ADDIS ABABA UNIVERSITY

COLLEGE OF NATURAL SCIENCES

SCHOOL OF INFORMATION SCIENCE

Factors Affecting Knowledge Sharing for Entrepreneurial Development: the case of Micro and Small Enterprises Engaged in Manufacturing in Addis Ababa

By

Yared Bekele

October, 2016

Addis Ababa, Ethiopia

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A Thesis Submitted to the College of Natural Science of Addis Ababa University in Partial Fulfillment of the Requirements for the Degree of Master of Science in Information Science

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_____	Advisor	_____	_____
_____	Examiner	_____	_____
_____	Examiner	_____	_____

DEDICATION

I dedicate this study to my father **Bekele Tibebu** and my brothers and sisters. Without their support I would not have accomplished this thesis.

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First, I would like to thank my advisors Dr. Elizabeth Ayalew and Dr. Rahel Bekele for their feedback, support and academic guidance.

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Abstract

The purpose of this research is assessing the enabling factors of knowledge sharing for entrepreneurs engaged in micro and small enterprise manufacturing by considering technology, individual, organization, extrinsic and intrinsic knowledge sharing factors. Lack of management insight into the ground and any historical data one can fall back on is a reality every entrepreneur has to face. Knowledge on legal procedures, competition, time and finance management, location and timing, etc. is all critical considerations that will decide the success or failure of any startup. The thesis attempts to identify knowledge sharing factors that hinder aspiring entrepreneurs from benefiting the knowledge acquired by their predecessors and relevant governmental and non-governmental actors in order to establish and operate successful ventures.

The research approach applied in this study was a quantitative and qualitative method to collect data. From the finding and exhaustive literature review, a knowledge sharing model was developed, which consist of five knowledge sharing factors: technological, individual, organizational, extrinsic and intrinsic.

The result of the study indicated that technology, individual, organization and intrinsic factors were the most critical one for knowledge sharing among entrepreneurs engaged in the manufacturing sector. Finally, the researcher recommended that the solutions to MSE to tackle the problem all potential entrepreneurs face regarding knowledge sharing.

Keywords: Knowledge, Knowledge sharing, Knowledge sharing factors

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LIST OF ACRONYMS

BSc- Bachelor of Science

CBE- Commercial Bank of Ethiopia

CD- Compact Disk

GSS- Group Support System

ICT- Information and Communication Technology

KM- Knowledge Management

KS-Knowledge Sharing

MSA- Modeling, Simulation, and Analysis

MSE- Micro and Small Enterprise

SECI- Socialization, Externalization, Combination and Internalization

SPSS- Statistical Package for the Social Sciences

TVET- Technical and Vocational Education and Training

UTC- UNITEN Training and Consultancy

CHAPTER ONE

INTRODUCTION

1.1 Background

Today, knowledge is very important in every aspect of life. It is also the power to individuals as well as to organizations. To become more effective, organizations have to share knowledge that comes from different sources. Knowledge is an indispensable asset to any organization when it is properly harnessed, managed and utilized. It will not only bring about increased productivity, but also expansion, growth and sustained profitability to the organization (Anumnu, 2013). Thus knowledge becomes useful if it is properly managed. Knowledge, especially the tacit one, is considered a source of competitive advantage because it is unique, difficult to imitate and impossible to be substituted (Valencia & Santos, 2014).

Institutions and organization need knowledge as it create employment opportunities and enhance wealth creation while enhancing poverty reduction. In order to fulfill these goals, the Micro and Small Enterprises are realizing a knowledge sharing mechanism to the new entry entrepreneurs. Knowledge sharing is considered to be the most important process in knowledge management. It is the process where individuals mutually exchange their knowledge and jointly create new information (Nemati-Anaraki & Nooshinfard, 2014).

Ethiopia is showing signs of progress in its fast economic growth. The country has a plan to be a middle-income country in 2025 (Entrepreneurship, 2012). The MSE is one of the institutions given recognition in the country's industrial development plan and is the fact that it serves as vehicles for employment opportunities at an urban center, and as it underpins the economic development. MSE serves as sources for sustainable job opportunities not only for developing countries like ours, but also for developed countries like USA. Thus, they should be given priority attention as they are important and serve for a sustainable source of job opportunities for our country (Federal Democratic

Republic of Ethiopia [FDRE], 2011). The federal MSE has a vision. Its vision is to see "created a competitive and convenient base for industry development "(FDRE, 2011).

MSE is also playing a great role for production and growth in the manufacturing sector. They will also be the great productive forces in the manufacturing sectors when our effort towards the country's renaissance is over. (FDRE, 2011) MSE organized in different sectors. There are also subsectors. Manufacturing, construction, trade, service and agriculture are the main sectors.

The aim of this research is to study the technological, individual, organizational, extrinsic and intrinsic factors that affecting knowledge sharing of Micro and Small Enterprises. Until recently, including the majority of micro and small companies, use the traditional method of knowledge management mode (Valencia & Santos, 2014). Thus, by using the identified knowledge sharing factors as the outcome of this research, entrepreneurs can smoothly get the opportunity to learn from other entrepreneurs' experiences and continue to share their knowledge to others. Moreover, they can smoothly know where to start, reduce the time it takes to start their own business, and help the process of increasing the innovation power of the entrepreneur.

1.2 Statement of the Problem

Micro and small enterprises as an organization contribute a lot to the country's development by providing employment opportunities and boosting economy. It faces many challenges to pursue the goal it sets for new entry and existing entrepreneurs. The challenges are competition, education, business performance, insecurity, debt collection and lack of working capital (Bowen, Morara & Mureithi, 2009).

Knowledge management is fundamental to the successful performance of micro and small business companies (Valencia & Santos, 2014). It is also the cumulative practice and experience of individuals from different disciplines. It heavily relies on the attitude and willingness of professionals to share their knowledge to others (Jegede & Ojo, 2012) However, knowledge management has not been given proper attention by SMEs. According to Gourova (2010) lack of KM champion, management resistance, lack of

experience in the senior management and lack of the financial resources are some of the challenges to implement knowledge management in SMEs.

Durst and Edvardsson (2012) state that most SMEs have no explicit policy targeted at strategic KM, and they tend to treat KM at operational level – at the level of systems and instruments. SMEs tend to place more emphasis on management of tacit knowledge than larger firms, and communication channels in SMEs are more likely to be between firms, rather than internal to the organization.

Hutchinson and Quintas (2008) observe that SMEs must have the ability to search for knowledge and share knowledge (particularly across the firm boundary), synthesize new and existing knowledge and reuse or apply knowledge. Knowledge sharing also changes the culture of most organizations. Micro and Small enterprises should establish a knowledge culture and also incentives and rewards put in place to motivate knowledge workers to share their knowledge and thus encourage creativity and innovation (Ngah & Ibrahim, 2011).

The information management system plays a role to establish knowledge management. Hamzah and Woods (2004) state that a formal information management system which is well integrated into SMEs day-to-day work, would improve their ability to share and retrieve documents and information. Wong and Aspinwall (2004) states that KM small business" The management of knowledge-related processes or activities, based on realistic resources in order to create competence, value and continual success for the organization".

SMS business competitiveness can be improved by applying knowledge management in several ways like allowing organizations to develop a better understanding of customer and client needs, preferences and pressures, facilitating stronger, partnership with customers and clients, contributing to an organization's capacity to establish and sustain their status as thought leaders, doing away with costs in business and production processes, and improving speed and quality and assist organizations to use lessons learnt from previous jobs, projects and tasks, as means of improving their future performance (Handzic,2004)

Micro and small enterprises can also change their performance by taking training. Temu and S.S (2010) states that training in business skills for Tanzanian micro and small entrepreneurs is vital for firm's performance, growth and improved owner's living standards in addition to credit access.

There are barriers to share knowledge in most organization, especially in knowledge intensive organization that make organization inefficient. According to Lingling et al. (2005) the first one is the nature of the knowledge which is difficult to clarify and explain in words. The second one is transmitter of knowledge which makes it the knowledge zero cost. The third one is lack of physical environment and motivation mechanism which are appropriate places, platform and motivation methods. There is limited research conducted about the Micro and Small Enterprise in manufacturing sector in Ethiopia.

Most of the MSE unable to grow in terms of employment opportunity and remain to be survival. This means that majority of them failed at start up. This is because there is no adequate information about existing SME entrepreneurs' knowledge to improve their innovation power to strengthen their business. Moreover, there is unavailability of knowledge sharing platform and environment to the potential entrepreneurs to look for the required business idea from existing manufacture entrepreneurs, to find loans for the business, to know where to start the business and to know other existing entrepreneurs experience.

The other challenge for new entry entrepreneurs because of there is no knowledge from existing manufacture entrepreneurs are the innovation power to produce new items to their customer is weak. This thing contributed economy lose to the country because the MSEs play a significant role for the country development.

Moreover, competitiveness between existing manufacture sector entrepreneurs play a significant role not to share their knowledge to the new entry entrepreneurs. Because they think, they lose their customers. As a result, they tend to hesitate in the use for knowledge sharing system that helps the new entry entrepreneurs in the long run.

In this, study factors that affect knowledge sharing i.e. technological, individual, organizational, extrinsic and intrinsic not given attention by MSE. In addition, there is no research done in this area in Ethiopia. So dealing with this issue contributes more jobs for new entrepreneurs and also for country economic growth. Thus this study tried to identify these factors and address knowledge sharing issues to potential entrepreneurs.

The research explores and answers the following questions:

- What are the challenges related to knowledge sharing in Micro and Small Enterprises engaged in the manufacturing sector?
- What is the extent of involvement of various knowledge agents in knowledge sharing?
- What gaps do exist in knowledge sharing in SME?
- What are the requirements of entrepreneurs with regard to knowledge sharing?

1.3 Objective of the Study

1.3.1 General Objective

The general objective of this research is to explore the practice of knowledge sharing for entrepreneurs of the Micro and Small Enterprises in Addis Ababa with the ultimate goal of identifying knowledge sharing factors for Entrepreneurial Development.

1.3.2 Specific Objective

The specific objectives are:

- To identify the challenges of knowledge sharing for entrepreneurial development issues
- To determine the involvement of various knowledge agents
- To understand the gaps related to knowledge sharing
- To identify the requirements of entrepreneurs regarding to knowledge sharing

1.4 Significance of the Study

This study is expected to give a better understanding to the researchers about knowledge management practices and propose solutions for factors of knowledge sharing for Micro and Small Enterprises in the manufacturing sector.

By doing so, not only entrepreneurs, but also other stakeholders like financial institutions, government body, researchers and potential and existing entrepreneurs will be benefited.

The government got the benefit from this research because it reduces unemployment to youths and by provides required information timely to new entrepreneurs. Economic growth, employment opportunities, income generation and poverty reduction are the benefits of government.

The new entry entrepreneurs got the benefits from this research because it helped them to find knowledge from existing entrepreneurs, increasing innovation power and enhancing productivity is the benefit to be individual.

Finally, the output of the study would be used as a standard in the Micro and Small Enterprises staffs and also would be used as a source for factors related to knowledge sharing in the case of enterprise level for future studies.

1.5 Scope and Limitation

Thematically, the scope of this study concentrates on the manufacturing sector entrepreneurs found in the selected 10 sub cities. And also the scope further identifies sample units and filling of questionnaires with the required quality standard from micro and small enterprise. Further, it mainly focused on identifying the factors which are technological, individual, organizational, extrinsic and intrinsic to knowledge sharing and proposing a solution to solve the problem a knowledge sharing gap to the new entrant entrepreneurs.

This study also limited in the Addis Ababa Micro and Small Enterprise engaged in manufacturing sector entrepreneurs due to time and financial limitation. The other limitation was the coverage of the sub city to distribute the questionnaires and the

availability of the respondents to provide the information. So, repeated visits and attempts of clarifying objective of the visit were tiresome and time taking. Furthermore, the researcher didn't include other statistics method like ANOVA, path coefficient and T testing.

1.6 Organization of the Thesis

This study is organized into five chapters. The first chapter includes background of the study, a statement of the problem, basic research questions, objectives of the study, the significance of the study, and delimitation and /scope of the study. The second chapter has the literature review followed by the third chapter method of the study describing the type and design of the research. The fourth chapter shows the result or finding of the study and discussions of findings. And the last chapter presents the conclusion and recommendation part of the study.

Chapter Two

Literature Review

2.1 Overview

In this chapter, concepts related to knowledge sharing from previous research paper are reviewed. Under its knowledge and knowledge sharing points are discussed. Next knowledge sharing related research in the area of small and micro enterprise is presented. Then, knowledge sharing framework-related literatures are reviewed to identify the existing research and to show the research gap and to measure the significance for the study.

2.2. What is Knowledge?

Knowledge is information that combined with experience, context, interpretation and reflection and also ready to apply to decisions and actions (Davenport & Prusak, 1998).

Nowadays, knowledge becomes an asset to every organization. Knowledge is increasingly being recognized as the new strategic imperative of organizations (A.Uriarte, 2008). Knowledge is being regarded as a valuable commodity that is embedded in products (especially high-technology products) and in the tacit knowledge of highly mobile employees (Dalkir, 2005). In addition, knowledge is an indispensable asset in any organization that when it is properly harnessed, managed and utilized, will not only bring about increased productivity, but also expansion, growth and sustained profitability to the organization (Anumnu,2013). According to Davenport and Prusak (1998) knowledge is "a fluid mix of framed experience, values, contextual information, expert insight and grounded intuition that provides an environment and framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knower". It found in organization in different forms. It often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices, and norms (Davenport and Prusak, 1998).

According to Davenport and Prusak (1998) knowledge derives from information as information derives from data. If information is to become knowledge, humans must do virtually all the work. This transformation happens through such C words as:

Comparison: how does information about this situation compare to other situations we have known?

Consequences: what implications does the information have for decisions and actions?

Connections: how does this bit of knowledge relate to others?

Conversation: what do other people think about this information?

Knowledge, especially the tacit one, is considered a source of competitive advantage because it is unique, difficult to be imitated and impossible to be substituted (Valencia & Santos, 2014). Furthermore, knowledge is a person's state of being with respect to somebody of information. These states include ignorance, awareness, familiarity, understanding, facility, and so on (Barclay & Murray, 2000). Knowledge can be seen from three perspectives. Knowledge is an amount of information that is necessary to function and achieve. It is also the capacity to make information from data and to transform it into useful and meaningful information. It is the capacity with which one thinks creatively, interprets and acts. It is attitude that makes people want to think, interpret and act (Barclay & Murray, 2000)

According to Nemati-Anaraki and Nooshinfard (2014) knowledge is a critical resource that should be well managed for effective performance in both profit- and non-profit oriented organizations, regardless of whether they deliver a product or service. Knowledge is the skill, intuition, and experience that can influence decision making (Nemati-Anaraki & Nooshinfard, 2014)

2.2.1 Types of Knowledge

Knowledge can be divided by two types which are tacit and explicit knowledge. Tacit knowledge is difficult to articulate and also difficult to put into words, text, or drawings and also tends to reside "within the heads of knowers". Explicit knowledge represents

content that has been captured in some tangible form such as words, audio recordings, or images and also it is usually contained within tangible or concrete media (Dalkir, 2005).

2.3 Knowledge Sharing

Knowledge coming from different sources needs to be shared in order an organization to be competitive. Furthermore, organizations that wish to facilitate knowledge sharing between individuals and teams must be cognizant of the type of knowledge involved (Mkhize, 2015).

Hendriks (1999) states that knowledge sharing presumes a relation between at least two parties, one that possesses knowledge and the other that acquires knowledge. Knowledge sharing also provides a link between individual knowledge workers and organization, where the knowledge resides and knowledge attains its (economic, competitive) value (Hendriks, 1999)

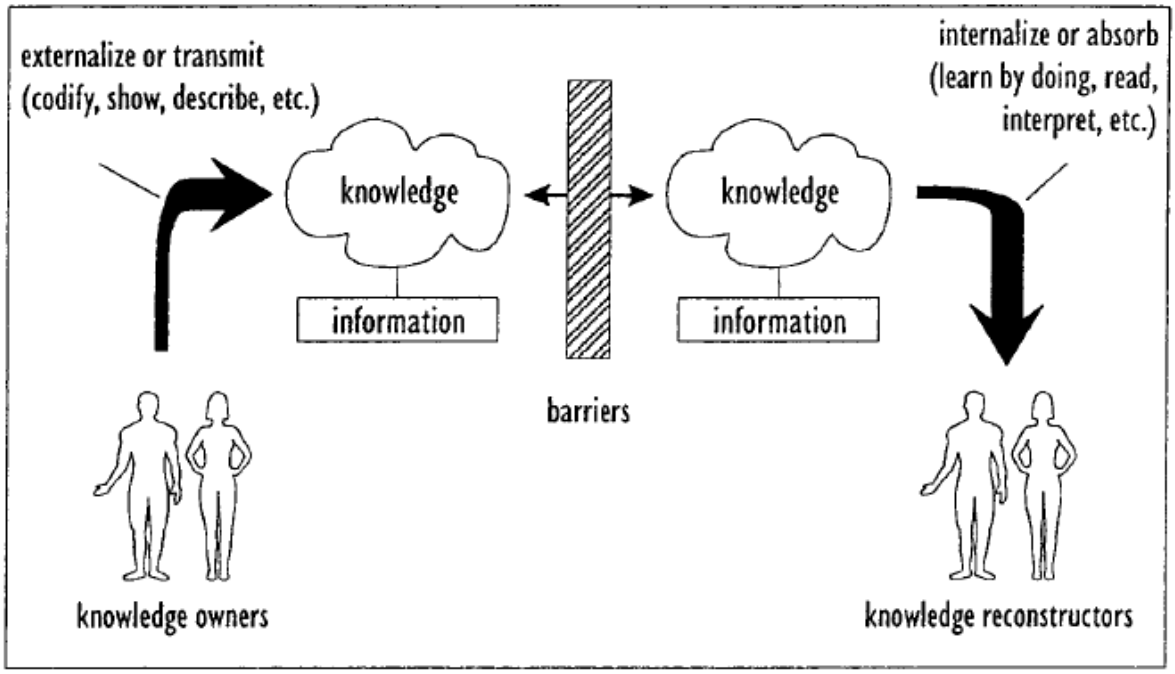

Figure 2.1: A simplified model of knowledge sharing (Source: Hendriks, 1999)

According to Cummings (2004) knowledge sharing refers to the provision of task information and know-how to help others and to collaborate with others to solve

problems, develop new ideas, or implement policies or procedures. Furthermore, knowledge sharing refers to sharing of not just codified knowledge but also beliefs, experiences, and contextualized practices (Davenport and Prusak, 1998). Knowledge sharing can occur via written correspondence or face-to-face communications through networking with other experts, or documenting, organizing and capturing knowledge for others (Cummings, 2004).

The sharing of knowledge between employees and departments in the organization is necessary to transfer individual and group knowledge into organizational knowledge, which leads to effective management of knowledge (Islam et al., 2011) Furthermore, knowledge sharing is a means and a process by which individuals and groups communicate their knowledge unconsciously or deliberately to their mutual benefit. The benefit could be the general promotion of culture or community wellbeing or it could be wealth creation on the part of the provider and the solution of problems for the recipient (Nemati-Anaraki & Nooshinfard, 2014).

According to Nemati-Anaraki & Nooshinfard (2014) "knowledge sharing is the process where individuals mutually exchange their (implicit and explicit) knowledge and jointly create new concepts". Knowledge sharing occurs at different levels. According to Nemati-Anaraki & Nooshinfard (2014) it occurs horizontally (within individual, group, and organizational levels) and vertically (among the levels). Thus, knowledge sharing can be distinguished between intra-organizational and inter-organizational levels.

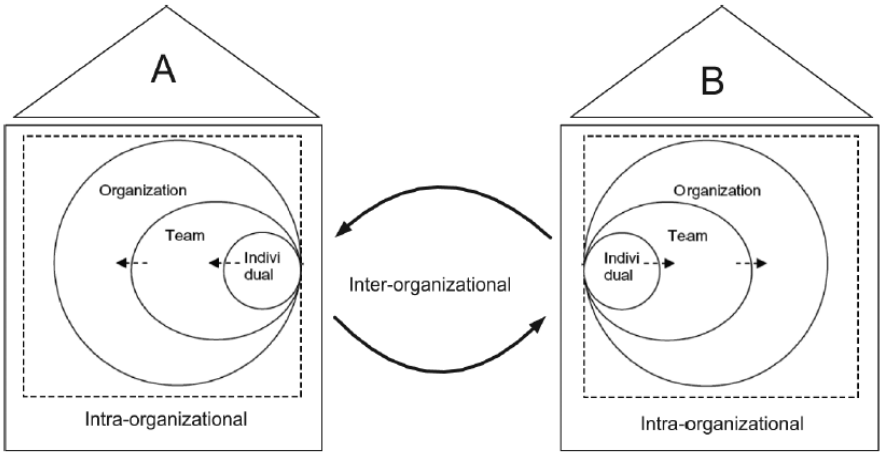

Figure 2.2: Levels of knowledge sharing (Source: Nemati-Anaraki & Nooshinfard, 2014)

Organizational success also depends on knowledge sharing strategy. According to Nemati-Anaraki & Nooshinfard (2014) five major points emerging from the review of knowledge sharing can be summarized as follows:

(1) Information technology can enable both explicit knowledge and, to a lesser extent, tacit knowledge sharing;

(2) Human interaction is the simplest approach to sharing knowledge within an organization;

(3) Knowledge management strategies may be adapted to fit with organizational culture;

(4) Motivation, such as monetary rewards, recognition, and praise, can persuade people to share knowledge; and

(5) Trust is an important factor in enabling knowledge sharing

Knowledge sharing can be affected by a lot of factors. It can be from an individual perspective like individual characteristics, intention, trust and relation, individual attitudes and scholarly communication and collaboration skills. It can also be from an organizational perspective like culture and organizational climate, motivation, reward and recognition, management leadership and support and organizational structure. It can also be from an information technology perspective like Information and communication technology (ICT), collaborative networking, Geographical proximity, organizational proximity and technological proximity (Nemati-Anaraki & Nooshinfard, 2014)

According to Ipe (2003) knowledge sharing can be influenced by the following factors; the nature of knowledge which have two characteristics i.e. tacitness and explicitness of knowledge and value of knowledge. The other factor is motivation to share which has two factors to share knowledge i.e. internal and external. Some of the attributes found under this are seeing knowledge as a power, reciprocity and relationship with recipient and reward for sharing. The other one is opportunities to share and finally culture of the work environment.

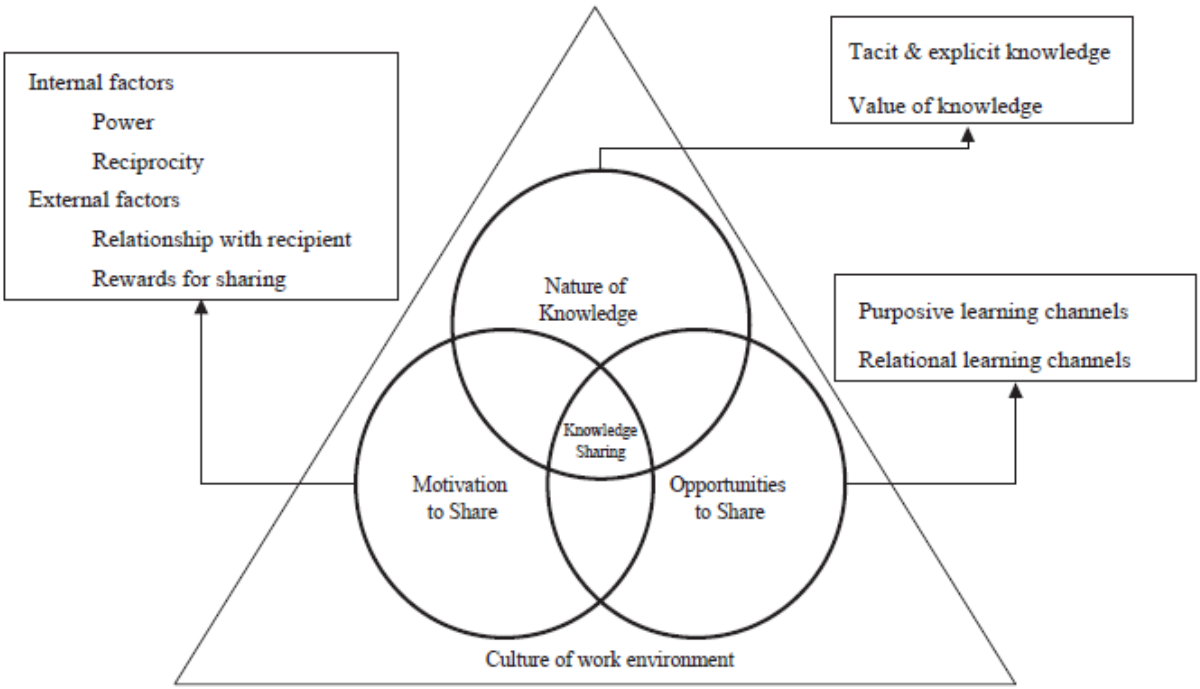

Figure 2.3: Factors That Influence Knowledge Sharing Between Individuals in Organizations (Source: Ipe, 2003)

2.4 Knowledge Sharing Framework

Knowledge management framework is developed to represent how and by whom information and knowledge is created, communicated and managed. All functions by peoples/ stakeholders are related through a variety of means and in a variety of ways (Agrawal, Sharma, & Kumar, 2008).

The framework also supports the designing, building and maintenance of a knowledge sharing platform both from an IT and organizational perspectives (J.L., H.S.C., & K., 2013). A framework is a classification schema that defines a set of categories into which various concepts or artifacts can be arranged (Agrawal, Sharma, & Kumar, 2010).

Regarding the knowledge sharing, there is a gap on sharing resources and tacit knowledge in every organization. John et al., (2002) examined the effects of the current practice of knowledge sharing among teachers to identify problems, needs, and opportunities in their current situation, to explore possibilities for enhancing knowledge

sharing through new procedures, tools, and content resources, and to assess the efficacy of interventions with respect to personal, social, and organizational goals.

According to Wang & Fu (2007), a framework of group support system (GSS) based on knowledge sharing, which consists of three major parts: workgroups, collaborative component and knowledge base is proposed. Further, knowledge sharing divides into three levels which are individual level, group level and organization (groups) level and depicted with diagrams in Figure 2.4.

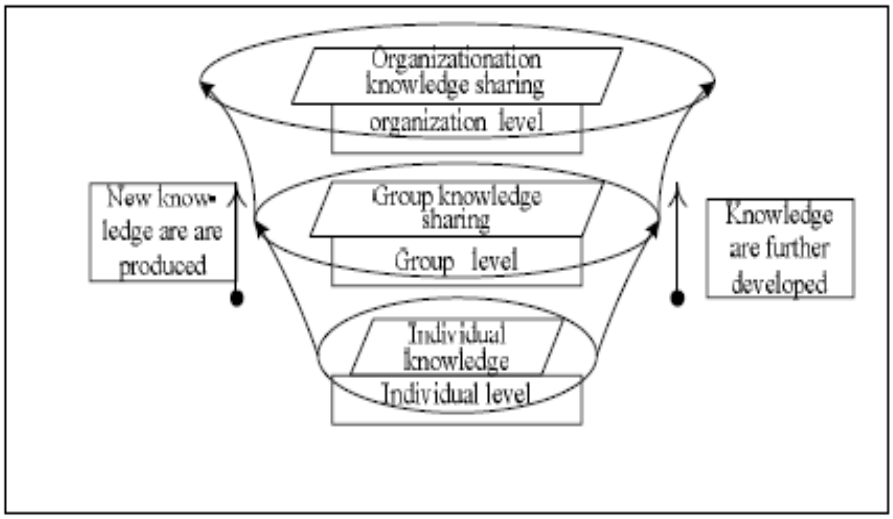

Figure 2.4: A conceptual model of organization (Source: Wang & Fu, 2007)

The finding showed that a collaborative component, on which workgroup members can communicate and discuss with each other, so the group, can achieve a high quality collaborative performance because of adequate knowledge sharing.

According to Lihua and Yujie (2009) they focused on the explores a framework that integrates the multi-agent and case-based reasoning techniques to support the dynamic and problem-oriented knowledge sharing among supply chain members. They found that knowledge sharing process supports the decision-making of supply chain members rather than the knowledge flowing and transferring purely and possible for supply chain members to share their private knowledge with other partners by negotiation, which provides a flexible mechanism to handle the dynamic nature of knowledge sharing along supply chain.

Furthermore, Singh et al. (2012) proposed knowledge sharing framework that would be the building block of designing a web based portal for teachers in order to cultivate a knowledge sharing environment. Quasi experimental was applied to collect data from the group. They found that web based portal to facilitate the needs of the teachers as well as encourage knowledge sharing amongst them.

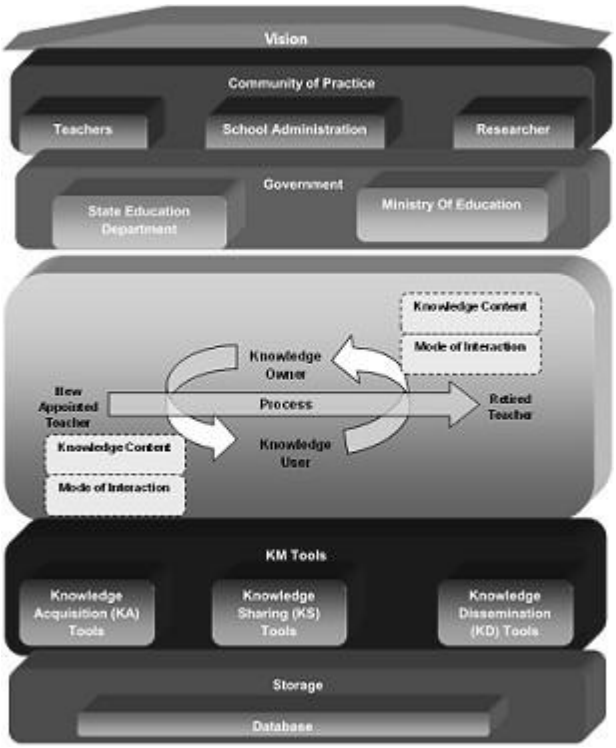

Figure 2.5: Knowledge Sharing Framework for teachers (Source: Singh et al, 2012)

According to Agrawal et al. (2008) proposed a knowledge-sharing framework that could be developed and maintained by the community interested in tracking and guiding coordinated development efforts in homeland security modeling, simulation, and analysis (MSA).And also the proposed framework used to pull together and create an information source for each technical area.

As it has been indicated above from the two frameworks the first one only focused on teachers. It didn't see from the school's organization point of view. One of its strengths was the proposed framework. So it can be applied in the local research. The second one focused on different technical user communities. Its strength was creating an information

source for each technical area and to encourage decision making. Its limitation was it didn't recommend further study.

2.5 Related Work

Merminod and AnneLeDain (2014) have studied knowledge sharing framework for black, grey and white box supplier configurations in new product development and a conceptual framework for knowledge sharing proposed to fill the knowledge sharing gap between customer and supplier.

The researchers used a case study approach as research design and also used interviews, documentation, observations and artifacts to collect the data. The finding from the research has highlighted the varying intensity of knowledge transfer, translation and transformation according to whether the relationship with the supplier reflects a black box, grey box or white box configuration. The results suggest that managers should pay attention to translation activities, which are critical to the success of co-development projects.

Evans et al. (2014) have studied a framework for improving the sharing of manufacturing knowledge through micro-blogging and a conceptual framework for manufacturing organizations might make greater use of micro-blogging tools to improve the sharing of explicit knowledge in their operations.

The researchers used an exploratory industrial investigation conducted within a leading power generation manufacturer. The finding shows that a conceptual framework is proposed to illustrate a new method for enhancing knowledge sharing and collaboration within organizations through the deployment of micro-blogging. Also the researches further work is recommended to identify how bespoke web 2.0-based technologies may be employed to enhance knowledge sharing in other industrial sectors and functional areas.

Mkhize (2015) has studied a knowledge sharing framework in the South African public sector. The purpose of this research was to evaluate individual knowledge-acquisition and sharing practices in the South African public sector.

The researcher used qualitative approach within the social constructivist paradigm so that to gain an in depth understanding of knowledge practice in the workplace. The finding shows that public sector employees are engaging in not-yet institutionalized but effective knowledge sharing initiatives. Also the researcher suggests that to formulate a guideline for knowledge sharing to apply by other stakeholders in the public sector when knowledge transfer is needed.

Dhillon, Rahman, and Abidin (n.d) have studied an evaluation of senior ICT requirement based on knowledge sharing framework. The purpose of this study was to identify the problems faced by senior citizens while using computer and to identify the most popular computer technologies used among the senior citizens.

The researchers used surveys to gather the required information and facilities in order to develop a web based portal to help the senior citizen and finding have shown that specific computer technology requirement and suitable content of a web portal that suits senior citizens is essential so that the older generation who see computers and new technology as what they have the potential to be – a tool for expanding their horizons, learning new skills and finding new interests at any age. Finally, the researchers recommended that the study about the content of a web portal as well as the design guidelines for the portal to be analyzed.

Farid and Ahmad (2011) have studied a conceptual knowledge management framework in consultancy services of the UNITEN Training and Consultancy (UTC). In this study, knowledge management framework proposes as a new consultancy service framework encompassing both internal UNITEN processes and its clients.

The researchers used both primary and secondary data collection mechanism to collect the data. As a primary, interview and questionnaire were applied whereas, document analysis as a secondary was applied to collect the data. The findings have shown that a conceptual framework as the preliminary result to illustrate the outline of the actual knowledge management framework in consultancy service for UNITEN. Finally the researches recommended that research analysis based on data collected via online and interviews to contribute in the continuous development of the preliminary framework.

In the context of Addis Ababa, there are limited researches done in the area of knowledge sharing framework for new entry entrepreneurs.

Mohammed (2011) conducted a case study examining Evaluation of Knowledge Sharing Practice in Commercial Bank of Ethiopia. The purpose of the study was to evaluate the practice of knowledge sharing at Commercial Bank of Ethiopia using Nonaka's SECI model of knowledge creation and sharing. The researcher conducted both qualitative and quantitative as a research design method. And also questionnaire and interview were applied to collect the data. The researcher had used Nonaka's SECI model to evaluate the knowledge sharing practice. The finding showed that knowledge sharing is still in its infancy states. Finally, the researcher recommended that capacity development to use web portal and discussion forum, develop knowledge base system for the bank, assessment in all bank branches and creating suitable knowledge sharing environment and facilities. The researcher focus was knowledge sharing practice between staffs of Commercial Bank of Ethiopia.

G/Slassie (2011) conducted a case study examining Knowledge Sharing among Employees of Mesfin Industrial Engineering. The researcher used mixed research method i.e. qualitative and quantitative to collect data. Also questionnaire was applied as a data collection method. The researcher had used two knowledge sharing models. His finding showed that IT infrastructures, personal benefits, management problems, individual attitudes, individual willingness, interaction and communication skills and knowledge storage mechanisms were affect knowledge sharing among employees. Finally, the researcher recommended that support knowledge sharing by performance and appraisal, top management support to employees to share their knowledge via different available methods, continuous training about knowledge sharing among employees were some of the recommendation. Also the researcher indicated that further studies should be done on other industries.

Ayalew (2013) has conducted a case study examining Knowledge Management Maturity Assessment in Development Aid Organizations in Ethiopia. The researcher used quantitative research method to collect data from the participants. As a data collection instrument questionnaire was applied. The researcher finding focused on knowledge

management strategies and implementation and use of ICT infrastructure. Finally the researcher recommended that building a knowledge sharing environment by combining the known knowledge sharing mechanism like face-to-face with an electronic communication method like email and training.

Assefa, Garfield and Meshesha (2013) have studied Barriers of Knowledge Sharing among Employees to the Commercial Bank of Ethiopia. The objective of the research was to identify the factors that affect knowledge sharing, which are individual, organizational and technological.

The researchers used an exploratory case research method. As a data collection instrument an open-ended questionnaire, interview, observation and document review were applied. The researchers finding showed that organizational and individual factors are the main barriers to knowledge sharing in CBE. Finally, the researchers recommended further study to determine the impact of technological barriers. This study only focused on the barriers of knowledge sharing among employees.

The above mentioned local researchers were mainly focused on knowledge sharing between employees within an organization. And also these local researchers were trying to show from of an organization and academic institutions' point of view. However, entrepreneurs' organization like micro and small enterprise has its own aim when it starts its service. So studying only academic and non-entrepreneurs organization were not enough. Because of that studying about factors that affect knowledge sharing between existing and new manufacture sector entrepreneurs were conducted. That is why this research is conducted after preliminary survey and observation of the actual situation in the country's context.

CHAPTER THREE

Methodology

The objective of this study is to explore the practice of knowledge sharing for entrepreneurs of the Micro and Small Enterprises in Addis Ababa with the ultimate goal of identifying knowledge sharing factors for Entrepreneurial Development.

In this chapter, the methodology that is used to process the objective of the study presented. Under it research design and model were presented. Then target populations of the study, sample size and techniques, data collection instruments, data collection procedures and pilot study are presented. Finally, data presentation and analysis is presented.

3.1 Research Design

A case study research approach is applied to collect and analyze the data. Case studies emphasize detailed contextual analysis of a limited number of events or conditions, and their relationships (Abiy et al., 2009) Addis Ababa Micro and Small Enterprises is considered as a case organization to conduct a knowledge sharing practice with new entry entrepreneurs. To conduct this case study both qualitative and quantitative research design method is used to collect data.

Qualitative approach is used to supplement the questionnaire by using interview. It is also not attempted to quantify their results through statistical summary or analysis (Abiy et al., 2009). By using an interview, the researcher gets the required information from higher officials selected from the staffs of the organization and entrepreneurs.

Quantitative research is used to cover a large sample. A survey is conducted by using a questionnaire to determine a knowledge sharing gap of micro and small enterprise manufacturing sector entrepreneurs. The questionnaire is adapted from different literatures and new questions and modification done.

Then from the finding of both qualitative and quantitative method, factors of knowledge sharing are identified to improve the service to manufacturing sector entrepreneurs.

3.2 Research Model and Hypothesis Development

In this study different articles were reviewed to identify the factors that affect knowledge sharing. These factors are adapted from different literatures with some modification.

Hung and Chuang (n.d.) states that the factors that affect knowledge sharing are put under four dimensions. These are cost, intrinsic benefits, extrinsic benefits and contextual factors. Under each dimension, there were sub items. According to Tan, Lye, Ng, and Lim (2010) the factors that affect knowledge sharing were motivational factors, which are divided into intrinsic and extrinsic factors. Wangpipatwong (2009) also identified the factors which were individual, classroom and technological that affects knowledge sharing.

The factors that affect knowledge sharing were identified. Based on these factors with some modification on it the questionnaire was developed. The factors are technological, individual, organizational, extrinsic and intrinsic.

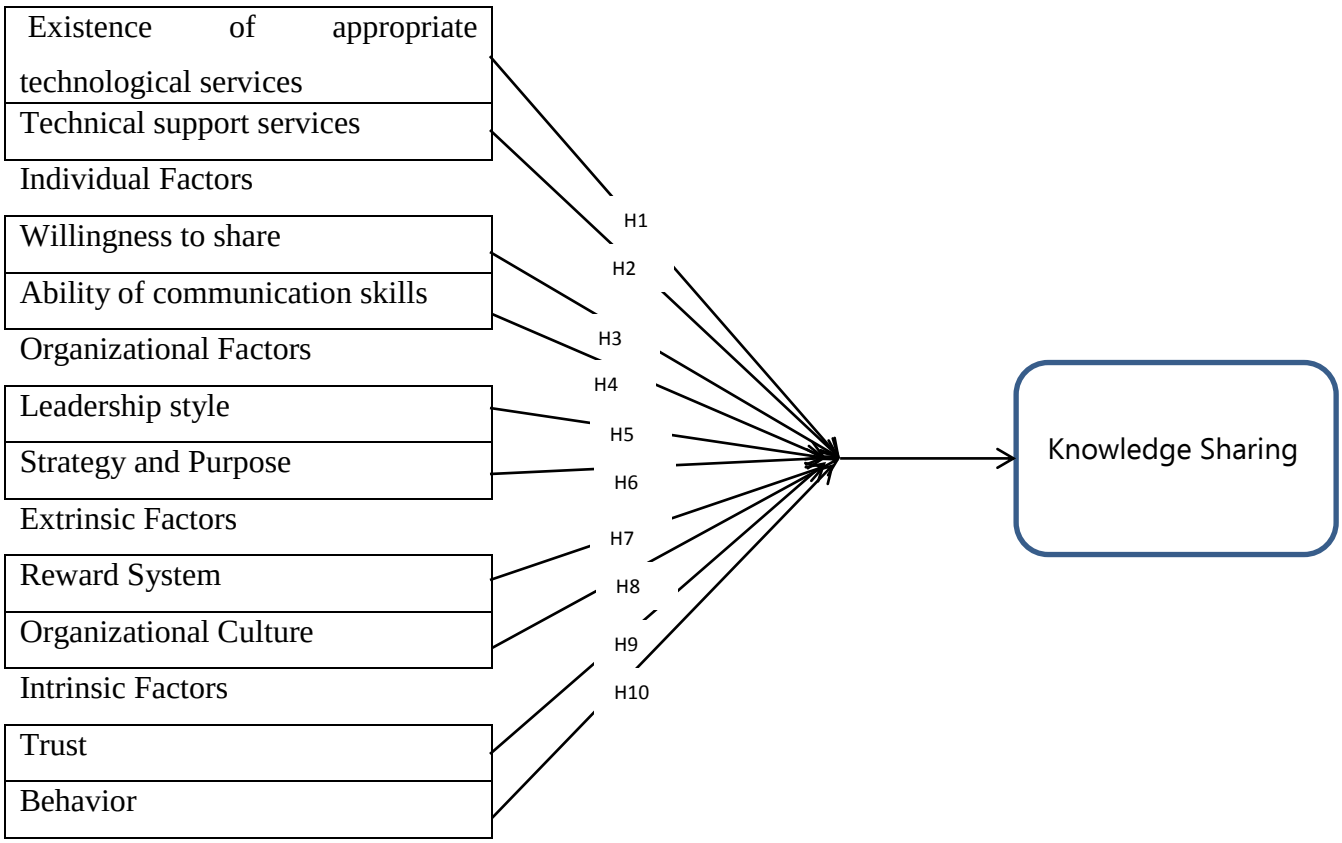

Figure 3.1: Research Model (adapted from: Yu-Chung & Ya-Hsueh,n.d., Nya et al.,2010, Sivaporn, 2009)

3.3 Target Population

The populations of this study are micro and small enterprise manufacturing sector entrepreneurs and staffs from the organization. According to the statistical report from micro and small enterprise, the total number of MSE in 2015/16 fiscal year is 20,322. Among these 6110 are manufacturers and these are the target populations in this study.

3.4 Sampling Technique and Size

For the quantitative analysis, stratified sampling technique is selected because the populations are heterogeneous, which are manufacturing entrepreneurs and employees within the organization. The strata is main manufacturing sector potential entrepreneurs which are textile and garment, leather and leather products, food processing and beverage, metal works and engineering, wood works and agro processing.

No	MSE Sectors	MSE Strata
1	Textile and Garment	50
2	Leather and leather products	50
3	Food processing and beverage	15
4	Metal works and engineering	20
5	Wood works including furniture and ornaments service	25
6	Agro Processing	25
	Total	185

Table 3.1- Strata of the manufacture sector

For qualitative study, purposive sampling technique is used to select top management staffs from MSE. From six sectors depicted in the strata table 3.1 a total of 6 top management staffs taken as a sample size for the qualitative study. However, only three management from textile and garment, agro processing and leather and leather products were interviewed. Hence the interview was conducted by selecting the appropriate top management staffs.

By taking the target population of 6110 manufacturers, a total of 185 samples were taken by using a convenience sampling technique from the respondents.

3.5 Data Collection Instrument

To conduct this research, both primary and secondary data were used as a data type. The primary data was collected by using questionnaires from the staffs of Micro and Small Enterprises and new entry and existing manufacturer entrepreneurs. And also top management staffs from each sector were interviewed

The secondary data was collected from different manuals and brochures and documents within the organization. These data sources are described below.

3.5.1 Interview

According to Creswell (2009) interview is one of the instruments to collect qualitative data by making face-to-face communication with participants, by telephone and on the internet intended to elicit views and opinions from the participants.

To conduct the interview, the researcher has to arrange a time to communicate with the appropriate top management staffs from each sector found in MSE by describing the objective of the researcher through different communication like email or telephone. Then a suitable time was arranged to take the required information from the interviewees. The interviews planned to take out of an office hours to get good information without interruption from the interviewees. The time arranged to each interviews falls between 30 to 40 minutes. After that the interview was started with the interviewees by elaborating the benefit of the research. Then the data has been collected with the prepared document. Finally, the researcher closed the interview by thanking the interviewees and promised to return back with a report to get a feedback from the interviewees if the information was taking correctly. Based on the feedback getting from the interviewees, the final output taken as an input to make the analysis.

3.5.2 Questionnaire

Questionnaire was used to get the required information from the responsible staffs in the organization and selected manufacturer sector new entry entrepreneurs and entrepreneurs' offices.

In this study, the structured type of questionnaire was applied by using Likert Scaling (Summative) from Fully Agree to Fully Disagree.

The questionnaire contents were identified from literatures and new questions were made to some of the questions. Some modifications were made in order to meet the objective of the study. And also pilot test was conducted on the questionnaire by 10 staffs of the MSE organization to make sure the questionnaire provided the required information or not.

3.5.3 Document Source

Documents were reviewed that are available in Micro and Small Enterprise as a secondary source. The documents that were reviewed include the organization annual bulletin, manuals and brochures.

3.6 Data Collection Procedure

The paper-based questionnaires were distributed to the selected respondents respectively. The questionnaire is distributed to 5 sub cities based on the number of entrepreneurs found in the sub city. The five sub cities were Gullele, Addis Ketama, Nifas Silk, Lideta and Kirkos. This method helps the researcher to explain to the respondents if they have anything unclear. Then the researcher follows the status of the respondents by different mechanism to finalize it with the allotted time. The second step was securing the data at the same time checking the completeness, cleanness and accuracy of the data to be free from error. Then this error-free data was entered into SPSS software to analyze the data. Finally, the data was explained in data analysis section.

3.7 Pilot Study

In order to test the reliability of the questionnaire the pilot test was conducted by taking 10 sample sizes from six manufacture sector. The pilot study respondents selected from

textile and garment, leather and leather products, food processing and beverage, metal works and engineering, wood works including furniture and ornaments service and agro processing. After the questionnaire filled by the respondents a Cronbach's alpha test was conducted to check the consistency of the questionnaire by using SPSS analysis tools. As the result indicted in the table below .709 obtained which is greater than the minimal value of 0.70 which indicated that the questionnaire consistency and reliability is good to use the study.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.848	.853	38

Table 3.2- Reliability Statistics based on pilot test

3.8 Method of Data Analysis

After the researcher collected data from different sources, it is organized and edited using statistical methods and tools. Data on the challenges and prospects of entrepreneurs were analyzed using SPSS and different reports generated like mean, frequency and graph. In addition, data reliability conducted using Cronbach's Alpha test to measure the consistency of the questionnaire. Also correlation and regression analysis were applied to analyze the data. Finally, factors of knowledge sharing for entrepreneurial development identified.

3.8.1 Reliability and Validity

To measure the quality of the research, both reliability and validity were applied. Reliability is used to measure the consistency of the survey, whereas validity is used to measure the degree to which a scale or set of measures accurately represents the construct (Hair et al., 1998).

To measure the reliability of the questionnaire, Cronbach's alpha is applied. From the pilot study, the Cronbach's alpha result became (0.709) which is greater than (0.7) and this showed that the questionnaire is reliable.

On the other hand, content validity was used to measure the survey instrument items address the problem being investigated. In order to measure the content validity of the research, the MSE staffs check the interview and questionnaire questions. Then based on the feedback from the staffs the instruments were updated.

CHAPTER FOUR

Data Presentation and Analysis

In this chapter, both quantitative and qualitative data are presented and analyzed that were obtained from different sources. In the quantitative part characteristics of the respondents and factors of knowledge sharing are presented and analyzed. Then for the qualitative analysis the data obtained through interview are presented and analyzed.

4.1. Quantitative data presentation and analysis

4.1.1 Characteristics of the respondents

This section attempts to provide general characteristics of the respondents as captured by their responses in the current survey. The variables in these sections are sex, age, education level, work experience and manufacture sector.

4.1.1.1 Distribution of respondents by Gender

The largest respondents were male (64.3 percent) which shows that the dominant gender is male.

Sex

	Frequency	Percent
Male	119	64.3
Female	66	35.7
Total	185	100.0

Table 4.1- Distribution of respondents by Gender

4.1.1.2 Distribution of respondents by Age

The largest group of the respondents was between age of 18-30 (54.6 percent) and the remaining (45.4 percent) between ages of 31-40.

Age

	Frequency	Percent
18-30	101	54.6
31-40	84	45.4
Total	185	100.0

Table 4.2- Distribution of respondents by Age

4.1.1.3 Distribution of respondents by Education Level

The result shows that most of the respondents are from high school (82.7 percent). Elementary and diploma take the next share (7 percent) each of them. The remaining (3.2 percent) take by BSc. This shows that most of the respondents fall in high school. So most entrepreneurs working in the manufacture sector don't have an education beyond high school.

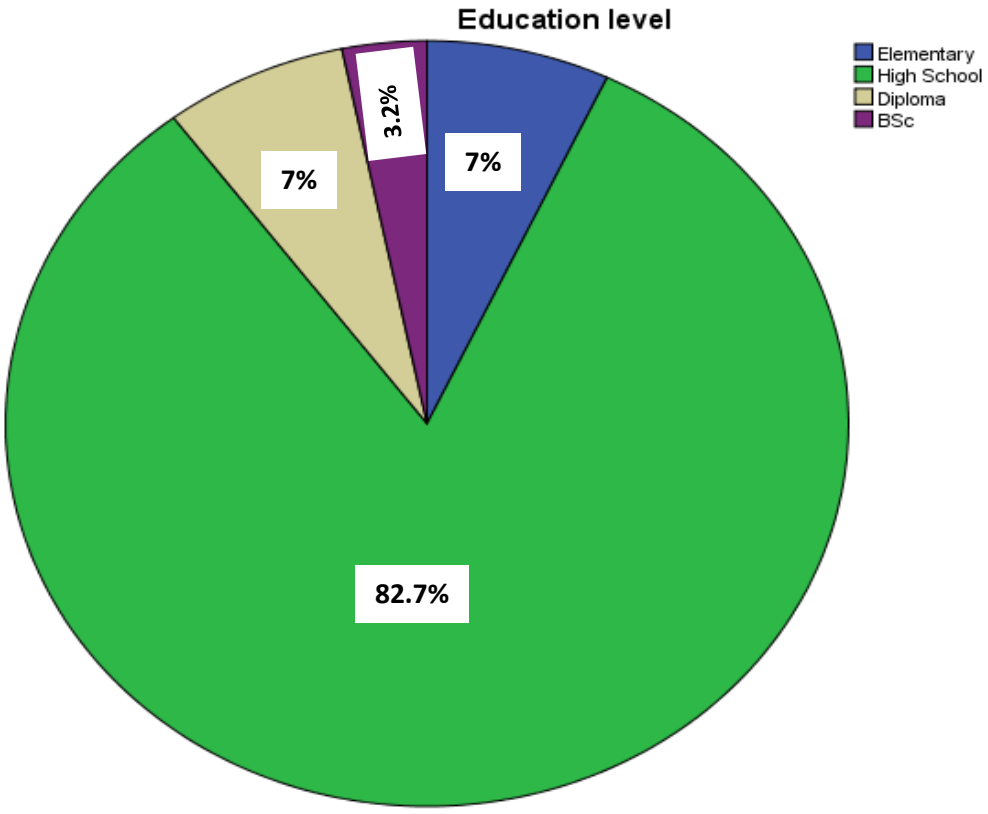

Figure 4.1- Distribution of respondents by education level

4.1.1.4 Distribution of respondents by Current Position work experience

In this part, work experience of the respondents displayed in the figure below 4.4 bar chart. Accordingly, 47% of the respondents had work experience ranging from one to two years. Nearly 31.4% had three to five years of experience, 20% had experience ranging from six to eight years, and 1.6% have been working experience of greater than eight years.

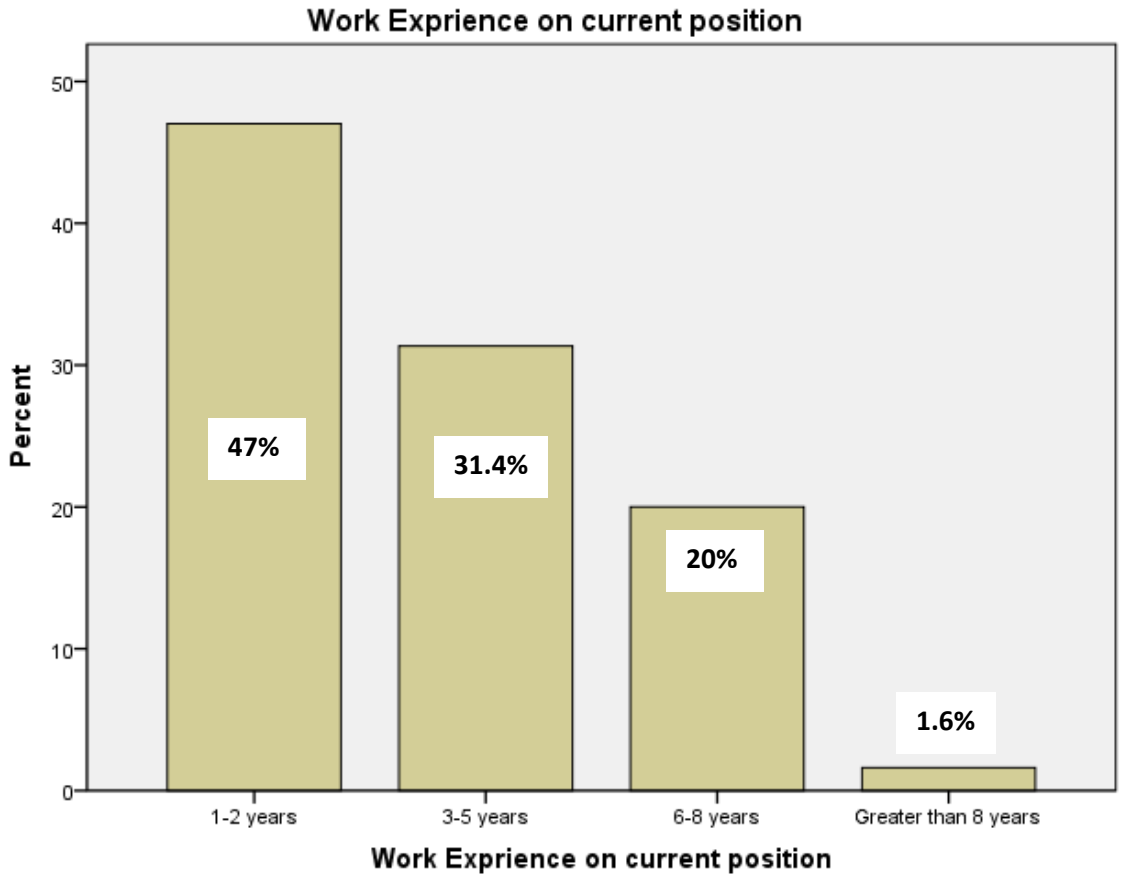

Figure 4.2- Distribution of respondents by work experience

4.1.1.5 Distribution of respondents by Manufacture Sector

In this section, respondents from manufacture sectors presented in the figure below 4.5. About 43.8% of the respondents are from textile and garment, 22.7% from leather and leather products, 10.8% from metal works and engineering, 9.2% from wood works including furniture and ornamentals service, 8.1% from food processing and beverage

and 5.4% from agro processing. This implies that most of the manufacture sectors are working on textile and garments and the least one is agro processing.

Manufacture Sector

	No of Sectors	Percent
Textile and Garment	81	43.8
Leather and leather products	42	22.7
Food processing and beverage	15	8.1
Metal works and engineering	20	10.8
Wood works including furniture and ornaments service	17	9.2
Agro Processing	10	5.4
Total	185	100.0

Table 4.3- Distribution of respondents by manufacture sector

4.1.2 Factors of Knowledge Sharing

4.1.2.1 Technological Factors

In relation to technological factors as indicated on the research model, there are two independent variables. These are lack of appropriate technological services and technical support services. Technological factors are discussed below.

i. Existence of appropriate technological services

Under this part, there are different points raised. These are new technology platforms, appropriate KM, utilize intranet or internet and website update. In the table below 4.4, the summary of the rating to lack of appropriate technology services presented using percentage and mean.

Existence of appropriate technological services	**Fully Disagree**	**Somewhat Disagree**	**Neutral**	**Somewhat Agree**	**Fully Agree**	**Mean**
	1	**2**	**3**	**4**	**5**	
The government(MSE) introduces new technology platforms that enable knowledge sharing for more effective operations	22.2	2.7	20	33.5	21.6	3.30
The government(MSE) use of an appropriate KM system to share knowledge	43.8	23.2	15.7	9.7	7.6	2.14
The government(MSE) utilize of the intranet or internet to share knowledge	48.6	23.2	18.4	1.6	8.1	1.97
The government(MSE) website updated regularly to share others experience knowledge	57.3	4.9	17.3	11.4	9.2	2.10

Table 4.4 Items under lack of appropriate technological services (Percentage and Mean)

The average mean result for lack of appropriate technological services item is found to be 2.34, which reside in the ‘disagreement’ category. This indicated that lack of appropriate technological services is one of the factors hindering knowledge sharing. From the respondents, 67% disagree on the government use of an appropriate KM system to share knowledge. This implies that the government (MSE) not using the required knowledge management system to share knowledge to new entrepreneurs and existing one. Whereas, 55% of the respondents agree on the government introduces new technology platforms that enable knowledge sharing for more effective operations.

Thus, the government utilizes the intranet or internet to share knowledge, website updated regularly to share others experience knowledge and uses of an appropriate KM system to share knowledge are lack of appropriate technological services that need an improvement.

ii. Technical support services

Technical support services are one of the issues that fall under technological factors. In the table 4.5, the items of the technical support services are discussed. The numbers shows in table are in percentage and mean.

Technical Support Services	**Fully Disagree**	**Somewhat Disagree**	**Neutral**	**Somewhat Agree**	**Fully Agree**	**Mean**
	1	**2**	**3**	**4**	**5**	
The government(MSE) information systems infrastructure is updated regularly to facilitate	35.7	16.2	18.9	25.4	3.8	2.45
The government(MSE) provides knowledge that is relevant to me by using IT	20	16.2	40	14.1	9.7	2.77
ICT training gap provided to fill the technology gap	0.5	18.4	7.6	10.3	63.2	4.17

Table 4.5 Items under technical support services (Percentage and Mean)

The average mean result for technical support services items is found to be 3.13, which reside in the agreed category. In this context 52% of the respondents disagreed government regularity updated of information systems infrastructure as it has a lowest mean. Around 40% of the respondents are neutral about government provide knowledge relevant to entrepreneurs using IT. About 73.5% of the respondents agree on ICT training to fill the technology gap.

4.1.2.2 Individual Factors

The individual factor consists of willingness to share knowledge and lack of communication skills are the two items. These factors further discussed below.

i. Willingness to Share

Sharing knowledge to others by willingness varies from person to person. In this part, the respondents were asked about sharing of new ideas, documents, their collaborative and strength to share knowledge and sharing knowledge to colleagues by willingness. In table 4.6 below the items of willingness to share are presented and further discussed in the table below.

Willingness to Share	**Fully Disagree**	**Somewhat Disagree**	**Neutral**	**Somewhat Agree**	**Fully Agree**	**Mean**
	1	**2**	**3**	**4**	**5**	
I am willing to discuss new ideas with my colleagues	-	7	1.1	6.5	85.4	4.70
I am willing to share knowledge that I acquire with my colleagues	-	7.6	-	7	85.4	4.70
I am willing to share documents with my colleagues	-	8.1	0.5	4.9	86.5	4.70
Collaborative Knowledge sharing enhances learning	-	7	0.5	1.6	90.8	4.76
Knowledge Sharing can be seen as strength	-	7.6	10.3	14.6	67.6	4.42

Table 4.6 Items under willingness to share (Percentage and Mean)

The average mean result for willingness to share item is found to be 4.66, which reside in the agreed category because its average mean is greater than 3.

ii. Ability of Communication Skills

Ability of communication skills are another item found in the individual factor. Communication plays a key role in the dissemination of information. In the table below 4.7 the items of lack of communication presented and further discussed below the table.

Ability of Communication Skills	**Fully Disagree**	**Somewhat Disagree**	**Neutral**	**Somewhat Agree**	**Fully Agree**	**Mean**
	1	**2**	**3**	**4**	**5**	
I am confident in my ability to provide knowledge to my colleagues	7	-	0.5	8.1	84.3	4.63
I am confident that my knowledge sharing would increase the performance of my colleagues	7	-	14.1	6.5	72.4	4.37

Table 4.7 Items under lack of communication skills (Percentage and Mean)

The average mean result for lack of communication skills item is found to be 4.5, which rated as an agreed category. Majority of the respondents 92.4% are confident in their ability to provide and share the required information to the new entry entrepreneurs. Moreover, 80% of the respondents are also confident that their knowledge increase others entrepreneurs performance. Furthermore, the average mean greater than 3, this indicated that there is no lack of communication skill to share the required information to existing and new entrepreneurs.

4.1.2.3 Organizational Factors

Organizational factors are the other independent variables. It consists of leadership style and strategy and purpose. The factors are discussed below.

i. Leadership Style

In this part points raised related to the government role in knowledge sharing that support manufacture sector entrepreneurs. In the table 4.8 below the construct of leadership style discussed.

Leadership Style	**Fully Disagree**	**Somewhat Disagree**	**Neutral**	**Somewhat Agree**	**Fully Agree**	**Mean**
	1	**2**	**3**	**4**	**5**	
The government(MSE) establishes the necessary conditions for knowledge sharing	18.4	12.4	16.8	30.8	21.6	3.25
The government(MSE) helped the manufacturer sector get the resources required for knowledge sharing	17.8	24.9	25.9	30.8	0.5	2.71
The government(MSE) communicated all required information to the manufacture sector	43.8	14.1	24.9	13	4.3	2.20
The government(MSE) understood manufacturers sector needs	49.7	5.4	29.2	8.1	7.6	2.18
The government(MSE) demonstrates commitment to knowledge sharing for manufacturers	28.6	28.6	34.6	7.6	0.5	2.23

Table 4.8- Items under leadership style (Percentage and Mean)

The average mean result for leadership style item is found to be 2.53, which reside in the disagree category. Almost 58% of the respondents disagree on government communication regarding the required information to manufacture sector. This implies that the government didn't provide the required information that helps the sector. The governments try to understand the needs of the manufacture is and other sectors.

However, 54% of the respondents disagree on this issue. Moreover, 56% of the respondents disagree on government commitment to knowledge sharing to the manufacture sector. This implies that the government must do a lot of commitment to regarding knowledge sharing because it improves a lot of thing. About 52% of the respondents agree on the necessary environment that the government provide to share knowledge.

As the overall mean is less than 3 this indicate that leadership style is one of a gap of an organization that needs a lot of improvement.

ii. Strategy and Purpose

Strategy and Purpose	**Fully Disagree**	**Somewhat Disagree**	**Neutral**	**Somewhat Agree**	**Fully Agree**	**Mean**
	1	**2**	**3**	**4**	**5**	
Objectives and goals of the government(MSE) clearly developed	24.9	7	18.9	32.4	16.8	3.09
The government(MSE) business strategy clearly aligned with knowledge sharing strategy	35.1	18.9	27	17.8	1.1	2.31
The government(MSE) knowledge sharing clearly developed to manufacturer sector	17.3	23.8	38.9	16.2	3.8	2.65

Table 4.9 Items under Strategy and Purpose (Percentage and Mean)

Strategy and purpose also the other organizational factor. The average mean result for strategy and purpose item is found to be2.68, which rate as disagree category. 54% of the respondents disagreed on the alignment of business strategy with knowledge sharing. Moreover, 41% of the respondents disagreed on the government development to knowledge sharing that support manufacture sector. Only 49% of the respondents agree

on the objectives and goals of the government clearly developed. Thus strategy and goals of the government was not clearly developed and need an improvement because its mean is less than 3.

4.1.2.4 Extrinsic Factors

Extrinsic factors are the other knowledge sharing factor. It consists of items which are reward system and organizational culture. In the next subsequent paragraph extrinsic factors discussed and analyzed.

i. Reward System

Reward system is one of the construct found under extrinsic factor. In the table 4-10 below the items of reward system further discussed and analyzed.

Reward System	**Fully Disagree**	**Somewhat Disagree**	**Neutral**	**Somewhat Agree**	**Fully Agree**	**Mean**
	1	**2**	**3**	**4**	**5**	
The government(MSE) will provide higher bonus for sharing knowledge	17.8	3.2	22.7	24.9	31.4	3.49
The government(MSE) have a promotion opportunities for me if I share my experience and knowledge with external stakeholders	20	9.7	33.5	17.3	19.5	3.06

Table 4.10- Items under Reward System (Percentage and Mean)

The average mean result for reward system is found to be 3.28, which rated as an agreement category. About 55% of the respondents agreed on higher bonus involvement for knowledge sharing from the government side. This implies that the government gives attention to knowledge sharing by arranging bonuses. Furthermore, 37% of the

respondents agreed on the promotion opportunity of the government if the entrepreneurs share their knowledge to others existing and new entrepreneurs. Thus the average mean greater than 3 this indicated that reward system is achieved by the government to support and enhance knowledge sharing.

ii. Organizational Culture

Organizational culture is another extrinsic factor. In the table 4-11 below the organizational culture items discussed and analyzed.

Organizational Culture	**Fully Disagree**	**Somewhat Disagree**	**Neutral**	**Somewhat Agree**	**Fully Agree**	**Mean**
	1	**2**	**3**	**4**	**5**	
The government(MSE) has an acceptance of knowledge sharing (not hoarding) as a strength	9.2	-	25.4	20	45.4	3.92
The government(MSE) empower manufacturer SMEs to explore new possibilities	20.5	11.9	27	3.2	37.3	3.25
MSE has a culture that values knowledge seeking and problem solving environment	1.6	1.1	23.2	13.5	60.5	4.30
The government(MSE) provide facilities individuals are encouraged to ask	30.8	19.5	18.4	14.1	17.3	2.68

Table 4.11- Items under Organizational Culture (Percentage and Mean)

The organizational culture average mean is 3.54 which rated as agreement category. About 50% of the respondents disagreed on government that provide encourage to ask facilities. Furthermore 65% of the respondents agreed on the government acceptance

knowledge sharing as strength. Therefore, the average mean is greater than 3 which indicated that organization culture is one of the governments take into consideration that support knowledge sharing.

4.1.2.5 Intrinsic Factors

Intrinsic factors are also other knowledge sharing factors. It consists of items which are trust and behavior. In the next subsequent paragraph, the intrinsic factors are discussed and analyzed.

i. Trust

Trust is one of an intrinsic factor. In the table 4.12below items of trust further discussed and analyzed.

Trust	**Fully Disagree**	**Somewhat Disagree**	**Neutral**	**Somewhat Agree**	**Fully Agree**	**Mean**
	1	**2**	**3**	**4**	**5**	
My colleagues and I trust each other	7.6	-	18.4	25.4	48.6	4.08
In a long-term view, getting on well with most colleagues is very important to my career development	15.1	0.5	13.5	16.2	54.6	3.95
Many of my personal friends are my colleagues	0.5	3.2	13.5	22.7	60	4.38
My colleagues can be relied upon if I meet with critical incidents	8.1	9.2	11.9	31.9	38.9	3.84
I trust the expertise of my colleagues	-	9.2	33.5	10.8	46.5	3.95

Table 4.12- Items under Trust (Percentage and Mean)

The average mean result for trust is found to be 4.04 which is rated as an agreement category. Majority of the respondents 83% agreed that many of their personal friends are their colleagues. In addition, the average mean is greater than 3 which indicated that trust is one of a positive outcome that strengthen knowledge sharing between entrepreneurs.

ii. Behavior

Behavior is also another intrinsic factor. In the table 4.13below the items of behavior discussed and analyzed.

Behavior	**Fully Disagree**	**Somewhat Disagree**	**Neutral**	**Somewhat Agree**	**Fully Agree**	**Mean**
	1	**2**	**3**	**4**	**5**	
In daily work, I take the initiative to share my work-related knowledge to my colleagues	3.2	-	17.8	19.5	59.5	4.32
In workplace I take out my knowledge to share with more people.	3.2	-	18.9	16.8	61.1	4.32
I never tell others my work expertise unless it is required in the company	58.4	24.3	-	8.6	8.6	1.85
After learning new knowledge useful to work, I promote it to let more people learn it	-	-	2.2	35.7	62.2	4.60
I actively use IT sources available in the company to share my knowledge	46.5	11.4	12.4	7.6	22.2	2.48

Table 4.13- Items under Behavior (Percentage and Mean)

The average mean result for behavior is found to be 3.51, which rated as an agreement category. Most of the respondents 83% disagreed that they never tell others their work experience unless they are requested by MSE. Furthermore 58% of the respondents disagreed that they use an IT sources available in their organization to share knowledge. This indicated that the manufacture sector existing entrepreneurs didn't properly use IT to share their knowledge. Thus the government should do more to fill the IT usage gap by giving training or other means.

4.1.3 Correlation and Regression Analysis

Pearson's correlation analysis was used to assess the relationships among the variables (Sekaran, 2003). Table 4-14 indicates that the correlation result between age, education level, work experience on current position and the five constructs of knowledge sharing.

		Overall KS	Technology Factor	Individual Factor	Organization Factor	Extrinsic Factor	Intrinsic Factor
Overall	Pearson Correlation	1	.772**	.963**	.711**	-.697**	.738**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	185	185	185	185	185	185
Technology Factor	Pearson Correlation	.772**	1	-.517**	.742**	.692**	-.621**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	185	185	185	185	185	185
Individual Factor	Pearson Correlation	.963**	-.517**	1	.460**	.749**	.791**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	185	185	185	185	185	185
Organization Factor	Pearson Correlation	.711**	.742**	.460**	1	.614**	-.608**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	185	185	185	185	185	185
Extrinsic Factor	Pearson Correlation	.697**	.692**	.749**	.614**	1	.693**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	185	185	185	185	185	185
Intrinsic Factor	Pearson Correlation	.738**	-.621**	.791**	-.608**	.693**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	185	185	185	185	185	185

**. Correlation is significant at the 0.01 level (2-tailed)

*. Correlation is significant at the 0.05 level (2-tailed)

Table 4-14 Correlation analysis

According to the result, overall knowledge sharing is positively correlated with technology factor with r=.772**, p<0.05, with individual factor positively correlated with r=.963**, p<0.05, with organization factor positively correlated with r=.711**, p<0.05, with extrinsic factor negatively correlated with r=-.697**, p<0.05 and with intrinsic factor positively correlated with r=.738**, p<0.05. Also the highest correlation value is r=.963** between overall knowledge sharing and individual factors. This indicates there is a positive relation between them compare to other variables.

In addition to correlation, regression analysis is also conducted to assess manufacture sector entrepreneurs knowledge sharing rate getting from MSE and knowledge sharing factors. Table 4-15 and 16 below show the result of the regression model and coefficient.

The multiple regression analysis show that the model is satisfactory because $R^{2=}0.222$. Table 4-16 shows the regression coefficients and p-values. The result indicated that technological and intrinsic factors have positive effects toward overall knowledge sharing rate. Individual, organizational and extrinsic factors have a negative effect toward overall knowledge sharing rate. Also the p value indicated that the reliability of the independent variables on the dependent variable. This value should be less than 0.05. The result indicted that technological, individual and intrinsic factors when regressed against overall knowledge sharing rate are significant. However, organizational and extrinsic factors has an insignificant influence overall knowledge sharing rate.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.472[a]	.222	.020	.590

Table 4-15: Model Summary (Source: Own Survey)

	Unstandardized coefficients		Unstandardized coefficients		
Independent variables	B	Std error	Beta	t	Sig.
(Constant)	.799	1.146		.698	.487
Technological Factors	.236	.100	.481	2.352	.020
Individual Factors	-.721	.356	-.951	-2.024	.045
Organizational Factors	-.115	.116	-.225	-.995	.321
Extrinsic Factors	-.158	.105	-.257	-1.509	.133
Intrinsic Factors	.308	.136	.559	2.262	.025
Note: Dependent Variable: Overall rate of knowledge getting from MSE					

Table 4-16: Multiple regression analysis for overall knowledge sharing rate

Reliability Analysis

As indicated in table 4-17, the overall Cronbach's alpha test result is .762 which indicated that there is a high consistency among the items.

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.762	.811	38

Table 4-17- Reliability Statistics based on Overall test

In table 4-18 reliability analysis is conducted for each of the knowledge sharing factors.

Reliability Statistics			
Factors	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
Technological	.590	.587	7
Individual	.963	.968	7
Organizational	.702	.708	8
Extrinsic	.309	.338	6
Intrinsic	.636	.707	10

Table 4-18- Reliability test of Technological, Individual, Organizational, Extrinsic and Intrinsic Factors

4.2 Qualitative Data Analysis

In order to support and supplement the quantitative survey interviews were conducted with three management members selected from each sector from micro and small enterprise. The first interviewee was from leather and leather products. The second interviewee was from Agro processing. The third interviewee was from textile and garment.

The first question raised to the interviewees was kinds of knowledge that need to be shared by SMEs engaged in the manufacturing sector. One of the interviewee replied that technological transfer is the one knowledge that transfers to SMEs. The other two interviewees replied that best practices from previous entrepreneurs should be shared amongst SMEs.

Another question raised to interviewees were the kinds of knowledge currently shared by SMEs engaged in the manufacturing sector. Two of the interviewees replied "*The kinds*

of knowledge shared are business proposal chain between entrepreneurs and training". The other interviewee replied "*Kizen and management".*

The interviewees were requested regarding organization of processes, documents, people, etc to facilitate knowledge sharing among the SMEs. All of the interviewee replied that there is an organization of documents in MSE. One of the interviewee replied "*Documents are organized in hard copy format to share the required knowledge to existing and new entrepreneurs".* The other one replied "*To share the required knowledge to new and existing entrepreneurs the MSE use a soft copy mechanism by using CD".* The other interviewee replied "*Documents and process that are required to entrepreneurs done by responsible person assigned to sub city based on their qualification in the sector".*

With regard to kinds of support (financial, technical, infrastructural, etc) does the Agency provide to facilitate knowledge sharing among SMEs all of the interviewees replied that there is no knowledge sharing mechanism between entrepreneurs. This is the task the government has a weakness. The agency also has a problem on this area according to the interviewee's response.

The interviewees were also requested regarding if there is an appropriate technology transfer and capacity-building program that help manufacturer sector entrepreneurs to get another experienced knowledge. One of the interviewee replied "*There is application that help the new entrepreneurs. It is called MS Zone System. It has some features that help the entrepreneurs. It register new entrepreneurs, arrange training according to the request coming from different sub cities, license renewal features etc are some of the features of the system that help the entrepreneurs technological transfer. Also there is training arrangement on TVET if new machine come to the office that help the manufacture sector. Also there is a training about how to use search engine and other technology related two times a year to fill their technological gap".* The other two interviewee replied that there is a TVET training arrangement done once in year to fill the capacity building gap. They also replied that the technology transfer and capacity-building program not done according to the needs of the manufacture sector new and

existing entrepreneurs. This indicates that there is a gap on technology transfer and the government should do a lot on this area.

The interviewees were asked about the assessment of the level of knowledge sharing among SMEs engaged in manufacturing. All of the interviewees replied that there is a gap on the level of knowledge sharing according to the needs of the government. One of the interviewee replied "*There was a plan by the government to transfer 20% of the manufacture sector to industrial level. Based on their capacity, this 20% manufacture entrepreneurs transferred to industrial level".*

Another question raised to interviewees was the challenges that hinder knowledge sharing among manufacturing SMEs. One of the interviewee replied "*One of the challenges is intellectual problem between entrepreneurs. The other one is lack of appropriate knowledge about their sector".* The other interviewee replied "*One of the challenges that hinder knowledge sharing is shortage of human resource to share the required knowledge to the new entrepreneurs. So the government should do more to increase the size of the human shortage".* The other interviewee replied "*One of the challenges is shortage of capital because of technology change over time to time".*

Another question raised to interviewees were the prospects of knowledge sharing among SMEs involved in manufacturing. All of the interviewees replied that there is a gap between entrepreneurs to share their knowledge. They didn't consider the usefulness of knowledge sharing between each other. So this also another gap the government should consider and take the necessary action according to the interviewees.

4.3 Discussion of the Findings

In this section finding from quantitative and qualitative research was summarized.

H1: Existence of appropriate technological services has positive effect on knowledge sharing

Existence of appropriate technological services was one of a factor that has a positive effect on knowledge sharing. It contains new technology platforms, appropriate KM, utilize intranet or internet and website update. The finding showed that 67% (Table 4.4)

disagree on the government use of an appropriate KM system to share knowledge. This implies that the MSE lacked on providing appropriate technological services to share knowledge to manufacture sector entrepreneurs.

H2: Technical support services has a positive impact on knowledge sharing

Technical support services have a positive effect on knowledge sharing. The finding showed that 52% (Table 4.5) of the respondents disagreed government regularity updated of information systems infrastructure. This indicated that the MSE didn't update the required information infrastructure regularly needed by the manufacture entrepreneurs.

H3: Willingness to share has a positive impact on knowledge sharing

There is a positive relationship between willingness to share and knowledge sharing. It is one of the individual factors. As a result from the table 4.6, majority of the respondents agreed on there is the knowledge sharing willingness between existing and new entry entrepreneurs.

H4: Ability of communication skills has a positive impact on knowledge sharing

Ability of communication skills is the other individual factors that impact knowledge sharing positively. Majority of the respondents 92.4% (Table 4.7) are confident about their ability to provide and share the required information to the new entry entrepreneurs. This implies that there is no lack of communication skills between manufacture sector entrepreneurs to share their knowledge to new entry entrepreneurs.

H5: Leadership style has a positive impact on knowledge sharing

Leadership style is one of the organization factors that impact knowledge sharing positively. As the result indicated from Table 4.8 majority of the respondents disagreed to the MSE leadership style. This implies that the manufacture entrepreneurs didn't get the appropriate leadership role from MSE.

H6: Strategy and purpose have a positive impact on knowledge sharing

Strategy and purpose are another organization factor that has a positive impact on knowledge sharing. The finding that showed from Table 4.9 indicated that the majority of

respondents disagreed on the development of MSE strategy and purpose. This implies that strategy and goal of the MSE were not clearly developed and need an improvement.

H7: Reward system has a positive contribution on knowledge sharing

Reward system is one of the extrinsic factors that has a positive contribution on knowledge sharing. As the result indicated from Table 4.10 the majority of the respondents agreed on, a reward system is achieved by the government to support and enhance knowledge sharing.

H8: Organizational culture has a positive impact on knowledge sharing

Organizational culture is another extrinsic factor that has a positive impact on knowledge sharing. The finding from Table 4.11 indicated that 50% of the respondents disagreed on government that provided encourage to ask an environment to manufacture entrepreneurs. This implies that the MSE should take into consideration this factor to share the required knowledge.

H9: Trust has a positive impact on knowledge sharing

Trust is one of the intrinsic factor that has a positive impact on knowledge sharing. The finding showed that in Table 4.12 majority of the respondents agreed on trust has a positive outcome on knowledge sharing.

H10: Behavior has a positive impact on knowledge sharing

Behavior is another intrinsic factor that has a positive impact on knowledge sharing. As indicated on Table 4.13 the behavior of the majority of the respondents of the manufacture existing entrepreneurs' proper usage of IT to share their knowledge was not as expected. Thus the government should do more to fill the IT usage gap by giving training or other means.

According to the interviewee, technology and best-practice transfer to the manufacture entrepreneurs didn't as expected from MSE. This implies that the MSE didn't provide the required technology to the entrepreneurs and best practices from existing entrepreneurs that help the new entry entrepreneurs.

Capacity-building transfer also another issue that shows a gap in the MSE according to the information got from the interviewees. This indicated that the capacity building arranged by the MSE was not adequate enough to fulfill the requirements of the manufacture entrepreneurs.

Human resource and lack of appropriate knowledge are the other gap from the government side found from the interviewees to share the required knowledge to manufacture sector entrepreneurs. This implies that the MSE didn't assign the required number of human resource to the new entry manufacture entrepreneurs with regard to the knowledge they required from the MSE and also the appropriate technology that helps to find the knowledge from existing manufacture entrepreneurs.

The researcher also recommends knowledge sharing dimensions as a framework. In this research, issues that are relevant to the knowledge sharing can be categorized in four dimensions as depicted in Figure 4.3

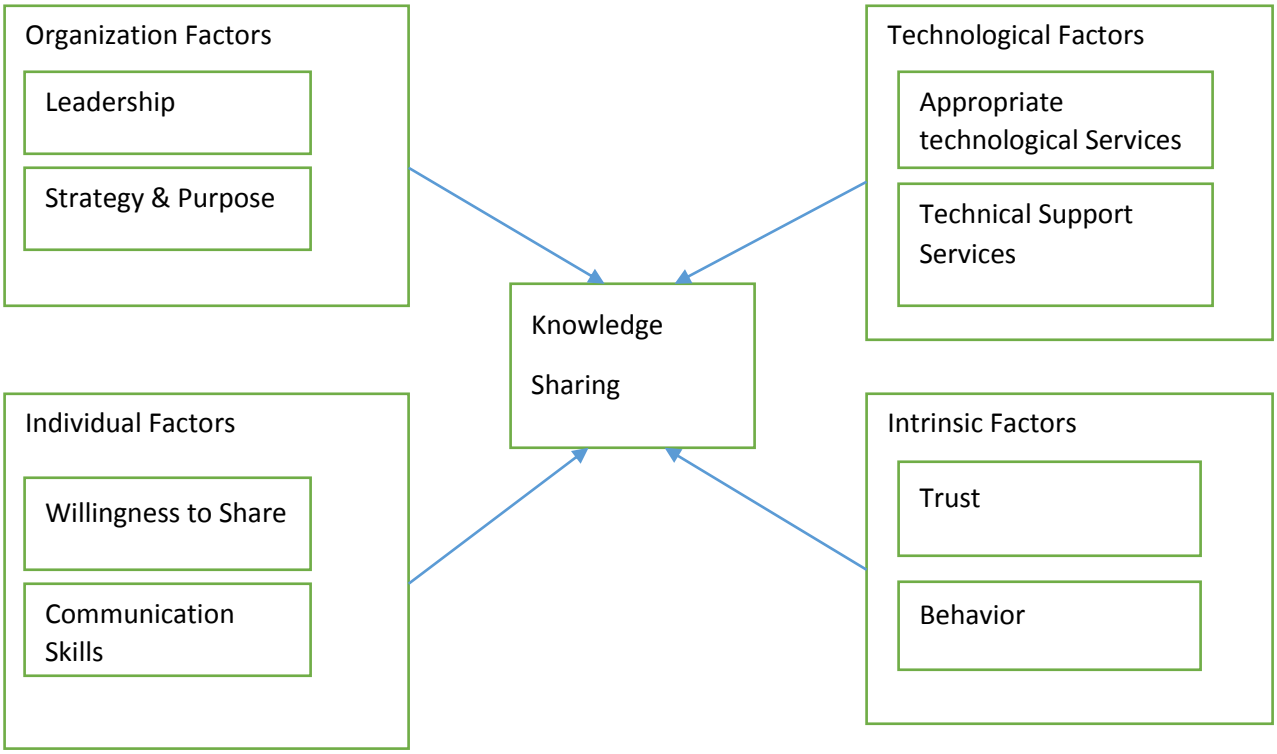

Figure 4.3 Knowledge Sharing Dimensions

The first one is technological dimensions, which include lack of appropriate technological services and technical support services. The second dimension is organizational factors, which include leadership style and strategy and purpose. The third dimension is individual factors, which include willingness to share and communication skill. The fourth dimension is intrinsic factors which include trust and behavior. This dimension was provide means for sharing and using knowledge, acquired through the entrepreneurs, to enhance their knowledge coming from existing manufacture sector entrepreneurs. The dimension also further elaborated below.

4.3.1 Technological Factors

4.3.1.1 Lack of Appropriate Technological Services

As the analysis of the study indicated that lack of appropriate technological services became a problem to share the required information to manufacture sector entrepreneurs. As MSE did not provide the required technologies to the sector, the entrepreneurs couldn't share the information to the new entrepreneurs and not speed up their knowledge sharing activity. So this showed that providing proper technological services improve the sharing practice of existing entrepreneurs to the new one.

4.3.1.2 Technical Support Service

As shown in the above figure technical support service from technological factor influence knowledge sharing. The finding of the study also indicated that the MSE did not give the required technical support to manufacture new and existing entrepreneurs. Because of that the dimensions incorporated this item. The government means MSE should provide different mechanism to tackle this issue. These are:

- By arranging training
- By identifying the entrepreneurs gap
- By updating the required resource

The above pointes help to facilitate the knowledge sharing activities between the manufacture sector entrepreneurs and the MSE.

4.3.2 Organizational Factors

4.3.2.1 Leadership Style

This study identified that to facilitate knowledge sharing management leadership style play a major role. MSE as a leader can create, develop infrastructure and direct manufacture sector entrepreneurs to share knowledge. Leaders also provide the necessary best practices from existing entrepreneurs to the new one. Leaders can handle knowledge sharing by applying these things. These are:

- By providing the required resource to share knowledge
- By arranging the necessary information timely to the entrepreneurs
- By follow up of the manufacture sector entrepreneurs need

4.3.2.2 Strategy and Purpose

The other point included in the knowledge sharing dimension is the strategy and purpose of MSE. It shows the clear direction of the government and it is a road to reach a proper knowledge sharing activity between entrepreneurs. This issue was tackled by:

- Clearly developed the goals and ready to apply it
- Providing a clear connection to manufacture sector entrepreneurs

4.3.3 Individual Factors

4.3.3.1 Willingness to Share

Another point included on the dimension is the willingness to share the knowledge from the entrepreneurs' side. As indicated in the survey result, there is a strong interest from the manufacture sector entrepreneurs to share their knowledge. So the dimension incorporates this construct because it plays a vital role to share the required knowledge between entrepreneurs.

4.3.3.2 Communication Skills

Another construct that included in the proposed dimension is a communication skill. The MSE showed a problem in this part. In order to handle this problem the MSE should follow these things by providing a proper communication mechanism between the manufacture sector entrepreneurs and the organization, assigning the proper communication person and facilitating training.

4.3.4 Intrinsic Factors

4.3.4.1 Trust

The other item that was included on the proposed dimension is trust. From the finding of the regression analysis, this construct included in the dimension. The MSE should be strength is issue because it plays a significant role on knowledge sharing. It also prepared knowledge sharing session between entrepreneurs to strength the trust between each other.

4.3.4.2 Behavior

The other construct from the intrinsic side included in the proposed dimension is behavior. Behavior is the one that is needed between entrepreneurs to transfer the required knowledge. The MSE tackled this issue by creating awareness to the entrepreneurs about the usage of knowledge by improving their behavior.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

In this chapter, conclusions found from the study, recommendations and suggestions for future research are presents.

5.1 Conclusion

Knowledge sharing can play a critical role to transfer the required information to manufacture sector entrepreneurs. This study identified factors' knowledge sharing in MSE engaged in the manufacturing sector which includes technological, individual, organizational, extrinsic and intrinsic. The knowledge sharing factors which are identified from this study help the MSE the areas which need to be improved with regard to knowledge sharing in the manufacturing sector.

The study also showed that technological, individual, organizational and intrinsic factors are the main challenges to knowledge sharing in MSE engaged in the manufacturing sectors. So the MSE should solve the problems of the identified factors which are technological, individual, organizational and intrinsic to give the required information to the manufacturer and better knowledge sharing resources. The finding from the study also showed that extrinsic factor appeared the least for knowledge sharing.

Moreover, technological and intrinsic factors have positive effect toward overall knowledge sharing. In addition, technological, individual and intrinsic factors when regressed against overall knowledge sharing rate are significant. However, organizational and extrinsic factors has an insignificant influence overall knowledge sharing rate.

Overall, it has been clearly shown that the MSE should put considerable efforts in creating suitable environment for manufacture sector new entry entrepreneurs to get the required knowledge from existing entrepreneurs. So, further research is required to know the impact of extrinsic factors in knowledge sharing in the case of MSE in other parts throughout the country.

5.2 Recommendation

Based on the finding and conclusion drawn above, the following recommendations are made which are necessary for good knowledge sharing flow between the government and manufacture sector entrepreneurs in Addis Ababa.

Technology plays a great role to transfer the knowledge between entrepreneurs. There is a lack of appropriate technological service from the government side. So as a recommendation the government should provide the necessary technology service to tackle problem of knowledge sharing between manufacture sector entrepreneurs and it helps to pick the right business to entrepreneurs easily without taking much time.

According to the result from the survey, information system not updated regularly by the government. It should be given attention by the government because it plays a significant role to transfer the necessary knowledge to entrepreneurs. So the government should take it seriously.

The MSE leadership style also the other point take into consideration because it is necessary to transfer the required knowledge to manufacture sector entrepreneurs. The entrepreneurs should get the required resource about the information they are looking for from the MSE. For this the management plays a great role. Also the government understands the need of the entrepreneurs.

The MSE also encourages the manufacture sector entrepreneurs to share their knowledge to other new entry entrepreneurs by proving a reward system. It can be done by prompting their product to exhibition and linking with local or international market.

The other point the MSE should consider is proving a training mechanism to the TVET or other training center to increase the capacity of the manufacture sector entrepreneurs.

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APPENDICES

Appendix A: Questionnaire Survey

Addis Ababa University

School of Graduate Studies College of Natural Science

Department of Information Science

Dear Sir or Madam;

First, I would like to thank you for participating in this survey. This research is being conducted in partial fulfillment of the requirements for the Degree of Master of Science in Information Science at Addis Ababa University with a research title of "Factors affecting knowledge sharing for Entrepreneurial Development: the case of Micro and Small Enterprises Engaged in Manufacturing in Addis Ababa". The aim of the study is to explore the practice of knowledge sharing among entrepreneurs engaged in Micro and Small Enterprises in Addis Ababa with the ultimate goal of developing solutions towards efficient and effective knowledge sharing.

Your response to each question is extremely valuable to the outcome of this research. The questionnaire survey will take approximately 25 minutes to complete, and the results of the survey will be used for the purpose of academic research only. Hence, all responses will be kept in strict confidentiality and would not affect anyone in any way.

Your dedication is most valued and appreciated, and I would like to take this opportunity to thank you in advance for your kind participation as well as genuine and on time response to the questionnaire.

Thank you for participating!

Yared Bekele

General Instruction

1. In the questionnaire the term MSE indicate micro and Small Enterprise.
2. Please circle your response according to the following 5 point scale.

   1= Fully Disagree
   2= Somewhat Disagree
   3= Neutral
   4= Somewhat Agree
   5= Fully Agree

ክፍል 1፡ ግለሰባዊመረጃ

Part I- Demographic

1. ጾታዎት ምንድነው?

What is your gender?

1. ወንድ	2. ሴት
Male	Female

2. በየትኛው የእድሜ ወሰን ውስጥ ይገኛሉ?

In which age range do you fall?

1. 18-30	2. 31-40	3. 41-50	4. ከ50በላይ
18-30	31-40	41-50	Above 50

3. የት/ት ደረጃዎት ምንድ ነው?

What is your education level?

1. 1ኛደረጃ	2. 2ኛደረጃ	3. ዲፕሎማ	4. ባችለር	5. ሌላ
Elementary	High school	Diploma	Bachelors	Other

4. በአሁኑ የስራ መደብዎ ላይ ለምን ያህል ጊዜ ሰርተዋል?

For how long have you worked in your current position?

1. ከ1-2 ዓመት	2. ከ3-5 ዓመት	3. ከ6-8 ዓመት	4. ከ8 ዓመትበላይ
1-2 years	3-5 years	6-8 years	Greater than 8 years

5. በየትኛው የአምራች ዘርፍ ውስጥ ተሰማርተው ይሰራሉ?
In which manufacturing sector are you engaged?

1. ጨርቃጨርቅእናልብስ	Textile and garment
2. ቆዳእናሌጦምርቶች	Leather and leather products
3. የምግብእናመጠጥማቀነባበሪያ	Food processing and beverage
4. የብረትስራእናምህንድስና	Metal works and engineering
5. የእንጨትስራየቤትመገልገያቁሳቁስእናየጌጣጌጥአገልግሎት	Wood works including furniture and ornaments service
6. አግሮፕሮሰሲንግ	Agro-processing

7. ሌላ	Other

ክፍል 2፡የእውቀትመጋራትነጥቦች

Part II- Knowledge sharing factors

	FD	SD	N	SA	FA
የቴክኖሎጂ ምክንያቶች **Technological Factors**					
አግባብነት ያለው የቴክኖሎጂ አገልግሎት መኖር **Existence of appropriate technological services**					
1. መንግስት ለላቀ እና ውጤታማ ለሆነ የስራ ትግበራ የእውቀት መጋራት አዲስ የቴክኖሎጂ መድረኮችን አመቻችቷል፡፡ The government introduces new technology platforms that enable knowledge sharing for more effective operations	1	2	3	4	5
2. መንግስት አግባብነት ያለው የኬኤም ስርዓትን የእውቀት መጋራት ይጠቀማል፡፡ The government use of an appropriate KM system to share knowledge	1	2	3	4	5
3. መንግስት ኢንተርኔትን ለእውቀት መጋራቱ ይጠቀማል፡፡ The government utilize of the intranet or internet to share knowledge	1	2	3	4	5
4. የመንግስት ዌብሳይት የሌሎችን እውቀትና ተሞክሮ በመደበኛነት በመጋራት አብዴት ይደረጋል፡፡ The government website updated regularly to share others experience knowledge	1	2	3	4	5
የቴክኖሎጂ ድጋፍ አገልግሎት **Technical support services**					
1. የመንግስት መረጃ ሲስተም አውታሮች ውጤታማ ስኬትን ለመቀዳጀት በመደበኛነት አብዴት ይደረጋሉ፡፡ The government information systems infrastructure is updated regularly to facilitate	1	2	3	4	5
2. መንግስት የመረጃ ቴክኖሎጂን በመጠቀም አግባብነት ያለው እውቀት እንድጠቀም ይረዳኛል፡፡ The government provides knowledge that is relevant to me by using IT	1	2	3	4	5

3. የአይሲቲ ስልጠና የቴክኖሎጂውን ክፍተት ለመዝጋት ይረዳል፡ ICT training gap provided to fill the technology gap	1	2	3	4	5
ግለሰባዊ ጉዳዮች **Individual Factors**					
ኃሳብ የመጋራት ፈቃደኛነት **Willingness to share**					
1. ከስራ ባልደረባዎቼ ጋር በአዳዲስ ኃሳቦች ላይ ለመወያየት ፈቃደኛ ነኝ፡፡ I am willing to discuss new ideas with my colleagues	1	2	3	4	5
2. ከስራ ባልደረቦቼ ያገኘሁትንዕውቀት ለማጋራት ፈቃደኛ ነኝ፡፡ I am willing to share knowledge that I acquire with my colleagues	1	2	3	4	5
3. መረጃዎችን ከስራ ባልደረባዎቼ ጋር ለመጋራት ፈቃደኛ ነኝ I am willing to share documents with my colleagues	1	2	3	4	5
4. ትብብር ላይ የተመሰረተ የዕውቀት መጋራት ትምህርትን ያሰድጋል Collaborative Knowledge sharing enhances learning.	1	2	3	4	5
5. ዕውቀት መጋራት እንደጥንካሬ ሊታይ ይችላል፡፡ Knowledge Sharing can be seen as strength.	1	2	3	4	5
የግንኙነት ክህሎት ችሎታ **Ability of communication skills**					
1. ለስራ ባልደረቦቼ ያለኝን እውቀት ለማጋራት ባለኝ ችሎታ እተማመናለሁ፡፡ I am confident in my ability to provide knowledge to my colleagues	1	2	3	4	5
2. የእኔን እውቀትን ለስራ ባልደረባዎቼ ማጋራት የስራ ባልደረቦቼን የስራ ክወና እንደሚጨምር እተማመናለሁ፡፡ I am confident that my knowledge sharing would increase the performance of my colleagues	1	2	3	4	5
ድርጅታዊ ምክንያቶች **Organizational Factors**					
የአመራር ስርዓት **Leadership style**					

1. መንግስት እውቀት ለመጋራት አስፈላጊ የሆኑ ሁኔታዎችን አመቻችቷል፡፡ The government establishes the necessary conditions for knowledge sharing	1	2	3	4	5
2. መንግስት የአምራቹን ዘርፍ እውቀት በመጋራት ረገድ አስፈላጊውን የሆነ ግብዓት እንዲያገኝ እገዛ ያደርጋል፡፡ The government helped the manufacturer sector get the resources required for knowledge sharing	1	2	3	4	5
3. መንግስት ሁሉንም አስፈገላጊ የሆኑ መረጃዎች ለአምራቹ ሴክተር ያቀርባል፡፡ The government communicated all required information to the manufacture sector	1	2	3	4	5
4. መንግስት የአምራቹን ሴክተር ፍላጎት ይረዳል፡፡ The government understood manufacturers sector needs	1	2	3	4	5
5. መንግስት ለአምራቾች የዕውቀት መጋራትን ግንኙነት ይወስናል፡፡ The government demonstrates commitment to knowledge sharing for manufacturers	1	2	3	4	5
እቅድና አላማዎች **Strategy and Purpose**					
1. የመንግስት ግብና አላማዎች በግልጽ ጎልብተዋል Objectives and goals of the government clearly developed	1	2	3	4	5
2. የመንግስት ተግባራት ከእውቀት መጋራት ስትራቴጂዎች ጋር መሳ ለመሳ የሚሄዱ ናቸው፡፡ The government business strategy clearly aligned with knowledge sharing strategy	1	2	3	4	5
3. የመንግስት እውቀት መጋራት በግልጽ የአምራቹን ዘርፍ አሳድጎታል፡፡ The government knowledge sharing clearly developed to manufacturer sector	1	2	3	4	5
ውጫዊ ምክንያቶች **Extrinsic Factors**					
የሽልማት ስርዓት **Reward System**					
1. መንግስት ለእውቀት መጋራት ከፍተኛ ድርሻ ይሰጣል The government will provide higher bonus for sharing knowledge	1	2	3	4	5

2. መንግስት እውቀቴን እና ተሞክሮዬን ከውጭ ባለድርሻ አካላት ጋር በማጋራት ጊዜ ከፍተኛ የሆነ የማስተዋወቅ እድሎችን ይፈጥርልኛል። The government have a promotion opportunities for me if I share my experience and knowledge with external stakeholders	1	2	3	4	5
ድርጅታዊ ባህል **Organizational Culture**					
1. መንግስት የእውቀት መጋራት ተቀባይነትን እንደጥንካሬ ያየዋል። The government has an acceptance of knowledge sharing (not hoarding) as a strength	1	2	3	4	5
2. መንግስት አምራቹን ኤስኤም ኢ አዳዲስ አጋጣሚዎችን እንዲፈልጉ ያበረታታል። The government empower manufacturer SMEs to explore new possibilities	1	2	3	4	5
3. የእውቀት መጋራትን ዋጋ የሚሰጥ ባህል ለችግርም መፍትሄ ይሰጣል። A culture that values knowledge seeking and problem solving.	1	2	3	4	5
4. መንግስት ግለሰቦች እንዲጠይቁ የሚያደርጉ ሁኔታዎችን ያመቻቻል። The government provide facilities individuals are encouraged to ask	1	2	3	4	5
ውስጣዊ ምክንያቶች **Intrinsic Factors**					
አመኔታ **Trust**					
1. የስራ ባልደረቦቼ እና እኔ እንተማመናለን My colleagues and I trust each other	1	2	3	4	5
2. በረጅም ጊዜ እይታ ሲቃኝ በአብዛኞቹ የስራ ባልደረቦች ዘንድ ለድርጅቱ መጎልበት ወሳኝ ሚና አለው። In a long-term view, getting on well with most colleagues is very important to my career development.	1	2	3	4	5
3. አብዛኞቹ የቅርብ ጓደኞቼ የስራ ባልደረቦቼ ናቸው። Many of my personal friends are my colleagues.	1	2	3	4	5

4. አስጊ ሁኔታ ሲገጥመኝ የስራ ባልደረቦቼ በእኔ ይተማመናሉ።። My colleagues can be relied upon if I meet with critical incidents.	1	2	3	4	5
5. በስራ ባልደረቦቼ ልምድ እተማመናለሁ።። I trust the expertise of my colleagues	1	2	3	4	5
ባህሪያት **Behavior**					
1. በቀን የስራ ሰዓት ከስራ ጋር የተያያዘውን እውቀቴን ለስራ ባልደረባዬ ለማካፈል ተነሰሽነት አለኝ።። In daily work, I take the initiative to share my work-related knowledge to my colleagues.	1	2	3	4	5
2. በስራ ቦታ እውቀቴን ከብዙ ሰዎች ጋር እጋራለሁ In workplace I take out my knowledge to share with more people.	1	2	3	4	5
3. በድርጅቱ ካልተጠየኩኝ በስተቀር ከማንም ጋር የስራ ልምዴን አላጋራም።። I never tell others my work expertise unless it is required in the company.	1	2	3	4	5
4. ለስራው ጠቃሚ የሆኑ አዳዲስ ትምህርቶችን ከቀሰምኩኝ በኋላ ሌሎች ሰዎች እንዲማሩበት አደርጋለሁ።። After learning new knowledge useful to work, I promote it to let more people learn it.	1	2	3	4	5
5. የአይቲ ግብዓቶችን በድርጅቱ ውስጥ በመጠቀም እውቀቴን በንቃት ለሌሎች አጋራለሁ I actively use IT sources available in the company to share my knowledge.	1	2	3	4	5

	Highly Dissatisfied	Dissatisfied	Neutral	Satisfied	Highly Satisfied
Overall, how do you rate the knowledge getting from MSE? በጠቅላላ ከኤም ኤስ ኢ ያገኘሽውን እውቀት ደረጃ እንዴት ነው?	1	2	3	4	5

Appendix B: Interview Outline

ቃለመጠይቅ

Interview

1. በኤስ ኤም ኢ የአምራች ዘርፍ ምን አይነት እውቀት መጋራት አለበት?

   What are the kinds of knowledge that need to be shared by SMEs engaged in the manufacturing sector?

2. ኤስ ኤም ኢ በማምረት ዘርፉ ላይ በአሁኑ ሰዓት ምን አይነት እውቀትን እያጋራ ይገኛል?

   What are the kinds of knowledge currently shared by SMEs engaged in the manufacturing sector?

3. የስራ ሂደትን ሰነዶችን ሰዎችን ወዘተ በማደራጀት በኤስ ኤም ኢ መካከል እውቀት መጋራትን አመቻችተዋል ወይ?

   Have you organized your processes, documents, people, etc to facilitate knowledge sharing among the SMEs?

4. በኤስ ኤም ኢ መካከል እውቀት መጋራትን ለማመቻቸት ኤጀንሲው ምን አይነት ድጋፍን (የፋይናንስ፣ የቴክኒክ እና የመሰረትአውታሮችንወዘተድጋፍሰጥቷል?)

   What kinds of support (financial, technical, infrastructural, etc) does the Agency provide to facilitate knowledge sharing among SMEs?

5. አግባብነት ያለው የቴክኖሎጂ ሽግግር እና የአቅም ግንባታ መርሃ ግብር የአምራቾችን ዘርፍ ኢንተርፕራነሮችን ሌላ የተሞክሮ እውቀት እንዲያገኙ አድርጓል ወይ?

   Is there is an appropriate technology transfer and capacity-building program that help manufacturer sector entrepreneurs to get another experienced knowledge?

6. በማምረት ላይ የተሰማሩ የኤስ ኤም ኢ መካከል ያለው የእውቀት መጋራት ምን ደረጃ ላይ አለ ብለው ይገምታሉ?

   How do you assess the level of knowledge sharing among SMEs engaged in manufacturing?

7. በአምራች ኤስ ኤም ኢ መካከል ያለው የእውቀት መጋራት ተግዳሮት ምንድን ነው ይላሉ?

   What are the challenges that hinder knowledge sharing among manufacturing SMEs?

8. በማምረት ላይ የተሰማሩ ኤስኤምኢ መካከል የእውቀት መጋራት ሁኔታ ምን ይመስላል?

   What are the prospects of knowledge sharing among SMEs involved in manufacturing?

DECLARATION

I declare that the thesis is my original work and has not been presented for a degree in any other university.

_____ Date_____

This thesis has been submitted for examination with my approval as university advisor.

_____ Date_____