and Paper Products Industries
 3. Agro processing Industry
 4. Metal and Eng. Products Industries

SECTION 2: DETERMINANTS OF SMALL AND MEDIUM MANUFACTURING INDUSTRIES PERFORMANCE

The major determinants that affect performance of SMMEs are listed below. Please indicate the degree to which these determinants are affecting the performance of your business enterprise. Read each of the determinants, evaluate them in relation to your enterprise and then put a tick mark (√) under the choices below. Where, **5** = strongly agree, **4** = agree, **3** = undecided, **2** = disagree and **1**= strongly disagree.

1. Please indicate the degree to which you agree with the following statements concerning Government Support.

S. No.	Government Support	5	4	3	2	1
1.1	Problems of incentives and operating environment.					
1.2	Problems of obtaining finance from Financial Institutions					
1.3	Problem of market and marketing services linkage.					
1.4	Access land/working premise/					
1.5	Lack of formal training					
1.6	Lack of accessible information on government regulations that important for the firm					

2. Please indicate the degree to which you agree with the following statements concerning Financial Accesses.

S. No.	Financial determinant	5	4	3	2	1
2.1	Lack of working capital					
2.2	High collateral requirement from banks and other lending Financial institutions					
2.3	Complicated application procedure to Banks and Financial Institutions					
2.4	High interest rate charged by banks and other lending financial institutions					
2.5	Lack of cash management skills					
2.6	Inadequacy of credit institutions					

2.7	Government and Private Financial institutions Lack common definition for small and Medium Enterprises					
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3. Please indicate the degree to which you agree with the following statements concerning Market related.

S. No.	Market determinant	5	4	3	2	1
3.1	Lack market information.					
3.2	Problems of marketing Strategies					
3.3	Poor marketing services linkage.					
3.4	Problem of demand of the product					
3.5	Motion of buying Small scale products					
3.6	Problem of Market advertisement and promotion					
3.7	Poor customer relationship and handling					
3.8	Absence of linkage with an organization that conduct marketing research					

4. Please indicate the degree to which you agree with the following statements concerning infrastructure related.

S. No.	Infrastructure determinant	5	4	3	2	1
4.1	Inadequate supply of utilities such as water, electricity, and telecommunication					
4.2	Inconsistent supply of utilities such as water, electricity, and telecommunication					
4.3	Lacks and inaccessibility of transportation					

5. Please indicate the degree to which you agree with the following statements concerning Technological Adoption.

S. No.	Technological Adoption related	5	4	3	2	1
5.1	Lack of technical skill to adopt new technology					
5.2	Problems of openness innovation culture					
5.3	Problem of open communication system					

5.4	Financial problem to acquire new technology					
5.5	Lack of strategic perspectives to adopt new technology					
5.6	Lack of appropriate machinery and equipment					
5.7	Unable to select proper technology					

6. Please indicate the degree to which you agree with the following statements concerning Land - Working premises related.

S. No.	Access to Land or Working premises	5	4	3	2	1
6.1	Absence of own Land, Shed or Working premises					
6.2	High cost of rented land/house/shade					
6.3	Inadequate of working premises from the market					
6.4	Inconvenient of Working place					

7. Please indicate the degree to which you agree with the following statements concerning skilled labor.

S. No.	Skilled Labor	5	4	3	2	1
7.1	Lack of well trained and experienced employees					
7.2	Lack of strategic skill adoption perspectives					
7.3	Resistance to acquire skill					
7.4	High labor cost					
7.5	Lack of entrepreneurship training skill					

8. Please indicate the degree to which you agree with the following statements concerning determinant of small and medium manufacturing performance.

S. No.	Performance determinant of small and medium manufacturing Enterprise	5	4	3	2	1
8.1	Poor Government Support					
8.2	Financial determinant					
8.3	Market determinant					

8.4	Infrastructure determinant					
8.5	Technological Adoption determinant					
8.6	Land or Working premises determinant					
8.7	Material inputs determinant					
8.8	Skilled Labor determinant					

1. What are determinants for the performance of Small and Medium manufacturing Industries -----, -----
-----.. Please explain some Possible Solutions for the above Problems? -----
-----, -----

Interview used for government officials interview questions with SMMEs leaders and actors

1. What are determinants of small and medium scale manufacturing industries?
2. What are the opportunities and threats in the process of developing Small and medium Manufacturing Sector?
3. How do you describe the general situation of SMMEs in view of the goal set by the government in developing small scale and medium scale enterprise to largest industries?
4. How do you monitor the activities of SMMEs in the city?
5. What are the solutions for the problem?

APPENDIX B

Regression Matrix

. regress per lwp td id md fd pgs letrs

Source	SS	df	MS	Number of obs =	105
Model	136.641508	7	19.5202154	F(7, 97) =	135.98
Residual	13.9241819	97	.143548267	Prob > F =	0.0000
				R-squared =	0.9075
				Adj R-squared =	0.9008
Total	150.56569	104	1.44774702	Root MSE =	.37888

per	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
lwp	2.864552	.2936837	9.75	0.000	2.281671	3.447433
td	1.613721	.3485326	4.63	0.000	.9219801	2.305462
id	2.143559	.3804821	5.63	0.000	1.388408	2.898711
md	2.502086	.3860148	6.48	0.000	1.735954	3.268218
fd	2.422992	.3749322	6.46	0.000	1.678856	3.167129
pgs	1.766852	.3746625	4.72	0.000	1.02325	2.510453
letrs	2.659756	.1930331	13.78	0.000	2.276639	3.042874
_cons	-13.72262	.2998872	-45.76	0.000	-14.31782	-13.12743

Correlation Matrix

. corr per lwp td id md fd pgs letrs

(obs=105)

	per	lwp	td	id	md	fd	pgs	letrs
per	1.0000							
lwp	0.4079	1.0000						
td	0.2063	0.2508	1.0000					
id	0.2836	-0.0925	0.1690	1.0000				
md	0.3470	-0.1674	-0.0951	0.3798	1.0000			
fd	0.5070	0.0541	-0.1707	0.1027	0.5439	1.0000		
pgs	0.5856	0.0601	-0.1611	0.0265	0.0640	0.3251	1.0000	
letrs	0.6541	0.1527	0.0657	-0.0805	-0.1537	0.0489	0.5489	1.0000

APPENDIX C

VIF Matrix

. vif

Variable	VIF	1/VIF
md	1.81	0.551243
pgs	1.72	0.580410
fd	1.72	0.582330
letrs	1.57	0.635454
id	1.26	0.790819
td	1.22	0.820022
lwp	1.16	0.862052
Mean VIF	1.50	

APPENDIX D

Omission of Variable test ,heteroskedasticity and kernel density

. hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of per

chi2(1) = 8.77

Prob > chi2 = 0.0031

. regress per lwp td id md fd pgs letrs,robust

Linear regression

Number of obs = 105

F(7, 97) = 172.78

Prob > F = 0.0000

R-squared = 0.9075

Root MSE = .37888

per	Robust					[95% Conf. Interval]	
	Coef.	Std. Err.	t	P> t			
lwp	2.864552	.3099367	9.24	0.000	2.249413	3.47969	
td	1.613721	.411231	3.92	0.000	.7975412	2.4299	
id	2.143559	.3858572	5.56	0.000	1.37774	2.909379	
md	2.502086	.3815476	6.56	0.000	1.74482	3.259352	
fd	2.422992	.3677436	6.59	0.000	1.693123	3.152862	
pgs	1.766852	.3681561	4.80	0.000	1.036164	2.49754	
letrs	2.659756	.2429213	10.95	0.000	2.177625	3.141888	
_cons	-13.72262	.2729207	-50.28	0.000	-14.2643	-13.18095	

