ST. MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

FACTORS INFLUENCING INNOVATION CAPABILITY OF MICRO AND SMALL ENTERPRISES IN ADDIS ABABA CITY ADMINISTRATION A STUDY ON MSEs IN KIRKOSE SUB CITY

BY

YONATAN GIZAW

JUNE, 2023

ADDIS ABABA, ETHIOPIA

FACTORS INFLUENCING INNOVATION CAPABILITY OF MICRO AND SMALL ENTERPRISES IN ADDIS ABABA CITY ADMINISTRATION A STUDY ON MSEs IN KIRKOSE SUB CITY

BY:

YONATAN GIZAW WORDOFA

ATHESSIS SUBMITTED TO ST.MARY'S UNIVERSITY COLLEGE, SCHOOL OF GRADUATE STUDIES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR DEGREE OF MASTER OF BUSINESS ADMINITRATION (MBA)

JUNE, 2023

ADDIS ABABA, ETHIOPIA

ST. MARY'S UNIVERSITY COLLAGE

SCHOOL OF GRADUATE STUDIES

FACULTY OF BUSINESS

FACTORS INFLUENCING INNOVATION CAPABILITY OF MICRO AND SMALL ENTERPRISES IN ADDIS ABABA CITY ADMINISTRATION A STUDY ON MSEs IN KIRKOSE SUB CITY

BY

YONATAN GIZAW

APPROVED BY BOARD OF EXAMINERS

Dean, Graduate Studies	**Signature**
Essayas Taye (Phd)	
Advisor	**Signature**
Taye A. (PhD)	
External Examiner	**Signature**
Internal Examiner	**Signature**

DECLARATION

I, the undersigned, declare that this thesis is my original work, prepared under the guidance of Essayas Taye (Phd). All sources of materials used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree.

Essayas Taye (Phd) 

Advisor Signature

St. Mary's University, Addis Ababa **June, 2023**

ENDORSEMENT

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

Essayas Taye (Phd) 

Advisor Signature

St. Mary's University, Addis Ababa **June, 2023**

Acknowledgements

First of all, It is the grace, mercy, charity, forgiveness, help and kindness of the almighty God that made me still alive, achieve this success and strength and to go through all the difficult time I would like to give a heartfelt thanks to my God, without his support it was unthinkable to deal with anything.

Secondly, I would like to express my gratitude to St. Mary's university, business and economics collage, while there are several people who have helped me in one way or another to achieve the completion of this thesis, it would have not been possible without the guidance, support and expertise of my thesis advisor Essayas Taye (Phd.).

Next, I would also extend my gratitude to Addis Ababa City Administration Kirkos Sub City micro and small enterprise office workers who help me in providing data and information about MSEs in Addis Ababa Kirkos Sub City. I cannot afford to leave out the precious support of Samuel Methios, Habtamu A/foge, Canaan Abate and Fitsum Fekedu who showed much devotion to the success of my thesis especially in printing, distributing and collecting the questionnaire and for all the positive comments, supports and cooperation you gave me while doing this research

Finally, I would like thank my beloved family and friends for their support while doing my thesis.

Table of Contents

LIST OF TABLES

List of Figures

ACRONYMS/ABBREVATIONS

CSAE Central Statistical Authority Agency of Ethiopia

EDRI Ethiopian Development Research Institute

EUR Eurocurrency

FMaSE Federal Micro and Small Enterprises agency

GDP Gross Domestic Product

GII Global Innovation Index

GPR Government Policy and Regulation

HCI High Cost of Innovation

ICT Information Communication Technology

IT Information Technology

IKED International Organization for Knowledge Economy and Enterprises Development

MoWUD Ministry of Works and Urban Development

MoFED Ministry of Finance and Economic Development

MSEs Micro and Small Enterprises

MSMEs Micro, Small and Medium enterprises

NBE National Bank of Ethiopia

OECD Organization for Economic Cooperation and Development

REMSEDAs Regional Micro and Small Enterprise Development Agencies.

SMEs Small and Medium Enterprises

SPSS statistical Package for social science

UNCTAD united Nations conference on trade and development

USPTO united states patent and Trade mark office

WDI world development indicators

WEF world economic forum

Abstract

This research aims to investigate factors Influence innovative Capability of micro and small enterprises (MSEs) with a special emphasizes on industrial sectors such as wood and metal work, Construction, textile and garment, food processing sectors in Addis Ababa City Administration Kirkos Sub city. This research also study and present the current state of innovation in Micro and small enterprises (MSEs) in Addis Ababa city Administration Kirkos Sub City. Generally, the focus of the paper is to bring out the key Factor Influence Innovational Capability of MSEs face in the innovation process in the context of the existing government policy. For the sake of achieving the objectives of this study, questionnaires were analyzed using statistical analysis such as descriptive and inferences analyses. The information gleaned through questionnaires were distributed randomly for 316 micro and small enterprises managers and/or employees to gather the needed information and face-to-face interviews were conducted with 20 owners of MSEs. The respondent owners were selected using stratified sampling technique. The data gathered from managers or owners' using ordinary scale was analyzed quantitatively. The empirical study elicited 5 major challenges which seem to affect innovation capability of MSEs in Addis Ababa Administration Kirkos Sub City which include: Access to finance, government policy and regulation, technology and marketing information, organizational behavior and skilled person or human capital. The findings further indicate that, there exists linear and Negative significant ranging from substantial was found between independent variables and dependent variable. Based on findings, recommendations to micro and small enterprises, government bodies and suggestions for other researchers are forwarded. This information also useful for policy makers.

Keywords: *Innovation, Barriers to innovation, MSEs, Addis Ababa City Administration Kirkos Sub City*

CHAPTER ONE
INTRODUCTION
1.1Background of the study

Much has been written in recent decades about the importance of innovation for economic growth. Innovation is the implementation of a new or significantly improved product or process, a new marketing, or organizational method in business practices (OCED, 2005). Innovation involves a broad and dynamic spectrum of activities relate with markets, new products, redesigning, production and others. Successful innovation comes from the integration of a set of capabilities, rather than a single type of capability (Zhang, Garrett-Jones, & Ricky, 2013). Innovation is considerers the foundation of competitiveness of firms and a crucial element in the process of improving the long run economic performance of nations (Dosi & Nelson, 2010; Fagerberg & Verspagen, 2002; Freeman, 1982).

Most of the work on understanding the process of innovation and factor affect to growth and development has been conduct in economically advance countries, where technological change takes place primarily through research and development that pushes the global knowledge frontier further. In contrast, in developing countries, technological change occurs primarily through adopting and adapting existing technologies. In a developing-country context, technological progress involves gaining mastery over products and processes that have already been put to use in more technologically advanced countries (Chaminade et al., 2009; UNCTAD, 2007; Westphal et al., 1985). This difference demonstrates the importance of understanding the nature of innovation in developing countries by using a different lens than that used in studies conduct in more mature economies.

In a rapidly changing world, the imperative for innovation increases. Innovation is common to all organization's technology development and management, no matter how large a company is. It is widely regard as the most important competitive advantage that enables a company to thrive in today's dynamic business environment. It is undutiful that innovation derives prosperity for organizations and nations. In this day and age, innovation is an essential factor for maintaining productivity and it is also a strong strategy to develop the profitability for customer-oriented firms (Hadjimanolis, 1999; Keizer et al., 2002). Nowadays, commonly agrees that innovation is the critical path towards growth and prosperity for countries as well as for individual firms. It is the key to technology adoption, creation and explains the vast difference in productivity across and

within countries. It is considerers the foundation of competitiveness of firms and a crucial element in the process of improving the long run economic performance of nations (Dosi& Nelson, 2010; Fagerberg &Verspagen, 2002; Freeman, 1982).

However, most of the work on understanding the process of innovation and its relationship to growth and development has been conduct in economically advanced countries, where technological change takes place primarily through research and development that pushes the global knowledge frontier further. The micro and small Enterprise is recognizes as an integral component of economic development and a crucial element in the effort to lift countries out of poverty (Wolfenson, 2007). The dynamic role of micro and small enterprises (MSEs) in developing countries as engines through which the growth objectives of developing countries can be achieves has long been recognizes. It is estimated that MSEs employ 22% of the adult population in developing countries (Fisseha, 2006).

Micro and small enterprises not play a crucial role in the Ethiopian economy because of there is not contributions to GDP and their role in poverty reduction and improvement of income distribution. In the manufacturing sector, which is mainly constitutes by agro-processing activities, MSE's contribute a sizeable share. For instance, in 2013 MSE's contributes 30% of the share of manufacturing industries in the GDP (MoFED, 2013). Production of textile, food and beverage processing, production of leather products including foot wear and manufacturing of wood and wood products accounts for more than 70% of the MSE establishments in Ethiopia (CSA, 2003). MSEs are also strongly present in the service sector. According to a survey conducts by Ethiopia's Central Statistical Agency (CSA) in 2002/2003, a large concentration of MSE's was found in trade, hotel, and restaurant activities.

Base on Global Innovation Index (GII) ranking of countries by region, Sub-Saharan Africa (including **Ethiopia**) is lower. Rating figure was computes on average of the following factors for each region: institutions, human capital & research, infrastructure, market sophistication, business sophistication, input, scientific outputs, creative outputs, output; and efficiency. On the other hand, Ethiopia rank low on innovation indicating factors: gross expenditure on R&D, creative goods exports, university or industry collaboration on R&D, regulatory quality index, domestic credit to private sector, number of scientific and technical journal articles; and ICT use index (Dutta, 2011)

With increasing global competition and quickly spreading of knowledge, the future of many businesses depends upon their ability to innovate. In this regard Castells (2010) and Hang and Tsai (2011) argued that most modern economies pursue progressive strategies and policies to develop a responsive and dynamic small and medium enterprises sector. This is done with potential to innovate, capability to respond rapidly to evolving economic environments. Emerging opportunities and threats forced companies to investigate and invest more on innovation to decrease risk of becoming un competitiveness. In this regard, innovation is about new solution that offers better value to customers. Organization use innovation to confirm critical decision in responding to technological or market challenges (Brenner, 1987; Gomes, 1996).

There are many good reasons for paying attention to MSE's. Currently the Ethiopian government use MSE's as a strategy towards development and creating employment by having overall objective of the strategy of creating and enabling environment for MSE's. Having specific objectives to "facilitate economic growth, bring equitable development, create long-term jobs, strengthen cooperation between MSE's, provide the basis for medium and large-scale enterprises, promote export, balance preferential treatment between MSE's and bigger enterprises" (CSAE, 2004).

Hence, the role of innovation as a crucial driving force of economic development is widely acknowledges. In particular within the business setting, innovation is often consider to be a vital source of strategic change, by which firm generates positive outcomes including sustain competitive advantage. Moreover, organizes reasons why enterprises undertake innovation: to improve quality, create new markets, expand product range, reduce labor costs, environmental damage and energy consumption; improve production processes and materials; and replace products or services. For these and other reasons, innovation has for many decades been subject to thorough analysis and research. Aminrezaet al.(2011)

However, if countries are not in a position to engage effectively in innovation activities, inevitably they are going to be dependent on other countries innovated products, import by hard currency from developed and other developing countries. This typically holds true for countries like Ethiopia. Likewise, firm's engagement in such activities is becoming mandatory, unless they lose their markets share and customers in the future, as a result of shift in demand of existing customers for new technology. Therefore, innovation helps to meet the customer requirements

and enables firms to introduce technology which become one of the most important concerns for enterprises. Hence, the ability of a company, not only to keep up with its current business performance, but to excess its own and its competition's expectations are critical to survive. Thus, this study will focus on generating relevant information on the main challenges or influencing factors of innovation capability for micro and small enterprises which are participating in industry sector in Addis Ababa Kirkos Sub City, bases on review of the pertinent literature and empirical study of a representative samples of 220 industry sector (manufacturing and construction) micro and small-scale enterprises out of the total of 316.

1.2 Statement of the Problem

In low-income countries, micro and small enterprises (MSEs), most of which operate in the informal sector, play a crucial role. These enterprises are important providers of employment and livelihoods to a large number of the poor. With limited resources for adopting new ways of working and increasing market shares micro and small-sized enterprises must seek out ways of increasing their competitiveness. Innovation is one of the key philosophies adoptees to face these competitive conditions. Particularly, MSMEs in developing countries are important socially and economically for wide dispersion across rural areas, employ a significant number of labor forces in their local economies, provide an opportunity for entrepreneurial and business skill development and so on. Thus, innovation is an area that has expands dramatically in recent years. Particularly, technological innovation is vital to the competitive performance of enterprises and of nations, and for the sustains growth of the world economy. Technological innovation provides the most obvious means for generating revenues, safeguarding and improving quality & saving enterprises costs. So, innovation uses as a bridge and link between technology and competitive advantage. It is the quest for competitive advantage that causes firms to invest in technological innovation. Studying the connection of MSEs technological innovation and factors adversely affecting innovation are important to make MSEs to increase innovativeness and competitiveness. In this regard, Roper (1997) points that “technological innovation is a key factor in MSEs competitiveness”. Nevertheless, “technological innovation is not as such simple to achieve, especially for MSEs with little experience and resources” (Kaufmann and Todtling, 2002).

Many failure stories of MSEs in innovation reveal that there are various factors hindering their innovation process. Although the phenomenon on innovation factors of MSEs has capture the interest of many scholars, less study focuses on the issue from the developing countries especially

in Africa. Even though, in developing countries like Ethiopia, MSEs are important for number of reasons, their engagement on innovation is lower when compare to other developing countries.

Ethiopia is locates at the bottom in technology production and absorption in world economic forum (WEF) rankings base on traditional innovation output indicators. Only Chad ranks lower with respect to its technological capacity. Hence, technology ranking will calculate, the low standing reflects three problems in Ethiopia: a very weak ICT infrastructure, a low capacity to absorb foreign technology and unfavorable perception in the private sector of the national innovation system (IKED, 2006). This indicates that a specific focus of Ethiopia national innovation culture will warrantee for low innovativeness of MSEs and crucial barriers to innovation were preventing MSEs.

The various policies and strategies adopted by the government have fails to bring the expect growth impacts on the MSE sector. The initiatives by the government and other development agencies have also turn out to be short-term interventions with no provisions or mechanisms for sustainability and scaling up. As a result, most of the MSEs in the country operate in a constrain environment which limits their contribution to national income, employment and export performance. They are unable to utilize their innovative potential, due to a number of internal and external factors which put restrictions on their activities. These factors, which mainly relate to the characteristics of the enterprises, individual entrepreneur characteristics, the business environment, and social or relational factors.

The evidence from the environmental scanning, literature review and empirical work shows that low innovativeness of MSEs is due to many factors affecting adversely. Therefore, the lower focus on innovation on MSEs initiates to conduct further investigation to describe factors that challenge MSEs engagement on innovation or expansion in Addis Ababa city Administration Kirkos Sub City.

1.3 Research Questions

- What is the Influence of access to finance on innovation capability of MSEs?
- What is the Influence of government policy and Regulation on innovation capability of MSEs?

- What is the Influence of organizational culture on Innovation capability of MSEs?
- What is the Influence of skill person or human capital on innovation capability of MSEs?
- What is the type of Influence does technology have on innovation capability of MSEs?

1.4 Objectives of the study

1.4.1 General Objective

The overall objective of study is to identification of the factor Influence innovation capability of Micro and small-scale enterprises participate in industrial sector from select Micro and small enterprises in Addis Ababa City Administration Kirkos Sab City.

1.4.2 Specific objectives

The specific objectives of the study include:

In addition to the general objective, the specific objectives of the study include:

- To find out the effect of access to finance and innovation capability of MSEs
- To assess the impact of government policy & Regulation on innovation capability of MSEs
- To investigate the effect of organizational culture and Innovation capability of MSEs
- To identify the relation between skill person or human capital and innovation capability of MSEs
- To realize the impact of technology on innovation capability of MSEs

1.5 Significance of the study

The finding of this study was being useful to the stakeholders including:

I. Academics/Researchers

II. Findings from this study will assist academicians in broadening of the prospectus with respect to this study hence providing a deeper understanding of the critical factors that Influence the innovation of MSEs.

II. Micro and Small Enterprises

The findings of this study was help MSEs in Addis Ababa City Administration Kirkos Sub city and others, within an insight into the benefits of using different factors studied in this research to predict the factors that affect the innovation in MSEs.

III. Governmental Policy Makers

The government can use the findings of this study to assist in policy formulation and development for a framework for critical finance, technology and marketing, skill person and other factors that affect the innovation of MSE. Moreover, the findings of this study was help the policy makers and financial institutions how to encourage establishing or expanding MSEs. It also enables them to know what kind(s) of policies should be frame.

1.6. Scope and Limitation of Study

1.6.1 Scope of the study

The study analyzed owners and/or managers and/or employees of micro and small sized enterprises who are currently engaged in the production and marketing of goods from Addis Ababa City Administration Kirkos Sub City. The study was not compare and contrast the finding of different kebeles or sub cities with one with the other, since it's strongly believes that kebeles or sub cities are homogenous. Moreover, the study deals only factors adversely affecting MSEs technological innovation and process innovation with the exclusion of non-technological (marketing and organizational) innovation. The study was inclusive of sectors which categorize under industry like manufacturing (e.g. metal and wood work), construction work; and of MSEs of select in Addis Ababa City Administration Kirkos Sub City and comparison will be on MSEs at industry level and specific size.

1.6.2 Limitation of the study

The study face some common limitation such as lack of time, lack of resource, Lack of up to date information about each sector of MSEs in Addis Ababa City Administration Kirkos Sub city

micro and small enterprise main office, lack of well-organized data about MSEs in sub Micro and small enterprise office.

In addition the study had the following limitations according to the researcher survey,

- ✓ Some of the respondents did not come on time.
- ✓ respondents didn't provide full answers and showed lack of willingness to fill up questionnaire,
- ✓ In addition some respondents absent to complete the questionnaire.

1.7. Organization of the paper

The research mainly concentrates of this Paper is factor Influence innovational Capability of Micro and small Enterprise in Addis Ababa City Administration Kirkose sub city Generally; the paper will organizes into Five chapters. The first chapter presents background which continues statement of the problem and continues with the research questions, objective of the study, significance of the study, limitation of the study, scope of the study and organization of the paper. The second chapter deals with the theoretical literature review, analytical literature review and conceptual framework of the study. The third chapter is research methods, fourth chapter result and Discussion, chapter Five Recommendation and Conclusion.

CHAPTER TWO
LITERATURE REVIEW

2.1 Theoretical Literature

2.1.1 Definition of Innovation

Different authors have different opinions about what can be call an innovation. For instance, Acs and Audretsch (1990) see innovation as a process that begins with an invention, proceeds with the development of the invention, and results in the introduction of a new product, process, or service

to the marketplace. According to Damanpour (1999), innovation is the adoption of an idea or behavior, whether a system, policy, program, device, process, product, or service, that is new to the adopting organization. Avlonitis and Salavou (2007) see innovation as a company's ability to introduce new products, which are also successful.

The third edition of the Oslo Manual (OECD, 2005) defines innovation as "the implementation of anew or significantly improves product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace, organization or external relations." Drucker (1985) defines innovation as the specific tool of entrepreneurs, the means by which they exploit change as an opportunity for a different business or service. Similarly, Tidd et al. (1997) defines innovation as a process of turning opportunity into new ideas and putting these into widely used practice. Whereas, Baregheh et al. (2009) define innovation as the multi–stage process whereby organizations transfer ideas into new or improve products, services or processes, in order to advance, compete and differentiate themselves successfully in their marketplace. Hence, organization can achieve competitive advantage through acts of innovation, and they can approach innovation in its broadest sense, including both new technologies and new ways of doing things (Porter, 1990).

Another dimension of innovation has been the nature of innovation with the two extremes being technological and non-technological. Technological innovation will be uses to refer to the process through which technological advances are produces, while non-technological innovations include strategies, processes, structures and management techniques (Eris and Saatcioglu, 2006). As Massa and Testa (2008) comment academics and entrepreneurs, may interpret innovation in a very dissimilar manner: while academics usually stress scientific novelty, for entrepreneurs, on the other hand, "innovation is anything that makes money". The differing views researchers may have also a source of bias in innovation studies.

Innovation is a complex and multidimensional phenomenon thus, Hagedoorn and Cloodt (2003) suggest that using multiple indicators to measure innovation has the double advantage and that a more comprehensive assessment of innovation performance is possible. Regard to this, there is many possible ways to measure innovation. In general, input measures involved with expenditure on innovation whereas outputs will consider being at least one technically new or improving product or processing from a firm. Two basic families of science and technology indicators are

directly relevant to the measurement of innovation: resources devote to R&D and patent statistics (OECD, 2005).

Traditionally, innovation has been perceives as the application of new technologies or application of formal R&D to produce new products or processes to acquire competitive advantage. In this context Tidd et al (2001) view innovation as a challenge to organizations; in essence unless organizations will prepare to renew their product and process on a continuing basis, their survival chances are seriously threaten. Moreover, Hattori and Wycoff (2002) stated that, the challenge now is to live and thrive in the new world, where the call is for more innovation. As result, technological innovations have become one of the most attractive and promising areas of study in management and others even if, radically different methods of approach and absence of a commonly accept and precise terminology. The increasing urgency for this area of study can be trace to a number of environmental developments, including globalization, increase competition, shortens product life cycles, products commoditization and rapidity in technological transfusion (Cardinal, 2001).

2.1.2. Types of innovations

An enterprise can make many types of changes in its methods of work, its use of factors of production and the types of output that improve its productivity or commercial performance. Tidd et al (2005) argue that there are four types of innovation; consequently, the innovator has four pathways to investigate when searching for good ideas: product innovation, process innovation, positioning innovation (repositioning the activities they deliver); and paradigm innovation (where major shifts in thinking cause change). On the other hand, four types of innovations are distinguishes according OECD, (2005)*;* Jaramillo et al (2001): product innovations, process innovations, marketing innovations and organizational innovations. Accordingly, each type of innovation will discuss as follows (OECD, 2005).

Product innovation: is the introduction of a good or service that is new or significantly improve with respect to its characteristics or intend uses. It includes significant improvements in technical specifications, components and materials incorporate software, user friendliness or other functional characteristics. New products are goods & services that differ significantly in their characteristics or intend uses from products previously produce by the firm. Product innovations

related to goods includes: products with significantly reduce energy consumption, and significant changes in products to meet environmental standards and so on.

Process innovation: is the implementation of a new or significantly improved production and/or delivery method for the creation and provision of services. It includes significant changes in the equipment and/or in the procedures or techniques that are employed to deliver services. It intends to decrease unit costs of production or delivery, to increase quality, or to produce or deliver new or significantly improve products. Production methods involve the techniques; equipment and software use to produce goods or services including installation of new or improve manufacturing technology, such as automation equipment, computerized equipment for quality control of production and improve testing equipment for monitoring production.

Marketing innovation: is the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion and pricing that is use of new pricing strategies to market. It's aimed at better addressing customer needs, opening up new markets, or newly positioning a firm's product on the market, and finally intends to increase the firm's sales.

Organizational innovation: Is the implementation of a new organizational method in the firm's business practices, workplace organization or external relations. It intends to increase a firm's performance by reducing administrative costs or transaction costs, improving workplace satisfaction, reducing costs of supplies. In business practices, it involves the implementation of new methods for organizing routines and procedures for conduct of work, implementation of new practices to improve learning and knowledge sharing within the firm and other knowledge to make more easily accessible to others.

2.1.3. The MSEs sector in Ethiopia

2.1.3.1 Overview of MSEs in Ethiopia context

The commonly use criteria at the international level to define MSEs are the number of employees, total net assets, sales and investment level. While employment is the criterion to define, then there exists variation in defining the upper and lower size limit of MSEs. A MSEs has become the focus of attention for development stakeholders interest in market-oriented solutions to poverty and economic development. Hence, European Commission defines SMEs as "enterprises which

employ fewer than 220 persons and which have an annual turnover not exceeding EUR 50 million, and/or an annual balance sheet total not exceeding EUR 43 million", subject to certain additional conditions regarding the ownership structure (EC, 2003a).

However, in Ethiopia SME define as base on hire employee and total asset excluding buildings. The improve federal Micro and Small Enterprises development agency adapt a definition of enterprises taking into consideration number of hired employee's and total asset excluding buildings for industry and services sector and five-year inflation rate and foreign exchange rate taking into consideration:

Micro Enterprise: Those enterprises hired to <5 employees or total asset amount birr up to 100,000 birrs for industry sector and up to 50,000 not greater than for services sector.

Small enterprise: Those enterprises hired 6 up to 30 employee or total asset amount birr 100,000 -1.5 million birr for industry sector and 50,000-500,000 not greater than for services sector. **(**Kirkos Sub City MSE's development agency bureau, 139/2004 E.C Addis Ababa region MSEs Document). Hence, according to officer of Addis Ababa Kirkos Sub City Micro and small enterprise development agency bureau interview, the limit for medium enterprises and definition for large enterprises are not stated so far.

2.1.2.2 Nature and Role of MSEs in the National Economy

MSEs play a crucial role in the Ethiopian economy because of their contributions to GDP and their role in poverty reduction and improvement of income distribution. In the manufacturing sector, which is mainly constitutes by agro-processing activities, MSEs contribute a sizeable share. For instance, in 2013 MSEs contribute 30% of the share of manufacturing industries in the GDP (MoFED, 2013). Production of textile, food and beverage processing, production of leather products including foot wear and manufacturing of wood and wood products account for more than 70% of the MSE establishments in Ethiopia (CSA, 2003). MSEs are also strongly present in the service sector. According to a survey conduct by Ethiopia's Central Statistical Agency (CSA) in 2002/2003, a large concentration of MSEs was found in trade, hotel, and restaurant activities.

Urban unemployment and underemployment are serious social problems in Ethiopia. The labor force is growing much more rapidly than the population as a whole because of Ethiopia's demographic profile, which is characterize by many more young people entering the workforce each year than old people leaving it (FDRE, 2009a). Rural-urban migration is also increasing driven by the dwindling amount of farmland available to the rural population and due to the low

level of agricultural productivity. MSEs give the urban poor, who could not find jobs in the formal sector, the opportunity to take part in some gainful activities, and expand their alternatives to support their families and contribute to national economic development. Furthermore, the MSE sector provides the ideal breeding ground for innovative entrepreneurs in Ethiopia who could play roles in the development process of the country.

The MSE sector in Ethiopia is dominate by informal-sector enterprises. There is a wide range of estimates of the informal sector in Ethiopia. Data obtain from different sources give different figures on the share of the sector in GDP and employment. This may have result from the various approaches follow in measuring informality by government agencies, international organizations and individual researchers. According to a nationwide urban informal-sector survey carries out by the CSA in 2003 the number of persons engage in informal-sector activities was put at 997,380 of which 799,353 (80.15%) were enterprise owners and 198,027 (19.85%) were persons working under employment agreements (CSA, 2003). This put informal-sector employment at 50.6 % of total urban employment during the survey period. The Survey showed that the majority of the work force was engaged in crafts and related trades (51.27%). A survey on urban employment and unemployment by CSA in 2014 show that the number of persons engage in informal-sector activities in Ethiopia has increased by 406,322 over a period of 11 years and reached 1,403,702. However, the percentage share of urban informal-sector employment in total urban employment fell down to 24.9%. (CSA, 2014). Some government documents and reports by international organizations put the figure for informal-sector activity in urban Ethiopia at a much higher level. For instance, in the National Employment Policy and Strategy of Ethiopia it is indicate that the informal sector on average accounts for 71% of urban employment in Ethiopia (FDRE, 2009a). Similarly, the World Bank reports that the informal sector is the fastest growing part of the private sector in the country. According to the World Bank's report between 1999 and 2005, informal employment grew by 144% compared to 16% in the formal sector (World Bank, 2009).

There is a range of different degrees of formality in terms of different characteristics such as nature of registration, payment of taxes, management structure, contractual arrangements with employees, and market orientation. Therefore, the more appropriate conceptualization of the informal sector is to look at it as a continuum, from formal to informal, where different activities and actors along the continuum occupy different locations (De Beer et al., 2013; Kraemer-Mbula, 2016; ILO, 2002; Steel & Snodgrass, 2008). In Ethiopia, there are a number of informal-sector

MSEs which sometimes work for formal enterprises under sub-contracts. For instance, footwear manufacturers in the informal sector produce well-known brands of shoes through sub-contract agreements with medium- and large-scale shoe factories. Similarly, many traditional weavers in the informal sector produce fabrics to fashion designers who operate in the formal sector. The fashion designers then market the final products under their own trademarks. Many of the MSEs also have relations with formal sector input suppliers, service providers and wholesalers and retailers of final products. Furthermore, some entities that are register by lower levels of government have many of the features of informal-sector operators (Duki, 2006; Jeffrey, 2014).

Particularly, the five-year growth and transformation plan will give particular attention to the expansion and strengthening of micro and small enterprise. The sector is believes to be the major sources of employment and income generation for a wider group of society. The major objective of this program, which is creating and promoting MSE's in urban areas foresee to reduce urban unemployment rate. According to ministry of works and urban development (MoWUD), total populations of 176,543 MSE's were established in 2009/10 employing 666,192 people. The number of established and total employment created went up 141.6 and 25.6 percent, respectively, compared to a year ago. In 2008/9 73,062 MSE's is created 530,417 numbers of employments and in 2009/10 176,543 was 666,192 numbers of employments. Regarding regional distribution, about 48.6 percent of total MSE's were locate in Tigray, follow by Amhara (31.1%), Oromia (9%), Harari (5.4%) and Addis Ababa (3.4%). (NBE Annual report 2009/10:11-12)

2.1.2.3 MSEs Government policies

The growth and competitiveness of MSEs is an important component of Ethiopia's development policies and strategies. Over the years, a number of policy measures have been taken to enhance the capacities of MSEs. These include tax relief; access to land, buildings and public utilities; improve access to credit facilities; counseling services; and income-generating projects (FDRE, 1996, 2009b; IEG, 1966). The first government strategy dedicate to advance MSE growth in Ethiopia was the federal MSE Development Strategy adopted in 1997 (FDRE, 1997), along with a set of sub-national strategies for the regions. The primary objective of the MSE Development Strategy was to create an enabling environment for MSE growth. The focus areas of the Strategy include: encouraging exploitation of local raw materials; correcting the preferential treatment according to bigger enterprises; export promotion; the creation of long-term jobs through skill upgrading programs; and strengthening the use of appropriate modern technologies. The Strategy

support networking of small and fragment enterprises within sectors, regions, or other localities. In 2011, the government revises the MSE Strategy, placing emphasis on enhancing the competitiveness of MSEs, ensuring continues rural development via sustainable growth of MSEs, and making the MSE sector a foundation for industrial development. The revised Strategy defines the role of technical and vocational education and training institutes in skills development and technology sourcing for MSEs (FDRE, 2011).

The First Growth and Transformation Plan of the country, which was implements during the period 2010/11-2014/2015, brought some changes in the MSE sector through skills development and promotion of entrepreneurship (MoFED, 2010). The Second Growth and Transformation Plan (GTP II), which is currently under implementation (2015/16-2019/20), points to the critical role of MSEs in employment generation, promotion of entrepreneurship, and broadening the base for value addition in the domestic private sector (NPC, 2015). The Country's Industrial Development Strategy and Science, Technology and Innovation Policy also stress the need for strengthening MSEs to enhance their role in the industrial development process (FDRE, 2002; 2012).

The government has established several organizations with the purpose of supporting the development of MSEs, such as the Handicrafts and Small-Scale Industries Development Agency, the Federal Micro and Small Enterprise Development Agency (FEMSEDA), and Regional Micro and Small Enterprise Development Agencies (REMSEDAs). In addition, a number of grassroots NGOs support activities that promote and develop MSEs. National development agencies and international organizations are also actively involved in the provision of basic business skills training to MSE operators (Debela, 2015; UNDP, 2013). To advance entrepreneurs' access to credit for start-up and operation capital, some donors also assist in the establishment and operation of loan guarantee schemes

2.1.4 Obstacles to innovation

One of the several different approaches to innovation concentrates on the main barriers, that is, obstacles to innovation usually as perceived by the top managers of the firms. This approach is sometimes extends to include factors motivating innovation, that is, facilitators. The aim of the research on barriers is initially to find out about their nature, origin, and importance. It attempts then to identify their point of impact in the innovation process and to measure their effects or consequences.

The measurement of effects is the really difficult part. Barriers can be classifies in various ways, a usual one differentiates between external to the firm or exogenous and internal or endogenous ones (Piatier, 1984). External can be further subdivides into supply, demand, and environment relate. Supply barriers include difficulties in obtaining technological information, raw materials, and finance. Demand barriers have to do with customer needs, their perception of the risk of innovation, and domestic or foreign market limitations. Environmental ones include various government regulations, antitrust measures, and policy actions. Internal barriers can be further subdivides into resource related, for example, lack of internal funds, technical expertise or management time, culture and systems related, for example, out-of-date accountancy systems (Rush & Bessant, 1992), and human nature related, for example, attitude of top manager to risk or employee resistance to innovation.

Barriers may act on one or more points of the innovation process. If this process is visualizes as simplifies linear sequence of stages from the adoption of innovation through implementation, the effect of a barrier is probably higher in one stage rather than another. For example, lack of finance will probably have a greater effect on the implementation stage. The assumption behind the barriers approach is that once inhibitors of innovation are identified, their effect is understood and action is taken to eliminate them, then the natural flow of innovation will be re-established. Innovation, however, demands motivation, extraordinary effort and risk acceptance to proceed (Tidd, Bessant, & Pavitt, 2005).

Barriers may even act as innovation stimulants in some cases rather than inhibitors. Successful innovation has been associates with subsequent growth and therefore performance of the firm (Freeman, 1982). It is expect then that barriers to innovation will also affect negatively the economic performance of a firm. The reservation for their possible positive effect on the success of innovation in some cases makes, however, the direction of association between barriers and performance inconclusive. Small and Medium Enterprises (SME's), even in industrializes countries, are expect to face relatively more barriers to innovation than large firms due to inadequate internal resources and expertise. This is why more emphasis has been given to SMEs in studying their barriers to innovation. SME's need, therefore, to obtain technology and resources from external sources through strategic networks and as a consequence the interactive character of innovation in their case is even more intense than in large firms (Rothwell &

Dodgson, 1991). It will assume that the higher the importance attaches to barriers, the higher the networking propensity. In less develops countries, MSE's face, apart from the above-mention problems, the inadequate technological and policy infrastructure. Studies on barriers to innovation in such contexts are relatively rare. There are, however some studies on barriers to growth (Levy, 1993) and technology development (Lall, Barba-Navaretti, &Wignaraja, 1994) which are of some relevance. Barañano (2005) reveals two barriers to innovation when he conducts a study on five Portuguese SMEs. The barriers are the lack of qualifies human resources and a huge absence of external communication between the knowledge generators (Universities and Investigation Institutes). Fernandes, Noronha and Nicolas (2002), conducted a study that relate the localization and innovation dynamic of SMEs in Portugal.

The main barriers acknowledges were the structure of the Portuguese entrepreneurial, the low formal investigation due to paucity on human and financial resources. Cardoso, Lima and Costa (2004), promote a study on organizational barriers to the introduction of new technologies. The results report in that study show that the leading opposition to new technologies is structural in nature. So, innovation faces barriers not only inside but outside the organization, in others words, the cost structure and also the consumers. The observation of the Portuguese business community in order to understand the longevity of companies allowed to establish the following barriers to innovation: (1) the high economic cost and risk associate with innovation; (2) lack of funding; (3) organizational rigidity; (4) lack of skilled human resources; (5) lack of market information and technology; (6) government regulation and; (7) weak capacity to approach the client, as well as lack of cooperation with centers of learning (Vieira, 2007). Madrid-Guijarro, Garcia, and Auken (2009) study the barriers to innovation face by Spanish SMEs. These are: (1) the external environment; (2) human resources; (3) risk and; (4) the financial position. The authors also conclude that the cost of innovation affects more Small and Medium-sized Enterprises, and that different barriers promote different impacts on different types of innovation. Also referring to the Spanish reality, Segarra-Blasco, Garcia-Quevedo and Teruel-Carrizosa (2008) present the barriers to innovation in Catalonia. The barriers to innovation identifies are: (1) cost barriers; (2) knowledge barriers and; (3) market barriers. With regards to cost barriers are present the high cost of innovation, and the lack of internal and external funds. The knowledge barriers are lack of qualifies staff, low information on technology, poor information about markets, and difficulty in

finding partners. Finally, markets barriers cite are the market dominance by the incumbent, the uncertainty of demand, and lack of demand for innovation.

The UK companies face three main barriers to innovation: (1) the time of development of innovation; (2) risk aversion and; (3) poor market knowledge (Tovstiga & Birschall, 2007). The German reality shows as being the more frequent barriers: (1) low budget; (2) difficulty in recruiting adequate human resources; (3) bureaucracy and (4) poor cooperation between enterprises (Tiwari &Buse, 2007). Buse, Tiwari and Herstatt (2010) also emphasize the lack of the target market, bureaucratic constraints, and the inability to find or decide on the better partner for strategic cooperation. A study carried over SMEs in Cyprus show the following conclusions: the internal most significant barriers are: (1) lack of time; (2) the inadequacy of R&D activities; (3) the design and testing within the company and also; (4) inadequate financial resources (Hadjimanolis, 1999). The author also identifies the more expressive external barriers to innovation: (1) the ease of copying the innovation; (2) government bureaucracy; (3) lack of government support; (4) lack of qualifies human resources policies and; (5) bank lending.

Demirbas (2010) conduct a study on barriers to innovation in Turkey and reach some conclusions. The entrepreneurs who are innovative are those with greater perception of barriers to innovation. The results show as barriers to innovation in Turkey: (1) lack of state policies to support technology and R&D activities; (2) the negative impact of the economy in the level of investment; (3) the high cost of innovation; (4) lack of appropriate means of financing and; (5) lack of qualifies personnel.

Necadova and Scholleová (2011) identifies as barriers to innovation in the Czech Republic the items describe: (1) high cost; (2) lack of specialists; (3) extremely long payback period of investment; (4) equipment technology; (5) standards and legislation; (6) lack of capital; (7) lack of consumer response; (8) resistance to change; (9) the fear of risk; (10) ignorance of the market and; (11) the infrastructure of the business. According to Comtesse, Hodgkinson and Krug (2002), the Swiss business sector faces the following barriers to innovation. The cultural levels are: (1) risk aversion; (2) public complacency; (3) non-recognition of high value innovation; (4) provincialism and; (5) closed networks. The educational levels are: (1) the inability of framework tools for innovation in education; (2) limited human capital; (3) the absence of functional models and; (4) lack of entrepreneurial mindset. At the political level: (1) poor access to financing; (2)

legal barriers; (3) insufficient political vision and growth; (4) underutilized infrastructure and intellectual capital and; (5) too many restrictions on the innovation.

In France, as showed by Galia and Legros (2004), the Community Innovation Survey 2 point out nine innovation barriers. Namely, (1) the high cost of innovation; (2) the nonexistence of appropriate sources of funding; (3) the internal resistance to change in firms; (4) too much relevance attribute to economic risk; (5) lack of qualify personnel; (6) insufficient information over technology; (7) low information about the markets; (8) the level of legislation, regulations and standards, and; (9) the lack of commitment of the customer with new products.

2.2 Empirical review

The survey study was examine barriers to innovation among a sample of 88 Iranian manufacturing SMEs. In-depth study of eleventh barriers to innovation (governmental regulations, lack of information on market & technology, lack of qualify personal, availability of finance, cost of finance, too high direct innovation costs, excessive perceived economic risk, international regulations, and uncertain demand dominate by establish enterprises) were done through distributing questionnaire. The study identifies reasons SMEs were not introducing innovation; 55.8% due to factor constraining and market condition was 29.4%. Finding also revealed that the economic factors such as excessive economic risk, lack of finance & high cost of innovation are significant impeding propensity of MSEs innovation. Similarly, lack of customer responsiveness, lack of qualifies personnel and lack of resources to develop and commercialize new product viewed as other important constraints to innovation. Moreover, the study show that the most significant barriers are associate with costs, whereas the least significant are associate with lag of information and also the survey results show that Iranian MSEs aren't collaborating with universities & higher education institutions; they don't see university as a main source of information (Aminreza et al., 2011).

On the other hand, study was conduct by Silva et al., (2007) to identify the barriers to innovation that influence the innovation capability of Portuguese industrial firms based on information from database obtain through the Community Innovation Survey II. Questionnaire was administer to 819 firms, of those answer the questionnaire, 470 carried technological innovations during the period of 1995-1997. From the sample of 819 firms, 298 are innovate product or process. The high cost of innovation, lack of financing, lack of skilled personnel, high economic risk,

organizational rigidities, government regulations, lack of customers‟ responsiveness, lack of technological and lack of market information are factors includes under the study. The study revealed that high cost of innovation; lack of financing and lack of skill personnel are the most important obstacles to innovation respectively and lack of information on market are the least factors hindering innovations of industrial firms. Logistic regression will perform in order to identify the significant restraining factors of entrepreneurial innovative capability.

Similarly, the study was conduct by Lim and Shyamala, (2007) based on national Survey of Innovation 2000-2001 data to investigate the obstacles to innovation faced by Malaysian manufacturing firms during the process of innovation. Innovation obstacle will evaluate by 671 firms (279 innovators and 392 non-innovators). The information was obtain on the relevance of each of nine obstacle including cost of innovation, economic risks, lack of sources of finance, lack of information on markets, lack of information on technology, lack of skilled personnel, lack of customers response, legislation & regulation and organizational rigidities are analyzed using descriptive statistics. The analysis explores the differences between firms by industry type and firm size. The results show that among all obstacles, economic relate factor appear to be the most important and also the ranking of obstacle by innovators and non-innovators are more or less similar. However, the level of importance of obstacles is different for innovator and non-innovator firms. Innovator firms are more likely face high cost of innovation and information relate obstacles to innovation and non-innovator firms face more likely finance, risk and man power related are more important obstacles to innovation. Furthermore, non-innovators firms face different set of obstacles at different intensity from innovators.

Likewise, the study conduct in Malaysia food processing industry in 2010 identified some barriers inhabiting innovation activities. The study was conduct using quantitative methodology with the help of survey questionnaires to collect information from SME owners and/or manager. Set of questionnaires will mail to 500 MSE food processing companies in 2010. The study identifies four most important factors: of this economic risk and cost barriers are main factors which inhabiting innovation; and government and market barriers are the second most important barriers to innovation. In addition, ICT and unskilled staff; and no gain and partnership are factors identifies as barriers but low influence on innovation (Mohd and Syed, 2010).

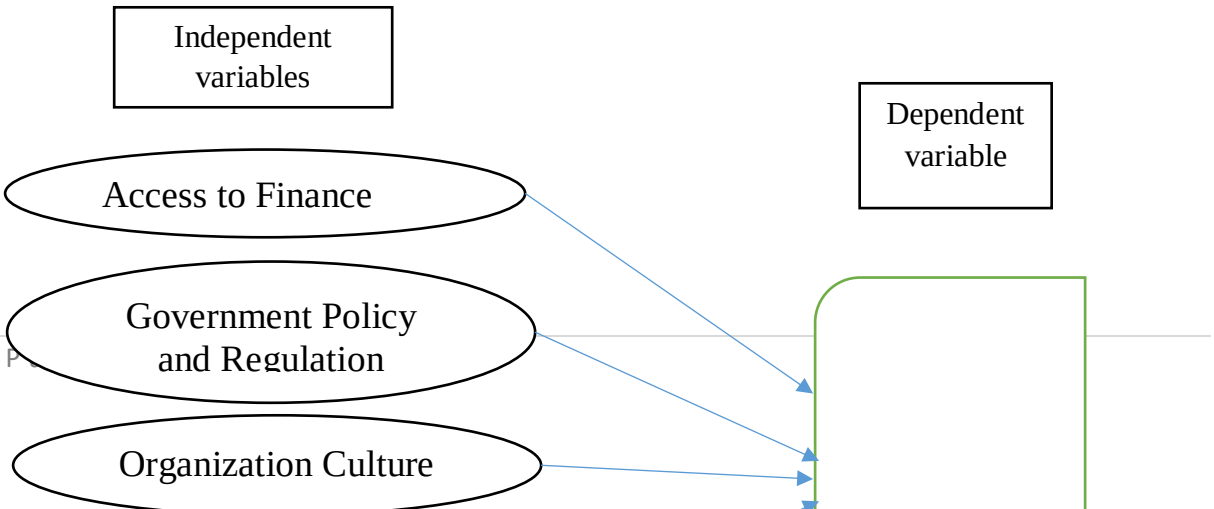
An empirical study of Mulu (2009), was conduct to examine entrepreneur's behavior and resources availability to the enterprises as a major determinant of innovativeness and its impact on firm growth, bases on a survey conduct in 2003 by the EDRI on 1000 microenterprises with 15 and fewer workers. The survey was done in six select major town including Addis Ababa, **Ethiopia**. A total sample of 974 enterprises was interview. However, firms own by female and old entrepreneurs are less likely to get involve in innovation. In an extended model of firm growth determinants that include innovation indicators, the study found strong evidence that innovators grow faster than non-innovators. In addition to innovation, firm growth is also affect by the firm size, age, access to finance, sector, and owner character factors. Even though, Mulu's study revealed that firm size significantly affects microenterprises innovation, this study incorporates additionally variables like GPR, LTMI, IRD, HCI, OC, LSP, LF and LC to study factors obstacle MSEs technological innovation and comparing obstacle at industry and specific level by taking only Addis Ababa City Administration Kirkos sub cities.

2.3 Conceptual Frame Work

The various policies and strategies adopt by the government have fail to bring the expect growth impacts on the MSE's sector. The initiatives by the government and other development agencies have also turn out to be short-term interventions with no provisions or mechanisms for sustainability and scaling up. They are unable to utilize their innovative potential, due to a number of internal and external factors which put restrictions on their activities.

These factors, which mainly relate to the characteristics of the enterprises, individual entrepreneur characteristics, the business environment, and social or relational factors.

The conceptual frame work indicates the relationship between barriers of innovation of micro and small sized enterprises and innovations. This framework was develop from the study of Belete(2018),Aminreza et al.,(2011), Silva et al.,(2007), and Lim and Shyamala(2007) .



Source: Own conceptual framework based on the literature review

Figure 2.1: Conceptual Framework

2.4 Hypothesis of the study

Based on the above reviewed literature, this study hypothesizes as follows:

H1: Access to Finance positive influence on Innovational Capability

H2: Government policy and Regulation Positive influence on Innovational Capability

H3: Organization Culture Negative Influence on Innovational Capability

H4: Skill Person/Human Capital Positive influence on Innovational Capability

H5: Technology Positive influence on Innovational Capability

CHAPTER THREE

REASERCH DESIGN AND METHODOLOGY

This section presents the methodologies employed on the study including the description of the study area, research design, research approach, target population, sample size, sampling technique, source of data, data collection method, Data analysis and interpretation method and it ends with ethical considerations.

3.1 Research Design

According to Creswell, 2009 there are three common approaches to business and social research namely quantitative, qualitative and mixed approach. In this study both qualitative and quantitative research approaches are employed. The two basic methodological approaches to which different studies might naturally lend themselves are the qualitative and the quantitative methods. Whilst qualitative research is more descriptive, quantitative research more often draws inferences based on statistical procedures and often makes use of graphs and figures in its analysis (Ghauri and Grönhaug, 2005).

Both Descriptive and explanatory research study is used. The major purpose of descriptive research is description of the state of affairs as it exists at present. Then this study describes and critically assesses the factors affecting the innovation capability of MSEs in Addis Ababa City Administration on Kirkos Sub City. The study employed explanatory research design in that the relationship between variables is correlated with an aim of estimating the integrated influence of the factors on innovation capability.

3.2 Research Approach

Basically, there are three types of research approaches; the first one is Qualitative method which involves studies that do not attempt to quantify their results through statistical summary or analysis. In qualitative research, data are often in the form of descriptions not in numbers. The second one is Quantitative method, which engages in systematic and scientific investigation of quantitative properties and phenomenon and their relationship. The objective of quantitative research is to develop and employee mathematical models, theories and hypothesis pertaining to natural phenomena. The process of measurement is central to quantitative research because it provides the fundamental connection between empirical observation and mathematical expression

of an attribute. The last one is mixed approach consisted of both qualitative and quantitative approach (Abiy et al., 2009).

This study employed quantitative method because, Using the quantitative inferential method helps to determine the relationship between two or more variables, i.e., the independent variables of 5 tools (access to finance, Government Policy and Regulation, Organization Culture, Skilled Person/Human Capital and Technology) and the dependent variable (Innovational Capability).

3.3 Study population

Information gathered from the firm or enterprises provides the opportunity to assess the perceptions of enterprise owners or managers or employees toward challenges to technological innovation. To finalize the research, data was collected from each owner and/or managers and/or employees of MSEs firms from Addis Ababa City Administration Kirkos sub city. The reasons for owners and/or managers of each MSEs were chosen as suitable candidates for the questionnaire was the owners or managers make most of the decisions with regard to the MSEs. Moreover, the questionnaires were distributed among the managers, because previous studies reported that managers' perception significantly impacted enterprises innovation climate (Storey, 2000; Lefebvre et al, 1997) as cited in Aminrezaet al.,(2011).

In addition to data gathered by using survey from owners and/or managers, interview was conducted with 5 people working in facilitating manufacturing and construction sectors work from Addis Ababa City Administration micro and small enterprise office Kirkos sub city, Toria Soap Detergent Industries. Both in micro and small enterprise there is two categories in Ethiopia context which are industry sector and service giving sector. this study focuses on industry sectors which establish from 2000 EC -2013 EC in Addis Ababa Kirkos Sub City and functional right now. Industry sector also divided into manufacturing sector and construction sector.

In this study the target populations are micro and small sized enterprises who participate in industry in Addis Ababa Kirkos Sub City. The total MSE's who participate industry sector which include into Manufacturing (eg. woodwork, metal work) are 901 and construction are 599 and totally 1500.

3.4 Sampling Technique

The sampling technique of this study is stratified sampling technique. Population stratified by class of business and size of the enterprise small scale construction, micro sized construction, small sized industry, micro sized industry and other manufacturing industries (other than wood and metal such as medical device manufacturing, soap manufacturing, food processing and textile) which are very common places where innovative activities occur.

3.5. Sample size determination

The sampling size for the study will be calculated using Yamane (1967) formula. Yamane (1967) provides a simplified formula to calculate sample sizes. This formula was used to calculate the sample sizes. A 95% confidence level and P =0 .5 which is Percentage of population picking a choice, expressed as decimal

$$.n = \frac{N}{1+Ne^2} \quad n = \frac{1500}{1+1500(.05^2)} \qquad n = 316$$

Where: n= Sample size required

N=Number of people in the population (total population) =1500

P=Estimated variance in population, as decimal (0.5 for 50-50 or unknown)

e=Precision desired (5%)

As per the above computation, out of the total 1500 MSEs population, 316 were selected as a sample size. The total populations were **1500,** that is approximately 630 for micro and **870** for small enterprises according to data gathered from Kirkos sub cities in Addis Ababa, respectively. All sample frames were inserted to computer by assigning serial number for each enterprise in the frame. Finally, MSEs from Addis Ababa Kirkos sub cities are **randomly selected** in line with their sectors to fill the questionnaires. Then for interview purpose 5 owners of MSEs selected. The respondent owners were selected using stratified sampling techniques.

3.6 Data Source

As the aim of this study is to assess the Factory effect affect Innovational Capability, not by only primary data was collected from Manager, Owner and Employees of the Enterprise. There are also secondary sources used to collect data.

3.7 Data Collection Instruments

A structured questionnaire was used for gathering data in this study. The rational is the method is easy to standardize and produce results that are easy to summarize, compare and generalize. It also contributes to reliability by promoting greater consistency; since every respondent is asked the same questions.

The researcher developed Questionnaire for measuring the variables and it is designed in a five points Likert scale measurement for both the independent and dependent variables. The variables were measured by using Likert scale with five response categories that stretch from strongly disagree to strongly agree. The researcher used the Likert scale because it is easy to prepare and interpret and also simple for respondents to give response.

3.8 Method of Data Analysis

Analysis of data in this study was done by using descriptive statistics tools like frequency, mean and standard deviation and inferential statistics (correlation and Multiple linear regression analysis). Personal information of the users was analyzed by using percentage, frequency and cumulative percentage. Statistical techniques which include mean values and standard deviation were computed for each variable of the study. The statistical method of Pearson Correlation was also used to determine the existence of any relationship between the independent variables and the dependent variable. Additionally, multiple linear regression analysis was conducted to examine the effect of the independent variables on the dependent variable. To analyze the quantitative data, the researcher executed SPSS software.

3.9. Data Quality Assurance

To make sure whether collected data are correct, the necessary activities, including using appropriate instructions and instruments by reviewing previous works on the same area.

3.9.1. Reliability Analysis

Reliability was tested using the Cronbach coefficient alpha, using 5 SMEs managers or owners pilot test, to pretest on the designed questionnaires. According to the stability coefficient' Cronbach's Alpha', if the coefficient is < 0.60, the consistency and internal stability is considered weak, if the coefficient > 0.60 < 0.80, it is considered accepted, if the coefficient is varies between (0.80 - 0.85), it is good and if coefficient is >0.85 to 1, it is considered excellent. So, if

the coefficient is >0.70, this means high credibility in the answers of the investigated subjects (Sekaran, 1992) as cited in Sayed (2011).

Table 3.1: Reliability analysis for each variable

Variable	Sub items	No of items	Value of Alpha coefficient
Government policy and Regulation	G1-G9	9	.844
Access to finance	F1-F8	8	.837
Organizational culture	OC1-OC9	9	.807
Skilled personal	SP1-SP6	6	.788
Technology	T1-T7	7	.847
Innovation In MSEs	IN1-IN11	11	.754
Total		50	.922

Sources: Own Survey, 2023

3.9.2. Validity Analysis

The idea of validity to questionnaire refers to the steps taken by the researcher to ensure clarity, wording and ordering of the questions. One measure of validity as described by McBurney and White (2007) is face validity. They stated that "face validity is researchers attempt to support the interpretation of the measurement and its connection to the construct will seek professional judgment that there is a plausible connection between the surface features of the measure's content and the constructs as theoretically defined." So, before collecting the data, the researcher gave the questionnaire for two SMSs manger to review the items of the questionnaire and interview questions and assess whether the items were suitable for the purpose of the study. After that, the questionnaire and interview questions were revised based on the comments and suggestions given by the Manager or Owner's regarding the use of some words and the structure of some statements. Thus, the questionnaire was translated into Amharic.

3.10 Study variables

In this study, many variables were identified. The variables are Government policy and regulation, Finance, technology, organizational culture, Skilled personal and innovation in MSEs.

3.10.1 Independent variables

In this study, the independent variables are (Government policy and regulation, Finance, technology, organizational culture, Skilled personal) are the barriers of innovation in micro and small scale. Each independent variable extracted from obstacles of innovation from the literature review and also the established relationship of these independent variables with innovation capability of MSEs.

3.10.2 Dependent variable

The innovation capability of micro and small-scale enterprises is the dependent variable.

3.11 Model Specification

The aim of this study is to examine factors influencing innovative performance of micro and small scaled enterprises. Model is on the barriers of innovation in micro and small enterprises Then, Multiple regression analysis, analysis of ANOVA and Likert Scale were the various tools used in the study. In multiple regressions, the aim is to examine the nature of the relationship between a given dependent variable and two or more independent variables. In multiple regressions, the model describing the relationship between the dependent variable and a set of independent variable $x_1, x_2 \ldots\ldots\ldots\ldots\ldots x_n$ can be expressed as:

$$Yi = b_0 + b_1X_1 + b2X_2 + \cdots \ldots \ldots . + B_kX_{ik} + ei \text{,,,,,,,,,,,,,,,,,,,,,,,,,,,,}(1)$$

(Dawodu & Osondu, 2013)

Accordingly, the estimated models used in this study were modified and presented as follow:

$$\boldsymbol{Y = b_0 + b_1x_1 + b_2x_2 + \ldots b_nx_n + e}$$

Where, Y= Dependent variable $b_0, b_1, b_2 \ldots b_n$= coefficients

$x_1, x_2, \ldots x_n$= Independent Variable e= error terms

3.12 Ethical Considerations

Confidentiality and privacy are some of the most corner stone of field research activities in order to get relevant and appropriate data. The researcher assured the purpose of the research paper and confidentiality of any information gathered through questionnaire on the introductory part of the paper. During data gathering some respondents didn't show willingness to respond to the questionnaire but, the researcher approached and explained the purpose and assured the confidentiality and finally they were positive to give response.

CHAPTER FOUR

RESULT AND DISCUSION

4.1 Response Rate

This chapter is considered as the most important part of the research, as it presents the collected data that were ascertained through questionnaires to be analyzed by the SPSS system, with an explanation of the results and discussion by comparing it with the results of previous studies.

The study is intended to describe factors negatively affecting MSEs innovation by taking 316 micro and small-scale enterprises located in Addis Ababa City Administration Kirkos Sub City. The previous chapter was dealt with a detailed methodology, which shows the research methods, materials and procedures, method of data collection and analysis. Whereas, this chapter present the analysis and discussion of data collected through survey method. Additionally, the research questions and objectives will be achieved in this chapter accordingly.

The result of survey study was analyzed using SPSS version 20, by using descriptive and inferential statistics like frequency, percentage, and mean, mode, cross tabulation, and correlation analysis. Five Likert scale was used to gather data, that is importance of barrier for MSEs Innovation expressed as strongly disagree - **1**, Disagree-**2**, Nutral-**3**, Agree-**4** and Strongly Disagree- 5.

4.2. Demographic Profile of Respondents

This Section attempts to show overall demographic characteristics of respondents for this research Enterprises were classified based on Micro and Small in line with the framework given by federal micro and small enterprises (MSEs).

The variables dealt with in this section include the Gender and age of managers/owner/employee, their level of education, previous business experience, their education back ground and their position.

4.2.1 Gender Composition

MSEs Managers or owners or employees Gender. The exploration looked to set up the gender gathering of the respondents and the discoveries were appeared in table 4.2

Table 4.2*:* Gender composition of the respondents

Variable	Classification of variable	Frequency	Percentage
Gender	Male	**265**	**83.8 %**
	Female	**51**	**16.2 %**

Source: own survey 2023

The study looked to build up the sexual orientation of the respondents and the discoveries and analysis shows that 83.8 % or 265 respondents were male while16.2 % or 51 respondents were female and are provided in the table 4.2.

4.2.2Age Composition

MSEs Managers or owners or employees were asked their age. The exploration looked to set up the age gathering of the respondents and the discoveries were appeared in table 4.3.

Table4. 3: Age Bracket of the Respondents

	Classification of Age	Recurrence	Percentage
Age	<20	15	4.7 %
	21-30	140	44.3 %
	31-40	136	43.1 %
	41-50	17	5.4 %
	>51	8	2.5 %

Source: own survey 2023

This study found out that 4.7 %, or 15 respondents were aged less than 20,44.3%, or 140 respondents between 21-30 years whereas 43.1% or 136 were aged between 31 to 40 years. In addition, 5.4% of the respondents were in the age group of 41-50 years. Moreover, 2.5% or 8 of the respondents were above 51 years. These outcomes propose that, lion's share of the respondents was moderately aged within the Ethiopian youth group which implies that they are energetic, efficient and productive in the economy. In fact, with such a group, an increased output in effectively marketing their MSEs product was expected.

4.2.3 Education Level

MSEs Managers or owners or employees were asked their educational level. The exploration looked to set up the educational level of the respondents and the discoveries were appeared in table 4.4.

Table 4. 4*:* Education background

	Education level	Recurrence	Percentage
Education Background	Primary school	67	21.2 %
	Secondary school	66	20.9 %
	Diploma & degree	162	51.3 %
	Master & above	21	6.6 %

Source: own survey 2023

The study looked to discover the most elevated amount of instruction of the respondents and the discoveries were given in the table 4.4. This analysis shows that, majority of the respondents, 20.9.% or 66 respondents had finished secondary school while51.3% or (162) had attained Diploma or degree qualification. Only, 6.6% or 21 respondents had Master degree or above qualification and the remaining 21.2% or 67 respondents are primary schools. This analysis implies that, all the respondents had formal education with majority of them are at high school level and attained university qualification.

4.2.4 Position of respondents in the enterprise

MSEs Managers or owners or employees were asked their position of respondents. The exploration looked to set up the position of the respondents and the discoveries were appeared in table 4.5.

Table4. 5: position of respondents

	Education level	Recurrence	Percentage
Position in the enterprise	Manager	75	23.7 %
	Owner	198	62.7 %
	Employee	43	13.6 %

Source: own survey 2023

Concerning the position of respondents in the enterprise 23.7 % are managers, 62.8 % are owners and the rest 13.6 % employee, as shown in the table below.

4.2.5 Enterprise description

Table 4. 6: Enterprise Description

Variables	Classification of variables	Frequency	Percentage
Enterprise Established as	Sole ownership	100	31.6 %
	Partnership	140	44.3 %
	In cooperative	76	24.1%
Enterprise scale	Micro	133	42.0 %
	Small	183	58.0 %
Enterprise sector	Manufacturing	134	42.5 %
	Construction	126.1	36.5 %
	Other	55.7	17.5 %
Year of enterprise operated	0-2years	96	30.4 %
	3-5 years	126	39.9 %
	5-7 years	62	19.6 %
	above 7 years	32	10.1 %

Source: own survey 2023

Enterprise established as sole ownership, partnership & cooperative are 32%, 44% &24%, respectively. Regarding enterprise included on the study 42 % are Micro and 58 % are Small. On the other hand, enterprises are engaged on construction, manufacturing and other, 39.9 %, 42.5%and 17.6 %, respectively. Regarding year of operation, enterprises between 0-2 years are 30.4 %, between 3-5 years are 39.9%, 19.6 % are between 5-7 years and 10.1 are above 7 years. Generally, the majority of the respondents considered on study are partnership small-scale enterprise with 3 up to 5 years of operation within metal & woodwork sector.

4.3 Design Analysis of study vs scale of enterprise

The cross tabulation was made between enterprises scale with enterprises sector, scale with their innovation performance, scale with the type of innovation they introduced and finally enterprise scale with reasons, why they didn't introduce or expand innovation.

The results obtained from respondent regarding this issue were presented in the table 4.7.

Table 4. 7: Design Analysis of study vs Scale of Enterprise

		Micro		Small	
		Count	**%**	**Count**	**%**
Enterprise introduce innovation	✓	102	55.6	32	24.1
	x	81.3	44.4	100.7	75.9
Total		183.3	100	132.7	100
If "YES" What type of innovation	**Process innovation**	93.3	50.9	30.7	23.1
	Product innovation	90	49.1	102	76.9
Total		183.3	100	132.7	100
If "NO" reason for not introducing or expanding	**Market condition**	32	47.05	47	47.95
	Factors constraining	36	52.94	51	52.05
	Due to Both reason	0	0	0	0
Total		**68**	**100**	**98**	**100**

Source: own survey (2023)

4.4 Descriptive Statistics

A descriptive analysis is presented through this section, which will demonstrate the perception of the sample and agreement in relation factors affecting innovation. Moreover, each dimension of the factors affecting innovation will be presented in the following section, with its associated statement's mean, standard deviation and relative importance. Subsequently, an explanation into the sample agreement and satisfaction in regards to the different factors and their subsequent statements will be provided later through these factors of innovation. A specific scale was used in

the process of analyzing questionnaire statements, which was divided into five levels that relate to the weights of the questionnaire (Sekaran, 2004).

An obstacle to innovation was studied by various researchers to establish linkage and attempt to show that the barrier to innovation causes a great impact on the performance of Micro and Small enterprises. The following section deals with, presentation and discussion of survey finding on factors affecting innovation regarding the five variables considered in the study.

4.4.1Access to Finance

Access Finance of innovation is the most obvious influencing factor of innovation capability of MSEs as empirical evidence shows. Lack of finance is usually cited factors which adversely affecting MSEs technological innovation (OECD, 2005). The effect of lack of finance on enterprises technological innovation at Micro and small enterprises depict on table 4.8.

Table 4. 8: Effect 1of Access to Finance MSEs innovative performance

No	*Items*	*Frequency*					*Mean*	*ST.D*
		SD	*D*	*N*	*A*	*SA*		
1	Enough funds are available within your enterprise to carryout innovation projects	*175*	*77*	*34*	*26*	*4*	*1.78*	*1.058*
		55.4%	*24.3%*	*10.8%*	*8.2%*	*1.3%*		
2	Enterprise has no access to long term loans from banks to innovation projects	*46*	*15*	*116*	*131*	*8*	*3.22*	*1.082*
		14.6%	*4.7%*	*36.7%*	*41.5%*	*2.5%*		
3	Funds are available from sources outside your enterprise for innovation	*142*	*90*	*60*	*16*	*8*	*1.96*	*1.068*
		44.9%	*28.5%*	*19%*	*5.1%*	*2.5%*		
4	Investors (banks, venture capitalists, etc.) are encouraging innovative firms through financing	*47*	*170*	*65*	*12*	*22*	*2.43*	*1.025*
		14.8%	*53.8%*	*20.7%*	*3.8%*	*6.9%*		
5	Collateral requirements of banks & financial institutions are encouraging innovation	*112*	*158*	*38*	*4*	*4*	*1.89*	*.799*
		35.4%	*50%*	*12%*	*1.3%*	*1.3%*		
6	Enterprise hire or purchase the necessary skill or equipment which is important to innovation	*47*	*4*	*8*	*211*	*46*	*3.79*	*1.171*
		14.8%	*1.3%*	*2.5%*	*66.8%*	*14.6%*		
7	Enterprise has no difficulty in finding cooperation partners for innovation	*146*	*128*	*30*	*12*	*0*	*1.759*	*.811*
		46.2%	*40.5%*	*9.5%*	*3.8%*	*0%*		
8	Enterprise has good cooperation with institutions.	*140*	*156*	*12*	*8*	*0*	*1.698*	*.963*
		44.3%	*49.4%*	*3.8%*	*2.5%*	*0%*		

Average						*2.32*	*0.997*

Source: Own Survey, 2023

The majority of the respondents feel that there is lack of funds available for innovation purpose with in enterprises. As shown above on the table 4.8, the grand mean value for lack of finance is 2.32 implies that it's an important obstacle to MSEs innovation. The 1st Statement which stated that "Enough funds are available within your enterprise to carryout innovation projects" which have a mean of 1.78 which indicate most of the respondents disagree on the issue which means there is no enough funds available within enterprises to carryout innovation projects. The 2nd statement stated that "Enterprise has no access to long term loans from banks to innovation projects" and have a mean value of 3.22. Which indicate most of the respondents agree on the issue. Out of 316 respondents 131(41.5%) agree on the statement, 46(14.6%) dis agree and 116(36.7%) neither agree nor disagree. the 3rd statement "Funds are available from sources outside your enterprise for innovation" and have a mean value of 1.96 which indicate that most of the respondents disagree on the statement. The 4th statement "Investors (banks, venture capitalists, etc.) are encouraging innovative firms through financing" and have a mean value of 2.43 which means that most of the respondents disagree on the statement implies that investors are not encouraging innovative firms through financing. The 5th statements stated that "Collateral requirements of banks & financial institutions are encouraging innovation" and have a mean value of 1.89 which means that most of the respondents disagree on the statement. Indicating that collateral requirements of banks and financial institution are not encouraging innovation. The 6th statement stated that "Enterprise hire or purchase the necessary skill or equipment which is important to innovation" and have a mean value of 3.79 which means most of the respondents agree on the statement. The 7th Statement "Enterprise has no difficulty in finding cooperation partners for innovation" and have a mean value of 1.76 which means most of the respondents disagree indicating that enterprises face difficulty in finding cooperation partner for innovation. The 8th statement stated that "Enterprise has good cooperation with institutions i.e. universities, non - university, and business development service provider regarding innovation" and have a mean value of 1.69 which indicate that most of the respondents disagree on the statement that means enterprises has no good corporation with universities, non-universities and business development enterprises.

Moreover, interview script support response of manager or owner that technological innovation of MSEs is mainly obstacle by lack of finance and finance related problems. And they pointed, by very nature innovation is intangible assets; as a result, anybody could not give money by bearing the risk associated. Finance is the main root of business. As result, enterprises need finance to invest in new equipment and machinery, reach out to new markets and products, and cope with temporary cash flow shortages as well as to develop new technology and expand it. If firms do not have sufficient amount of finance it's impossible to compete with others by engaging in activities which gain competitive advantages. So, due to lack of availability of finance MSEs has shortage of assigning fund for innovation .so far, this resulted on low engagement of MSEs on new technology developments. Particularly, while data gathered from manager or owner, they explained that even they have prototype technological innovation on their hand, however due to lack of finance they are unable to reach to the market. Due to intangibility nature of innovation those financial institution also not ready to make available such loan service for MSEs specific to innovation, thus it affects adversely technology innovation of enterprises.

4.4.2 Technology

The other factors considered as barriers for MSEs to engage in innovation in this study were, technological and market information. Regarding this issue result obtained from survey were presented in the following table 4.9.

Table 4. 9: Effect of technology on MSEs innovative performance

No	*Item*	*Frequency*					*Mean*	*SD*
		SD	*D*	*N*	*A*	*SA*		
1	Has access & utilize up to date technological information	*148*	*117*	*39*	*12*	*0*	*1.739*	*0.825*
		46.8%	*37.1%*	*12.3%*	*3.8%*	*0%*		
2	Enterprise are accessed and utilized up to date technology materials	*41*	*134*	*20*	*117*	*4*	*2.82*	*1.141*
		13%	*42.4%*	*6.3%*	*37%*	*1.3%*		
3	Adequate information technology transfer institutions are available for enterprise	*71*	*68*	*83*	*90*	*4*	*2.741*	*1.164*
		22.5%	*21.5%*	*26.2%*	*28.5%*	*1.3%*		
4	Enterprise easily access & utilize internet services while they need technological innovation information	*55*	*88*	*37*	*132*	*4*	*2.904*	*1.214*
		17.4%	*27.8%*	*11.7%*	*41.8%*	*1.3%*		

5	Enterprise has linkage with technology teaching institutes	*35*	*70*	*22*	*185*	*4*	*3.251*	*1.156*
		11.1%	*22.2%*	*6.9%*	*58.5%*	*1.3%*		
6	Enterprise seek new technology markets to serve and satisfying existing clients	*45*	*110*	*16*	*139*	*6*	*2.915*	*1.201*
		14.2%	*34.8%*	*5.1%*	*44%*	*1.9%*		
7	Enterprise participates in conferences, trade fairs and exhibitions to share technological innovation information	*98*	*75*	*100*	*34*	*9*	*2.36*	*1.118*
		31.2%	*23.7%*	*31.6%*	*10.7%*	*2.8%*		
Average							*2.211*	*1.155*

Source: Own Survey, 2023

As shown above on the table 4.5, the grand mean value for lack of technological & market information 2.211 is implies that it's an important obstacle to MSEs technological innovation. The 1st statement which states "has access & utilization of new technological information (exposure to innovation journals and articles)"which have a mean of 1.739 which indicate most of the respondents disagree on the issue which means they have low access and utilization of new technological information, the 2nd question which states "Enterprise are accessed and utilized up to date technology" Which have a mean value of 2.82 indicate that most of the respondents disagree with this statement which means there low access and utilization of new technological materials. The 3rd question which states that "Adequate information technology transfer institutions are available for enterprise" which have a mean value of 2.74 indicate that most of the respondents disagree with the statement which indicate there is in adequate information technology transfer institutions available for enterprises. The 4th question which states that "Enterprise easily access & utilize internet services while they need technological innovation information" and have a mean value of 2.90 which indicate that almost equal number of respondents agree and disagree on the statement which means it depends on the enterprise. The 5th question which states that "Enterprise has linkage with technology teaching institutes" and have a mean value of *3.25* which shows most of the respondents agree, while the total number of respondents agree and strongly agree on this issue is 189(59.8) and the total number of disagree and strongly dis agree on this issue is 105(33.3%) and the other 22 respondent remain silent or neutral. The 6th question which states that "Enterprise seek new technology markets to serve and satisfying existing clients" and

have mean value of 2.92which indicate most of the respondents disagree on the issue from 316 respondents 155 respondents disagree and 145 agree and the remaining 16 neither agree or disagree. The 7th question which states that "Enterprise participates in conferences, trade fairs and exhibitions to share technological innovation information "and have a mean value of *2.36* which indicate that most of the respondents dis agree on the issue which means that most of the enterprises did not participate in conferences, trade fairs and exhibitions to share technological information Interview scripts admit information is important and base for making innovation. However, MSEs lack important technological information. This is a result of enterprises are not in a position to update themselves by reading new scientific journals and other and absence of the internet service around working place aggravate the problem. Likewise, MSEs has problem on marketing information.

Information about technology and markets can under pin the importance and potential advantage of becoming more innovative (Galia and Legros, 2004). Finding is similar with Jaramillo et al, (2001) and Silva et al, (2007) which identified as barrier for innovation. In addition, Asseffa (1997) confirmed that a problem of information on private sectors even if information is power to every organizations or enterprises. Technological or market information is important for MSEs to cope up in this dynamic environment and to overcome competitive restrain factors. Information technology is crucial because it is the means to develop or modify technological innovation.

Information regarding market or customer needs also a problem for SMEs, hence limited knowledge about users demand with regard to technological innovation might not be effective after they developed or improved new technology as a result those new or significantly improved technologies hasn't needed by markets or potential users. Moreover, to imitate or radically introduce technological innovation, the access for and utilization of up-to-date information and materials are critical for enterprises otherwise; their new technological innovation role is restrained.

4.4.3 Skilled Person

Lack of skilled personnel is usually considered as influencing factor for MSEs innovation as empirical evidences noted. This study also considered lack of skilled personnel to measure influence of innovation performance in micro and small enterprises.

Table 4. 10: Effect of skilled personnel on innovative performance of MSEs

No	*Item*	Frequency					*Mean*	*ST.D*
		SD	*D*	*N*	*A*	*SA*		
1	Enterprise inadequate number of trained personnel for successful innovation projects	*45*	*110*	*16*	*138*	*7*	*2.93*	*1.205*
		14.2%	*34.8%*	*5.1%*	*43.7%*	*2.2%*		
2	Enterprise has individuals with creative and innovative ideas	*96*	*77*	*100*	*34*	*9*	*2.37*	*1.138*
		30.4%	*24.4%*	*31.6%*	*10.8%*	*2.8%*		
3	Enterprise has enough managerial know-how to effectively and efficiently manage innovation processes	*90*	*98*	*90*	*30*	*8*	*2.31*	*1.044*
		28.5%	*31%*	*28.5%*	*9.5%*	*2.5%*		
4	Within enterprise qualified, experienced and technically skilled personnel are available for innovation	*52*	*82*	*30*	*142*	*10*	*2.96*	*1.233*
		16.5%	*25.9%*	*9.5%*	*44.9%*	*3.2%*		
5	Within the market qualified, experienced and technically skilled personnel are available for innovation	*8*	*25*	*10*	*186*	*87*	*4.13*	*0.925*
		2.5%	*7.9%*	*3.2%*	*58.9%*	*27.9%*		
6	Enterprise can access expertise for innovation from other firm and scaling up innovation	*152*	*44*	*19*	*92*	*9*	*2.301*	*1.423*
		48.1%	*13.9%*	*6%*	*29.1%*	*2.8%*		
Average							*2.83*	*1.162*

Source: Own Survey, 2023

MSEs Managers and/or owners and/or employees' response regarding lack of skilled personnel is important obstacle to enterprise innovation or not. The lack of skilled personnel is important influencing factor to MSEs innovation capability were the grand mean value is 2.83 which is good. Moreover, the 1st question states that "enterprises have inadequate number of trained personnel for innovation" and a mean value of 2.93 which indicate that almost equal number of respondents agree and disagree on the statement which means most enterprises lack of trained personnel for innovation. The 2nd question which state that "Enterprise has individuals with creative and innovative ideas" and have a mean value of 2.37 which is most of the respondents disagree on the statement which is there is lack of individual with creative and innovative ideas. The 3rd question which stated that "Enterprise has enough managerial know-how to effectively and efficiently manage innovation processes" and have a mean value of 2.31 which means most of the respondents disagree on the statement which indicating that enterprises have lack of managerial know how to manage innovation process. The 4th question which stated that "Within enterprise qualified, experienced

and technically skilled personnel are available for innovation" and have mean value of 2.96 out of the total 316 respondent's30 neither agree nor disagree (neutral) on this statement. from the remaining 286 respondent's 82(25.9%) disagree on this statement. Which indicate that there is lack of qualified, experience and technically skilled personal are available for innovation. The 5th question stated that "Within the market qualified, experienced and technically skilled personnel are available for innovation" and which have a mean of 4.13 which indicate that most of the respondents agree on the statement. The 6th question stated that "Enterprise can access expertise for innovation from other firm and scaling up innovation" and have a mean value of 2.30 which indicate that most of the respondents disagree on the statement which indicate that there is difficulties to access expertise for innovation from other firm and scaling up innovation. These all six questions are important influencing factors of innovation in micro and small enterprises.

Additionally, interview script indicates, MSEs innovation is highly influenced by lack of skilled personnel as indicated by participants.

4.4.4. Government Policy and Regulation

Firms who operate in a country always regulated under the government of that country, which is why government policy and regulation is considered in this study as a factor that influence for the introduction or expansion of innovative performance in MSEs. Government policy can be seen in two dimensions for the firms to engage in innovation (i.e. it can encourage them to rely on innovation or it can discourage them to innovate new technology). According to Samad (2007) government policy encourage MSEs to move to higher levels and gain competitive advantage. In contrary, the study of Lim and Shyamala (2007) identified as an inhibiting factor. the result obtained from the respondents regarding government policy and regulations were shown on table 4.11, as follows:

Table 4. 11. Effects of government policy and regulation on MSEs innovation capability

No	*Items*	*Frequency*					*Mean*	*ST.D*
		SD	*D*	*N*	*A*	*SA*		
1.	Government strategy is appropriate for enterprise technological innovation	21	53	4	108	130	3.94	*1.333*
		6.6%	16.8%	1.3%	34.2%	41.1%		
2.	Government technological innovation policies are encouraging	44	96	19	115	42	3.12	*1.371*
		13.9%	30.4%	6%	36.4%	13.3%		
3.	Enterprise innovation activities helped through government policy and regulation	10	136	60	62	48	3.1	*1.193*
		3.1%	43.2%	18.9%	19.6%	15.2%		
4.	Regulatory measures ensure financial resources for innovation	*8*	*82*	*7*	*163*	*56*	3.68	*1.127*
		2.5%	*25.9%*	*2.3%*	*51.6%*	*17.7%*		
5.	Enterprise share new technologies experience with the help of government	*22*	*72*	*42*	*154*	*26*	3.36	*1.154*
		6.9%	*22.8%*	*13.3%*	*48.7%*	*8.3%*		
6.	Enterprise has supported through access for doing & expanding innovation by government	*4*	*138*	*36*	*112*	*26*	3.13	*1.090*
		1.3%	*43.7%*	*11.4%*	*35.4%*	*8.2%*		
7.	Enterprises accessed and used government loans service for innovation project activities	*50*	*50*	*40*	*140*	*36*	2.86	*1.418*
		15.8%	*15.8%*	*12.7%*	*44.1%*	*11.3%*		
8.	Government not provides equal support for all enterprise related to innovation.	*29*	*30*	*12*	*195*	*50*	3.80	*1.097*
		9.2%	*9.5%*	*3.8%*	*61.7%*	*15.8%*		
9.	Tax system is modified with the view to promote enterprise technological innovation	*24*	*89*	*30*	*173*	*0*	3.14	*1.149*
		7.6%	*28.2%*	*9.5%*	*54.7%*	*0%*		
Average							3.345	*1.215*

Source: Own Survey, 2023

The above table showed that MSEs manager or owner or employees' responses regarding whether government policy and regulation influencing factor for innovation capability or performance of MSEs or not. The average mean value of government policy and regulation is 3.245 which rated as good.

The 1st statement stated that "Government strategy is appropriate for enterprise technological innovation" and have mean value of 3.94 which indicate that most of the respondents agree with

the statement their implies that there is fair government strategy. The 2nd statement stated that "Government technological innovation policies are encouraging" and have a mean value of 3.12 which indicate that most of the respondents agree that government technological innovation policies are encouraging. The 3rd statement showed that "Enterprise innovation activities helped through government policy and regulation" and have mean value of 3.10 which indicate most of the respondents disagree on the statement about 136(43.2%) respondents disagree. The 4th statement stated that "Regulatory measures ensure financial resources for innovation" and has a mean value of 3.68 which implies that most of the respondents agree that regulatory measures ensure financial resource for innovation. The 5th statement stated that "Enterprise share new technologies experience with the help of government" and has a mean value of 3.36 indicate that most of the respondents agree on the statement. The 6th statement showed that "Enterprise has supported through access for doing & expanding innovation by government" and have a mean value of 3.13 which implies that most of the respondents disagree with the statement. the 7th statement which is "Enterprises accessed and used government loans service for innovation project activities" and have a mean value of 2.86 which implies that most of the respondents disagree on the statement. The 8th statement implies that "Government not provide equal support for all enterprise related to innovation" and have a mean value of 3.80 which means most of the respondents agree with the statement. The 9th statement which is "Tax system is modified with the view to promote enterprise technological innovation" and have mean value of 3.14 implies that almost equal number of respondents agree and dis agree on the statement.

Moreover, interview showed that government policy and regulation is not attractive as such, it lacks consistency in which regulation and strategies are changed from time to time, absence of government R&D funding which help enterprises innovation activities, absence of regulatory measure to encourage innovators, inadequate effort by government to transfer technological know-how, absence of modification of tax system to promote innovation are important obstacles for MSEs innovation.

Similarly, government policies and regulations, is a frequent source of influencing factors to innovation (Poll et al., 1999) and this supported by uncertainty about government policy, and also became a significant barrier to innovation. For organization government policy and regulation has positive and negative effect on firm performance. This is the fact that every organization is governed under the umbrella of state government policy and regulation. As a result, enterprises

innovation performance might be also encouraged or discouraged by policy and regulation of countries government. Having this in mind, MSEs by very nature has a number of problems as a result of size and capability and others factors to engage on technological innovation.

MSEs will engage on innovation for different reasons, may be for maintaining market share & existing customer or else. To do so, their ownership for newly developed technology should be maintained; otherwise they are de motivated to engage on such activities.

4.4.5 Organizational Culture

Organization culture usually cited as factors affecting innovation of micro and small enterprises as literature concerned. Table 4.12, depicts that organization culture effect on micro and small enterprises innovation capability.

Table 4. 12: Effects of organization culture innovation capability of MSEs

No	*Item*	*Frequency*					*Mean*	*ST.D*
		SD	*D*	*N*	*A*	*SA*		
1.	Enterprise believe as any one of the workers could be creative and innovative	*85*	*155*	*43*	*9*	*24*	*2.23*	*1.111*
		26.9%	*49.1%*	*13.6%*	*2.8%*	*7.6%*		
2.	Employees are empowered to come with new ideas in the enterprise	*38*	*14*	*14*	*175*	*75*	*3.88*	*1.218*
		12%	*4.4%*	*4.4%*	*55.5%*	*23.7%*		
3.	Enterprise is aware of constant change environment & innovation as key to this situation	*119*	*131*	*26*	*21*	*19*	*2.10*	*1.160*
		37.7%	*41.5%*	*8.2%*	*6.6*	*6%*		
4.	Enterprise has encouraged synergies of different resources towards innovation	*130*	*129*	*20*	*15*	*22*	*2.02*	*1.168*
		41.1%	*40.8%*	*6.3%*	*4.7%*	*6.9%*		
5.	Enterprise managers or owners play significant role in promoting innovation	*20*	*220*	*62*	*0*	*14*	*2.19*	*.639*
		6.3%	*69.6%*	*19.6%*	*0%*	*4.5%*		
6.	Supervisors spend a good deal of time listening to employees' ideas and support for new ideas development	*40*	*240*	*22*	*0*	*14*	*2.19*	*.639*
		12.7%	*75.9%*	*6.9%*	*0%*	*4.5%*		
7.	Enterprise enables staffs to update with best practice learning	*0*	*0*	*149*	*8*	*159*	*4.12*	*1.024*
		0%	*0%*	*47.2%*	*2.5%*	*50.3%*		

	(benchmarking exercise) related to innovation							
8.	Enterprise see opportunities for innovation where others see problems	*7*	*290*	*0*	*5*	*14*	*2.19*	*0.639*
		2.2%	*91.8%*	*0%*	*1.6%*	*4.4%*		
9.	Enterprise has done closely with regional government, private and non-profit research institutes on innovation issues	*4*	*4*	*0*	*150*	*158*	*4.61*	*0.512*
		1.3%	*1.3%*	*0%*	*47.4%*	*50%*		
Average							*2.837*	0.901

Source: Own Survey, 2023

The above table reveals that MSEs manager or owner or employees' responses regarding whether organization culture obstacle innovation capability or performance of MSEs or not. As it is shown on table 4.8, the mean grand value for organizational culture is 2.837 demonstrate slightly good level of agreement relating to the above statements. Indicates that MSEs organization culture is important barrier to MSEs innovation. Moreover, the 1st question states that "Enterprise believe as any one of the workers could be creative and innovative" and a mean value of *2.23* which indicate that most of the respondents disagree on the statement which means most enterprises did not believe any one of the workers with in the enterprise is creative and innovative. The 2nd question stated that "Employees are empowered to come with new ideas in the enterprise" and have a mean value of 3.88 which means most of the respondents agree on the statement indicating that enterprises empowered employees to come with new ideas. The 3rd question stated that "Enterprise is aware of constant change environment & innovation as key to this situation" and have mean value of 2.10. which means most of the respondent's disagree this statement indicating that enterprises not aware of constant changes environment and innovation. The 4th question stated that "Enterprise has encouraged synergies of different resources towards innovation" and have a mean value of 2.02 which means most of the respondent's disagree on this statement indicating that enterprises have not encouraged synergies of different resources towards innovation. The 5th question stated that "Enterprise managers or owners play significant role in promoting innovation" and have mean value of 2.19. which means most of the respondent disagree on the statement and the is lack of significant role in promoting innovation by managers or owners of the enterprise. The 6th question stated that "Supervisors spend a good deal of time listening to employees' ideas and

support for new ideas development" and have mean value of 2.19 indicating that most of the respondent's disagree on the statement. The 7th question stated that "Enterprise enables staffs to update with best practice learning (benchmarking exercise) related to innovation" and has mean value of 4.12 means most of the respondent's agree on the statement. Which indicate that enterprise enables staffs to update with best practice learning related to innovation. The 8th question stated that "Enterprise see opportunities for innovation where others see problems" and have a mean of 2.19 which indicate that most of the respondent's disagree with this statement.

The 9th question stated that "Enterprise has done closely with regional government, private and non-profit research institutes on innovation issues" and have a mean value of 4.61 which indicate that most of the respondent's agree with this statement.

Even if, MSEs managers or owners responded organization culture as the list important barriers to technological innovation, interview from agency workers confirmed that enterprises organization culture are hindering MSEs innovation performance so far. They noted MSEs has not unified goal which govern the entire member in the enterprises and also miss trusted each other as a result they are not motivated to engage activities related to innovation.

4.4.6 Innovation Capability

Innovation capability has been considered as a key element for the growth of micro and small sized enterprises (MSEs) for a long time. Though this field of research has been subject to numerous studies, the links between the factors that affect innovation within SMEs still need to be clarified and investigated (Leghima, 2014).

Several studies have suggested that there are many factors that lead to innovation, including individual, organizational and environmental factors as well as those related to or are considered to be innovation attributes (Saunière et al. 2012). They have, moreover, underlined the importance of recognizing that most of these factors can influence unevenly the process of innovation, in that they are not of equal strength nor all act in the same direction (Ducaux, 2013).

Table 4. 13: Innovation

No	*Item*	*Frequency*					*Mean*	*SD*
		SD	*D*	*N*	*A*	*SA*		
1.	Innovation Increased range of goods or services	*52*	*124*	*110*	*26*	*4*	*2.40*	*0.899*
		16.6%	*39.2%*	*34.8%*	*8.2%*	*1.2%*		
2.	Innovation Improved quality of goods or services	*182*	*89*	*16*	*17*	*12*	1.73	*1.080*
		57.6%	*28.2%*	*5%*	*5.4%*	*3.8%*		
3.	Improved flexibility of production or service provision	*48*	*100*	*90*	*74*	*4*	2.67	*1.054*
		15.3%	*31.6%*	*28.5%*	*23.4%*	*1.2%*		
4.	Increased the speed of supplying and/or delivering goods or services	*26*	*28*	*42*	*186*	*34*	3.67	*1.053*
		8.2%	*8.9%*	*13.3%*	*58.9%*	*10.7%*		
5.	Reduced labor costs per unit output.	*111*	*116*	*39*	*42*	*8*	2.19	*1.131*
		35.2%	*36.7%*	*12.3%*	*13.3%*	*2.5%*		
6.	Increased capability of production or service provision.	*74*	*34*	*33*	*156*	*19*	3.06	*1.347*
		23.4%	*10.8%*	*10.4%*	*49.4%*	*6%*		
7.	Reduced materials or energy per unit output	*40*	*152*	*108*	*12*	*4*	2.41	*1.262*
		12.7%	*48.2%*	*34.2%*	*3.7%*	*1.2%*		
8.	Reduced environmental impacts	*60*	*81*	*44*	*120*	*11*	2.76	*1.227*
		18.9%	*25.6%*	*13.9%*	*37.9%*	*3.7%*		
9.	Improved health and safety	*15*	*95*	*20*	*100*	*86*	4.14	*0.883*
		4.7%	*30.1%*	*6.3%*	*31.6%*	*27.3%*		
10.	Met requirements of existing clients	*50*	*138*	*40*	*84*	*4*	2.58	*1.117*
		15.8%	*43.7%*	*12.7%*	*26.6%*	*1.2%*		
11.	Innovation Allowed the plant to keep up with its competitors	*30*	*20*	*50*	*186*	*30*	3.67	*1.062*
		9.5%	*6.3%*	*15.8%*	*58.9%*	*9.5%*		
Average							2.84	*1.101*

Source: own survey (2023)

The above table indicates that MSEs manager or owner or employees' responses regarding to innovation. As it is shown on table 4.8, the mean grand value for innovation is 2.84 demonstrate the participants slightly good level of agreement relating to the above statements. Moreover, the

1st statement states that "Innovation Increased range of goods or services" and a mean value of *2.40* which indicate that most of the respondents disagree on the statement. the 2nd statement states that "Innovation Improved quality of goods or services" and mean value of 1.73 which indicate most of the respondents disagree on the statement. The 3rd statement is showed that "Improved flexibility of production or service provision" and have mean value of 2.67 indicate that almost equal number of respondents agree and disagree on the statement. The 4th statement showed that "Increased the speed of supplying and/or delivering goods or services" and has mean value of 3.67 which implies that most of the respondents agree that innovation increased speed of supplying and delivering goods. The 5th statement said that "Reduced labor costs per unit output "and have a mean value of 2.19 which implies that most of the respondents dis agree that innovation reduced labor costs per unit output. The 6th statement said that "Increased capability of production or service provision" and have a mean value of 3.06 which implies almost equal number of respondents agree and dis agree on the statement. The 7th statement said that "Reduced materials or energy per unit output" and have mean value of 2.41 indicating that most of the respondents disagree on that innovation reduced materials or energy per unit output. The 8th statement said that "Reduced environmental impacts" and have mean value of 2.76 implies there is equal number of respondents agree and dis agree on the statement which means equal number of respondents agree and dis agree innovation reduce environmental impacts. The 9thstatement states that "Improved health and safety" and have mean value of 4.14. Which indicate that most of the respondents agree that innovation improved health and safety. The 10th statement states that "Met requirements of existing clients" and have mean value of 2.58 which means most of the respondents disagree on the statement. The 11th statement states that "Innovation Allowed the plant to keep up with its competitors" and have mean value of 3.67 indicating that most of the respondents agree on the statement.

4.5 Correlation between independent variables and dependent variable

Correlation is a statistical tool to determine the strength of relationship between two suitability variables. Therefore, correlation matrix is an interpretation of the correlations is based on a significant of the correlation between two or more variables. The ranges of r value from -1 to +1, which used to describe a direction relationship between two variables. As noted by (Gujarati, 2004), a serious problem for multicollinearity is occurred if the correlation is about 0.8 or larger. i.e. if pair-wise or zero-order correlation coefficient between two repressors is out of the

recommended range of multicollinearity which is -0.8 or 0.8. Among them, minus means the relationship between two variables is negative, and if the greater the absolute value of correlation coefficient, the stronger the relationship. It shows that if one variable becomes bigger and another variable will become to smaller. For plus sign means a positive relationship between two variables, a variable tends to directly become bigger with another variable, or smaller and smaller with this variable (direct relation). When correlation coefficient equal to 0, it means the weakest relationship between two variables. The correlation matrix table is a comparison of needs, requirements, or functions whereby the user identifies a relationship of either mutual benefit, conflict, or no.

Table4. 14: Correlation between independent variables and dependent variable (innovation) and among independent variables

		Innovation	Gov. policy and regulation	Technology	Finance	Organizational culture	Skilled personnel
Innovation	Pearson Sig.	1					
Gov. policy and regulation	Pearson Sig.	.809** .000	1				
Technology	Pearson Sig.	.799** .000	.710** .000	1			
Finance	Pearson Sig.	.407** .000	.286** .000	.388** .000	1		
Organization culture	Pearson Sig.	-.114* .046	-.101 .077	-.025 .655	.040 .481	1	
Skilled personnel	Pearson Sig.	.752** .000	.696** .000	.828** .000	.213** .000	-.063 .271	1

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

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

Source Own survey, 2023

The Pearson correlation coefficient can take a range of values from+1 to -1. Value 0 indicates that there is no association between the two variables. a value greater than 0 indicates a positive association; that is, as the value of one variable increases, so does the value of the other variable. Findings revealed that government policy and regulation was positively and significantly

associated with innovative capability of MSEs (r =0.809, ρ<0.01). Further, the technology and marketing information of the enterprises and significantly correlated to innovative capability (r = 0.799, ρ<0.01) showing that organizational objective and project management competence has a positive correlation with core banking. Finance also correlated with innovative capability (r = 00.407, ρ<0.01). In addition, Skilled person or human capital was positively and significantly correlated with innovative capability of MSEs (r = 0.752 ρ<0.01).on the other hand, organizational culture was negatively and significantly correlated with innovative capability (r = -0.114 ρ<0.05). This implies that government policy and regulation, skilled person, technological and marketing information and access to finance have a strong positive significance with the innovation capability of MSEs.

4.6. Regressions Assumption tests

Before doing multiple regression analysis, it is essential to test assumptions of multiple linear regression analysis Model (Keith, 2006; Pallant, 2005). Therefore, each assumption result discussed below:

4.6.1 Normality test

Normality tests are used to determine whether a data set is well-modeled by a normal distribution or not, or to compute how likely an underlying random variable is to be normally distributed (Gujarati, 2009). Therefore, the researcher was used Histogram methods of testing the normality of the data. According to Fidell (2001),if the residuals are normally distributed around its mean of zero.

Table 15: Residuals Statistics on Normality Test

Residuals Statistics

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	13.6385	24.6000	19.0949	2.25616	316
Residual	-5.55886	6.35920	.00000	1.71430	316
Std. Predicted Value	-2.418	2.440	.000	1.000	316
Std. Residual	-3.217	3.680	.000	.992	316

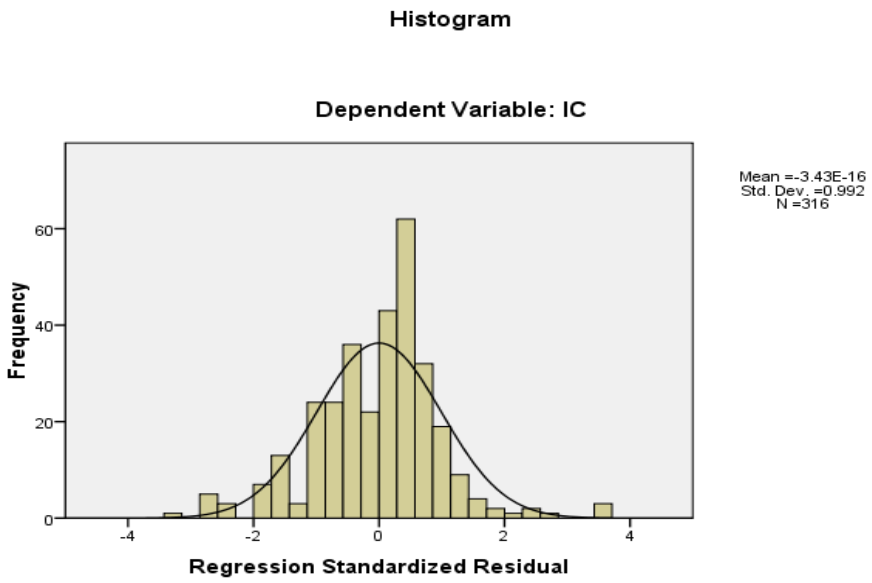
a. Dependent Variable: IC

Source: survey result, 2023

The histogram should be a bell shaped and regression standardized residual plotted between 3.3 and –3.3. So that, from figure 4.2 below, it can be noted that the data conforms to the normality

assumption (Stevens, 2009). As we can understand from the histogram and p-p plot depicted below, the residuals seem normally distributed and the residuals are distributed with a mean of 0 and standard deviation of 0.992 which is approximately 1. Thus, the model fulfills the assumption of being normally distributed. Moreover, in the normal probability plot is expected that our points will lie in a reasonably straight diagonal line from bottom left to top right which can be confirmed from p-p plot depicted below. This would suggest no major deviations from normality.

Figure 4.2: Normality test Histogram

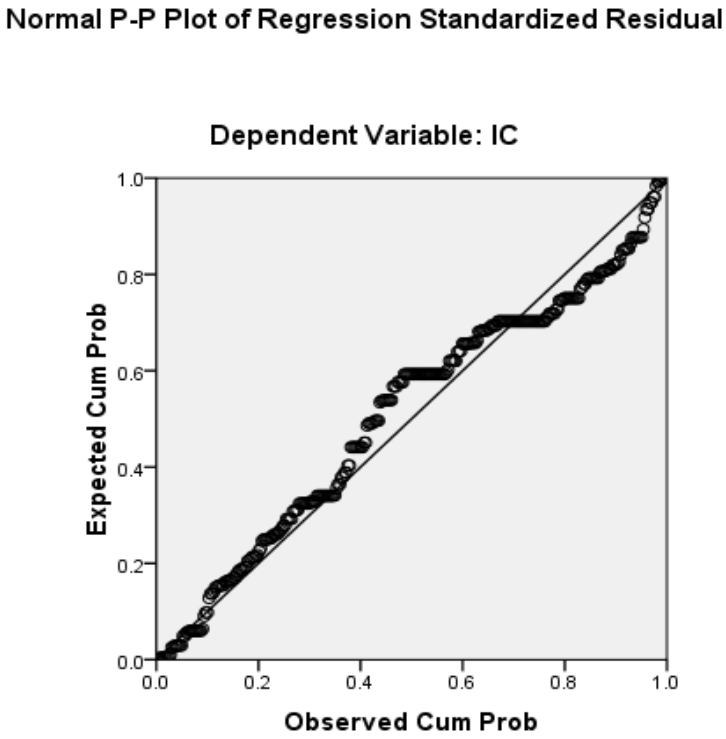


Source: survey result, 2023

4.6.2 Linearity test

This is slightly different from simple linear regression as we have multiple explanatory variables. Multiple regressions can accurately estimate the relationship between dependent and independent variables, when their relationship is linear in nature (Keith, 2006). If linearity is violated, all the estimates of the regression including regression coefficients, standard errors, and tests of statistical significance may be biased (Keith, 2006). This can be best checked by p-p plot residual as shown in figure below 4.3. When, p-p residual look at straight line, the relationship between the dependent and independent variables is linear. Therefore, there is no linearity problem on the data used for this study.

Figure 4. 3: P-P plot; linearity test results



Source: survey result, 2023

4.6.3 Multicollinearity Test

If an independent variable is an exact linear combination of the other independent variables, then we can infer that the model suffers from perfect collinearity. According to Gujarati (2003), multicollinearity test helps to identify the correlation between explanatory variables and to avoid double effect of independent variable from the model. When independent variables are multicollinear, there is overlap or sharing of predictive power. This may lead to the paradoxical effect, whereby the regression model fits the data well, but none of the explanatory variables (individually) has a significant impact in predicting the dependent variable. For this purpose, variance inflation factor (VIF) and tolerance test were employed to check whether or not multicollinearity problem exists in explanatory variables (efficiency, cost, speed, & security). If the value of VIF is less than 10, there is no multicollinearity between the explanatory variables and on the other hand VIF greater or equal to 10 is an indicator of a serious multicollinearity problem. In addition, tolerance is an indicator of how much of the variability of the specified independent is not explained by the other independent variables in the model and is calculated using the formula for each variable. If this value is very small (less than .10), it indicates that the

multiple correlation with other variables is high, suggesting the possibility of multicollinearity (Keith, 2006; Shieh, 2010).

Table 16 :Collinearity Statistics

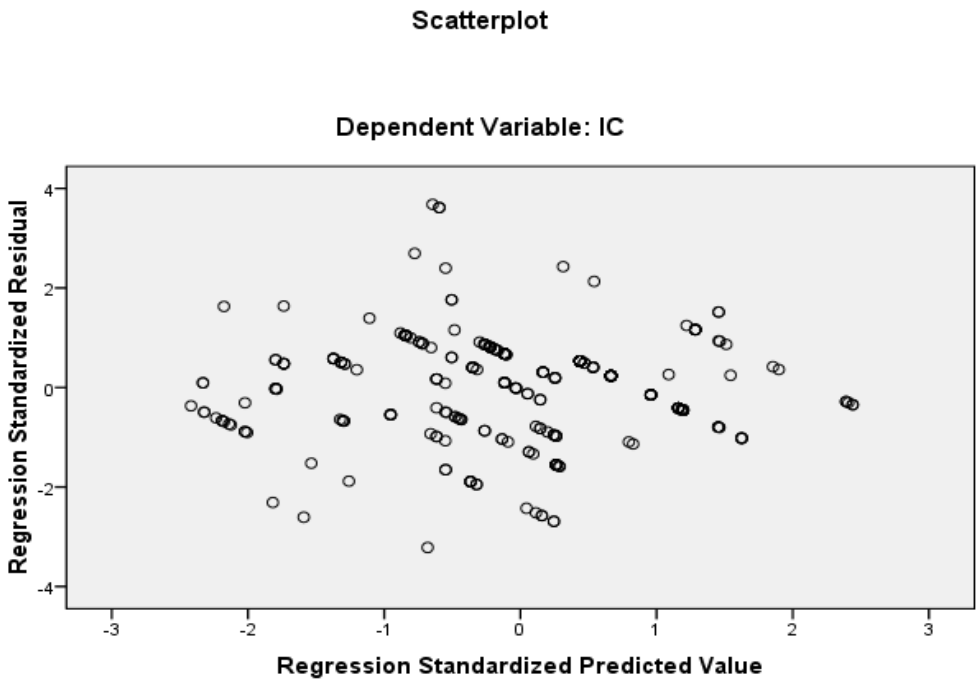
MODEL	Collinearity Statistics	
	Tolerance	VIF
Government regulation	.539	1.855
Technology	.293	3.412
Finance	.421	2.377
Organizational culture	.653	1.531
Skilled personnel	.223	4.483

As exposed in collinearity Statistics the above table 4.16, the value of VIF of all independent variables was found to be smaller than 10 and similar purpose tolerance is used for test multicollinearity by having not less than 0.1. In this study the tolerance value for each independent variable is well above 0.1. Therefore, all the results confirm that multicollinearity assumption is maintained.

4.6.4 Heteroscedasticity Test

Heteroscedasticity statistics checked is used to measure model fitness. The variance of the residuals for every set of values for the independent variable should be equal and violation is called heteroscedasticity. This means that investigators assume that errors are spread out consistently between the service quality dimensions. Scatter plot of more than 3.3 or less than -3.3 indicates a heteroscedasticity problem (Tabachnick & Fidell, 2007). Therefore, as shown in figure below 4.4 the data did not violate heteroscedasticity assumption and instead it was homoscedastic.

Figure 4.4: Scatter Plot Heteroscedasticity test results



Source: survey result, 2023

4.7 Results of Multiple Regressions

Multiple regressions are a logical extension of the principles of simple linear regression to situations in which there are several predictor variables. A regression model is created by adding one lag of the dependent variable on the right-hand side of the equation; The regression coefficients are analyzed the independent and dependent variables identify both magnitude and the direction of impact. Under the following regression out puts the beta coefficient may be negative or positive; beta indicates that each variable's level of influence on the dependent variable. P-value indicates at what percentage or precession level of each variable is significant. R2 values indicate the explanatory power of the model and in this study adjusted R2 value which takes into account the loss of degree of freedom associated with adding extra variables were inferred to see the explanatory powers of the models (Girma, 2016)

Correlation and multiple regression analyses were conducted to examine the effect of setting objective, feedback, coaching, appraisal and evaluation on employee performance. Using the regression output in table above, the following equation model was estimated

$$y = b_o + b_1x_1 + b_2x_2 + \ldots b_nx_n + E$$

Where, y= Dependent variable b_0, b_1, $b_2 \ldots b_n$= coefficients

The regression equation becomes:

Innovation In MSEs = b_0 +bx_1GP +bx_2Fi+ bx_3OC +bx_4SP+ bx_5TE +E

Table4. 17. Summary of Regression between independent and dependent variables

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig
	B	Std. Error	Beta		
(Constant)	.779	.109		7.154	.000
GP	.309	.028	.438	10.876	.000
TE	.206	.039	.290	5.322	.000
Fi	.116	.026	.134	4.464	.000
Oc	-.055	.027	-.057	-2.078	.039
Sp	.123	.036	.175	3.404	.001

a. Dependent Variable: IN

Source: Own survey 2023

The above table Simple regression analysis indicates in that government policy and regulation, technology and marketing information, access to finance and skilled person have a significant influence on innovation which means there is a positive relationship between independent variable such as governmental regulation and policy, technology, Access to finance, skilled personnel with dependent variable innovation. There is a negative relationship between Organizational culture and innovation performance of micro and small enterprise. This implies that when one variable increases the other may decrease and via versa.

Table 4.16 further shows that, all the explanatory variables included in this study can significantly explain at 99% confidence level to the variation on the dependent variable. The standardized beta coefficient column shows the contribution that an individual variable makes to the model. The beta weight is the average amount the dependent variable increases when the independent variable increases by one standard deviation (all other independent variables are held constant). As these are standardized, we can compare them. Thus, the largest influence on the performance of innovation in MSEs is from government policy and regulation (.0309) and the next is

technological and marketing information factor (0.206). Also Access to finance with beta value of (0.116) and skilled person (human capital) with the beta value of .116 are also positively affect innovation capability in MSEs. On the other hand, organization culture with beta value of (-0.055)negatively significant.so that Innovation in MSEs positively associated with GP(-.309),TE(-.206), Fi (.116), SP (.123) and negatively associated with OC(-0.055).From the result of multiple regression analysis ,the researcher concluded that government policy and regulation have stronger effect on core banking service than the other independent variables with 0.309.the negative beta of organizational behavior indicate that there is negative correlation between the dependent variable which is innovative capability and organization culture if the other independent variables held constant. The multiple regression model with all five predictors produced R^2 =.779, F= 213.4, p = 0.000. Since the p-value is less than α=.05, we can conclude that the predictors did contribute to the multiple regression model.

The multiple regression model with all four predictors produced R2 = .779, F= 213.4, p < .001. Therefore, the final model for the multiple regressions is,

The Final Model equation given as

Innovative Capability = .779 + -.309 (GP)+-.206 .(TE) + .116 (FI) -.055 (OC)+ .123(SP) + e

B_0: not analyzed (generally, it is the mean for the response when all of the independent Variables (x) take on the value 0.), core banking service be.779

4.8 ANOVA

ANOVA tells the overall goodness of fit of the model. Table 4.18 using ANOVA shows a significant value of 107.388 for the F distribution with 6 and 316 df. The F-test can be taken as a measure of overall model significance of the estimated regression, indicates that the p-value is less than 0.05, which implies that a significant relationship exists between the selected variables in this model. The following Table 4.18, coefficients table illustrates the influence on Innovational Capability. At this point using this multiple regression coefficient results, the proposed hypotheses for this study were tested as follows

Table 4. 18: ANOVA

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1603.425	6	320.685	107.388	.000[a]
	Residual	925.727	316	2.986		
	Total	2529.152	316			

a. Predictors: (Constant), SK, OC, GP, AF, TCH

b. Dependent Variable: IC

Source: Own survey 2023

The output of the analysis is shown in below table. The model summary table reports the correlation coefficient as R; the R square static is in the second column and is also known as proportionate reduction in error,

4. Model Summary

The regression model summary results present the R value which is the measure of association between the dependent and the independent variables, the R Square which is the coefficient of determination measuring the extent at which the independent variables influence the dependent variable as well as the Adjusted R Square which measures the reliability of the regression results. The output of the analysis is shown in below table.

Table4. 19: Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.796[a]	.634	.628	1.72807	.248

a. Predictors: (Constant), SK, OC, GP, AF, TCH

b. Dependent Variable: IC

Source: Own survey 2023

As far as the above table is concerned, the adjusted R square 0.628 indicates 62.8 percent of the variance in Innovational Capability is attributed to the five independent variables entered into the regression and the remaining 37.2 percent of the variance in Innovational Capability may be explained by other factors which are not included in this study.

4.9 Hypothesis Testing

Hypothesis (H) testing is based on unstandardized coefficients beta and p-value to test whether the hypotheses are rejected or not. Based on the Table 4.17 multiple linear regression coefficients, each proposed hypothesis is tested as follows.

H1*: Governmental Police has Positive and significant effect on Innovational Capability*

The regression result of Governmental Policy with Innovational Capability shows significant level of influence at 99 percent confidence interval with a Sig. value of 0.000. Based on this result, the first hypothesis of the study was supported **H1**.

H2: Technology has positive and significant effect on Innovational Capability

The regression result of Technology with Innovational Capability shows insignificant level of influence at 99 percent confidence interval with a Sig. value of 00.00. Based on this result, the second hypothesis of the study was rejected **H2**.

H3: Access to finance has positive and significant effect on Innovational Capability

The regression result of Access to Finance with Innovational Capability shows significant level of influence at 99 percent confidence interval with a Sig. value of 00.00. Based on this result, the third hypothesis was supported ***H3***.

H4: Organizational Culture has Negative and significant effect on Innovational Capability

The regression result of Organizational Culture with Innovational Capability shows insignificant level of influence at 99 percent confidence interval with a Sig. value of 0.039 Based on this result, the fourth hypothesis was rejected **H4**.

H5: Skill Person has positive and significant effect on Innovational Capability

The regression result of Skill Person with Innovational Capability shows significant level of influence at 99 percent confidence interval with a Sig. value of 00.00. Based on this result, the fifth hypothesis was supported **H5**.

Table 4.17: Summary of hypothesis testing

Hypothesis	Statement of hypothesis	Sig. value	Result
H1	Governmental Police has Positive and significant effect on Innovational Capability	**0.000**	Accepted
H2	Technology has positive and significant effect on Innovational Capability	0.000	Accepted

H3	Access to finance has positive and significant effect on Innovational Capability	**00.00**	Accepted
H4	Organizational Culture has Negative and significant effect on Innovational Capability	0.039	Rejected
H5	Skill Person has positive and significant effect on Innovational Capability	**0.001**	Accepted

Source: survey output, 2023

4.10 Result and Discussion

The overall objective of this study was to Factor influence Innovational Capability of MSEs in Addis Ababa City Administration Kirkose Sub City.

The determinants of factor influence were Governmental Policy, Technology, Access to finance, Organizational Culture and Skill Person. The study further revealed that Governmental Policy was found as a dominant innovational Capable of MSEs of Addis Ababa City Administration Kirkose Sub City. The effect of independent variable "Governmental Policy'' provides B- value of 0.309 and sig. value of 0.000. So that it can be concluded that Governmental Policy has a positive and significant effect on Innovational Capability.

The second significant found in this study which has strong and positive effect on Innovational Capability is personal Technology. The effect of independent variable "Technology" on Innovational Capability yields a B-value of 0.206 and Sig. value of 0.000. So that it can be concluded that Technology has a positive and significant effect on Innovational Capability.

The third significant found in this study which has strong and positive effect on Innovational Capability is Access to Finance. The effect of independent variable "Access to Finance" on Innovational Capability yields a B-value of 0.116 and Sig. value of 0.000. So that it can be concluded that direct marketing has a positive and significant effect on Innovational Capability.

Organizational Culture was found to have insignificant effect on Innovational Capability. The effect of independent variables "Organizational Culture" on Innovational Capability yields a B-value of -0.055 and Sig. value of 0.039. So that it can be concluded that Organizational Capability does not have significant effect on Innovational Capability.

Skill Person/Human Capital was found to have insignificant effect on Innovational Capability. The effect of independent variables "Skill Person/human Capital" on Innovational Capability yields a B-value of 0.123 and Sig. value of 0.001. So that it can be concluded that public relation does not have significant effect on Innovational Capability.

CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The study was intended to look at factors influencing innovation performance or capability of micro and small enterprises. The purpose of this chapter is to windup the study by stating conclusion and recommendations.

5.1 Summary of finding

The main objective of this study was to investigate the Factor infulance innovational Capability of Addis Ababa City Administration Kirkose Sub city. In this study Descriptive research design were used. Regarding research approach, quantitative research approaches are implemented. The target populations of the study were managerial position employees, marketing employees and Owners of the company.

Based on the research objective, primary data were employed as a source of information using English/Amheric version questionnaire. One hundred and fourteen (316) respondents were approached using non- probability sampling (convenience sampling technique). From the 316 question forms, 316 are completed and returned.

With respect to the reliability and validity of the questionnaire table 4.2 illustrated that all the questionnaires were reliable and acceptable with Cronbach's Alpha result 0.999 and valid items are identified from the literature i.e., adopted and modified.

5.2. Conclusions

This research was conducted with the main objective to identify the factors determining the innovative performance of micro and small-scale enterprises in Addis Ababa City Administration Kirkos sub city. Since the innovative performance of micro and small enterprises have a crucial contribution in the economy and it will further reduce the unemployment rate and increase the number of products or services offered to the society. Taking the data analysis and the findings in to account the following conclusions could be reached. The study used both quantitative and

qualitative approaches and research mainly descriptive and explanatory types of research design. Based on the objectives and findings of the study, the following conclusions were drawn.

Micro enterprises are better introducing technological innovation from that of small enterprises in in industry sector. Factors constraining innovation is the main reason for MSEs not innovate or actively engaging in technological innovation.

Enterprises loss confidence on the benefit of innovation and de motivated to engage on innovation due to absence of support and access to loan so enterprises remain to not play what expected thus, unfavorable government policy and regulation is obstacle for Micro and small enterprises at industry sector.

Information is power for MSEs to cope up in this dynamic environment and to overcome competitive restrain factors. Enterprises unable to learn what is going on outside enterprises regarding new technologies and its dynamic environment as a result of absence of information technology, and the shift in demand of potential customers for new technology introduction so; lack of technological and marketing information is obstacle for innovation in micro and small enterprises.

Finance is the main root of business. Hence, it's the main problem of MSEs, they couldn't assign funds for making technological innovation and even funds are not available from outside in the form of loan or support to complete prototype or expand new technology. Micro and small Enterprises at industry and specific level is unable to have necessary resources and capabilities which is critical to engage on technological innovation, due to cost to own external competency. Due to fast changing environment and increase of knowledge dissemination, it's difficult to MSEs to maintain competitive advantage through internal capability. Since, enterprises have no cooperation with universities, institution and research organization they can't access expertise from outside related to technological innovation. Therefore, lack of access to finance is barrier of innovation in micro and small enterprises.

By and large innovation idea is created from people mind and those organizations govern the collection of peoples, resources and values they have. So, enterprises culture isn't encouraging employees to devote time on new ideas and employees are not updated with best practices regarding innovation thus, Organizational Culture is obstacle for micro and small enterprises to participate in technological innovation.

Lack of sufficient support from government in the preparation of convenient place for MSE operators, market related and source of fund issues, etc. are serious problems for MSEs innovative performance. Even if there is support it was not free of corruption.MSE businesses were constrained by lack of skills to handle new technology, lack of capital to acquire new technology, unable to select proper technology, lack of appropriate machinery and equipment for their business so it is difficult for them to engage in innovative activities.Finally, the research clearly illustrates that, even if the degree of those critical factors is not uniform across the sectors, most of the factors are considerably common for all sectors. It has been noted that the factors that are prevalent to the innovative performance of businesses such as financial, government policy and regulation, technology factors, skilled personnel factors had very high effect on the financial performance of MSEs compared to other factors in the research area.

5.3 Recommendation

On the basis of the major findings of the study, the following recommendations are forwarded with the view to improve the contributions of innovation in MSEs to the country in general and to the study area in particular.

5.3.1. Micro and small-scale enterprises

The MSEs operators, managers or employees are better to enhance their production and marketing skills through proper training and experience sharing with other successful medium and large-scale enterprises. In addition to this marketing skills, such as setting competitive price for their products, are creating good interpersonal relationship with customers and the way of promoting their outputs to the customers in an effective manner.

Access up to date technology information and materials by having web gadget access, reading technological journals, creating information integration and partnership with technological institution & vocational schools and with others in line with the shift in demand of customers of new technology. Engaged on radical innovation by having organized research and design offices and equipped staff and be able to use new finding of research and design of private organization

for introduction or expansion of their technological innovation hence, enterprises can gain competitive advantage. Micro and small enterprises in particular should: believe that anybody in

the enterprises could have a potential to innovate, encourage empowerment & synergies of resources, share best practices to employees in line with playing of significant role by managers or owners in spending time to listen employee ideas, and use possible opportunity to promote enterprises technological innovation. The micro and small enterprises should have adequate number of trained personnel for technological innovation by in reaching the potential of existing employees through upgrading their knowledge or hiring new employee. Micro and small enterprises at industry level be in a position to find partners with government, private research and design organizations, different association which helps to share experiences and expertise in line with engagement of technological innovation. Lastly Enterprises have good opportunities to make improvements. They must pay attention to what they are doing and what customers are telling them about their products and services. Customers know how they want products and services to be better. The enterprises' job is to do research and ask customers their desires. Employees are also an important source of information. Creative ideas can be conceived by anyone in the enterprise. But, these suggestions must be taken seriously and some selected for implementation. To profit from innovation, enterprises make great efforts to build their innovation capability. Measuring innovation capabilities is complex. Multi-dimensional difficulties are shown in the innovation process.

5.3.2Government and its policy makers

The government has in a position to give due emphasis to MSEs sectors and their role in accomplishment of five years growth transformation plan in creating employment and expanding industry in country by engaging in new technology development or creation.

Therefore, government and its policy makers should Set a clear policy and regulation that can encourage MSEs at industry & specific technology innovation, formulate independent agency which control innovation activity accordingly, establish research and design funding (innovation fund) and enable patent is protected and Make financial regulation to insure finance provision for innovation activities.

Government should Support or encourage micro and small enterprises to expand innovation by making access to government loans, modifying tax for encouraging innovators while purchasing valuable plant, Encourage cooperation between micro and small enterprises and different parties in the country

Reference

Acs, Z. and Audretsch, D. (1990), Innovation and Small Firms, MIT Press, Cambridge, MA.

Alemayehu, E.(2015). Scientific Research Methods. Lecture Note, Jimma University; pp. 12-30.

Aminreza K., R. Maryam and A. MahLagha,(2011). Barriers to Innovation among Iranian SMEs, Asian Journal of Business Management 3(2): 79-90, 2041-8752

Assefa, A. (1997), A Comparative Analysis of the Development of Small-Scale Industries in Region 14 with other Regions. In Wolday Amha (Eds) (1997). Small Scale Enterprise Development in Ethiopia, Proceedings of the Sixth Annual Conference on the Ethiopian Economy, Addis Ababa, pp 88-112.

Baregheh,A.,Rowley,J. and Sambrook,S.(2009).Towards a multidisciplinary definition of innovation, management Decision, 47(80), pp.11323-1339

Brenner, R., (1987), Rivalry: Business, Science, Among Nations. Cambridge University Press, Cambridge

Cardinal L.B. 2001. „Technological Innovation in the Pharmaceutical Industry: The Use of Organizational Control in Managing Research and Development'. Organization Science, 12(1): 19-36.

Central Statistical Authority (CSA). (2003). Report on cottage/handicraft manufacturing industries survey. Addis Ababa.

Chaminade, C., Lundvall, B. A., Vang, L., Jan, J., & Joseph, K. J. (2009). Innovation policies for development: Towards a systemic experience-based approach. Paper presented at the 7th Globelics Conference, Dakar, 6–8 October.

De Beer, J., Kun F., & Wunsch-Vincent, S. (2013). The informal economy, innovation and intellectual property Concepts, metrics and policy considerations. WIPO Economic Research Working Papers 10. Geneva: World Intellectual Property Organization, Economics and Statistics Division.

Debela, K. (2015). Women in the development of micro and small enterprises to ensure sustainable development and food security. Addis Ababa City Administration, Micro and Small Enterprises Development Bureau.

Demirbas, D., 2010. How do entrepreneurs perceive barriers to innovation? Empirical Evidence from Turkish SMEs.Proceedings of Oxford Business and Economics Conference 2010, Oxford, UK.

Dosi, G., & Nelson, R. R. (2010). Technical change and industrial dynamics as evolutionary processes. In B. H. Hall, & N. Rosenberg (Eds.), Handbook of the economics of innovation. Amsterdam: Elsevier.

Duki, A. (2006). Unleashing the potential of MSMEs in Ethiopia: Report of the diagnostic study of the Merkato leather footwear cluster. Addis Ababa: Cluster Development Program, UN Industrial Development Organization (UNIDO).

Dutta, S. ed.(2011).The Global innovation index 2011, accelerating growth and development, France, INSEAD

EC (2003b), The New SME Definition: User guide and Model declaration, Publications Office of the European Commission.

Fagerberg, J., &Verspagen, B. (2002). Technology-gaps, innovation-diffusion and transformation: An evolutionary interpretation. Research Policy, 31, 1291–1304.

FDRE (2010). Council of Ministers Regulation to Establish the Leather Industry Development, Regulation No. 181/2010. Addis Ababa.

FDRE. (2009a). National Employment Policy and Strategy of Ethiopia. Addis Ababa

FDRE. (2009b). Micro-Financing Business Proclamation NO. 626/2009. Addis Ababa.

FDRE. (2011). Micro and Small Enterprise Development Strategy, Provision Framework and Methods of Implementation. Addis Ababa.

Fisseha Y. (1992). `Small Scale Enterprises in Lesotho: Summary of a Country-wide Survey'.Gemini Technical Report No.14, Washington D.C. Development Alternatives Inc.

Lim, E. and Shyamala, N. (2007), Obstacles to Innovation: Evidence from Malaysian Manufacturing. Retrieved from: // http: mpra.ub.unimuenchene.de/MPRA Paper No. 18077

Lishan, A. (2006), Towards an African e-Index, SME e-ACCESS AND USAGE, across 14 African countries, pp.22-25. Available: (www.researchICTafrica.net access 20/03/2012)

Madrid-Guijarro, A., Garcia, D. and Auken, H. V., 2009.Barriers to innovation among Spanish manufacturing SMEs.Journal of Small Business Management, 47 (4), pp. 465-488.

Mariano, N. (2004),"Basic propositions for the study of the technological innovation process in the firm", European Journal of Innovation Management, Vol. 7, Iss: 4 pp. 314 - 324

Martins, T.C. and Terblanche, F. (2003), "Building organizational culture that stimulates creativity and innovation", European Journal of Innovation Management, Vol. 6, No. 1, pp.64-74.

Massa, S. and Testa, S. (2008), "Innovation and SMEs: misaligned perspectives and goals among entrepreneurs, academics, and policy makers", Tec novation, Vol. 28, No. 7, pp. 393-407.

Ministry of Agriculture (MOA). (2013). *Hides, skins and leather value chain vision and strategy for Ethiopia*. Livestock Master Plan Background Paper. Addis Ababa.

Ministry of Education (MOE). (2008). National Technical and Vocational Education and Training (TVET) Strategy. Addis Ababa.

Ministry of Finance and Economic Development (MoFED). (2010). Growth and Transformation Plan (GTP), 2010/11–2014/15. Addis Ababa.

Ministry of Science and Technology (MOST). (2010). Green Paper on Science, Technology and Innovation Policy: Building Competitiveness through Innovation. Addis Ababa

Miotti, L. and Sachwald, F. (2003), "Co-operative R&D: why and with whom? An integrated framework of analysis", *Research Policy*, Vol. 32 No. 8, pp. 1481-99.

MOE. (2010). Education Sector Development Program IV (ESDP IV): Program Action Plan, Addis Ababa.

MoFED. (2013). Brief note on the 2005 (EFY) GDP estimates series: The major results of the 2005 GDP estimates. Addis Ababa.

Nega, F., & Edris, H. (2016). *Small and medium enterprise access to finance in Ethiopia: Synthesis of demand and supply*. Horn Economic and Social Policy Institute (HESPI) Working Paper 01/16. Addis Ababa.

OECD (1981), The Measurement of Scientific and Technical Activities, Frascati Manual 1980, Organization for Economic Cooperation and Development, Paris.

OECD (2005), Oslo Manual: Guidelines for Collecting and Interpreting Innovation, ISBN 92-64-01308-3, p. 22

Piattier, A., 1984. Barriers to innovation. Frances Printer. London and Dover NH.

Pinheiro, I., 2002. Factors do clime organizational que sãomotivadores para ainovaçãotecnológicaem um centro de tecnologia. Revista de Administração Publica, 8 (5).

Poll, E., Crinnion, P. and Turpin, T. (1999), „'Innovation barriers in Australia: What the available data say and what they do not say"", working paper, University of Wollongong, Australia.

Porter, M. (1990), The Competitive Advantage of Nations, London: Macmillan

Rehbinder, E. (2011, October). Fsm – Finance & Strategic Management. Do Personal Networks Affect the Success of Foreign Venture Performance? Poland: Copenhagen Business School.

Robson, Paul J.A., Helen M. Haugh. and Bernard O. (2009), „Entrepreneurship and Innovation in Ghana: Enterprising Africa. " Small Business Economics 32: 331-350.

Rogers, M. (2004), Networks, firm size and innovation. Small Business Economics,22:141-153.

Roper, S. (1997), "Product innovation and small business growth: a comparison of the strategies of German, UK and Irish companies", Small Business Economics, Vol. 9 No.1, pp.1-15.

Samad, N. A. (2007), Positioning Malaysian SMEs in the global. Proceedings of Persidangan Kebangsaan IKS 2007, Kota Kinabalu: Universiti Utara Malaysia.

Sauber, T. and Tschirky, H. (2006), Structured Creativity: Formulating an Innovation Strategy. Basingstoke: Palgrave Macmillan.

Saunders, M., Lewis, P. and Thornhill, A. (2007), Research Methods for Business Students (4th ed.). Harlow: Financial Times/Prentice Hall.

Sayed, H.(2011), Customer Relationship Management and Its Relationship to the Marketing Performance, International Journal of Business and Social Science, Vol. 2, No.10, p.174

Scherer, F. and Ross, D. (1990), Industrial Market Structure and Economic Performance, Houghton Mifflin, Boston, MA

Schumpeter, A. (1942), Capitalism, Socialism and Democracy. New York: Harper.

Schumpeter, J. A., 1939. The theory of economic development: an inquiry into profits, capital credit, interest and the business cycle. Cambridge: Harvard Business Press.

Scothmer, S. (2004), Innovation and Incentives. MIT Press, Cambridge, Massachusetts

Segarra-Blasco, A., Garcia-Quevedo, J. and Teruel-Carrizosa, M., 2008. Barriers to innovation and public policy in Catalonia. International Entrepreneur Manager Journal, 4, pp. 431-451.

Siguaw, J.A., Simpson, P.M. and Enz, C.A. (2006), Conceptualizing innovation orientation: A Framework for Study and Integration of Innovation Research. Journal of Product Innovation Management 23 (6), pp. 556-574.

Silva, M., Leitao, J. and Raposo, M. (2007), Barriers to Innovation faced by Manufacturing Firms in Portugal: How to overcome it? MPRA Paper No. 5408 posted 07, Nov. 2007.

Tahi, T. (2011), "Development of small and medium enterprises in a developing country, the Indonesian case", Journal of Enterprising Communities: People and Places in the Global Economy Vol. 5 No. 1, 2011 pp. 68-82

Tidd, J., Bessant, J. and Pavitt, K. (1997), Managing Innovation: Integrating Technology, Market, and Organizational Change, Wiley, New York,NY

Tidd, J., Bessant, J. and Pavitt, K. (2001), Managing Innovation: Integrating Technological, Market and Organizational Change, Wiley, Chichester

Tidd, J., Bessant, J., and Pavitt, K. (2005), Managing innovation: integrating technological, market and organizational change (3rd ed.). New York:

Tovstiga, G. and Birschall, D., 2007. Henley SME Innovation Study 2007. Proceedings of PICMET 2008, 27-31 July, CapeTown, South Africa.

Wiedmaier, P. M., Gessese, D., Amha, W., Mommartz, W., Duflos, E., & Steel, M. (2008). Access to finance in Ethiopia. Sector Assessment Study, Volume 2. Addis Ababa: Engineering Capacity Building Project, German Technical Cooperation (GTZ).

Wolfenson, J. D. (2007). 'The Challenges of Globalization: the role of the World Bank.Paper presented at the address to the Bundestag Berlin, Germany.

Appendix A

English version Questioner

St. Mary University
College of business and economics
Masters of business Administration (MBA) Program

Dear Respondent

First I would like to thank you for your willingness and cooperation to fill this questionnaire form. This questionnaire is designed to explain the extent of barriers to innovation of micro and small enterprises in Addis Ababa Administration Kirkos Sub city. This study is conducted in partial fulfillment of the requirements for the Master's degree in Business Administration (MBA) in St Mary University. Its main objective is to identify the factors affecting product and process innovativeness of micro and small enterprise located in Addis Ababa City Administration Kirkos Sub city. All pieces of information will be used only for thesis Paper. Your response is vital to the outcome of the study and you are requested to completely and objectively answer all questions. I assure you that your response will be kept in secret. Each of your response is very useful for the studies please go through each question patiently and give your genuine answer.

General instruction

- ✓ There is no need of write your name
- ✓ In all cases where answer options are available please tick()in the appropriate box
- ✓ For questions that demands your opinion, please try to honestly describe as per questions on the space provided.

Contact address

If you have any query, please do not hesitate to contact me and I am available as per your convenience

Mob No: 0925356745/991180483

Email:yonatangizaw12@gmail.com

Thank you in advance for your indispensable cooperation to spare invaluable time and energy to complete these questionnaires

Part 1. General information and demographic background of MSE's Managers or owners

1.1. Gender

[ ] Male [ ] Female

1.2.Age

[ ]<20 [ ]21-30 [ ]31-40 [ ]41-50 [ ] >51

1.3. Education

[ ] Primary school [ ] Secondary school

[ ] Diploma & degree [ ] Master & above

1.4. What is your position in the enterprise?

[ ] Manager [ ] Owner [ ] Employee

1.5. Enterprise established as?

[ ] Sole ownership [ ] Partnership [ ] in cooperative

1.6. Currently in which enterprise scale you are engaged?

[ ] Micro [ ] Small

1.7. The sectors you are engaging?

[ ] Manufacturing (Metal and woodwork) [ ] Construction [ ] other

1.8. How long have been you engaged with the enterprise?

[ ] 0-2years [ ] 3-5 years [ ] 5-7 years [ ] above 7 years

Part 2 . SME's Manger/ owner opinion /views regarding barriers of innovation

2.1. Did your enterprise introduce technological innovation?

Yes [ ] No [ ]

2.2. If your enterprise is innovator, did it introduce?

Product innovations Yes [ ] No [ ]

Process innovations Yes [ ]No [ ]

2.3. If your enterprise had no innovation, even if enterprise introduced innovation please indicate why it has not been necessary or possible to innovate or expand innovation?

- ✓ No need due to prior innovation [ ]**Yes** [ ]**No**
- ✓ No need due to market condition [ ] **Yes** [ ]**No**
- ✓ Due to Factors constraining innovation [ ]**Yes** [ ]**No**

This survey attempts to get your opinions of the barriers to product and process innovation your enterprises are facing currently. Please show the extent to which you think innovation barriers affect enterprise innovativeness. What is interested in here is a number that best shows your views about enterprises innovation barriers by putting this () in the box on the following table provided.

KEY: 4= Strongly Agree 3= Agree2= Neutral 1= disagree 0=Strongly disagree

	Questioner	**4**	**3**	**2**	**1**	**0**
A. Government policy and Regulation						
1.	Government strategy is appropriate for enterprise technological innovation					
2.	Government technological innovation policies is encouraging					
3.	Enterprise innovation activities helped through government policy and regulation					
4.	Regulatory measures ensure financial resources for innovation					
5.	Enterprise share new technologies experience with the help of government					
6.	Enterprise has supported through access for doing & expanding innovation by government					
7.	Enterprises accessed and used government loans service for innovation project activities					
8.	Tax system is modified with the view to promote enterprise technological innovation					
9.	Government not provides equal support for all enterprise related to innovation.					
B. Technology and marketing information						
1.	Has access & utilize up-to-date technological information (exposure to innovation journals and articles)					
2.	Enterprise are accessed and utilized up to date technology materials					
3.	Adequate information technology transfer institutions are available for enterprise					
4.	Enterprise easily access & utilize the internet services while they need technological innovation information					
5.	Enterprise has Linkage with technology teaching institutes.					
6.	Enterprise seek new technology markets to serve and satisfying existing clients					
7.	Enterprise participates in conferences, trade fairs and exhibitions to share technological innovation information					

C. Access to finance						
1.	Enough funds are available within your enterprise to carryout innovation projects					
2.	Enterprise has access to long term loans from banks to innovation projects					
3.	Funds are available from sources outside your enterprise for innovation					
4.	Investors (banks, venture capitalists, etc.) are encouraging innovative firms through financing					
5.	Collateral requirements of banks & financial institutions are encouraging innovation					
6.	Enterprise hire or purchase the necessary skill or equipment which is important to innovation					
7.	Enterprise has no difficulty in finding cooperation partners for innovation					
8.	Enterprise has good cooperation with institutions i.e. universities, non - university, and business development service provider regarding innovation					
D. Organizational culture						
1.	Enterprise believe as any one of the workers could be creative and innovative					
2.	Employees are empowered to come with new ideas in the enterprise					
3.	Enterprise is aware of constant change environment & innovation as key to this situation					
4.	Enterprise has encouraged synergies of different resources towards innovation					
5.	Enterprise managers or owners play significant role in promoting innovation					
6.	Supervisors spend a good deal of time listening to employees' ideas and support for new ideas development					
7.	Enterprise enables staffs to update with best practice learning (benchmarking exercise) related to innovation					
8.	Enterprise see opportunities for innovation where others see problems					
9.	Enterprise has done closely with federal government, private and non-profit research institutes on innovation issues					
E. Skilled personnel or Human Capital						
1.	Enterprise has inadequate number of trained personnel (human resources capabilities) for successful innovation projects					
2.	Enterprise has not individuals with creative and innovative ideas					
3.	Enterprise has enough managerial know-how to effectively and					

	efficiently manage innovation processes					
4.	Within enterprise qualified, experienced and technically skilled personnel are available for innovation					
5.	Within the market qualified, experienced and technically skilled personnel are available for innovation					
6.	Enterprise can access expertise for innovation from other firm and scaling up innovation					
F. Innovation capability						
1.	Increased range of goods or services					
2.	Improved quality of goods or services					
3.	Improved flexibility of production or service provision					
4.	Increased the speed of supplying and/or delivering goods or services					
5.	Reduced labor costs per unit output.					
6.	Increased capability of production or service provision.					
7.	Reduced materials or energy per unit output					
8.	Reduced environmental impacts					
9.	Improved health and safety					
10.	Met requirements of existing clients					
11.	Allowed the plant to keep up with its competitors					

Part 3. Open ended questions for MSE's managers and/or Owners

3.1. List those factors affecting technological innovation of MSE's other than discussed above?

_____

3.2. What is suggestion to overcome the problem of barriers to technological innovation your enterprise is facing?

_____

Thank you again for your cooperation to complete this questionnaire!

Appendix B
Amharic version Questioner

ቅድስት ማርያም ዩኒቨርሲቲ
የቢዝነስ እና ኢኮኖሚክስ ኮሌጅ
ማስተርስ ኦፍ ቢዝነስ አድሚንስትሬሽን

የተከበሩ የጥናቱ ተሳታፉ፡
ይህ መጠይቅ የተዘጋጀው በአዲስ አባበ ከተማ ቅርቆስ ክ/ከተማ በተመረጡ የጥቃቅን እና አነስተኛ ኢነተርፕራይዞችን የፈጠራ ክህሎትን የሚገድቡ ምክንያቶችን ለማጥናት ነው። ጥናቱም የሚካሄደው በቅድስት ማርያም ዩኒቨረስቲ ማስተርስ ኦፌ ቢዝነስ አድሚንስትሬሽን የማስተርስ ዲግሪ በከፊል ማሟያ እንዲሆን ነው።

የጥናቱም ዓላማ በአዲስ አባበ ቅርቆስ በሚገኙ ክፍለ ከተሞች ውስጥ የሚገኙ የጥቃቅን እና አነስተኛ ኢነተርፕራይዞችን የፈጠራ ክህሎትን የሚገድቡ ምክንያቶችን ለመወያየት ነው። የሚሰጡት መልስ ለጥናቱ ውጤት በጣም አስፈላጊ ስለሆነ ይህንኑ ተገንዝበው ትክክለኛውን መልስ ለሁለም ጥያቄዎች እነዲሰጡ ስል ጥናቱን የማካሄደው ግለሰብ በአክብሮት እጠይቆታለሁ።የሚሰጡት ምላሽ ጥናቱን ከሚያካሄደው ሰው በስተቀር ሚስጥራዊነቱ የተጠበቀ መሆኑንም ይወቁ።

እባክዎን በተሰጠው ሳጥን ውስጥ በሚፈልጉት ምርጫ ትይዩ ይህን (✓) ምልክት በማድረግ መልሰዎን ይስጡ!

ስለሚያደርጉት ትብብር በቅድሚያ አመሰግናለሁ።

ጥናቱን የሚያካሄደው፡ ዮናታን ግዛዉ

አድራሻ: **Mob No**: 092535675/991180483

Email:yonatangizaw12@gmail.com

ክፍል1፡ አጠቃላይ እና ዲሞግራፉክ መረጃ የጥቃቅን እና አነስተኛ ኢንተርፕራይዝ ባለቤቶች ወይም አስተዳደሮች

1.1. ፆታ [ ] ወንድ [ ] ሴት

1.2. የትምህርት ደረጃ

[ ] አንደኛ ደረጃ [ ] ሁለተኛ ደረጃ

[ ] ዲፕልማ እና ዲግሪ [ ] ማስተርስ እና ከዚያ በልይ

1.3. የስራ ድርሻዎ ወይም ሀላፊነቶ?

[ ] አስተዳደር [ ] ባለቤት [ ] ሰራተኛ

1.4. የኢንተርፕራይዙ ህጋዊ አደረጃጀት?

[ ] የግል [ ] የቡድን [ ] የህብረት ስራ ማህበር

1.5. በአሁኑ ሰዓት በየትኛው የኢንተርፕራይዝ ደረጃ ሊይ የተሰማራችሁት?

[ ] ጥቃቅን [ ] አነስተኛ

1.6. በምን የስራ ዘርፍ ተሰማርተው ይገኛሉ?

[ ] በማምረቻ (ብረታብረት እና እንጨት) [ ] በግንባታ [ ] በሌላ መሰክ

1.7. ለምን ያህል ጊዜ በኢንተርፕራይዙ ውስጥ ቆይተዋል?

[ ] 0-2 ዓመት [ ] 3-5ዓመት [ ] 5-7ዓመት [ ] ከ7 በሊይ ዓመት

ክፍል 2፡ ክህሎትን ስለሚገድቡ ምክንያቶች የጥቃቅን እና አነስተኛ ኢንተርፕራይዝ አስተዳደር ወይም ባለቤት አስተያየት ይመለከታል

መግላጫ፡

የምርት ፈጠራ ፈጥረዋል የሚባለው፡ አዲስ ምርት ወይም አገልግሎት ለመጀመሪያ ግዜ ድርጅቱ በፈጠራ መልክ ያቀረበ እና የተጠቀመ ሲሆን።

የአመራረት ወይም አቅርቦት ሂደት ፈጠራ ፈጥረዋል የሚባለው፡ አዲስ ወይም የተሻሻለ የአመራረት ወይም አቅርቦት ሂደት ወይም አሰራር ዘዴ ለመጀመሪያ ግዜ ድርጅቱ በፈጠራ መልክ ያቀረበ እና የተጠቀመ ሲሆን።

2.1. እስካሁን ድርጅትዎ ፈጠራ ላይ?

[ ] ተሰማርቷል [ ] አልተሰማራም

2.2. በፈጠራ ስራ ላይ ተሰማርተው ከሆነ ምን ግኝት(ፈጠራ) አስተዋውቀዋል (ዉጤት አስገኝተዋል)?

አዲስ ምርት ወይም አገልግልት [ ] አዎ [ ] አይደለም

አዲስ የአመራረት ወይም አቅርቦት ሂደት ወይም አሰራር ዘዴ [ ] አዎ [ ] አይደለም

2.3. ድርጅትዎ በፈጠራ ላይ ያልተሰማራ ከሆነ ደግሞም ተሰማርቶ ከሆነም እባክዎ ከሚከተለት ምክንያቶች ፈጠራ ውስጥ እንዳትገቡ ወይም እዳታሳድጉት ያደረጋችሁን ይጥቀሱ?

በቀደመው ፈጠራ ምክንያት ፈጠራ ስለማያስፈልግ ነው [ ] አዎ [ ] አይደለም

የገበያው ሁኔታ ፈጠራ ውጤቶችን ስለማያበረታታ ነው [ ] አዎ [ ] አይደለም

የፈጠራ ክህሎትን በሚገድቡ ምክንያቶች ነው [ ] አዎ [ ] አይደለም

ይህ ጥናት የሚያተኩረው በድርጅትዎ ውስጥ ክህሎትን ስለሚገድቡ ምክንያቶች ማለትም በምርት እና አሰራር ዘዴ ፈጠራ ላይ ያሎዎትን አመለካከት ለማወቅ ነው።እባክዎ ከተዘረዘሩት ምርጫዎች ዉስጥ በምን መጠን የድርጅትዎ የፈጠራ ክህሎት ተገድቦ (ተፅዕኖ ደርሶበት) እንደሆነ ከስር በተሰጠው የልኬት መጠን በሚፈልጉት ምርጫ ሳጥን ውስጥ ትይዩ ይህን ምልክት (✓)በማድረግ መልሶዎን ይስጡን።

መግለጫ፡ 4=በጣም እሰማማለው 3 = እሰማማለው 2 = ምንም አይመሰለኝም 1= አልሰማማም 0 = በጣም አልሰማማም

	የልኬት መጠን ዝርዝሮች	**4**	**3**	**2**	**1**	**0**
A.የመንግስት ፖሊሲ ወይም ስትራቴጂ						
1.	የመንግስት ስትራቴጂ ለድርጅቱ የፈጠራ ስራ ተስማሚ እና አመቺ ነው					
2.	ድርጅቱ በመንግስት የፈጠራ ፖሊሲ ይበረታታል					
3.	የስራ ፈጠራ መብት በመንግስት በቂ ጥበቃ ይደረግለታል					
4.	የመንግስት የጥናት እና ምርምር ፈንድ የድርጅቱን የፈጠራ ስራ ያግዛል					
5.	የመንግስት ደንቦች እና አዋጆች ለፈጠራ ስራ የገንዘብ ድጋፍ እና አቅርቦት እንዲያገኙ ያመቻቻለ					
6.	መንግስት አዳዲስ የፈጠራ ውጤቶችን እና ግኝቶችን ድርጅትዎ ልምድ እንዲቀስም የልምድ ልውውጦችን ያመቻቻል					

7.	ድርጅትዎ ፈጠራ እንዲያካሂድ እና አንዲያስፋፋ በመንግስት አስፈላጊ አቅርቦት ይደረግለታል					
8.	ድርጅትዎ የመንግስትን ብድር አገሌግሎት ለፈጠራ ስራ ማግኘት እና መጠቀም ይችላል					
9.	መንግስት ለሁለም ድርጅቶች ፈጠራን በተመለከተ ተመጣጣኝ እና እኩል የሆነ ድጋፍ እና ማበረታቻ ያደርጋል					
B.የቴክኖልጂ እና ገበያ መረጃ እጥረት						
1.	ድርጅትዎ ዘመናዊ የቴክኖልጂ መሳሪያዎችን አቅርቦት እና ተጠቃሚነት ያገኛል					
2.	ድርጅትዎ ዘመናዊ የሆነ ቴክኖልጂ መረጃ አቅርቦት የሚያገኝ እና የሚጠቀም ነው					
3.	ለድርጅትዎ እና ለሌሎች ድርጅቶች በቂ መረጃ ቴክኖልጂ ሽግግርን የሚያመቻቹ ተቋማቶች አሉ					
4.	ድርጅትዎ የቴክኖልጂ ፈጠራ መረጃ ለማግኘት የኢንተርኔት አገልግልት ተጠቃሚ ነው					
5.	ድርጅቱ ለፈጠራ የሚጠቅም ስለደንበኞች ፍላጎት ወቅታዊና በቂ የሆነ መረጃ አለው					
6.	ድርጅቱ አዲስ እና ነባር የሆኑ የአዳዲስ ቴክኖልጂ ፈጠራ ገበያ ተጠቃሚዎችን እየተጠቀመ ለፈጠራ ይበረታታል					
7.	ድርጅትዎ በተለያዩ ኮንፍረንሶች፡ኤግዚቢሽኖች እነዲሁም የምርት እና ቴክኖልጂ መረጃ ማስተዋቂያዎች ላይ ልምድ ለማግኘት ይሳተፊል					
C.የገንዝብ እጥረት						
1.	የፈጠራ ስራ ለማካሄድ በቂ የሆነ ገንዘብ ድርጅትዎ አሏው					
2.	ድርጅትዎ የረጅም ጊዜ ብድር ሇፀጠራ ስራ ሲያስፇሌገው ከባንኮች ያገኛል					
3.	ድርጅቱ ከሚመድበው ውጭ ለፈጠራ ስራ በፈንድ መልክ ከሌሎች ድርጅቶች ያገኛል					
4.	ድርጅቱ ሰራተኞቹን በቂ ሰዓት እና ጉልበት በመመደብ ፈጠራ ስራ ውስጥ በደንብ እዲሰማሩ ያበረታታል					
5.	ድርጅትዎ አስፈሊጊ የሆነ በጀት ለፈጠራ ስራ በየግዜው ይመድባል					
6.	ባለሀብቶች የፈጠራ ስራ ላይ የተሰማሩ ድርጅቶችን የገንዘብ ድጋፍ በማድረግ ይተባበራለ					
7.	ድርጅቱ የፈጠራ ውጤት አለመሳካት አደጋ በሰራተኞች ላይ ሲከሰት በቀላሉ ተቀብሎ እንደገና ፈጠራ ስራውን ያስቀጥላል					
D. የድርጅትዎ አሰራር(culture)						
1.	ድርጅትዎ ማንኛውም የድርጅቱ ሰራተኛ የፈጠራ ብቃት አለው ብሎ ያምናል					

2.	የድርጅቱ ሰራተኞች አዳዲስ የፈጠራ ሃሳብ እንዲያፈልቁ ይበረታታል					
3.	ድርጅቱ ተለዋዋጭ የገበያ ሁኔታ እንዳለው አውቆ ተወዳዳሪ ለመሆን የፈጠራ ስራ አስፈላጊ እንደሆነ ያምናል					
4.	ድርጅትዎ የተለያዩ ግብዓቶችን በማቀናጀት እና በመስራት የፈጠራ ስራውን ለማሳለጥ ይሰራል					
5.	የድርጅቱ ባለቤት ወይም አስተዳዳሪ የፈጠራ ስራን ለማሳደግ ሚና ይጫወታል					
6.	የድርጅቱ ስራ ሃላፊዎች የሰራተኞችን የፈጠራ ሃሳብ ለማዳመጥና ለማገዝ ጊዜ ሰጥተው ስራቸውን ያከናውናሉ					
7.	ድርጂቱ ሰራተኞቹን በአዳዲስ እና በላልች ድርጅቶች የስራ ልምድ በመጠቀም ለፈጠራ ራሳቸውን እንዲያሻሽለ ያደርጋል					
8.	ድርጅቱ ለአዳዲስ የፈጠራ ሀሳብ እድሎች ራሱን ክፍት ያደርጋል ሌሎች እንደ ድክመት ሲመለከቱት					
	E. የሰለጠነ የሰው ኃይል እጥረት					
1.	ድርጅትዎ ለውጤታማ ፈጠራ ስራ በቂ የሆነ እና የሰለጠነ የሰው ሀይል አለው					
2.	ድርጅትዎ አዳዲስ የፈጠረ ሃሳብ ሊያመነጩ የሚችለ ብቁ የሆኑ ሰራተኞች አሉት					
3.	ድርጅትዎ የሚሰራውን የፈጠራ ስራ በብቃት እና በጥራት ለመቆጣጠር የሚችል አስተዳደራዊ የሰው ሀይል አለው					
4.	በድርጅትዎ ውስጥ ለፈጠራ ስራ የሰለጠኑ፡ ልምድ ያካበቱ እና የሙያ ብቃት ያላቸው ሰራተኞች አለው					
5.	በገበያ ውስጥ ለፈጠራ ስራ የሰለጠኑ፡ ልምድ ያካበቱ እና የሙያ ብቃት ያላቸው ሰራተኞች አለው					
6.	ድርጅቱ የተቀናጀ ጥናት እና ምርምር ክፍል እና ለፈጠራ ዝግጁ የሆኑ ሰራተኖች አሉት					
	Fየፈጠራ ሁኔታ					
1.	የተለያዩ ሸቀጦችን ወይም አገልግሎቶችን አይነት ይጨምራል					
2.	የተሻሻሉ ዕቃዎች ወይም አገልግሎቶች ጥራት ይጨምራል					
3.	የማምረት ወይም የአገልግሎቶች አቅርቦት ማሻሻል					
4.	ሸቀጦችን ወይም አገልግሎቶችን አቅርቦት በፍጥነት ይጨምራል					
5.	የሰው ኃይል ወጪ ይቀንሳል					
6.	የማምረት ወይም የአገልግሎቶች አቅርቦት መጨመር					
7.	ለአንድ ስራ የሚያሰፈልጉ ቁሳቁሶች ወይም ኃይል ይቀንሳል					
8.	የድርጅቱን ምርታማነት ይጨምሯል					
9.	የአካባቢ ብክለት ተጽዕኖ ይቀንሳል					
10	የተሻሻለ የጤና እና ደህንነት ያጎናጽፋል					

1	የነባር ደንበኞች ፍላጎት ያሟላል					
1	ፋብሪካው ከተፎካካሪ ፋብሪካዎች ጋር ሳይበለጥ እንዲቀጥል ይረዳዋል					

ክፈል 3 ፡ማብራሪያ የሚጠይቅ ሆአነስተኛ እና መካከለኛ ድርጅቶች ባለቤቶች ወይም አስተዳደሮች የተዘጋጀ መጠይቅ፡፡

3.1. ከሊይ ከተጠቀሱት ውጭ የአነስተኛ እና መካከለኛ ድርጅቶችን የምርት እና የስራ ሂደት ፈጠራን ተፅዕኖ የሚያደርጉ ምክንያቶችን ጥቀስ?

_____

_____

_____

3.5. የድርጅትዎን የምርት እና ስራ ሂደት ፈጠራ በውስጥ እና ከውጭ (ከቁጥጥር ውጭ) ተፅዕኖዎች ለመቋቋም ድርጅትዎ ምን ማድረግ አለበት ብለው ያስባሉ?

_____

_____ስ

ላደረጉልኝ ትብብር አመሰግናለሁ!

APPENDIX C

Regressions Tables

Multiple Regression

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	SK, OC, GP, AF, TCH[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: IC

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.796[a]	.634	.628	1.72807

a. Predictors: (Constant), SK, OC, GP, AF, TCH

b. Dependent Variable: IC

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1603.425	5	320.685	107.388	.000[a]
	Residual	925.727	310	2.986		
	Total	2529.152	315			

a. Predictors: (Constant), SK, OC, GP, AF, TCH

b. Dependent Variable: IC

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig
	B	Std. Error	Beta		
(Constant)	10.107	.951		10.631	.000
GP	-.099	.031	-.150	-3.197	.002
TE	-.072	.059	-078	-1.231	.219
Fi	.513	.070	.388	7.316	.000
Or	-.019	.036	-.022	-.528	.598
Skilled Personnel	.661	.088	.544	7.482	.000
a. Dependent Variable: IC					

Appendix D

Correlation Table

		Innovation	Gov. policy and regulation	Technology	Finance	Organizational culture	Skilled personnel
Innovation	Pearson Sig.	1					
Gov. policy and regulation	Pearson Sig.	.809** .000	1				
Technology	Pearson Sig.	.799** .000	.710** .000	1			
Finance	Pearson Sig.	.407** .000	.286** .000	.388** .000	1		
Organization culture	Pearson Sig.	-.114* .046	-.101 .077	-.025 .655	.040 .481	1	
Skilled personnel	Pearson Sig.	.752** .000	.696** .000	.828** .000	.213** .000	-.063 .271	1