

Factors affecting the growth of Small and Medium size Enterprises
in case of Addis Ababa city Administration

A research thesis submitted to the department of accounting and finance in partial fulfillment of the requirements for the degree of Master of Science

(Accounting and finance)

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POST GRADUATE PROGRAM

Factors affecting growth of small and medium enterprise in case of Addis
Abeba city administration

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Abstract

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Small and Medium Enterprises are well known as the building blocks of both developed and developing economy. Understanding the growth behaviors of SMEs is quite heterogeneous. The basic aim to constitute this research is to identify and analyze factors that affect the growth of SME. Firm specific factor including: size, age, human capital and managerial competence and business environment factor which include access to finance, access to market, and infrastructure were realized as major factors for SMEs working in Addis Ababa. In this study both quantitative and qualitative approach was used. The collected data were analyzed through both descriptive and inferential analysis and different statistical tools were used to check different test. Empirical model was proposed relating dependent with independent variables and statistical tests were applied to check for relation between growth and independent variable. This study finds the proposed model can explain the expected relations between dependent and independent variables. This study has shown that Gibrat's law of size and age independence of enterprise growth is not hold in the case of Addis Ababa. Rather, age of an enterprise is found to have significantly inverse relation with enterprise growth. Furthermore, growth of SME is found to be affected negatively by both age and initial size, although the impact of initial size is statistically insignificant. It is also found that the direction of growth impacts of age and initial size are insensitive to alternative measures of growth. Finally, the impacts of environmental factors are weak due to geographical proximity between enterprises and its direct result of environmental similarity.

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List of acronyms

ATF:- Access to Finance

ATM:- Access to Market.

CSA:- Central Statistical Agency.

CSAE:- Central Statistical Authority of Ethiopia.

EU:-European Union.

EDRI:- Ethiopia Development Research institute.

GDP:- Gross Domestic Product.

HC:- Human Capital. 8

IN:- Infrastructure.

ILO :- International labor organization

MOI:- Ministry of Industry.

NOE:- Number of Employment.

OECD:- Organization for Economic Cooperation and Development.

R&D:- Research and Development.

SBA:- Small Business Administration. 8

SME:- Small and Medium Enterprise

UNIDO:- United Nation's Industrial Development Organization.

UK:- United Kingdom.

USA:- United State of America.

WISE:- Women in Self Employment.

SPSS : Statistical Package for the Social Sciences

MANOVA: Multivariate analysis of variance

OLS: ordinary least squares

CLRM: classical linear regression model

Chapter one

1. INTRODUCTION

Introduction:- this chapter begins by providing brief background that leads the reader to understand the study. After giving some insight about SMEs growth and their factors, in the statement of the problem part the paper justifies the reasons that make visible to carry out this study. After the statement of the problem general and specific objectives are presented. Then the subsequent section presents research hypotheses. Significance of the study, scope of the study and organization of the paper are presented respectively.

1.1 Background of the study

Small and Medium enterprises (SMEs) can be categorized as business groups aimed to create productions, services, employment opportunities and others for the communities. SMEs are considered backbone of a country's economy. This sector is highly recognized as contributing high portion of employment, contribution to exports, and promoting entrepreneurship. And they are also used as a building block for a country's economic development.

In developing countries, SMEs contribute to 22% of the adult population employment. United Nations Industrial Development Organization (UNIDO) estimated that SMEs represent over 90% of private business and contributed to more than 50% of employment and of gross domestic product (GDP) in most African countries (UNIDO, 1999). Reports by (ILO, 2002) showed that the share of informal employment (outside agriculture) to the total non-agricultural employment accounts for nearly half or more in all regions of the developing world and about 72 percent in sub-Saharan Africa countries.

In 2003 it was found that 1,863 SMEs employing about 97,782 individuals Central Statistical Agency (CSA, 2003). Carree and Klomp (1996) showed importance of Small and medium sized enterprises (SMEs) as a job generator.

In Ethiopia, according to a survey conducted by the country's Central Statistical Agency (CSA) in 2002 revealed that there were about 974,679 micro enterprises, generating a means of livelihood for about 1.3 million people (CSA,2002).



Growth may refer earning profits, growth in sales/turnover, growth in productivity, growth in number of employment, avoiding losses, being cost efficient, surviving in the market, or performing well compared to competitor. For policy makers Barkham et al., (1996), employment growth is interesting and applied within some studies besides it is also relatively easy to access and measure. Moreover, Davidsson and Wiklund, (2000) discussed the most relevant for some purposes such as policy makers is in fostering employment growth through entrepreneurship and this indicator is also applied due to reasons of easily data availability.

There is no unified theoretical model on firm growth, due to divergence in theoretical and empirical perspectives and interpretations, as well as the complexity of the phenomenon of growth. The situation is further compounded by the heterogeneous nature of growth, i.e. firms grow in a very dynamic way following different patterns. A recent review on growth of SMEs by Gupta et al. (2013) showed the path of firm growth is rarely linear or predictable or other authors argued that firm growth is fairly opportunistic and unpredictable.

A study by Haibo and Gerrit, (2009) on Dutch small and medium firms, growth was measured by *employment growth*. According to Evans, (1987) *turnover* is best to describe SME growth. However in this research both *turnover and employment growth* were used as growth measurement instruments. Since it makes the study reach in understanding about the growth of SMEs than using a single growth measurement tool and it also leads the thesis result to be more sound.

Though it is clear that SMEs have significant contribution to build the economy of countries they are hampered by factors affecting their growth and even some of them lead to collapse at all. Previous studies have tried to address the relationship between growth and firm characteristics (for instance :- using traditional size and age determinants).

Growth pattern of small and medium enterprises is affected by a number of factors which could be internal and external factors. Growth relationship with size and age of firms had been started with the law of Gibrat, (1931). It states that the growth rate of a given firm is independent of its size at the beginning of the period examined. However this law has been empirically rejected by many researches, for example a study by Evans, (1987) found that firm growth decreases with firm size and age by considering data on manufacturing firms in USA. And a study done on

small Italian manufacturing firms showed Gibrat's law failed to hold immediately following start-up when small firms rush to achieve a size large enough to assure their survival (Francesca L. et al, 1999). A more detailed analysis is needed apart from the traditional size and age factors on growth of SMEs which is useful for economics and policy makers. Trovato and Becchetti, (2002) considered external finance, access to foreign markets and ownership structure besides size and age using small Italian manufacturing firms. And they found that external finance and access to market are crucial determinants for growth of small firms.

A more integrated analysis on the determinants of firm growth was done by Haibo. and Gerrit, (2009) by classifying firm determinants in to three dimensions:- *individual, organizational and environmental determinants* by considering 523 Dutch small and medium enterprises. And they found that individual motivation is basic for growth; besides this, organizational determinants and availability of finance affect firm growth. In organizational determinants, firm strategies (market orientation and entrepreneur orientation) are crucial determinants of firm growth. Firms with good market orientation are able to respond quickly to their customer needs by coordinating their internal process with their customers which in turn leads to firm growth.

In Ethiopia there are few studies which are related to this study topic:- A study on Addis Ketema sub city by Endalkachew (2008) discussed on underlying causes of micro and small business failures. The study found financial problems, poor business plan, lack of access to market are some of the main factors leading them to failure. Similar study conducted by Abiyu (2011) on factors constraining the growth and survival of micro and small enterprise in case of Burayu sub-city identified marketing, management, finance and government supports hindering their growth.

Mulu (2009) discussed innovation and micro enterprise growth in Ethiopia and explained factors that affect the innovative activity in micro enterprises. Benyam (2008) studied financial and operating performance of women operated micro and small enterprises organized under WISE (women in self-empowerment). Apart from those few studies conducted, there is lack of integrated empirical study taking the main determinants which controls the growth variable in Ethiopia.

As it is shortly described above growth of SMEs is affected by firm specific factors which includes: human capital, size, age, managerial competence.

Besides the firm specific determinants, this study also identified major factors:- access to market, access to finance, and infrastructure availability. These set of determinants control the business environment where particular SMEs are operating. And it is also understood that these factors are major particularly in developing countries where infrastructures, lack of financial supports, and market problems are quite often.

This study is mainly aimed to identify the major factors hindering growth of SMEs and to recommend possible contributions from different stakeholders to alleviate those problems. Therefore, the investigator tried to understand the behavior of growth variable from firms characteristic point of view (size & age, human capital, management competence) and business environment point of view (access to finance, access to marketing and infrastructure) in an integrated way.

1.2 Statement of the problem

As it was already stated in the previous section of this study SMEs are generator of a given economy by stimulating innovation, creating competition, contributing significant role in employment generation, contributing to export. And for developing countries like Ethiopia apart from those listed contributions, SMEs play much for poverty reduction, even in some cases they help a lot for the welfare of individuals besides profit gain.

Growth of SMEs is affected by various firm specific determinants, and external factors. However previous findings are not consistent and even some contradict to each other. Actually this could be due to differences in the growth behavior of this small and medium enterprises, and the way of looking this problems in different study areas with diversified situations.

Gibrat's law, explained the relation between firm age/size and firm growth and it stated that the growth rate of a firm is independent of its initial size and that there is no difference between firms in the probability of a given growth rate during a specific time interval within the same industry. In fact, a huge number of studies have been devoted to examining the relationship between growth and the firm's size and age. For example, Evans, (1987) found that firm growth decreases with firm size and age.

However, empirical studies do not find supporting evidence (Becchetti & Trovato, 2002). Several studies show that younger firms show higher growth rates than firms that existed for many years.

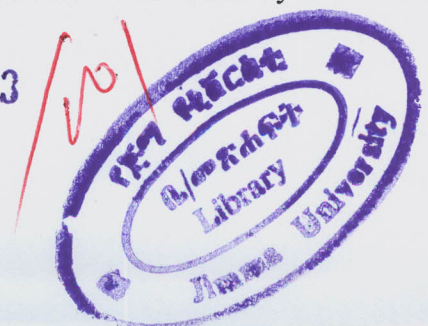
In a similar studies, small firms grow relatively fast since they have to achieve a minimum efficient size Audretsch et al., (2004). Furthermore, researchers who studied firm growth in different size groups suggest that Gibrat's law of size independence only holds for firms above a certain size threshold, for instance a relatively large size with over 400 employees (Bigsten and Gebreeyesus, 2007).

However, empirical literature suggested that firm growth is determined not only by the traditional characteristics of size and age but also by other firm-specific characteristics (like human capital, management skill and know-how) and external factors which includes: - access to finance, access to market and infrastructures. And there exist diverse views on the issue, with limited empirical studies explaining the determinants of firm growth in a holistic manner.

Therefore, this study selected the most influential determinants of firm growth after rigorous review of previous literature works and quantitative empirical studies using the case of SMEs located in Addis Ababa, Ethiopia. It will be interesting for the researcher to figure out the most determining factors for SMEs growth and understand their effect using empirical modeling tools. And the researcher selected seven determinants to influence growth variable such as: - *enterprise age, size, management competence, entrepreneurs human capital (skilled employee), access to finance, access to market and infrastructures.*

Apart from researches done on growth of SME in the global level, there is a clear gap in the case of Ethiopia. And the dynamics of SME growth will change with different behavior of growth determinants, for instance the case of marketing access in the sense of local and global market opportunities and how it affects SME growth in Ethiopia created a motive to investigate its characteristics. And also the influence of infrastructure availability (water, electricity, transport ...) is also another interesting determinant which needs to be understood considering as a gap for this study. So the growth behavior of SME in Ethiopia is an interesting area to be studied.

In addition there is also a gap on literatures done in Ethiopia in finding the relation between growth and growth determinants, previous studies done on growth of SME like, Mulu, (2009), addressed innovative and growth aspects of SME in Ethiopia. And other works by



Merima. and Jack ,(2010) studied the effect of clustering on the performance of SMEs in urban and rural areas considering only SMEs working on the handloom sector using empirical models.

Benyam (2008) studied factors affecting the financial and operational performance of women working under WISE (organization for women for self-employment) and the study applied qualitative studies focusing specific target groups which showed there was a gap in understanding growth of SMEs with empirical models. A similar work was also done by (Endalkachew, 2008) on a case study on business failure of SMEs in Addis ketema sub city with qualitative methods.

Despite those few studies, there is a need to enrich and develop our knowledge of understanding about the growth of SMEs by considering SMEs working on different sectors particularly in Addis Ababa using empirical model. Moreover such studies need to be continuously progressed and advanced since their outcomes will guide policy makers on their approach towards growth of SMEs.

Above all, the growth of SME is not well studied in Ethiopia and it shows that there is a clear gap which needs to be investigated more considering the above listed determinants for improving SME growth in Ethiopia. And this research aimed to fill some gaps on studies focusing on factors affecting growth of SMEs working in different sectors using empirical models.

1.3 Objectives of the study

1.3.1 General objectives

The general objective of this study is to identify and analyze factors that affect the growth of small and medium enterprises located in Addis Ababa.

1.3.2 Specific objectives

- To investigate the effect of firm characteristic factors on the growth of SME.
- To examine effect of business environment factors on the growth of SME.

1.4 Research hypothesis

Before heading to the main part of the research work, hypotheses were set up from independent variables which could affect (positively or negatively) the growth variable. There were empirical evidences done on the relation between growth variable and firm determinants. Accordingly, the investigator formulated seven hypothesis which can be tested using model later in the analysis part of this work. In each part of the session, some previous findings are also discussed for clarifications.

A. Size

From empirical works, it is understood that the larger the firm (defined in terms of assets) the greater its potential to grow (Wiklund and Shepherd, 2005). In a similar studies, small firms grow relatively fast since they have to achieve a minimum efficient size (Audretsch et al., 2004). Furthermore, researchers who studied firm growth in different size groups suggest that Gibrat's law of size independence only holds for firms above a certain size threshold, for instance a relatively large size with over 400 employees (Bigsten and Gebreeyesus, 2007).

In fact, a huge number of studies have been devoted to examining the relationship between growth and the firm's size and age. For example, Evans, (1987) found that firm growth decreases with firm size and age. In addition, (Mateev, 2010) supported that firm size when proxy by its total assets tends to increase sales revenues. Hence, this contrasting view regarding the relationship between firm size (size of asset) and growth enables the researchers to frame the following hypothesis.

H1: - There is a positive relation between growth and size of SME

B. Age

It is defined as the number of years a firm has been operating in the market (since the date of incorporation) and is expected to have a negative relation with firm growth. Contrary to Gibrat's law some studies, for example, Evans, (1987) examined the effects of firm size and age on growth using data on manufacturing firms in the United States. Thus, he suggested that younger firms are more likely to grow faster than older ones.

H2:- growth of SME is affected negatively by firm age

C. Management competence and know how

Studies done by (Storey, 1994) showed business owners who previously owned other businesses may be inherently more cautious than those unburdened by such experience and may therefore not have a growth objective. Also the level of education can enhance the entrepreneur's motivation and ability to use a number of skills that are useful in managing enterprises. In this sense, it may be expected that more "educated" business owners have a greater likelihood of forming faster-growing businesses than their less educated counterparts.

H3:-there is a positive relationship between SME growth and management competence.

D. Firm human capital

Educated entrepreneurs play an important role in identifying and exploiting opportunities (Ucbasaran et al., 2006). According to Chandler and Hanks,(1998), increased levels of human capital can act as a substitute for financial capital. Educated entrepreneurs are particularly successful when they own the firm in question. This human capital variable is expected to positively correlate to the firms' growth.

H4:- there is a negative relationship between enterprise human capital and SME growth.

E. Access to finance

It has been well documented that most firms, especially small ones and those in developing countries with less developed financial systems, face substantial credit constraints (Hubbard 1998; Banerjee and Duflo, 2008).

As compared with large firms SME are highly affected by financial constraints, some empirical studies (e.g. Becchetti and Trovato, 2002; Carpenter and Petersen, 2002) have confirmed that the constrained availability of finance affect small firm growth. Even though smaller firms seek to achieve minimum efficient scale, they are more likely to be unable to obtain sufficient capital from external sources in order to expand their businesses. As explained by (Sarno, 2008) on southern Italian firms, firms are supported by internal finance since provision of external resources are more problematic and costly for them.

Moreover, evidences suggested that banks are more conservative when they provide loans to SMEs. Due to the information asymmetries, SMEs are more likely to be charged relatively high interest rates and asked for high collateral and loan guarantees (Stiglitz and Weiss, 1981). In the study this determinant is expected to affect firm growth positively.

H5:- there is a positive relation between firm growth and access to finance

F. Access to market

Market structure is the main dimension of a firm growth which connects directly with the customers. And the market share where SMEs work on price is highly competitive where new firms will create pressure on the existing firms. Some studies also showed (Hall, 1995) lack of knowledge of marketing of the firms also contribute to barrier for their growth. Since SMEs work on relatively small investments, they rely on easily accessible markets for their survival. And the concept of globalization has created challenges to SMEs in their competitiveness in global market as well as in the local markets.

Moreover the concept of market orientation is not related to firm size and it is appropriate to both large and small firms (Blankson et al., 2006). SMEs respond quickly to markets based on customer information as compared to large firms since they are more closer to customers, and since they have also less bureaucracy (Keskin, 2006). And it has been argued that most of SMEs lacked marketing concepts since most firm managers are not also taking formal trainings in marketing.

A study by (Helen Reijonen, 2009) revised that, SMEs may follow some form of self-directed and informal customer centric philosophies (McPherson, 2007). According to the responsive market orientation, customer needs are first investigated, assessed and then consistent products and services developed; however, in SMEs the managers usually do it in the opposite way:-they develop a product and then try to find a market for it (Stokes, 2000b).

H6: - there is a positive relation between growth of SMEs with access to market

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G. Infrastructures

The existence of good infrastructures also paved ways for SMEs to be competitive internationally. Infrastructure can be developed by the provision of quality education, health facilities, environment, water supply, energy supply, access roads, and creation of science and technology institutions to produce competitive entrepreneurs. Moreover technological innovation, globally integrated financial sectors, well-developed infrastructures and skilled labor force all support a country's international competitiveness. Infrastructure plays a great role to the economic development including:- efficient transport network system which helps to access to market and resources, reliable energy source production and distribution which helps SMEs to use modern technologies. Particularly SMEs working in developing world suffer a lot in this dimension since there are a lot of infrastructure problems. The World development report (1994) showed that the efficiency of infrastructure utilization is important to business and economic growth.

H7:- there is a positive relation between growths of SMEs with infrastructure

1.5 Significance of the study

This study will have a significant contribution in the literature of growth of SMEs particularly in Ethiopia, where it will be used as a good starting point for researchers. The study will also give precious findings for the policy makers or financial institutions about their link with growth of SMEs so that each stakeholders will be aware of the existing gaps to be filled by the concerned stakeholders. As it is obvious that the SMEs have already contributing a lot to the country's economy in terms of employment, innovation, income, poverty reduction etc... this type of research works should be continuously advanced to understand the up-to-date growth dynamics of SMEs.

1.6 Scope and limitation of the study

This study is concerned to analyze factors that affect the growth of small and medium enterprise in Addis Ababa specifically in two selected sub cities i.e. "Arada" and "Kaliti". Even if there are so many factors that affect the growth of SME this research delimited to firm characteristics factor (human capital, size, age, managerial competence) and business environment factor (access to finance, access to marketing and infrastructure) due to time and financial constraint.

In addition this study gives more infuses for SMEs that conduct around four types of business sector. This thesis have some limitations due to the following sources of problems:

1. It considers only seven factors that affect growth of SME
2. This study is made based on various data collected from owner of SMEs but most of them are reluctant to provide truthful information.

1.7 Organization of the paper

This study will be organized in to five chapters. the first chapter contains background of the study, statement of the problem, objective of the study, hypothesis of the study, and scope and limitation of the study. The second chapter present review of literature both theoretical and empirical aspect. The third chapter provides briefly about methodological part that is adopted to achieve the objective of the study. The last two chapters will depict about analysis, conclusion and recommendation of the study respectively.

Chapter two

2. REVIEW OF RELATED LITERATURE

Introduction:-This chapter will discuss the theoretical and previous research works done on this aspect. In the first part, some theoretical bases are discussed and then previous literatures findings will be presented.

2.1 Theoretical literature

2.1.1 General overview

Enterprise is defined as a controlled system which comprises detector (is a part of a system that acquires information about the environment), selector (based on the information provided by the detector it gives behavioral response), and effectors (the other part of the system that changes the behavior to effect or simply it is the effector) (Salminen, 2000).

Charte des Pme,(2003) defined SME as a physical or moral person that produce market goods and services. SMEs provide crucial contribution for the world economy basically for developing country like Ethiopia. Indirectly those SMEs help to distribute the benefit from economic growth equally. Even if those sectors have this much contributions for the country economy, the basic dynamics and robust are not available in least developed country like Ethiopia.

Moreover SMEs are considered backbone of a country's economy. This sector is highly recognized as contributing high portion of employment, contribution to exports, and promoting entrepreneurship. And they act as a building block for a country's economic development. In European economy, 'they contribute significantly to source of jobs, create entrepreneurial spirit and innovation in the EU and are thus crucial for fostering competitiveness and employment'. In the enlarged European Union of 25 countries, some 23 million SMEs provide around 75 million jobs and represent 99% of all enterprises (EU, 2005).

According to the African development bank estimates 'SME have a crucial role to play in stimulating growth, generating employment, and contributing to poverty alleviation and they

represent over 90% of private business in the continent and contribute 50% of employment and GDP of most African countries' (African Development Bank, 2003).

In Ethiopia, even though a large number of SMEs are working in Ethiopia, it is extremely difficult to define what constitute SMEs in Ethiopian economy. According to a survey conducted by the country's Central Statistical Agency (CSA) in 2002 revealed that there were about 974,679 micro enterprises, generating a means of livelihood for about 1.3 million people (Central Statistical Agency, 2002). Similar study done by the same institution in 2003 showed that 1,863 SMEs employing about 97,782 individuals (CSA, 2003). Carree and Klomp, (1996) showed importance of Small and medium sized enterprises (SMEs) as a job generator. And it is obvious that SMEs contribute a significant portion of a country's employment and economy. In this theoretical review of SMEs, first the study will try to put some definitions of SMEs, characteristics and role of SMEs, national strategy for development of SMEs, definition and measurement of SMEs growth and finally factors affecting SMEs growth will be presented.

2.1.2 Definition of SMEs

There is no universal definition of SMEs throughout countries and they apply different criterion to define SMEs. Mostly number of employee, turnover, total asset are used as a definition base. SME defined as none affiliate or subsidiary firm which facilitate certain number of employee, but according to OECD (Organization for Economic Co-operation and Development) countries number of employee is not unique definition criteria.(OECD 2005, 17). The size of the enterprise is also used to classify. 'In United Kingdom (UK), a small enterprise is defined as a unit that has a turnover of £5.6 million, and employs around fifty people. And a medium sized enterprise has a turnover of £22.8 million, and has two hundred fifty employees. Canada defines a small business as one that has around fifty to hundred employees depending on service and manufacturing respectively. And a firm that has around five hundred employees is classified as a medium sized business. In Japan, for the manufacturing sector, SMEs are those that employ less than three hundred people or have an invested capital of less than hundred million yen. In the United States of America, SME means a unit consisting of one thousand five hundred employees and has a turnover of around \$0.75 to 29 million, depending upon the type of business. In the USA a government department called small business administration (SBA) sets the definition of small businesses. SME definition in EU (2005) stated the category of micro, small and medium-

sized enterprises (SMEs) is made up of enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding 50 million euro, and/or an annual balance sheet total not exceeding 43 million euro’.

In China small enterprises are defined as those that employ fifty to hundred people and medium enterprises employ hundred one to one hundred fifty people. However a study by (Jiantuo YU et 2005) showed that different SMEs classifications are used for different working sectors (Industry, Construction, Wholesale and Retail Trade, Post and Telecommunications etc.).

In a study on west African SMEs by (Ibrahima,1990) used SMEs classification adopted by Senegalese charter which states small enterprises which includes micro enterprises characterized by staff between 1 and 20 employees, annual revenue not exceeding \$50,000 for enterprises delivering services and \$100,000 for delivering services and goods. And for medium size enterprises a staff less than 250 employees , annual revenue between US \$100, 000 - \$30milions without tax and net investment exceeding US\$2milions.

In Nigeria Dr. Mike et al. (2012) defined as ‘Small Scale Industry:- an industry with a total capital employed over 1.5 million naira, but not more than 50 million naira, including working capital but excluding cost of land and /or a labor size of 11 to 100 workers. Medium Scale Industry:- an industry with a total capital employed of over 50 million naira, but not more than 200 million naira, including working capital but excluding cost of land and/or a labor size of 101- 300 workers’.

A study by (Markus Loewe et al. 2013) showed Egypt SMEs classification based on the number of employees, ‘Micro enterprises are individuals or business entities with 1 to 4 employees, Small enterprises are business entities with 5 to 49 employees, Medium enterprises are business entities with 50 to 99 employees, and Large enterprises are business entities with 100 employees or more’.

Also in Kenya, based on MSE National Baseline Survey (1999), ‘MSEs defined as those non-primary enterprises (excluding agricultural production, animal husbandry, fishing, hunting, gathering and forestry), whether in the formal or informal sector which employ 1-50 people (Ronge et al. 2002)’.

In a similar way, with reference to capital and technical capacity, SMEs definition in Ethiopia that is accepted by Ministry of Trade and Industry in 2003 showed, *micro enterprises* are business enterprises with a capital of not more than 20,000 birr (\$2,500) while a *small enterprises* are business enterprises with a capital of less than 20,000 – 500,000 birr (\$2,500 - \$62,500) in both cases excluding high-tech consultancy firms and other high-tech establishments. And a definition considering the number of employee working in an enterprise. Central Statistical Authority classified small and medium enterprises are establishments that engage less than 10 persons using power driven machinery.

As it is seen from the above definitions there is no unique definition about SMEs in the globe and different institutions use their own classification based on different parameters considering the existing country's economic development situations.

2.1.3 Role and contribution of SMEs

The economic importance of SMEs is widely understood in all corners of the globe. They contribute significantly for job creation (employment), involve in innovative activities and they create competitiveness in the market. Especially for developing economies they contribute much for *economic growth* and *poverty alleviation*. In the context of poverty alleviation, SMEs help entrepreneurs for income generation in terms of profit margins, and also for income generation in the form of salaries for employees.

In OECD (Organization for Economic Co-operation and Development) countries, 95% of firms are SMEs employing between 60% and 70% of workers. In a different report in the enlarged European Union of 25 countries, some 23 million SMEs provide around 75 million jobs and represent 99% of all enterprises (European Commission). Similarly in Africa comprising over 90% of African business operations and contributing to over 50% of African employment and GDP (Okafor, 2006). In Kenya some estimates showed that there were about 900,000 small and micro enterprises establishments employing 2 million Kenyans and generating about 14 per cent of the country's GDP (Dolman, 1994).

In Nigeria, SMEs working under agricultural projects were used as an effective strategy for poverty alleviation. Despite previous failed government programs to alleviate poverty, SMEs



working in agricultural sectors easily create income and employment to the local rural communities which in turn also reduce displaced people to urban areas (Adepoju, 2012).

More experiences in developing world, for example, in three west African countries (Botswana, Zimbabwe and Mauritius) showed that SMEs working in various sectors (trade and service, 68% ,manufacturing, 15%, construction , 3%) played much in poverty alleviation(Mukras, 2003).

In general SMEs played a key role in job creation in developed and developing world. Ethiopia, being the poorest country, the role of SMEs in alleviating poverty is unquestionable and it is also widely accepted from every stakeholders in the country SMEs are helping much for the community to survive. Moreover SMEs in Ethiopia are not only aiming for income and employment generation, rather they are contributing to the welfare and improving the life of society (Mukras, 2003:58-69).

2.1.4 SMEs characteristics

SMEs are also considered flexible and innovative organizations that are able to respond quickly to customer and market demands. Moreover flexibility is a key characteristic of SMEs which determine their ability to adapt to changing circumstances (Margi Levy and Philip Powell, 2005). Though flexibility is desirable, but dependent upon other factors in the organization (Hansen et al., 1994). The production technologies of many manufacturing SMEs may inhibit flexibility (Gupta and Cawthorn, 1996), while it is also believed that it is people rather than technology that provide flexibility (Carrie et al. 1994).

And SMEs are also characterized by producing innovative products and many of the owners are motivated by innovation activities. And with innovation SMEs are able to respond within their bounds of the knowledge about existing products or services to changes required by their customers within their niche market. Moreover to be successful firms needs to understand the perceptions, needs and wants of the market in order to create products with a superior value (Barbara et al. 2011).

While SMEs don't involve in extensive research and development, if they do so, they can be more innovative than larger firms (Storey, 1994). Moreover many of the SMEs innovative are

not successful due to lack of professionalism and inability to collaborate with other enterprises (Rothwell, 1986; Noteboom, 1991).

8

The growth of SMEs is highly depending on their innovative nature. Size of firms, human capital determines the innovativeness of SMEs. For example in Ethiopia, among the human capital variables vocational training was found to have a strong effect on the innovation activity and with regard to their size, larger SMEs are more innovative than small ones (Mulu, 2009).

These are among the positive characteristics of SMEs that lead them to success. However, SMEs are found to often be constrained not only financially, but also in skills (Carrie et al., 1994; Hansen et al., 1994). And this usually leads SMEs to use external consultants to provide the skills that they need.

They are also characterized by small equity since the owners have small resources to invest in the business. And this low equity is viewed by financial institution (banks) as insufficient to create a good relation between the enterprises and the banks. Actually this shows clear differences from the advanced business sector.

When we look at the sociological context of SMEs, they have low level organization since most of them have social link with the informal sector. And most of these enterprises have family based structure rising from family. Usually entrepreneurs launch business based on their family base (Ibrahima,1990). Some experiences from SMEs in Portugal indicated that family-based firms may be in a relatively better position to enter the market (Vitor and Bernadette, 2011). 'Although the family may determine the structure of the firm, it may also play a secondary role in business – for example by providing resources. Thus, the family may play a central role in the process of the firm start- up, and, in later stages of the firm development, it may become part of the firm only through participation in its management' (Vitor and Bernadette, 2011). However there are considerable opportunities and limitations in a family based firm.

In developing countries, SMEs use traditional technology and process which might be due to the cost of technology or they have little attachment to technology (Ibrahima,1990). Moreover the level of technology in SMEs critically affect their growth and productivity. Particularly in developing world:- communication services, electricity, water, infrastructures are poorly

available. And as a result SMEs working in such locations are technologically constrained and they are unable to use information system to support their business.

2.1.5 Theory on SMEs

Study by Green et al.,(2006) summarized the existing theories in their work of policy arena on SMEs particularly focusing on finance for SMEs and poverty reduction for developing countries. And it is also provided in this paper as follows to highlight the existing theoretical developments on SMEs.

When we look at the theoretical developments done in the last centuries on SMEs, the main theory is the *labour surplus theory* which was formulated by Lewis (1955). It is argued that the driving force behind SME development is excess labor supply, which cannot be absorbed in the public sector or large private enterprises and is forced into SMEs in spite of poor pay and low productivity. And it is argued that, the SME sector develops in response to the growth in unemployment, functioning as a place of last resort for people who are unable to find employment in the formal sector. And they are expected to grow in periods of economic crisis, when the formal sector contracts or grows too slowly to absorb the labour force. In the contrary when the formal employment grows SME sector is assumed to contract again and thus develops an anti-cyclical relationship with the formal economy. Nevertheless there are empirical problems with the unemployment theory of the growth and development of SMEs, since there is lack of reliable and adequate data for researchers to test the hypothesis that SMEs absorb surplus labour from the public sector or large private enterprises. It is also sometimes argued that SMEs concentrate on trade because this requires less capital and knowledge than production (Green et al., 2006).

The second theory for explaining the development of the SME sector in developing countries is the *output-demand theory*. And the theory postulates for the development of SMEs there is a prerequisite that is a market for their products and services. Therefore, the SME sector will tend to develop a cyclical relationship with the economy as a whole. However they will face fierce market competition with large firms which will hinder their growth.

Nevertheless, structural adjustment and other policies that limit such monopolies, and attempt to create more competition, will therefore be advantageous to the SMEs, because this may allow

them to capture market shares from the large enterprises. Empirical studies also propose strengthening of the SMEs through networks or via the creation of forward linkages with the formal economy, for example franchising and sub-contracting.

The third theory, known as *the firm growth theory*, contends that, as a result of industrialization and economic growth. It is assumed that SMEs are likely to disappear and be replaced by modern large-scale industry. This theory has, however, been shown to be inaccurate in the sense that SMEs do not normally compete directly with large enterprises; rather, they often tend to remain micro and small, co-existing with large multi-national companies, which phenomenon the World Bank (1989) has identified as the 'missing middle' (Ryan, 2005). Also most studies confirm that SMEs are unable to expand creating a 'missing middle'. Moreover SMEs find market niches where scale economies cannot be exploited by large firms distributing to areas or income groups where their costs would be prohibitively high for large enterprises (Green et al., 2006). All the theories are common in the sense that growth of SMEs contribute to poverty reduction.

2.1.6 “Pro” and “contra” arguments on SMEs

Moreover there are two widely accepted arguments of SMEs:- ‘**pro- and contra-SME arguments**’. World Bank Group and other international aid agencies provide targeted assistance to small and medium size enterprises (SMEs) in developing economies to accelerate growth and reduce poverty. For example, World Bank Group approved more than \$10 billion in SME support programs over the period 1998 – 2002 and \$1.3 billion in 2003.

And this **pro-SME** policy of World Bank is based on three core arguments (World Bank, 1994, 2002, 2004). First, those advocating SMEs argue that SMEs enhance competition and entrepreneurship and hence have external benefits on economy-wide efficiency, innovation, and aggregate productivity growth. From this point of view, direct government support of SMEs will help countries exploit the social benefits from greater competition and entrepreneurship. Second, SME proponents frequently claim that SMEs are more productive than large firms but financial market and other institutional failures impede SME development. Thus, pending financial and institutional improvements, direct government financial support to SMEs can boost economic growth and development. Finally, some argue that SME expansion boosts employment more

than large firm growth because SMEs are more labor intensive. From this perspective, subsidizing SMEs may represent a *poverty alleviation tool* (Thorsten Beck et al. 2005). And this argument believes that direct support of government for SMEs in least developed countries which they can exploit social benefits from their completion and entrepreneurship and SMEs will boost their economic growth and development.

And the opposite view of this argument argued the importance of large firms opposing pro-SMEs, and they argued that large firms provide more stable and therefore higher quality jobs than small firms with positive ramifications for poverty alleviation (Rosenzweig, 1988; Brown et al., 1990). A study by (Little, et al. 1987) showed that SMEs are neither more labor intensive, nor better at job creation than large firms. And they provide also that, large enterprises may exploit economies of scale and more easily undertake the fixed costs associated with research and development (R&D) with positive productivity effects (Pagano and Schivardi, 2001; Pack and Westphal, 1986). Another critics of pro-SME arguments is SME subsidization programs are likely to fail in exactly those economies where SMEs most need government subsidies to grow. And this logic can be clarified as SMEs financing in countries with poorly functioning political systems and which also in turn have poorly functioning legal and financial institutions is directed to politically connected firms.

2.1.7 SMEs Strategy for the development

For many SMEs, decision-making and strategic objectives are ignored, due to uncertainty and risks. Usually short term^o decisions are considered to balance the needs of customers with the demands of suppliers and financiers. However, successful owners try to keep options open because of future uncertainty in the market. SMEs' strategy tends to be emergent and informal. SMEs primarily adopt a differentiation strategy, where the product or service delivered is different from those already in the market to get a particular market niche (Margi and Philip, 2005). And this makes SMEs grow more quickly since they exploit the existing market gap. Moreover, investment in product innovation is usually the main strategy for SMEs growth. It also allows the SME to focus on quality, innovation and flexibility in delivering the product or service (Burns and Harrison, 1996). And their strategy is usually connected to their innovativeness and this⁹ is a key characteristic of SMEs and one that may demand flexible strategies for success. So SMEs are reluctant to commit to long-term strategies. And there are

few formal systems and relatively little strategic planning done by SMEs until they are nearly at maturity (Margi and Philip, 2005). In general, as compared to large firms, SMEs tend to plan strategically in a less structured and more informal manner than bigger companies.

2.1.8 National strategy for the development of SMEs

In Ethiopia, according to a survey conducted by the country's Central Statistical Agency (CSA) in 2002 revealed that there were about 974,679 micro enterprises, generating a means of livelihood for about 1.3 million people (Central Statistical Agency 2002). Similar study done by the same institution in 2003 showed that 1,863 SMEs employing about 97,782 individuals (Central Statistical Agency 2003). Carree and Klomp,(1996) showed importance of Small and medium sized enterprises (SMEs) as a job generator.

In Ethiopia the private sector is limited and it was the worst state and discouraged in the previous government time. Even now they are at the lowest peaks as compared to other continental countries (Zuzana and Emerta,2010). Particularly the sector of manufacturing is quite limited with some exceptional sectors (flower, leather, textile). And unemployment in the urban population is quite high whereas the limited private sector can't absorb such high unemployment which actually comes from the high population increase in the urban areas from 6 million to 13 million between 1990 and 2007 (Zuzana and Emerta,2010). Besides this, there distribution is not even most concentrated in the capital, Addis. Moreover, as it is shown in fig (2.1) the private sector got significant share around 15% of employment distribution (World Bank, 2005)

Moreover, similar studies also showed that in Ethiopia most private sectors are SMEs where majority of them are informal and unproductive. Even the existing SMEs are unproductive and are not upgrading. According to World Bank assessment in 2001/02, among the surveyed entrepreneurs 70% of the respondents complained about high tax rates, access to land, access to credit and lack of skilled labor also affects much, where 20% of the respondents have been affected, access to finance also affected 40% of the respondents (refer fig 2.1).

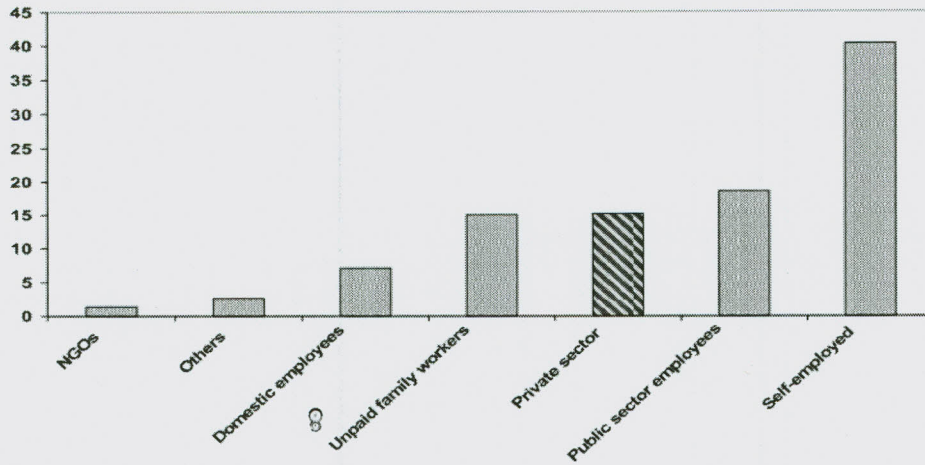


Fig (2.1) Employment distribution (World Bank, 2005)

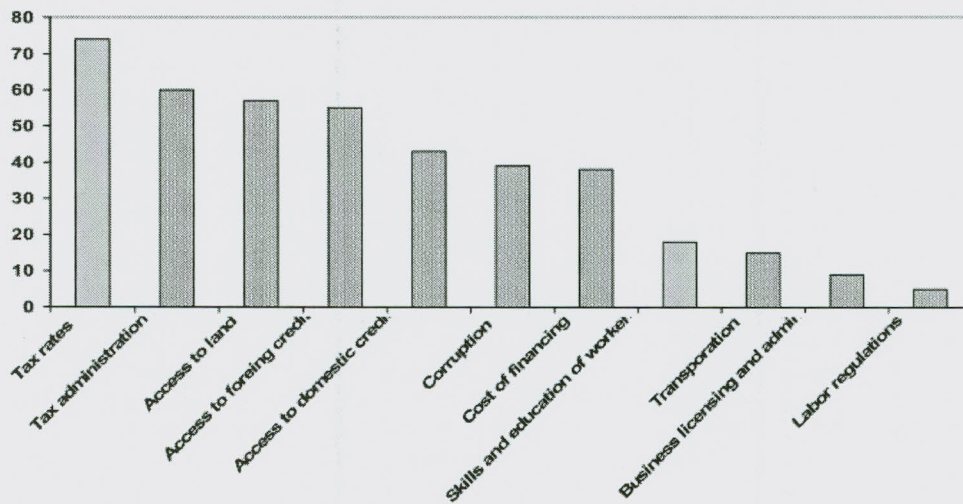


Fig (2.2) Most cited constraints to SMEs (% of respondents) (World Bank 2005)

Government has also included many promotional policies to support this sector like product reservation, infrastructure support, direct and concessional credit, tax concession, special assessment in procurement of equipment, facility of duty drawback, quality control, and provision of market network.

Moreover the government has formulated a National SMEs Development and Promotion Strategy in 1997 E.C, which enlightens a systematic approach to alleviate the problems and promote the growth of SMEs. And the strategy was planned to achieve economic growth, to assure employments, to help them to be more innovative and productive so that they can be competitive in both local and global markets.

Particularly the strategy focus on manufacturing sectors which includes :- food, textiles, leather, clothing, metal works, and crafts. Besides the strategy encourages on start-up and expanding firms (particularly focusing on women-owned firms). Small enterprises are also working in nomadic and disaster areas; agro-business and small scale farming and fishing; small exporters; as well as small-scale tourism operators; small size contractors & firms providing construction materials. And SMEs working related to construction have got particular attention to make them work with big construction companies using subcontracting so that they can be easily upgraded and achieve growth.

The framework of SMEs support includes, business registration and licensing; financial and loan application, simplified tax declaration, training in entrepreneurship, skills and management. However there are more discrepancies at different stakeholder levels to implement those strategies.

Moreover, World Bank (2005) has reported that poor countries such as Ethiopia are usually more heavily regulated in terms of policy. In these countries they reported that SMEs have only two options: compliance with regulation or operating in the informal sector. However, neither of the two options is strategically beneficial for small businesses and enterprises as the options fail to meet the basic needs and requirements of small firms. SMEs in Ethiopia are over-regulated and under-resourced, compliance with existing regulations does not provide SMEs with competitive market conditions that would raise their profit. The second option left for SMEs is operating in the informal sector which denies SMEs access to benefits such as loan from formal money lending institutions such as commercial banks, business related trainings, technical assistances and work-place related problems. According to (Lowery, 2005) in countries where there is good macro-economic policy, SMEs flourish and operate at full potential, conversely in countries where macro -economic policy is not favorable, SMEs struggle to survive, and fail to play a prominent role in the national economy (Eshetu and Mammo, 2009).

2.1.9 Growth definition and its measurements

A recent research done by Gupta et al, (2013) collectively revised aspects of growth definition. Growth can be defined in terms of revenue generation, value addition, and expansion in terms of volume of the business. Besides this, it can also be measured with qualitative features like market share, product quality, and customer satisfaction. And for studying the growth of an enterprise the life cycle analysis is used mostly. In life cycle models, growth is considered as organic for some firms, assuming linear growth pattern over a period of time or for some firms it might not follow linear path where they can grow, stagnate, and decline in any order.

Several studies adopted various growth measurement indicators for their specific study area. However the most common are: the number of employee and sales /turnover over a given period of time. Previous studies like Delmar et al.,(2003) have discussed further growth indicators applied by various scholars such as; assets, market share, physical output and profits. However those indicators have limited applicability for example, total assets value depend on industrial capital intensity and is sensitive to change over time, and market share and physical output vary within different industries and are therefore difficult to compare and finally, profits are only relevant in order to measure size over a long period of time (Delmar et al., 2003). For policy maker (Barkham et al., 1996), employment growth is interesting and applied with in some studies it is also relatively easy to access and measure.

Moreover, Davidsson and Wiklund, (2000) discussed the most relevant for some purpose such as policy makers' interest in factoring employment growth through entrepreneurship, and this indicator is often applied due to reason of easily data availability.

Very few entrepreneurs use growth in employees as a goal in itself (Gray,1990; Robson and Bennett, 2000) and because some growing firms outsource heavily in employment growth is not always highly correlated with sales growth (Delmar et al., 2003).

Turnover is the most common growth indicator. Various writers noted turnover growth is the best measurement of growth; in addition, this form of growth measurement is mostly used by SME owner and managers themselves (Carter and Evans, 2000).

2.1.10 Small and medium enterprise growth theories

Growth has two different forms which are organic and none organic. If the company grows internally by expanding the existing production or by launching new production line this growth is grouped under organic way of growth. On the other side if the company grows by purchasing another existing firm it is called the company grows through none organic way. (Davidson et al, 2001).

For the sake of describing growth different theoretical model are developed. Those theories can be classifying in to two classes one class focus on *learning process* (either active or passive) while the other class is *stochastic and deterministic approach*.

Passive learning model: In this Jovanovic's (1982) 'learning model' framework, it is explained that efficient firms (i.e. firms with efficient managers) grow over time, expanding each period when their managers observe that their guesses about their managerial efficiency turn out to have understated their true efficiency. In short in this learning model the annual growth rate of a firm depends on the accuracy of the manager's predictions regarding ability and price of the product. Moreover this model implies that small and young firms are more viable for growth (Stranova, 2001; Cunningham and Maloney 2001;Goedhuys, 2002). To sum up only after interring to the market the firm learn how to grow.

Stochastic and deterministic approach: it is known as Gibrat's low, it argues that all change in size is by chance. Therefore size and age of the firm has no effect on the growth of SMEs. The deterministic approach assumes, the difference in the rate of growth across firms depend on a set of observable industry and firm specific characteristics (Becchetti and Trovato, 2002; Francesca et al 1999).

There are views which describe growth processes in the form of life cycle or stage models that encompass the entire life span of a firm (reviewed by Gupta et al. 2013)

A model developed by (Churchill and Lewis,1983) showed that an enterprise can have five stages of growth as depicted below figure 1. Existence is the first stage and survival is the second where business grows and entrepreneur feels adding more capital. In the third phase the enterprise starts earning profit. At the take-off stage the firm plans for further growth, expansion

and seeking new opportunities. Finally the firm reaches maturity. And the firm focus is on quality control, financial control, and creating a niche in the market.

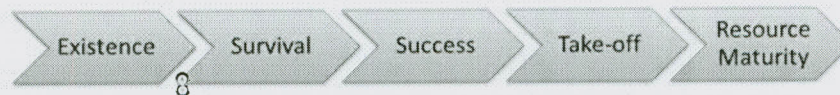


Fig (2.3) Stages of an enterprise growth (Churchill and Lewis 1983).

However it is not necessary that an enterprise develop in a discrete stages with clear boundaries between them (Bridge et al. 2003). And enterprises don't necessarily follow linear models. It is not possible for firms to progress through each stages. In general growth depends on the strength of the growth aspirations and growth-enabling factors of an enterprise. Hence, it is not possible to consider growth as a norm or an even progression of an enterprise.

Understanding the dynamics of growth of Small and micro Enterprises is an essential step since their growth is not at all healthy, being affected by many hindering variables like:- employee education, firm size, age, management competence, financial constraints, access to market and infrastructure. Several papers addressed those issues by considering various SMEs in their study. However there are constraints in discussing the main factors which really controls the dynamics of the growth of SME using models especially in developing world. And the conceptual background of those variables is discussed in the next section of this chapter. In the last session of this chapter empirical finding will be discussed and finally the research gap in the context of SMEs located in Addis Ababa, Ethiopia is presented.

2.1.11 Factors affecting growth of SMEs

The growth function in small and micro enterprises is affected by a number of factors. And SMEs grow in a different way which is quite heterogeneous and multi-dimensional and difficult to be summarized with a simple model. And particular studies are beneficial to understand clearly growth of SMEs. Some of determining factors could be related to the behavior of SMEs, financial access and some influences from institutional stakeholders (look fig 2.4 and 2.5).

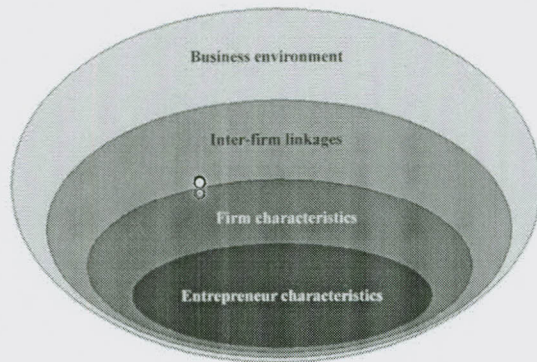


Fig 2.4 Four layers affecting SME growth (adopted from (Reeg, 2012), & (Markus Loewe et al, 2013)

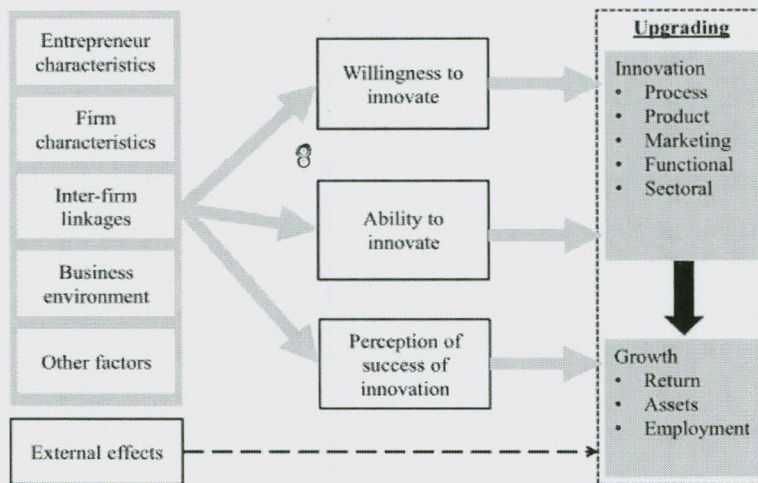


Fig 2.5 SME Growth adopted from Markus Loewe et al., (2013)

The existence of various internal and external factors that could affect firm growth creates a challenge for studies aiming at approaching full explanation of the phenomenon (fig 2.5).

I. Age and size

Typically, younger small firms are shown to grow more rapidly than older ones. And younger owner/manager has the necessary motivation, energy and commitment to work and is more inclined to take risks (Storey, 1994). Moreover it was found that in the United Kingdom and United States of America younger SMEs grew more rapidly than older enterprises (Storey, 1994).

Size as determinants of firm growth has been discussed for a long time, following the formulation of Gibrat's law in 1931. Gibrat's law states that the rate of growth of a firm is independent from its size at the beginning of the period, and that the probability of a given growth rate during a specific time interval is the same for any firm within the same industry.

And the general pattern of growth in terms of size is smaller firms grow more rapidly than large firms (Storey, 1994; Delmar, 1997). However there is a contrary point of view where smaller firms have low survival capability than large firms.

II. Human capital

Human capital refers to the skills and knowledge that individuals acquire by investing in schooling, on-the-job training and other types of experience that could contribute for possible growth of SME (Becker, 1964). The management of SMEs is determined by the owner and their attitude towards business. The more skills and knowledge an SME owner has, the greater is their capability to exploit opportunities, learn about new processes or develop a growth strategy and find it easier to grow than others (Shane, 2003). And the behavior of the entrepreneur affects the firm growth who really creates business and use any opportunities. For instance, innovation activities, cost reduction, production efficiency and any other changes and growth of the enterprise depends highly on the entrepreneur ability to respond to changes in the environment (Hashi and Krasniqi, 2011). And firms with growth intention entrepreneurs achieve high growth rates as compared to those with no intention of growth. Also the willingness, motivation and readiness to take risk also affect the upgrading of SMEs. (Markus Loewe et al. 2013)

Moreover, since a country's educational and entrepreneurship systems contribute to its entrepreneurs' average human capital, they can help to predict the general likelihood of SMEs to upgrade or not. Particularly in developing countries lack of qualified, practically oriented vocational schools, institutions highly affect the growth of SMEs.

III. Managerial competence

Managerial skills become more important to the firm since there is a greater attention to be paid in financing, marketing and managing staffs (Burns, 2001). And the organizational structure will

need to be more formal, although most owners attempt to try to keep it from becoming bureaucratic. Besides this, the owner is responsible to respond to changing circumstances to manage firm growth. Firm managers are appointed to support activities such as finance, marketing and operations. And firm plans are medium term, but focusing on operational issues and budgets. And then the owner's attitude to growth will determine their path. Owners need to have a vision for future growth which is shared with staff throughout the organization (Margi Levy and Philip Powell, 2005). Firms owned with good education and management experience get success in their business (Storey, 1994). Besides education and experience of owners have much stronger relation to growth if the owner has high growth aspirations (Wiklund and Shepherd, 2003). In other words, the ability gained through experience and education does not deterministically force business founders to expand their firms. If they aspire to do so, however, education and experience seem instrumental in reaching their target goal.

IV. Access to finance

Small and medium enterprises should pass through tiresome informalities to get access to credit. And informality becomes the basic determinant for access to credit. SMEs should provide extensive information to the lenders, including proper documentation of registration and an operating license, tax-compliance and externally audited financial statements. And Informal firms are less likely to possess all of these documents, and almost certainly not to the standard required by formal financial institutions. As a result such firms are likely to be restricted to access to credit. Further, financial contracts are highly sensitive to the availability and enforcement of contract. And it is almost impossible for formal financial institutions to enter into contracts with informal firms. Thus, informality is a priori an important determinant of a firm's access to external finance which is noted on the study in Ethiopian SMEs by Aga and Reilly, (2010). Apart from this, certain attributes of SMEs like size and age, motivation to grow, and assets they possess all can have effect on the financial institution to get the confidence to provide the required finance. Similarly access to finance is more difficult for small enterprises than for large ones (Beck et al. 2006). Small firms are also more vulnerable to limitation in accessing finance than large companies.

V. Access to market

Market structure is the main dimension of a firm growth. Moreover the market share where SMEs work on price is highly competitive where new firms will create pressure on the existing firms and also some competition may come from large firms entering the market. Moreover market uncertainty is high in most SMEs as they tend to have a smaller share of the market, to have one or two major customers and are hence less able to influence price. Since large firms have large market share they usually determine price. Few SMEs work in slim market niches where there is little or no competition. These firms may influence price and sold amount (Margi and Philip, 2005).

Lack of knowledge of marketing of the firms also contribute to barrier for their growth (Hall, 1995). Since SMEs work on relatively small investments, they rely on easily accessible markets for their survival. And the concept of globalization has created challenges to SMEs in their competitiveness in global market as well as in the local markets.

Moreover the concept of market orientation is not related to firm size and it is appropriate to both large and small firms (Blankson et al. 2006). SMEs respond quickly to markets based on customer information as compared to large firms since they are more closer to customers, and since they have also less bureaucracy (Keskin, 2006). And it has been argued that most of SMEs lacked marketing concepts since most firm managers are not also taking formal trainings in marketing.

SMEs may follow some form of self-directed and informal customer centric philosophies (Helen, 2009; McPherson, 2007). According to the responsive market orientation, customer needs are first investigated and assessed and then consistent products and services developed, however in SMEs the managers usually do it in the opposite way: they develop a product and then try to find a market for it (Stokes, 2000b). And for SMEs working in Ethiopia, market access is main factor controlling their growth.

VI. Infrastructure

Finally the availability of good infrastructures also controls SMEs growth to make them competitive in the local and international markets. Infrastructure can be assured by the provision

of quality education, health facilities, environment, water supply, energy supply, access roads, and creation of science^o and technology institutions to produce competitive entrepreneurs. Moreover technological innovation, globally integrated financial sectors, well-developed infrastructures and skilled labor force all support a country's international competitiveness. Infrastructures like efficient transport network systems helps SMEs to get good access to market and resources, and reliable energy source production and distribution systems which helps SMEs to use modern technologies. Particularly SMEs working in developing world suffer a lot in this dimension since there are a lot of infrastructure problems. The World development report (1994) showed that the efficiency of infrastructure utilization is important to business and economic growth.

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2.2 Empirical literature

Introduction:- In this section previous empirical findings will be discussed considering the aspect of data collection, sampling, empirical modeling, the findings and gaps of previous studies and lessons will be learned from those findings and their gaps.

The growth of small and medium enterprise is affected by a number of factors. And SME grow in a different way which is quite heterogeneous and multi-dimensional and difficult to be summarized with a simple model. And particular studies are beneficial to understand clearly growth of SMEs. Some of determining factor could be related to the behavior of SMEs, financial access and some influences from institutional stakeholders.

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The existence of various internal and external factors that could affect firm growth creates a challenge for studying aiming at approaching full explanation of the phenomenon.

A study by (Ibrahima,1990) using stake holder analysis which showed stakeholders dealing with SMEs by selecting those that have significant impact of SMEs and classified as government, international institutions, financial institutions, non-financial service providers and SMEs themselves and explained their role on controlling SMEs growth. Similarly the study showed constrains that hinder SMEs development in west Africa: policy, finance, organization culture and information.

Few attempts were done to formally integrate a broad range of growth determinants in a causal model and to test it empirically (Davidsson, 1991; Wiklund, 1998). In Davidsson's model he put growth predictors categorized in to three aspects of exhaustive factors: *ability*, *need* and *opportunity*. From his results all three factors affect growth but also that the variables indicating variance in the *need* for growth were the most influential. Those factors also had the most stable effects across industries. Similar pattern emerged when objective and perceived *ability*, *need* and *opportunity* were related to future growth aspiration.

Other studies like by (McPherson, 1996) used surveys using a stratified cluster sampling technique. The study used first set of variables measuring age and size. And a second set of dummy variables reflecting to which sector or location SMEs belong was also included. Growth was measured using the annual growth employment rate and the study found positive relationship between firm growth and human capital on firm growth and an inverse relation between firm growth with both size and age of firms using survey data from about 1,600 SMEs from five countries in Southern Africa.

A study by (Wiklund, 1998) showed three theoretical perspectives of growth determinants: *the resource-based view*, the *motivation perspective*, and *strategic adaptation*. In his model, *strategy* operationalized as *entrepreneurial orientation* is hypothesized to be directly related to growth. Whereas *resources*, *motivations*, and *characteristics* of the environment are assumed to indirectly affect growth via strategic adaptation and his results confirm that all included categories of variables influence growth. However, in empirical estimation aspects of motivation and the environment were ascribed direct effects alongside their effects via *strategy*.

Growth of SMEs also depends on access to finance, which is one of the most important determinant of a firm's productivity and growth. However, it has been well documented that most firms, especially small ones and those in developing countries with less developed financial systems, face substantial credit constraints (Hubbard 1998).

According to a study by (Francesca et al., 1999) on Italian manufacturing SMEs, using empirical analysis, they found that Gibrat's Law of Proportionate Effect fails to work for new entrants where they struggle in order to achieve a size large enough to enhance their likelihood of survival.

However, empirical studies typically do not find support for the independence of firm growth from size and age (Becchetti and Trovato, 2002). The study adopted a multivariate approach and they found that Gibrat's law doesn't work for SMEs but it cannot be rejected for large firms. The study also found that the scarce availability of external finance and lack of access to foreign markets are crucial determinants of firm growth.

Study done by (Humphrey, 2003) on opportunities for SMEs in developing countries to upgrade in a global economy addressed the issue of strategic developments on market opportunities by examining the embedding of small and medium enterprises (SMEs) in horizontal linkages between firms (through clusters and networks) and vertical linkages with markets (through local and global value chains). Also the study argued that highly skilled managerial and technical workers are required that can provide the management and supervisory systems that will ensure adherence to the specifications demanded by global buyers.

A study by Joshua, (2004) considering SME in Ghana, explained the positive relation between age and size with the possibility of getting debt financing. And the study concluded that as SME gets older, they become acceptable investors to lenders. With respect to size, similarly larger SME are more likely to receive debt. And the degree of internationalization and debt financing are positively related. Also similar study by Joshua, (2006) on Small Business Financing Initiatives in Ghana was conducted. Through a questionnaire survey, the study investigated the awareness and use of these various financing schemes (quasi-commercial credit) available to the SME sector and the study revealed low awareness and usage levels of the various financing initiatives among SMEs.

A study by Green et al.,(2006) on finance for small enterprise growth and poverty reduction in developing countries addressed on the financial sector development policy which might contribute to poverty reduction, particularly by supporting the growth of SMEs.

Empirical studies report that entrepreneurial innovativeness is positively and statistically significantly impacted by variables such as the owner's years of schooling or years of experience in the sector (Koellinger, 2008).

A study was conducted by Mohd Noor and Chea, (2008) aiming to understand the relationship between entrepreneurial values, firm financing and management and the growth performance of

small-medium enterprises (SMEs) in Cambodia. The study applied usable questionnaires that were collected from owners/managers of the firms. By applying hierarchical multiple regression analysis, the study found the inclusion of market environment and government policy in the analysis had increased the effect of the relationship between the values of entrepreneurs, firm financing and management and the growth performance of SMEs in Cambodia.

A study by Atsed. Et al., (2008) which is devoted to influence of owner/ manager and firm characteristics to growth of SMEs in Nigeria. They used a self-administered questionnaire, and the data were analyzed using descriptive statistics based mainly on frequency distribution and percentage value. In addition, bivariate analysis was used to determine the characteristics of the growing firms. The dependent growth variable was measured using turnover growth. They measured firm growth using the perceptions of the owner/managers, who were asked to classify their turnover in the last two years in three categories, namely: decreased and remained the same, increased slightly, increased greatly. The study concluded firm characteristics such as age, sector, legal status and number of employees and owner/ manager characteristics like age, education, previous experience, motivation affected growth of firms. In this study, model was not developed to relate dependent and independent variables where parameters will be calculated.

Studies done on SME in Ethiopia by Mulu., (2009) on a 1000 microenterprises with 10 and fewer workers. And they applied the logistic regression to test their hypothesis. The study showed that firms larger in size and in manufacturing are more likely to engage in innovative activities showed that the smaller, younger, and less capital constrained firms grow faster than their counterparts. Also among the human capital variables vocational training was found to have a strong effect on the innovation activity.

Study done by Haibo and Gerrit,(2009) on determinants and dimensions of firm growth using an empirical study on 523 Dutch small and medium sized firms. They measured growth of firms using employment growth. They found that entrepreneurs with growth motivation and having technical knowledge are more likely to grow their firms. Besides this , age was found inversely related with growth. And financial capital was found to be crucial to firm growth.

Study done by Merima and Jack,(2010) with objective of contrasting performance of clustered micro enterprises with that of dispersed ones in the handloom sector in Ethiopia. Using Enterprise level data from the 2002/03 survey on Cottage/Handicraft Manufacturing Industry, conducted by the Central Statistical Authority of Ethiopia (CSAE). Applying empirical model, they found that access to market, transport infrastructure, access to credit affect the clustering and profitability of SMEs.

Mateev and Anastasov (2010) on their work of main determinants of growth in small and medium sized enterprises (SMEs) in central and eastern Europe. Using a panel dataset of 560 fast growing small and medium enterprises from six transition economies, they found that the firm size when measured by firm total assets can explain to a large extent the growth in SMEs in these countries where as when size is proxied by a firm's number of employees the observed effect is marginal and leverage, current liquidity, future growth opportunities, internally generated funds, and productivity are important factors in determining a firm's growth and performance.

Empirical study done by Gemechu. And Barry ., (2011) with aim of identifying the effect of firm determinants on access to finance particularly firm formality using detailed collected data by the Ethiopian Development Research Institute (EDRI) 2003. And in their data collection schemes the sample size and number of towns to be covered was fixed first ; towns were fixed based on their population density, their population of microenterprises and their regional representation. Finally, a random sample of firms was selected from each sector in each town from a sample frame generated for each town. And then in their methodology, they applied a probit model in estimation given the binary nature of the dependent variable where the dependent variable takes either 0 or 1 depending access to credit. And they found that informal firms are more credit constrained as compared to formal ones and firm's location, membership of a business association and maintaining an accounting record were also important determinants of access to credit. Among the limitations is the dependent variable is defined on the basis of demand-side responses alone in that it reflects only the view of firms and not that of lenders.

A recent study done by Admasu., (2012) on factors affecting the performance of micro and small enterprises in Arada and Lideta sub-cities, Addis Ababa. The study applied descriptive and explanatory research methodology and stratified random sampling and the study concluded that financial access, working premises, managerial factor, market access, infrastructure factors, was

found to be the main factors hindering growth of SMEs in located Arada and Lideta sub-cities, Addis Ababa.

Similar study done by Mike and Lawal, (2012) on financial sector reforms and the growth of small and medium scale enterprises (SMEs) in Nigeria. The data was collected through questionnaires, interviews and extensive literature reviews and using analysis of percentages, tables, ratios and summary tables. It was found that besides firm characteristics access to finance played a critical role for growth of SMEs. Also a study by Musa and Ibrahim, (2012) using modified version of Lu and Wang (2010) model which is based on ordinary least squares regressions, the study found an important difference in measurement and interpretation of the firm growth-financial constraints relationship by controlling the effect of size, age as well as size and age.

Studies done by Markus et al, (2013) on their comprehensive investigation about SME upgrading in Egypt. They used panel data, literature survey and interviews. They tried to summarize factors affecting firm upgrading in to four categories which are:- *entrepreneur characteristics, firm characteristics, business environment, inter-firm linkages*.

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Above all, most SME working in Ethiopia operate in the trading and service sectors, their demand for new investment in fixed assets are relatively low. Usually they look for short-term bank loans or other resources from relatives, friends or suppliers to finance their operations.

Apart from these previous achievements on growth definition and measurement, factors affecting growth behavior of SMEs, there is still a need to address this area and understand the dynamics of SMEs growth particularly in our developing world. This study aims to understand firm growth by considering *firm characteristics* and *business environment* which includes *access to market, access to finance* and *availability of infrastructure*. And this paper also aims to fill the gap we had in Ethiopia by considering SMEs located in Addis.

And besides this paper tries to build empirical model which relate the growth function with firm determinants considering SMEs working in Addis Ababa, Ethiopia.

2.2.1 Conclusion and knowledge gap emerged from earlier literature

Table 2.1 Summary of empirical reviews

Authors and study	Context	Growth determinants	Research method	Limitation
Main determinants of growth in small and medium sized enterprises (SMEs) (Mateev and Anastasov, 2010)	(SMEs) in central and eastern Europe	Firm size Internally generated funds	Using panel data analysis, empirical model.	Variables like human capital, managerial competence are not included in the model
Financial Constraints and the Growth of Manufacturing Firms in Nigeria (Musa and Ibrahim, 2012)	SME working in manufacturing sector in Nigeria	Financial constraints	Quantitative method	Only size , age are considered to affect growth of SMEs
Finance for small enterprise growth and poverty reduction in developing countries (Green et al., 2006)	SMEs in developing countries	Access to formal and informal sectors	Qualitative method	Lacks quantitative analysis.
Growth performance (Mohd Noor, 2008)	Small-medium enterprises (SMEs) in Cambodia	Entrepreneurial values, firm financing and management	Quantitative method	-External variables like markets, infrastructures are not incorporated
Barriers for Growth of SMEs A case study of a Swedish manufacturing company (Ahmed and Johan, 2013)	SME in the Swedish Manufacturing Industry	Management skill, organization and strategy and competition and market, and access to finance	Qualitative method	Quantitative analysis is not included
Venture Capital (V C) Impact on Growth of Small and Medium Enterprises in Kenya (Momba et al., 2012)	SMEs in Kenya	Venture capital	Quantitative method	Lack integrated analysis including more variables (access to market, infrastructure)
Factors influencing small and medium enterprises (SMEs) (Atsedo et al., 2008)	SMEs in Nigeria	Owner/manager and firm characteristics	Quantitative method	Lack integrated analysis
Factors constraining the growth and survival of SMEs (Abiyu, 2011)	SMEs in Ethiopia	Marketing, management, finance and government supports	Qualitative Method	-Similarly more variables need to be included like infrastructure, human capital , age, size -Quantitative analysis is not included.

Chapter three

3. METHODOLOGY

Introduction:- this chapter describes methods followed by the researcher to carry out the objective of this research. It contains seven points the first part describes about research design, second section about data collection method, section three presents about sampling procedure and technique, section four talks about method of data analysis, fifth section shows model specification and the last two sections describe and present definition of both dependent and independent variables and conceptual frame work respectively.

3.1 Research design

From the definition provided by (Kothari, 2004) “A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure”. Moreover research design is a frame work or a plan to be followed for a study and is used as a guideline for collecting and analyzing data. Among the existing research methods, this research used both *descriptive and explanatory research design (why is it going on) methods* and those are appropriate for the study case.

Descriptive research design tries to “paint a picture” of a given situation by addressing who, what, when, where, and how questions (William G. Zikmund, 1984). In other words it shows what is going on. Explanatory research is used to answer why questions and this feature leads to involve causal explanations. The reason for application of descriptive research design in this thesis is to describe and asses factors that affect the growth of small and medium enterprise in two sub city (i.e. “Arada” and “Kaliti” sub cities). Besides explanatory research design was used to estimate the influence of those factors on the dependent variable or growth.

3.2 Research approach

For a given research question appropriate research approach needs to be followed. In deductive (theory testing) approaches theory is placed at the beginning of the plan for a study. And then the researcher advances a theory, collects data to test it, and reflects on the confirmation or

disconfirmation of the theory by the results. Mostly this approach is associated with quantitative method.

Inductive approaches (theory building) can be applied for qualitative studies where there isn't any explicit theory. In this approach; however, the researcher gather information (e.g. observations, interviews) and then the researcher analyze data to form themes and categories. Finally these themes or categories are developed into broad patterns, theories, or generalizations that are then compared with personal experiences or with existing literature on the topic (Creswell, 2003). Mostly this approach is associated with qualitative approach.

Several studies also applied deductive approach for barriers of SMEs growth (Ahmed, 2013; Markus et. al, 2013). Likewise this research used both deductive and inductive approaches because there are no clear structured theories that deal about factors that determine the growth of SME.

3.3 Research strategy

There are five research strategies that can be applied in a research work which are experiment, survey, archival analysis, history and case study (Yin, 2003). Case study is the most widely used approach of researching a problem. Previous studied also consider case study to understand growth of SMEs (Ahmed, 2013; Admasu, 2012). In a case study by understanding the deep behavior of a particular case (for example SMEs growth factors) can help for wider understanding of factors affecting growth of SMEs. To achieve its specific objectives this study also used a *case study* way of approach for researching factors that affect the growth of small and medium enterprises. Particularly this study is designed focusing on growth factors for SMEs located in Addis Ababa "Arada and Kaliti" sub cities, Ethiopia.

3.4 Research method

As it is known widely there are two sorts of research approaches:- such as qualitative and quantitative research approach. Based on the general and specific objective the researcher might select one or both methods that are most appropriate to achieve the aim. In this research both quantitative and qualitative approach are used. Quantitative methods involve systematic empirical studies which includes quantifying through the assistance of mathematics and statistics. And the collected data are converted into numbers which will be tested empirically to

draw some conclusions from the results. Quantitative approach will be applied to test the research hypothesis and to examine the relationship between dependent and independent variable by using empirical models. While in qualitative methods, statistical analysis are irrelevant rather they draw conclusion by deep understanding of how the respondents perceive barrier to growth of SMEs. Similarly the researcher used the second approach (qualitative) to interpret result of the analysis and to collect qualitative data from the respondents since most of the independent variables cannot be obtained in quantitative form and this leads to seek more about their opinion and belief of the respondents about the variable. In addition to the above reasons, the investigator applied both approaches since they provide additional advantages like:- to achieve cross validation, to obtain full understanding of the research and to cover the weakness of one approach using the other approach.

3.5 Types and method of data collection

As it is already explained in the previous topics, the study particularly focused on growth factor of SMEs using a case in Addis Ababa, Ethiopia.

This study applied both primary and secondary types of data and they have qualitative and quantitative nature. Primary data were collected using structured questionnaire which were filled with firm owners or managers since they are aware of the trend of the firm. Besides this the study used secondary data which are mostly qualitative data referred from similar case studies done on the topic particularly in the study area, books, articles, and some policy documents are used. Moreover, in this work the researcher reviewed previous literature, books and developed research questions and concepts. After thorough revisions on growth of SMEs, the researcher figured out factors (i.e. age, size, human capital, managerial competence, access to finance, access to market and infrastructure) that hinder growth of SMEs in developing countries particularly in Ethiopia.

3.6 Sampling procedure and technique

This study covered SMEs located in Addis, Ethiopia as the target population. The study concerned on registered small and medium enterprises. It also excluded micro enterprises due to the following reasons:- (1) Some of the independent variables may not exist like human capital, experienced manager and (2) most of micro enterprise may not keep proper record.

In Addis Ababa city administration there are 10 sub cities. From those sub cities two sub cities (Arada and Kaliti sub cities) were selected based on their convenient. And in this study small and medium enterprises working in textile and garment, wood and metal work, food and processing and construction were chosen since they exist relatively in high number as compared to other sectors which made data collection easier.

In the selected sub cities there are SME that conduct different business type and a *stratified random sampling* was used. In this technique the investigator must group the sample frame in to homogeneous group often called strata before selecting the element for the sample. And the business type was taken as criteria to create strata.

3.7 Sample size determination

According to Adams et.al, (2007) descriptive research method uses large number of sample. Sometimes it uses 10 or 20 % of total population. In this study registered SMEs were used as a population to select the sample and the total populations in the selected sub cities were 1031 those are from different SME that conduct different business type includes construction (415) wood and metal work (245) food processing (121), textile and garment (250).

And the sample size taken for the study represents those different strata. The following formula is used to calculate the sample size because according to Adams et.al , (2007) it is the best method.

$$n_o = z^2 \frac{p*q}{d^2} \text{-----}(3.1)$$

Where :

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Z = 1.96 value for selected alpha value of .025 in each tail (95% degree of confidence)

$p \cdot q =$ estimate of variance $= 0.25 = (0.5 \cdot 0.5)$

$d =$ acceptable margin of error for proportion being estimated, $5\% = 0.05$

After substituting all the above parameter values we get the following value for n_0 ,

$$n_0 = \frac{1.96^2 (* (0.5 * 0.5))}{0.05^2}$$

\rightarrow Then $n_0 = 384$ ----- initial sample size

However this, n_0 should be corrected to n according to the following equation (3.2)

$$n = \frac{n_0}{1 + \frac{n_0}{\text{population}}} \text{ ----- (3.2)}$$

Then after substituting, $n_0 = 384$ into equation (3.2) and assuming response rate $R = 0.96$ and population, $N = 1031$ we get the following value

$$n = \left(\frac{384}{1 + \frac{384}{\text{population}}} \right) / (R)$$

$n = 292$. From this total sample size, individual sample sizes are produced taking the ratio.

Hence sample for construction business type $= (415/1031) \cdot 292 = 118$, wood and metal work $69 = (245/1031) \cdot 292$, food processing $22 = (121/1031) \cdot 292$ and textile and garment $71 = (250/1031) \cdot 292$.

3.8 Method of data analysis

The raw data by itself is not relevant unless it is analyzed to give meanings. Therefore in this research the collected data were analyzed through descriptive statistical analysis (mean, standard deviation and correlation analysis through Pearson) and inferential analysis (ANOVA and multiple regression analysis). Then by using statistical packages Stata version 12. OLS multiple regression and t-statistics were conducted to test the relationship between dependent and independent variable. In addition the researcher used multiple regressions in order to identify the most influential factors of growth. To test the hypothesis based on the estimated coefficient by using OLS the model should fulfill assumption of CLRM (classical linear regression model). From those assumption multicollinearity test and auto correlation test were conducted in this study.

According to Chris Brooks (2008) multicollinearity means it is a problem that occurs when there is correlation between explanatory variable and it leads the individual variable to be insignificant. Besides it makes difficult to draw inferences from the model. In this research correlation matrixes, were formed to check the possible degree of multi-collinearity.

Besides, the investigator use Karl Pearson's coefficient of correlation to measure statistically significant correlation between variables (size, age, human capital, management competency, access to finance ,access to market, infrastructure with SME growth). According to C.R. Kothari, (2004) this method is most widely used for measuring degree of relationship between variables. the same author indicated the value of 'r' lies between ± 1 . Positive values of r indicate positive correlation between the two variables whereas negative values of 'r' indicate negative correlation and zero value of 'r' indicates that there is no association between the two variables. When $r = (+) 1$, it indicates perfect positive correlation and when it is $(-) 1$, it indicates perfect negative correlation. The value of 'r' nearer to +1 or -1 indicates high degree of correlation between the two variables. In addition natural logarithmic functions were used to linearize our model. And the regression model was tested using statistical tests.

Finally for the proposed empirical model a regression analysis was evaluated. And coefficients were determined for each variable. And a relation between dependent and independent variables

was realized with the help of the model. P-test was used to describe the relation between growth and determinants.

3.9 Model specification

The regression equation that is existing in different literature has the following form;

$$Y_i = \beta + \alpha X_i + \varepsilon_i \quad (3.3)$$

Where Y_i is the dependent variable for firm i , β is the constant term, α is the vector of coefficient of the independent variables of interest that the study want to estimate, X_i is the vector of the independent variable for firm i and ε_i the normal error term. The estimated regression model used in this study is as follows.

Two models are developed for growth variable using two measurements. Moreover the growth mode is formulated starting from the basic model of Evans (1987) where the growth function is expressed in size and age.

$$G = \frac{S_{it'}}{S_{it}} = g(S_{it}, A_{it}) \quad (3.4) \text{ referred from (Tidiane and Josef L., 2008)}$$

Where $S_{it'}$ and S_{it} are the size of the firm in period t' and at period t respectively and A_i is the age of the firm in period t . And this model can be modified considering working business environment, BE, factors. In this research it includes *access to finance, access to market, and infrastructure* as business environment factors.

$$G = g(S_{it}, A_{it}) e^{BE} \quad (3.5)$$

Then the following regression formula can be applied for the equation. And in this model cross-sectional formulation is provided where there is no time index.

$$\text{Growth}_i = \alpha + a_1 \ln(A_i) + a_2 \ln(S_i) + a_3 \ln(A_i) * \ln(S_i) + \sum_{i=1}^7 b_i (HC)_{ij} + \sum_{i=8}^{13} c_i (MC)_{ij} + \sum_{i=14}^{21} d_i (ATF)_{ij} + \sum_{i=22}^{28} e_i (INF)_{ij} + \sum_{i=29}^{36} f_i (ATM)_{ij} + \varepsilon_{ij} \quad (3.6)$$

And if growth in number of employee and sale is considered, the above formula will be provided as follows:

$$\frac{\ln(N_i) - \ln(N_0)}{A_i} = \alpha + a_1 \ln(A_i) + a_2 \ln(S_i) + a_3 \ln(A_i) * \ln(S_i) + \sum_{i=1}^7 b_i (HC)_{ij} + \sum_{i=8}^{13} c_i (MC)_{ij} + \sum_{i=14}^{21} d_i (ATF)_{ij} + \sum_{i=22}^{28} e_i (INF)_{ij} + \sum_{i=29}^{36} f_i (ATM)_{ij} + \varepsilon_{ij} \dots \dots \dots (3.7)$$

$$\frac{\ln(\text{current sales}) - \ln(\text{initial sales})}{\text{firm age}} = \alpha + a_1 \ln(A_i) + a_2 \ln(S_i) + a_3 \ln(A_i) * \ln(S_i) + \sum_{i=1}^7 b_i (HC)_{ij} + \sum_{i=8}^{13} c_i (MC)_{ij} + \sum_{i=14}^{21} d_i (ATF)_{ij} + \sum_{i=22}^{28} e_i (INF)_{ij} + \sum_{i=29}^{36} f_i (ATM)_{ij} + \varepsilon_{ij} \dots \dots \dots (3.8)$$

Where:-

N_i and N_0 = current and initial number of employee of firm, i respectively.

S_i and A_i = size and age of enterprise, i respectively.

HC_i and MC_i = human capital and management competency of firm, i respectively

ATF_i and ATM_i = access to finance and access to market for the firm, i respectively

INF_i = infrastructure factor for firm, i .

α = constant term .

$\varepsilon_{i,t}$ = the error term. It has zero mean, constant variance and non- auto correlated

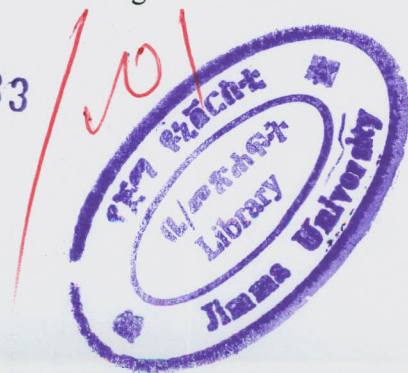
$a_i, b_i, c_i, d_i, e_i, f_i$ = coefficients of the explanatory variable respectively, they are none zero estimated by OLS method .

In the above formulation higher order expansion and interaction terms of size and age variables can be applied all in logarithmic terms but they are ignored for simplicity in this model.

3.10 Definition of variables and their measurement

The dependent variable is firm growth and it can be measured by several attributes such as turnover/sales, employment, assets, market shares, and profits. Among these measures, sales and employment are in particular broadly used indicators for growth (Davidsson, 1991; Haibo and Gerrit , 2009). However, in this study it is decided to measure growth variable with

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turnover and employment growth since it will help us to represent fully the growth of SME in the study area and they are mostly applicable to measure the growth.

Firstly growth is defined as the ratio of employment change between start up and during time of survey with age of the enterprise Evans (1987). McPherson (1996) also applied similar growth definition during a study of SMEs in developing countries.

$$\text{GROWTH} = \frac{\ln(\text{current employment}) - \ln(\text{initial employment})}{\text{firm age}} \dots\dots\dots(3.9)$$

However according to McPherson(1996), ‘calculating average annual growth rates in this manner may hide fluctuations in employment levels over smaller spans of time. For example, a firm may have begun as a single-person operation, grown rapidly for a time, but then shrunk back to one person. Should this be so, measuring growth using only the endpoints would mask important parts of the growth process’.

Similarly growth is defined with regard to change in sales with respect of age

$$\text{GROWTH} = \frac{\ln(\text{current sales}) - \ln(\text{initial sales})}{\text{firm age}} \dots\dots\dots(3.10)$$

Independent Variables:-

The independent variables include factors and individual variables representing internal factors which basically include firm characteristics and business environment those are mostly external factor that affect firm growth. Firm characteristics include (firm size, firm age, entrepreneurs human capital, management competence), on the others side business environment (access to finance, access to market and infrastructure). They are summarized as follows.

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a. Firm size :-

The absolute value of total assets (TOT_ASSETS) is used as size variables in order to test for scale effects in the relation to growth and firm size.

$$\text{Firm size} = \ln(\text{TOTAL_ASSETS})$$

b. Firm age:-

It is defined as the number of years a firm has been operating in the market (since the date of incorporation) and is expected to have a negative relation with firm growth.

$$\text{Age} = \text{number of years of existence}$$

c. Entrepreneurs human capital,(Skilled employee):-

Firms with skilled employee are productive and innovative. The researcher considers the level of employee education, or the number schooling years they did.

d. Management competence and know-how

Business owners with prior management experience are thought to be likely to form faster-growing businesses than those established by individuals without that experience.

e. Access to finance

Even though measuring access to finance is difficult, researcher formulated a survey question whether the firms have received credit from banks, personal savings , “Idir” or family support or micro finance or NGOs.

f. Access to market and availability of infrastructure.

Both variables will be assessed through a formulated questions to understand whether a firm has access to those factors.

Table 3.0 : Summary of variables and their representation

<i>Variable</i>	<i>Definition</i>	<i>Explanation</i>	<i>Expected sign</i>
<i>Dependent variable</i>			
<i>Growth</i>	<i>Number of employees and sale turnover</i>	<i>Difference between the logarithms of number of employees or turnover in period t and t</i>	
<i>Independent variables</i>			
<i>Size</i>	<i>Firm assets/ Number of employees</i>	<i>Logarithm of asset/ employees in period t and t</i>	-
<i>Age</i>	<i>Number of years of existence</i>	<i>Logarithm of firm's age (number of years of existence) in period t</i>	-
<i>Human capital</i>	<i>Years of schooling</i>		+
<i>Managerial competence</i>	<i>Years of experience</i>		+
<i>Infrastructure</i>		<i>Dummy variable</i>	+
<i>Access to market</i>		<i>Dummy variable</i>	+
<i>Access to finance</i>		<i>Dummy variable</i>	+

3.11 Conceptual model

Since the main objective of this work is to identify and analyze factors that affect the growth of SME. To align the conceptual frame work with this objective growth is take as dependent

variable whereas firm size, firm age, human capital, management competency, success to finance, access to market and infrastructure take as independent variable. Based on this a simple schematic relation is realized between the variables as shown in fig 3.1

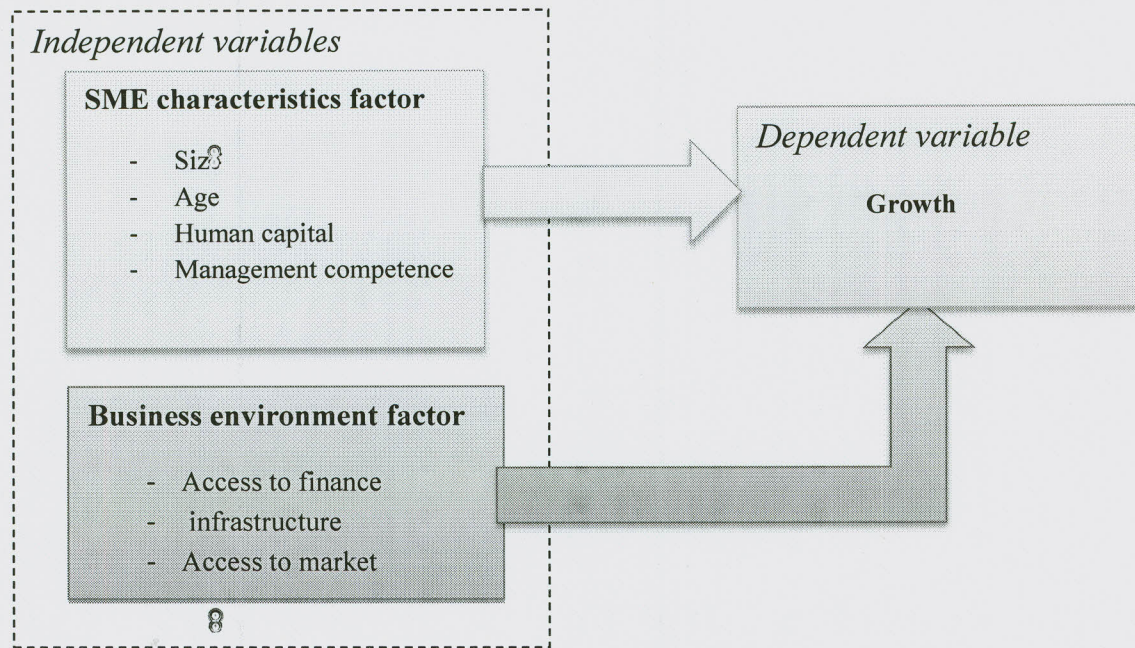


Fig 3.1 Simplified approach used in this study for growth of SMEs

3.12 Instrument design

In this study, structured questionnaire is designed to capture easily the required data for the study work and it is attached in final part of this proposal (Appendixes A and B). Besides this, unstructured interviews were used to support and to complete data collection mechanisms. It is also advisable to include interviews to particular stakeholders to understand better the growth behavior of SMEs in a qualitative way.

Questionnaire was designed by thorough revision of previous case studies and it is reconstructed accordingly to our growth variables. The questionnaire consists four parts where the first three parts focus on general profile of the entrepreneur, the firm and other related information. The fourth part includes only considered factors (*size, age, human capital, managerial competence,*

access to finance, access to market, and infrastructures). For each factors a five-point *Likert Scale* ranging from “strongly disagree = 1” to “strongly agree= 5 ” were applied to understand the respondents stand on each factors affecting their growth. In addition some questionnaires were derived from other researches (Abiye, 2011;Admasu, 2012).

Quality of research design

John Adams et.al (2007) states there are three criteria generally used for testing and evaluating measurements of variables and ensuring the quality of data, research design methods and the overall accuracy of study results. These criteria are known as reliability, validity and generalizability. From those test validity and reliability test were conducted by using the following method.

Instrument validity

Validity is an important term in research that refers to the conceptual and scientific soundness of a research study (Graziano & Raulin, 2004). Its primary purpose is to increase the accuracy and usefulness of findings by eliminating or controlling as many confounding variables as possible, which allows for greater confidence in the findings of a given study. To increase the validity of this thesis the researcher follows the following techniques. First, testing the instrument. Second the questioner were refined based on the respondent comment and finally the proper detection obtain from advisor were taken. Furthermore statistical inferences were used to test the relationship of variable and to give inference for the dependent variable.

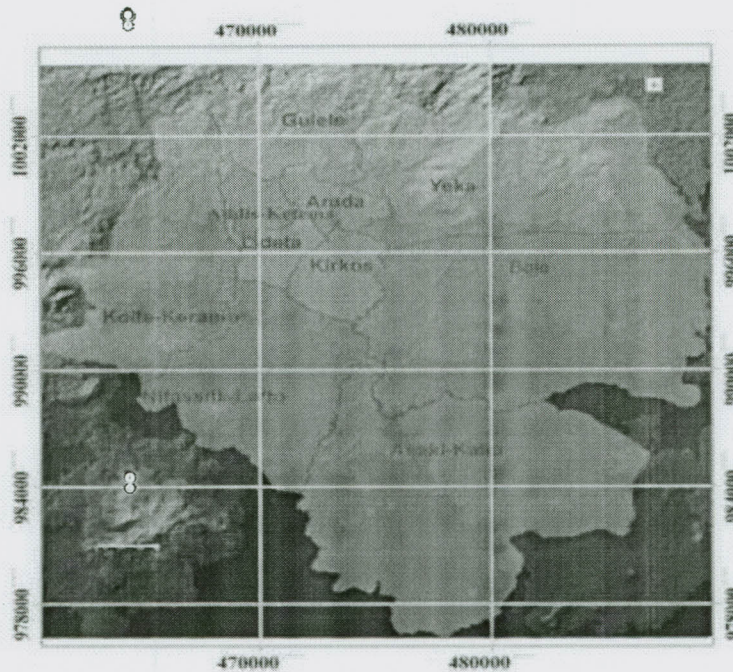
Instrument reliability

According to Creswell (2009) instrument reliability shows the degree of consistency that the instrument and procedure had. In this research the instrument was developed based on the objectives therefore the investigator believed the instrument fulfilled consistency criteria .

3.13 Study area and period

The study under the title of factors affecting the growth of small and medium enterprise was undertaken in Addis Ababa city administration by taking two sub cities as specified study area. Addis was founded in 1886 by emperor Menilik II of Ethiopia and the city become a capital city of Ethiopia on 26 October 1896. geographically, the city is located between 8°55' and 9°05'

north latitude and between $38^{\circ} 40'$ and $38^{\circ} 50'$ east longitude, while its total area is 54,000 hectares. This research investigates starting from November 2013 and ends in May 2014.



Source: Yirgalem Mahitame (2011)

3.14 Ethical consideration

Before conducting data collection activity provision of ethical consideration is necessary to obtain efficient and reliable data from the respondent. To provide it the researcher first try to obtain their permission from the selected small and medium enterprise by using formal letter from Jimma university, business and economics college, research and graduate research office. Besides all the participant in this research informed about the purpose of the study, it leads all participant both to collect and fill the questioner confidentially. Finally for the privacy of the respondent the study kept secret any identity of the participant.

Chapter four

4. DATA PROCESSING, ANALYSIS, PRESENTATION AND INTERPRETATION

Introduction:- this chapter presents data processing in the first section, analysis of data in the second part and lastly interpretation of the analysis is included.

4.1 Data presentation and analysis

The enterprises included in this paper are diversified in many dimensions. The enterprises are also diversified in terms of gender of owners, experience and education of managers in business, the sectors they are engaged, and their finance sources as will be briefly discussed. The study was conducted to understand factors affecting growth of SMEs located in Addis Ababa, Ethiopia. To undertake this study two sub cities were selected (“Arada” and “Kaliti” sub cities). Once the data was collected, it was filtered, categorized and proceeded using descriptive statistics tools like mean, standard deviation by applying SPSS-19 (Statistical Package for the Social Sciences version, 19). Hypotheses were also tested using particular methods like F-test chi-squared. Out of 292 distributed questionnaires only 238 are retrieved successfully which represent average response rate of 76.2% for construction, 81.1% for wood and metal work, 98% for textile and garment and 64.7% for food processing. Among them 70 represent textile and garment 22 Food processing, 56 of them wood and metal work and 90 represent construction.

4.1.1 Sectors considered in the study

Among the collected data from the field survey it is understood that SMEs considered in this study are involved in four major business sectors:- textile and garment, food processing, wood metal work and construction (fig 4.1) . when we look at the distribution by percent from fig 4.1 37.82% accounts for construction, 29.41% for textile and garment , 23.53% for wood and metal work while least percent is observed 9.24% for food processing sector.

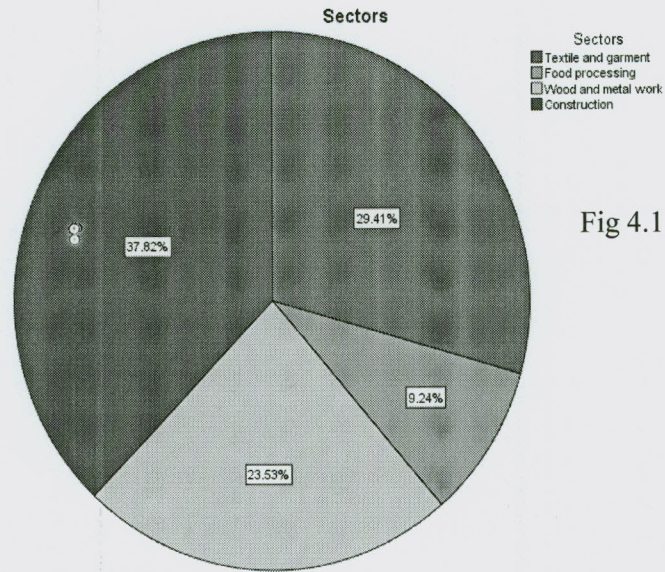


Fig 4.1 sector involved in the study

4.1.2 Financial sources for business startup

Among the considered financial sources for their startup, the researcher produced fig 4.2 plot where there is a clear detailed description of all the possible financial sources of SMEs business startup. It is obtained that most of the respondents used their personal saving (47.90%), and from family (19.33%) , micro finance institutions (9.66%). It is interesting also to get low values for financial sources from banks (2.94%) which might be most probability the stiff and complicated requirements provided by the banks. (Becchetti and Trovato, 2002) Mike and Lawal, (2012) Markus et al, (2013). For other financial sources (like "Iqub", NGOs refer fig 4.2). It is clear that from this simple analysis their financial sources are limited mostly to the informal sources (personal savings , family etc ---) and it is most likely this affect their growth. As it is already explained from the chart plot it is also seen from table 4.1 that personal saving played a lot among sectors with 114 respondents where 46 for construction, 28 wood and metal work, 7 food processing 33, textile and garment.

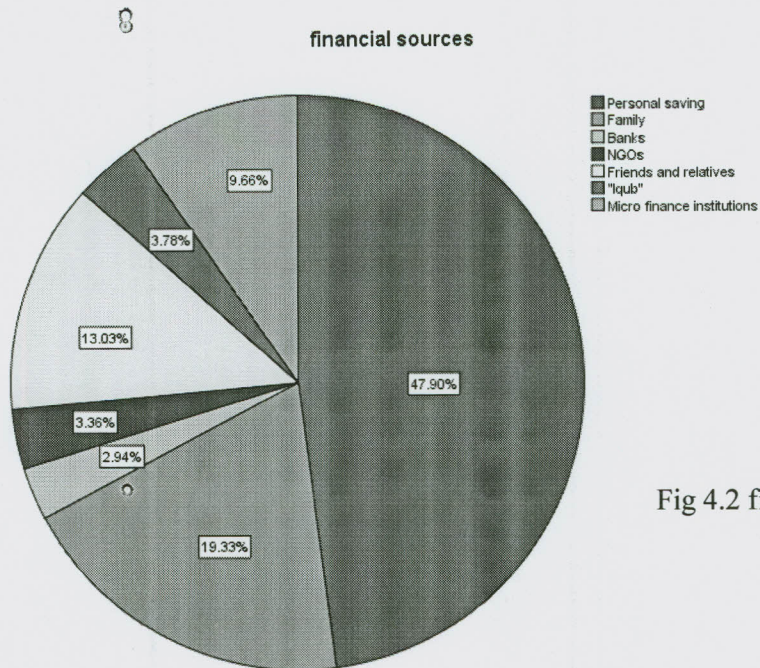


Fig 4.2 financial sources

Table 4.1: financial sources for business startup with sectors

financial source	Sectors				Total
	Textile and garment	Food processing	Wood and metal work	Construction	
Personal saving	33	7	28	46	114
Family	9	5	18	14	46
Banks	2	0	2	3	7
NGOs	1	1	3	3	8
Friend and relatives	21	1	4	5	31
"Iqub"	1	3	1	4	9
Micro finance institutions	3	5	0	15	23
Total	70	22	56	90	238

4.1.3 Gender issues

Of the total 238 enterprise owners interviewed in this paper only 50 (21%) are women revealing the fact that female participation in business is still behind the required level in the study area. Furthermore, women-managed enterprises are also out performed in some crucial business success indicators such as current sales volume, current assets level, and growth of sales too as shown in table 4.3.

Table 4.2a: respondents gender distribution

Gender	Frequency	Percentage	Valid Percentage	Cumulative Percentage
male	188	79.0	79.0	79.0
female	50	21.0	21.0	100.0
Total	238	100.0	100.0	

Table 4.2b respondents gender distribution among sectors

Gender	Sectors				Total
	Textile and garment	Food processing	Wood and metal work	Construction	
male	57	8	48	75	188
female	13	14	8	15	50
Total	70	22	56	90	238

Taking notation for Gender =1 if female, and gender=0 if male and other selected variables ^{*1} refer the footnote provided below.

Table 4.3 result showing gender differences in some business measures

-> gender = 0					
Variable	Obs	Mean	Std. Dev.	Min	Max
ageofenter~e	188	7.723404	4.670774	1	31
assetf	188	4910574	2.48e+07	1800	3.00e+08
salesf	188	1162237	9218173	2000	1.25e+08
grassets	188	.53575	.3536224	-.268	1.532
grsales	188	.3005532	.2716128	-.329	1.609
empf	188	19.3883	36.55621	1	250
gremf	188	.0565851	.1426524	-.22	1.386
-> gender = 1					
Variable	Obs	Mean	Std. Dev.	Min	Max
ageofenter~e	50	7.3	4.413569	4	29
assetf	50	2240100	2802914	10000	1.50e+07
salesf	50	775815.2	2515422	5000	1.50e+07
grassets	50	.54634	.3519573	-.03	1.352
grsales	50	.26428	.2341107	-.231	.738
empf	50	22.5	49.32038	1	300
gremf	50	.0717	.1146165	-.139	.322

*1 N.B. look this note for variable representations

ageofenterprize = age of interprise

grsales= growth in sales

assetf= asset final

gremf= growth in employment

empf= employment final

asseti = asset initial

This may indicate the relative disadvantage of women both in access to business and business running skills. The low level of participation of women on one hand and, the relative weakness of women-managed business on the other hand indicate that there is still much job to be done to achieve economic empowerment of women in Ethiopia.

8

However, the researcher could not find statistically significant differences between the two genders in any of growth measures used in this paper. The two-sample t-test proves that the differences in mean growth of assets, sales, and employment are not statistically significant.

4.1.4 Experience in business management

Among the total enterprise owner/managers included in the study 66.4% have only 5 or less experience in business running, while about 86% have less than 10 years of business experience as depicted in table 4.4 a & b.

Table 4.4a: respondents experience level

Experience level	Frequency	Percentage	Valid Percentage	Cumulative Percentage
1 - 5 years	158	66.4	66.4	66.4
6 - 10 years	46	19.3	19.3	85.7
11 - 16 years	19	8.0	8.0	93.7
> 16 years	15	6.3	6.3	100.0
Total	238	100.0	100.0	

Table 4.4b: respondents experience level with sectors

Experience level	Sectors				Total
	Textile and garment	Food processing	Wood and metal work	Construction	
1 - 5 years	59	11	20	68	158
6 - 10 years	6	8	19	13	46
11 - 16 years	5	3	6	5	19
> 16 years	0	0	11	4	15
Total	70	22	56	90	238

Theoretically, it is believed that experience in business has important role in productivity of enterprises as experienced business managers can take more appropriate measures than the inexperienced ones. In addition to tapping new potentials and expanding business, experienced business managers are better equipped to cope with business risks and uncertainties. As can be

seen from the next table however, experience in business has statistically significant negative correlation with growth of sales and growth of assets. If we use assets as a proxy for size of an enterprise as in many studies, this means that business experience has a negative correlation with enterprise expansion. Similarly, the negative correlation between growth of assets and business experience which is getting even stronger at higher level of experience shows that there are limits to expansion of SMEs.

Table 4.5 correlation between experience level and growth in employment and growth in assets and sales*²

	experiance	grsales	grassets	grempl
experiance	1.0			
grsales	-0.1854 (0.004)	1.0		
grassets	-0.1913 (0.003)	0.3378 (0.000)	1.0	
grempl	0.0707 (0.2775)	0.1858 (0.0040)	0.0026 (0.9677)	1.0

N.B*² : look this note for variables

grsales = growth in sales ; grassets = growth in assets ; grempl= growth in employment

To ease the analysis experience in business is categorized in to four categories. The first category from 1-5 years, the second is from 6-10 years, the third is from 11-16 years, and the fourth category is above 16 years of business experience.

Bartlett's test was carried out to see if there is any difference in growth of enterprises across different experience categories. The test proves that there is indeed statistically significant difference in growth across experience groups with a $\chi^2(12) = 25.4650$, and $\text{Prob}>\chi^2 = 0.013$. If we take this and negative correlation coefficients together, it means as experience in the business increases, growth in assets and sales tend to decrease.

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Table 4.6 Experience in business with growth in employment, in asset and sales.

Variable	Obs	Mean	Std. Dev.	Min	Max	Experience
grassets	158	0.5831772	0.3514083	-0.048	1.532	1
grsales	158	0.320943	0.273322	-0.329	1.609	
grempp	158	0.0529494	0.1534629	-0.22	1.386	
Grassets	46	0.4947391	0.3655664	-0.268	1.243	2
grsales	46	0.2842391	0.2600212	-0.112	0.886	
grempp	46	0.0699783	0.1076171	-0.22	0.322	
grassets	19	0.3670526	0.3153741	0.06	1.147	3
grsales	19	0.1788421	0.1942639	-0.231	0.586	
grempp	19	0.0727895	0.0852542	-0.081	0.322	
Grassets	15	0.4109333	0.2752618	0.144	1.064	4
grsales	15	0.1690667	0.184746	-0.118	0.574	
grempp	15	0.0836667	0.0777925	-0.059	0.215	

8

Even if the correlation coefficients between experience and growth measures are found negative, correlation coefficients between level of education and growth measures are not found statistically significant even if they are showing a positive correlation.

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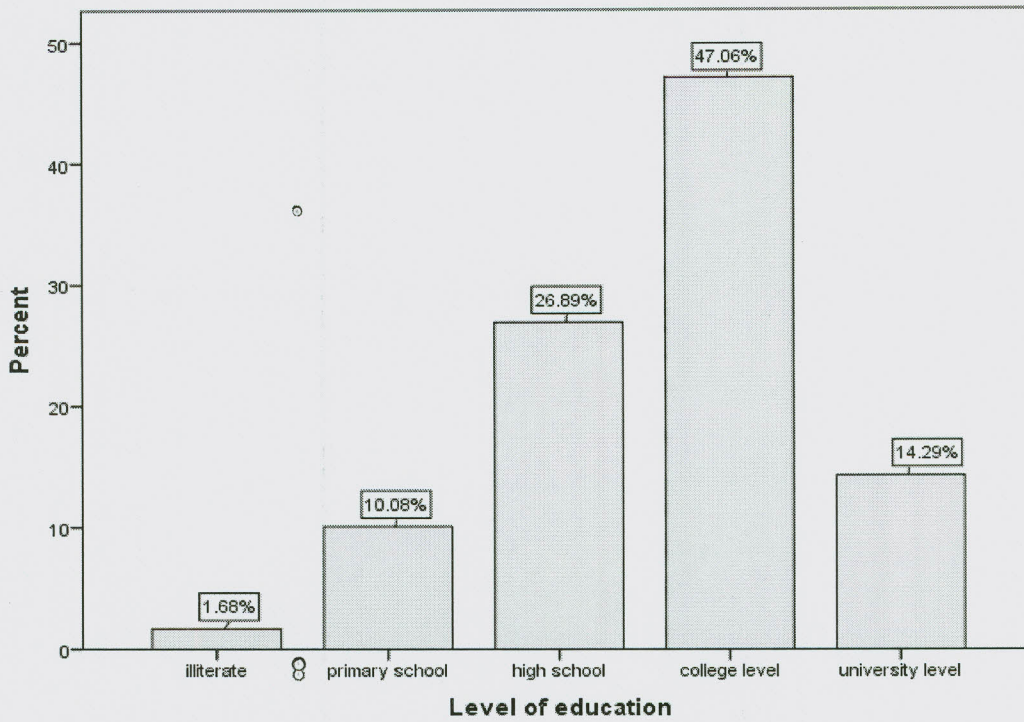


Fig (4.3) percent for level of education

Furthermore, the data analysis shows 98.34% of SMEs owners are found to have above primary level education, while those who are illiterate are only 1.68%. One important finding is that the literacy differences are using statistically significance with Bartlett's test at $\chi^2(4)=5.3370$, and $\text{Prob} > \chi^2 = 0.254$.

Besides charts, tables 4.7 a& b are also included to present the level of education among sectors and overall percentages.

8

Table 4.7a : data presentation for respondents based on level of education

level of education	Frequency	Percentage	Valid Percentage	Cumulative Percentage
primary school	24	10.1	10.1	11.8
high school	64	26.9	26.9	38.7
college level	112	47.1	47.1	85.7
university level	34	14.3	14.3	100.0
illiterate	4	1.7	1.7	1.7
Total	238	100.0	100.0	

Table 4.7b: data presentation for respondents based on level of education with sectors

Level of education	Sectors				Total
	Textile and garment	Food processing	Wood and metal work	Construction	
illiterate	2	0	0	2	4
primary school	5	3	8	8	24
high school	16	9	13	26	64
college level	40	6	27	39	112
university level	7	4	8	15	34
Total	70	22	56	90	238

4.1.5 Age

The enterprises included in this study are composed of firms ranging enterprises of just 1 year old to fairly as old as 31 years.

The general trend between age of enterprises and growth of sales is an inverse one with much stationarity as age of enterprises increase, and much volatility in the earlier periods. As age of the enterprise increase, we observe decrement in growth of SME. This is in line with Evans, (1987) who found that younger firms are more likely to grow faster than older ones. Figure 4.4 also shows that the greater volatilities are at the first few periods, and after some point the volatility gaps are narrower. This may be due to, for example, greater experience in business management and coping with risks and uncertainties among the enterprise owners/managers.



Fig (4.4) relationship between growth in sales and age of enterprise

Table 4.8^{*3} (a) correlation between growth in assets and age of enterprise

PW corr, grsale, lnasseti, lnage, sig			
	grsales	lnasseti	lnage
grassets	1.0000		
lnasseti	-0.6136 (0.0000)	1.0000	
lnage	-0.4105 (0.0000)	0.2249 (0.0005)	1.0000

8

Table 4.8 (b) correlation between growth in sales and age of enterprise

PWcorr, grsale, lnasseti, lnage, sig			
	grsales	lnasseti	lnage
grsales	1.0000		
lnasseti	-0.1426 (0.0279)	1.0000	
lnage	-0.3776 (0.0000)	0.2249 (0.0005)	1.0000

8

N.B^{*3} : look this note for variables

grsales = growth in sales ; grassets = growth in assets ; lnage = ln(age) ; lnasseti = ln(asset)i ;

As can we observe from the above partial correlation coefficients, growth of small and medium enterprises, defined in terms of both assets and sales have negative relations with initial size and age of the firm. The given correlation coefficients are strongly significant indicating that there is an important inverse relation between size and age in one hand and growth rate of the enterprises on the other hand. These inverse relations between asset and sales on one hand and age and size on the other hand are indications of failures of Gibrat's law of size and age independence of firm growth to hold. This is in line with bulk of studies in the topic including Evans (1987) and Audretsch et al. (2004). However, this point will be discussed in detail in the next part.

4.1.6 Initial size

The descriptive analysis of the data reveals that there is an inverse relation between initial size of an enterprise and its growth in its subsequent sales volumes. However, the correlation coefficients are not found statistically significant. This can be seen plainly from figure 4.5.

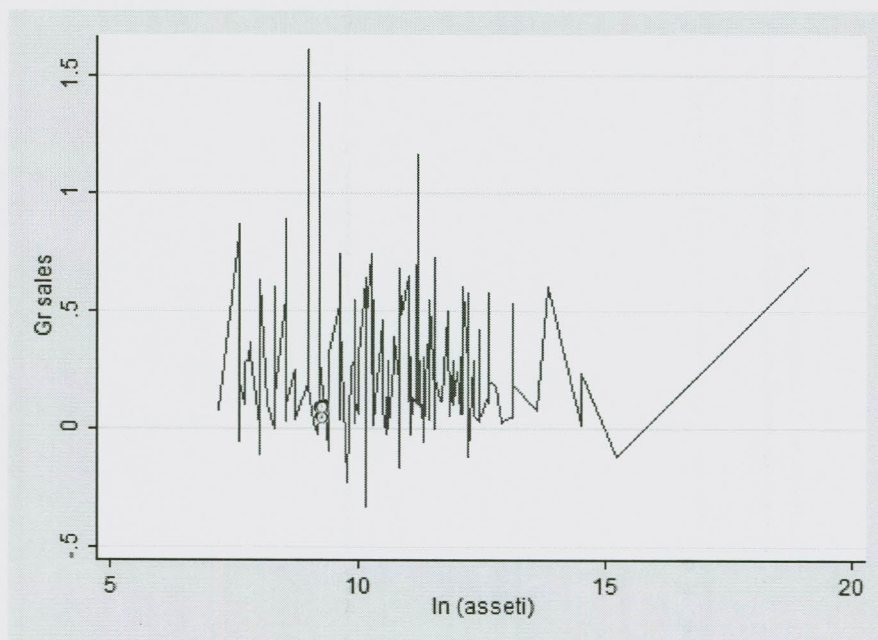


Fig (4.5) relationship between growth in sales and age of enterprise

Table 4.9 (a) correlation between growth and initial size

PWcorr grsales lnasseti sig		
	grsale	lnasseti
grsales	1.0000	
lnasseti	-0.0279	1.0000

(b) between sales growth and initial size

corr gr sales, lnasseti, sig (obs=238)		
	grsale	lnasseti
grsales	1.0000	
lnasseti	-0.1426	1.0000

4.1.7 Sectorial differences

As can be seen from next chart 70 (29.4%) of enterprises are engaged in textile and garment, sector 1, 22(9.24%) in food processing, sector 2, 56(23.6%) in wood and metal work, sector 3, and 90 (37.8%) are engaged in construction, sector 4. It is also observed that there are sectorial differences of growth of enterprises. Higher growth of enterprises is seen in sector1 (textile) in terms of both assets and sales, whereas relatively low growth rates are observed in other sectors. The pattern of enterprises' growth across different sectors implies that small and medium enterprises have better opportunities of expansion in light industries than those of heavy industries. In fact this finding has an important implication for the industrialization goal of the nation. The lesson is that the country needs either building the capacity of SMEs or creating other large scale industries for heavy industrialization.

Table 4.10 growth in different sectors

Variable	Obs	Mean	Std. Dev.	Min	Max
-> sector= 1					
grassets	70	0.5990571	0.3873256	-0.033	1.532
grsales	70	0.3379429	0.305486	-0.231	1.609
grem	70	0.0009	0.1922041	-0.22	1.386
-> sector = 2					
grassets	22	0.5107727	0.3853203	0.094	1.352
grsales	22	0.2938182	0.2235124	0.024	0.738
grem	22	0.0789091	0.0742986	-0.081	0.241
-> sector = 3					
grassets	56	0.5000893	0.3310814	-0.031	1.365
grsales	56	0.2600357	0.2303277	-0.118	0.863
grem	56	0.0947679	0.0993087	-0.22	0.322
-> sector = 4					
grassets	90	0.5206889	0.3280084	-0.268	1.243
grsales	90	0.2781778	0.257583	-0.329	1.382
grem	90	0.0790778	0.1004461	-0.12	0.358

4.1.8 Capital sources for startups

As can be seen from the figure below, about 84.042% of the businesses started business with private and informal sources of capital. This shows that, neither the commercial banks nor the micro finance institutions, NGOs, established to help the poor, are not providing the required level of startup capital for SMEs in the study area.

Analysis carried out to see if there is any correlation between initial size and source of startup capital did not reveal any significant link.

And for all considered factors i.e. both SMEs characteristic factors and business environment factors, the respondents evaluations ranging from 5 to 1 for each item is provided in appendix C in the form of average and standard deviation.

4.1.9 Econometric analysis

In this section results from econometric analysis through stata 12 software package will be discussed. As it has been already discussed in chapter three of this paper, the theoretical model designed to study factors affecting the growth of small and medium size enterprises is:

$$\text{Growth}_i = \alpha + a_1 \ln(A_i) + a_2 \ln(S_i) + a_3 \ln(A_i) * \ln(S_i) + \sum_{i=1}^7 b_i(\text{HC})_{ij} + \sum_{i=8}^{13} c_i(\text{MC})_{ij} + \sum_{i=14}^{21} d_i(\text{ATF})_{ij} + \sum_{i=22}^{28} e_i(\text{INF})_{ij} + \sum_{i=29}^{36} f_i(\text{ATM})_{ij} + \varepsilon_{ij}$$

where all variables are already defined.

Growth of SMEs is measured by growth of sales or assets as very few entrepreneurs use growth in employees as a goal in itself (Gray,1990; Robson and Bennett, 2000) and because some growing firms outsource heavily in employment growth is not always highly correlated with sales growth (Delmar et al., 2003). Hence, growth is measured in terms of sales as discussed in the literature review part. However, growth of assets is also used to present alternative to growth of sales.

4.1.10 Results

The model given above has been rigorously analyzed for violations of linear model, as will be discussed in the subsequent section. The results from Stata 12 application of the given model are given as they are given from the software.

Table 4.11 Stata outputs for model parameters with heteroscedasticity^{*4}

Source	ss	df	ms
Model	3.1689351	8	.396116888
residual	13.3642595	229	.058359212
Total	16.5331946	237	.069760315

Number of observation=238
 F(8,229) = 6.79
 Prob>f = 0.0000
 R-squared = 0.1917
 Adj R-squared = 0.1634
 Rootmse = 24158

Gr sales	Coef.	Std.err	t	t > p	[95% conf- Interval]
Ln assets	-.0065391	.0096901	-0.67	0.500	-.0256324 .0125541
Ln age	-.2246795	.036668	-6.13	0.000	-.2969292 -.1524298
ehf	.0058955	.0048428	1.22	0.225	-.0036465 .0154376
emcf	.0005922	.0038659	0.15	0.878	-.0070251 .0082095
eff	.0095127	.0047972	1.98	0.049	.0000604 .018965
eif	-.0084012	.0040801	-2.06	0.041	-.0164406 -.0003619
emkf	.0020059	.0019709	1.02	0.310	-.0018776 .0058893
egf	-.071843	.0043279	-1.66	0.098	-.0157119 .0013434
-cons	.72902	.1413481	5.16	0.000	.4505109 1.007529

N.B⁴ : look this note for variables

ehf= coeff human factor ; emcf = coef. management competence eff= coef fianacial factor ; eif = coef infrastructure factor
emkf= coef. Marketing factor ; egf = coef. General factor

The econometric analysis reveals that both age and initial size have negative impact on growth of enterprises. However, only age of an enterprise is found statistically significant. Among the environmental variables, only infrastructural and general factors found to have negative impact. But, since the data has a heteroscedasticity problem as we see shortly, we cannot say much about the size of the regression coefficients.

The heteroscedasticity test results are presented as:-

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of gsales

chi2(1) = 32.09

Prob > chi2 = 0.0000

8

The Breusch-Pagan test shows that the data set has a heteroscedasticity problem that should be dealt with before any analysis. Heteroscedasticity is a problem that commonly arises with cross

section data. Heteroscedasticity arises if the variance of the errors is non-constant. The heteroscedasticity problem in this model is addressed with robust standard errors model and the heteroscedasticity problem is solved. The results after correcting for heteroscedasticity are given as follows:

Table 4.12 Stata outputs for model parameters after correcting for heteroscedasticity

Linear regression		Number of obs = 238				
		F(8, 229) = 4.83				
		Prob > F = 0.0000				
		R-squared = 0.1917				
		Root MSE = .24158				
<hr/>						
grsales	Robust					
	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
<hr/>						
lnasseti	-.0065391	.0117135	-0.56	0.577	-.0296191	.0165409
lnage	-.2246795	.0438978	-5.12	0.000	-.3111748	-.1381843
ehf	.0058955	.0061368	0.96	0.338	-.0061963	.0179873
emcf	.0005922	.0046846	0.13	0.900	-.0086381	.0098226
eff	.0095127	.0051612	1.84	0.067	-.0006569	.0196823
eif	-.0084012	.0049559	-1.70	0.091	-.0181663	.0013638
emkf	.0020059	.0017173	1.17	0.244	-.0013778	.0053895
egf	-.0071843	.0051842	-1.39	0.167	-.0173991	.0030306
_cons	.72902	.1636462	4.45	0.000	.4065753	1.051465
<hr/>						

Now, once we have corrected for the heteroscedasticity problem in the data, we can proceed to interpreting the results. On the top right corner of table 4.12, the R^2 value shows the goodness of fit of the model. In cross sectional data of this type R^2 value of 0.1917 indeed shows the model specified fits well the data at hand. The given F-value and its P-value are indicators of the fact that the variables included in the model are jointly significant.

The negative signs of both age and size variables show that both variable affect growth of SMEs negatively, as has been discussed in the descriptive analysis part. This is indeed shows Gibrat's law of size/age independence of growth failed to hold. Typically, younger small firms are shown to grow more rapidly than older ones. This is indeed supported by many previous works in the

field. Francesca et al (1999) found that Gibrat's Law of Proportionate Effect fails to work for new entrants where they struggle in order to achieve a size large enough to enhance their likelihood of survival. Hubbard (1998) documented that most firms, especially small ones and those in developing countries with less developed financial systems, face substantial credit constraints. Haibo and Gerrit (2009) found age was inversely related with growth, and financial capital is found to be crucial to firm growth. Becchetti and Trovato (2002) conclude empirical studies typically do not find support for the independence of firm growth from size and age and found that Gibrat's law doesn't work for SMEs but it cannot be rejected for large firms.

Among the environmental factors included in the model only financial and infrastructural factors are found to be significant even if it is at a lower level of significance level. The impact of environmental factors is both weak and weakly significant as it is expected given the fact that geographical and environmental variations between enterprises is reasonably minimal. In such a situation where enterprises are located close to one another, environmental impacts on growth across enterprises is expected to be almost similar.

4.1.11 Beta decomposition

Since the regression coefficients given above are not in standard deviation format, it is very difficult to compare the relative impact of each variable on enterprise growth. Hence we used Beta-decomposition technique to do that and the results are given as:

Table 4.13 model parameter results after beta- decomposition

Source	SS	df	MS		
Model	3.1689351	8	.396116888	Number of obs =	238
Residual	13.3642595	229	.058359212	F(8, 229) =	6.79
Total	16.5331946	237	.069760315	Prob > F =	0.0000
				R-squared =	0.1917
				Adj R-squared =	0.1634
				Root MSE =	.24158

grsales	Coef.	Std. Err.	t	P> t	Beta
lnasseti	-.0065391	.0096901	-0.67	0.500	-.0416012
lnage	-.2246795	.036668	-6.13	0.000	-.3807602
ehf	.0058955	.0048428	1.22	0.225	.086684
emcf	.0005922	.0038659	0.15	0.878	.0135634
eff	.0095127	.0047972	1.98	0.049	.181262
eif	-.0084012	.0040801	-2.06	0.041	-.1676895
emkf	.0020059	.0019709	1.02	0.310	.092213
egf	-.0071843	.0043279	-1.66	0.098	-.1469401
_cons	.72902	.1413481	5.16	0.000	.

Values under the column 'beta' show the relative impact of the regressors. Accordingly, natural logarithm of age (lnage) variable is found to have the strongest impact on enterprise growth. Therefore we can say that age is the major factor followed by infrastructural factors that affect SME's growth in Addis Ababa.

The econometric analysis shows that only age and not initial size are significant determinants of SMEs growth in Addis Ababa among enterprise characteristics variables. Of the environmental variables, financial and infrastructural variables are found to be significant determinants of SMEs growth.

What if growth is measured with asset?

Here the researcher used growth in assets as an alternative measure of enterprise growth and the following results in table 4.14 are reported.

Table 4.14 model parameters outputs when growth is measured by assets

Source	SS	df	MS			
Model	14.366309	8	1.79578863	Number of obs =	238	
Residual	15.0920669	229	.065904222	F(8, 229) =	27.25	
Total	29.4583759	237	.124296945	Prob > F =	0.0000	
				R-squared =	0.4877	
				Adj R-squared =	0.4698	
				Root MSE =	.25672	

grassets	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
lnasseti	-.1168433	.0102975	-11.35	0.000	-.1371333	-.0965534
lnage	-.2448563	.0389662	-6.28	0.000	-.3216345	-.1680781
ehf	.0073792	.0051463	1.43	0.153	-.0027609	.0175193
emcf	.0011342	.0041082	0.28	0.783	-.0069606	.0092229
eff	-.0013668	.0050979	-0.27	0.789	-.0114115	.008678
eif	.0074411	.0043358	1.72	0.087	-.0011021	.0159843
emkf	.0014289	.0020944	0.68	0.496	-.002698	.0055557
egf	-.0007483	.0045992	-0.16	0.871	-.0098105	.0083139
_cons	1.822502	.1502076	12.13	0.000	1.526536	2.118467

Initial size has got a higher and statistically significant impact on SMEs growth when growth is measured with assets. Furthermore, the explanatory power of the model has improved with this version of the model as can be observed from the higher R^2 - value. Most importantly, errors in this model are homoscedastic, as can be seen from the following Breusch-Pagan heteroscedasticity test.

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of grassets

chi2(1) = 2.19

Prob > chi2 = 0.1387

The results are similar when we use employment growth as a measure of enterprise growth, even if the coefficients are getting weaker. However, we refrain from reporting the results in the interest of space. The choice between the first and the second models depends on ones perception of what is the best measure of SMEs growth. As we have briefly discussed in the literature review part, researchers use one or both of growth measures. Some even use employment as

growth measure. Similar results reported from all three measures of SMEs growth in this work are indicators of firm results.

In conclusion this study has shown that Gibrat's law of size and age independence of enterprise growth is not hold in the case of Addis Ababa. Rather, age of an enterprise is found to have significantly inverse relation with enterprise growth. On the other hand, the negative impact of initial size could not be found statistically significant. The Beta-Decomposition analysis shows that age of SME is the major factor that affects growth. Furthermore, growth of SME is found to be affected negatively by both age and initial size, although the impact of initial size is statistically insignificant. It is also found that the direction of growth impacts of age and initial size are insensitive to alternative measures of growth. Finally, the impacts of environmental factors are weak due to geographical proximity between enterprises and its direct result of environmental similarity

Chapter five

5. CONCLUSION AND RECOMMENDATION

This chapter presents the conclusions from the research outputs based on research questions and possible recommendations will be forwarded. Recommendations will be used by the concerned stakeholders to improve the growth of Small and medium enterprises in the study area.

5.1 Conclusion

Small and Medium Enterprises are one of the building blocks of both developed and developing economy, and understanding the growth behaviors of SMEs is quite heterogeneous. With aim of that, both firm specific factor including: size, age, human capital and managerial competence, and business environment factor which include access to finance, access to market, and infrastructure were used in this study.

Graphs, statistical tables, correlation coefficients, are used for descriptive analysis purpose. Econometric model of SMEs growth has been used for analytic purpose with all necessary pre and post estimation tests. Furthermore, beta decomposition method is used to point the most important variables of that affect SMEs growth.

Literacy level differences are statistically significance with Bartlett's test. Similarly, the test proves that difference in growth of enterprises across different experience categories is statistically significant. However, we could not find statistically significant differences between the two genders in any of growth measures used in this paper.

The study has shown that Gibrat's law of size and age independence of enterprise growth is not hold in the case of Addis Ababa. Rather, age of an enterprise is found to have significantly inverse relation with enterprise growth. On the other hand, the negative impact of initial size could not be found statistically significant. The Beta-Decomposition analysis shows that age of SME is the major factor that affects growth. Furthermore, growth of SME is found to be affected negatively by both age and initial size, although the impact of initial size is statistically

insignificant. It is also found that the direction of growth impacts of age and initial size are insensitive to alternative measures of growth. Finally, the impacts of environmental factors are weak due to geographical proximity between enterprises and its direct result of environmental similarity.

From the data interpretations results SMEs were found to have financial sources covered mainly from informal sectors, personal saving which accounts (47.90%) and followed by family supports (19.33%) while the formal sectors i.e. banks represent (2.94%) micro finance institutions (9.66%). This showed a clear gap in access to finance which affect their growth and as it was already discussed the formal sectors demands more collateral requirements and complicated procedures.

From perspective of SMEs characteristics competent manager played an important role for growth of SMEs i.e. with lack of multi skill trainings, lack of management ability in creating external relationship capable of looking for business opportunities and lack of suitable management style control the growth of SMEs in the study area (Appendix C).

5.2 Recommendations

Based on findings of this study some recommendations are forwarded. Improving human capital could be also a good option for SMEs to be effective in their growth. Since human capital is the prerequisite for innovation, investment and financial literacy, as well as for understanding customer orientation, quality and market research and innovations. So it is highly recommended to work in upgrading the skill and performance of firm human capital. Moreover since there are already some entrepreneurship skill upgrading training, the government should address these trainings with full capacity for small and medium enterprises. Besides this vocational schools also should concentrate also besides their technical skills in their entrepreneurship skills to upgrade human capital factor and management skills.

Since it was found that age of enterprises is negatively related to their growth therefore it is highly recommended to change their business type after some durations to keep growing.

In the aspect of access to market, owners need to be aware of customer needs, demands and search their market niche accordingly. Besides this the stakeholders should provide to them up to date market information both in the local and international markets so that they can align their production accordingly.

In the case of access to finance SMEs should have to provide clear business plans and financial statements to be trusted by banks during loan application. Moreover the government should create incentives for banks to increase their SME lending capacity. And the stakeholders should increase access to micro credits and create awareness to easily lend for SMEs.

Besides this the government should address infrastructure problems to small and medium enterprises as it is rated in data collections electricity supply, water supply, communication services are affecting negatively their growth.

Finally this type of researches on factors affecting growth of SMEs should be continuously progressed since they can be as an input to policy makers and concerned stakeholders .

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8

Appendix A

QUESTIONER

JIMMA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

DEPARTMENT OF ACCOUNTING AND FINANCE

Part one: - Introduction

Deer respondents,

I am a Masters student from Jimma University College Business and Economics. Now I am conducting a study on “factors affecting growth of small and medium sized Enterprises in Addis Ababa city administration”. The purpose of this questionnaire is to collect information on Factors Constraining the Growth of Small and Medium Enterprises in Addis Ababa. It is purely for academic purpose and the information obtained shall not be used for any other purpose other than for its intended use and will be treated with utmost confidentiality. So, your genuine, honest and timely response is vital for accomplishment of this study on time. Therefore, I kindly ask you to give your response to each question honestly. Thanks in advance for cooperation!

8

Sincerely,

Elham Derese

Instruction

- ❖ No need to write your and organization name.
- ❖ Put a tick mark (✓) under the choices below in the appropriate place.

Part Two: - Profile of respondent

1. sex of respondent

Male

female

2. age of respondent

15-20

31-35

21-25

36-40

26-30

More than 40

3. Level of Education:

[1] Primary school

[2] High school

[3] College level

[4] University level

[5] illiterate

4. Experience level in the enterprise

[1] 1-5 year

[3] 6-10 year

[2] 11-16 year

[4] More than 16 year

Part three: - GENERAL INFORMATION ON BUSINESS ENTERPRISES

1. What is the main activity of the enterprise

A. Textile and garment

B. Food processing

C. Wood and metal work

D. different from the above

2. the major source of capital to start your business and to operate your business operation is from

A. Personal saving

D. NGOs

G. Micro finance institutions

B. Family

E. Friends/Relatives

C. Banks

F. Iqub/Idir

3 Which one of the following aspect is the most important for growth of your business weather in terms of sales turnover or number of employee.

A. competent manager

C. good infrastructure

B. Business opportunities

D. Training in business skills

4. How many employees you have

A. when your enterprise starts the operation-----

B. in the last year, (2013, G.C).....

5. When did your company start operating? _____ (Age of business)

6. Have you accessed any business training services? [A] Yes [B] No

7. If [Yes], which service of training you took

[A] =maintaining books of records [C] =Inventory Control [B] =Marketing

[E] =Other (Specify) _____

[D] Financial management

8. What is the current total value of your business assets _____ birr
9. How much were approximately your total sales in 2013 ? _____ birr
10. Did your sales grow by at least half as compared to the previous year?
- A. Strongly increase D. Increase
- B. Decrease E. strongly decrease
- C. stayed the same
11. Did the size of your enterprise assets increase by at least half as compared to the previous year?
- A. Strongly increase D. Increase
- B. Decrease E. Strongly decrease
- C. Stayed the same
12. Did your profits grow by at least half as compared to the previous year?
- A. Strongly increase D. Increase
- B. Decrease E. Strongly decrease
- C. Stayed the same
13. Your business sales volume and number of employment shows when you compared to the previous year?
- A. Strongly increase D. Increase
- B. Decrease E. Strongly decrease
- C. Stayed the same

PART four: - FACTORS AFFECTING THE GROWTH OF YOUR BUSINESS

Please indicate the degree to which these factors are affecting the growth of your business enterprise. After you read each of the factors, evaluate them in relation to your business and then

put a tick mark (✓) under the choices below. Where, 5 = strongly agree, 4 = agree, 3 = undecided, 2 = disagree and 1= strongly disagree.

S. No	Human capital factor	1	2	3	4	5
1.1	Do you think your education status affect your firm growth					
1.2	How do you describe innovative activities in your firm?					
1.3	Did you get special training which will upgrade your skill?					
1.4	Have you received any entrepreneurship trainings?					
1.5	Do you agree firm growth is affected by education level?					

S. No	Management competency factors	1	2	3	4	5
2.1	Lack of well-rounded experience in basic business activities					
2.2	Lack of multi- skill training to perform multiple tasks					
2.3	Inefficient utilization of business resources					
2.4	Lack of management ability in creating external relationship					
2.5	Lack of suitable management style					
2.6	Lack of communication between employees and manager.					

S. No	Financial Factors	1	2	3	4	5
	8					
3.1	Lack of credit facility					
3.2	Lack of cash management skills					
3.3	High collateral requirement from banks and other lending institutions					
3.4	Loan application procedures of banks and other lending institutions are too complicated					
3.5	Lack of sufficient working capital					
3.6	Unfamiliarity with financial Information					
3.7	Lack of providing convincing business plan to get loan					
3.8	High cost of loan funds.					

S. No	Infrastructural factors	1	2	3	4	5
4.1	Power interruptions					
4.2	Poor or interrupted communication system (mobile and internet)					
4.3	Insufficient and interrupted water supply					
4.4	Lack of business development services					
4.5	Lack of sufficient and quick transportation service					
4.6	Lack of appropriate dry waste and sewerage system					

S. No	Marketing Factors	1	2	3	4	5
5.1	Inadequate market for my product					
5.2	Searching new market is so difficult					
5.3	Lack of demand forecasting					
5.4	Lack of market information					
5.5	Absence of relationship with an organization that conduct marketing research					
5.6	Lack of promotion to attract potential users					
5.7	Poor customer relationship and handling					
5.8	Lack of continuous improvement of product					
5.9	Lack of setting clear and competitive price for products					
5.10	Lack of network with successful and other businesses					
5.11	High Competition					
5.12	Lack of identifying target market					
5.13	Lack of adaptation to changing environment					
5.14	Negative perception of public					
5.15	Lack of export your products directly					

S. No	General factor	1	2	3	4	5
6.1	Enterprise age					
6.2	Enterprise size					
6.3	Management competency					
6.4	Human capital					
6.5	Access to finance					
6.6	Access to market					
6.7	Infrastructure					

7. If you have any comment regarding factors affecting growth of your business out of the above factors, please mention here

.....
.....
.....
.....

Appendix B

Interview question

1. What problem did you face relating to the following factor that affect the growth of your SME?
 - ❖ Firm characteristics factor
 - ❖ Business environment factor
2. If you have any opinion and suggestion with regard to factors that affect the growth of small and medium enterprise please specify.....

3. የትምህርት ደረጃ

- G. ጻፈጻሚ ለ [] S. ኮሌጅ []
- ለ. ሁለተኛ ደረጃ [] ሠ. ዩኒቨርሲቲ []
- ሐ. ያልተጠቀሰ []

4. በ ድርጅቱ ውስጥ የ ቆዩበት ወይም የሰራ ልምድ-----

- ሀ. 1-5 ዓመት [] ሐ. 11-16 ዓመት []
- ለ. 6-10 ዓመት [] መ. ከ16 ዓመት በላይ []

ክፍል ሶስት :- ስለ ድርጅቱ አጠቃላይ መረጃዎች

1. የተሰማሩበት የሰራ መስክ ?

- ሀ. ጨርቃ ጨርቅና አልባሳት [] ሐ. እንጨትና ብረታ-ብረት []
- ለ. የምግብ ዝግጅት ጾ [] መ. የተለየከሆነይግለፁልን (-----)

2. በ ዘርፉ ለመንቀሳቀስ መነሻ ብር እንድሁም የሰራ ማስከጃ ብር ከየት አገኙ?

- ሀ. ከግልቁጠባ [] መ. መንግስታዊ ካልሆኑ ድርጅቶች [] ሰ. ከማይክሮፋይናንስ []
- ለ. ከቤተሰብ [] ሠ. ከጓደኛ []
- ሐ. ከባንክ [] ረ. ከዕቅብ/እድር []

3. ከሚከተሉት ጉዳዮች ውስጥ ለድርጅትዎ የሽያጭ ሁኔታ እና ያለዎት የሰራተኞች ብዛት እድገት በታም አስፈላጊ የሆነው የቱ ነው?

- ሀ. ተወዳዳሪ መሪ [] ሐ. ጥሩ ኢንፍራስትራስትር []
- ለ. የቢዝነስ አጋጣሚዎች [] መ. የቢዝነስ ክህሎት ስልጠናዎች []

4. በ ድርጅትዎ ውስጥ ቋሚ የሰራተኞች ቁጥር ብዛት ፤

- ሀ. ድርጅቱ ሲመሰረት -----
- ለ. በአሁኑ ወቅት -----

5. ድርጅትዎ ስራ የጀመረዉ መቶ ነዉ ----- ዓ.ም

6. ባለፉት ጊዜያት የቢዝነስ እቅድ ስልጠና አገልግሎት ወስደዉ ያዉቃሉ

- (ሀ) አዎ [] (ለ) አልወሰድኩም []

ሠ. ባለቤት ሁኔታ ላይ ነው

ላ. ቀንቅፋ ላይ

መ. ለጠቅላይ ልማት

ሀ. ለጠቅላይ ልማት

ሐ. ለጠቅላይ ልማት

12. የድርጅት የገቢ ለውጥ ምን ዓይነት ለውጥ ነው?

ሠ. ባለቤት ሁኔታ ላይ ነው

ላ. ቀንቅፋ ላይ

መ. ለጠቅላይ ልማት

ሀ. ለጠቅላይ ልማት

ሐ. ለጠቅላይ ልማት

11. የድርጅት የገቢ ለውጥ ምን ዓይነት ለውጥ ነው?

ሠ. ባለቤት ሁኔታ ላይ ነው

ላ. ቀንቅፋ ላይ

መ. ለጠቅላይ ልማት

ሀ. ለጠቅላይ ልማት

ሐ. ለጠቅላይ ልማት

10. የድርጅት የገቢ ለውጥ ምን ዓይነት ለውጥ ነው?

9. በአጠቃላይ የድርጅት የገቢ ለውጥ ምን ዓይነት ለውጥ ነው?

8. አጠቃላይ የድርጅት የገቢ ለውጥ ምን ዓይነት ለውጥ ነው?

ሐ. የሆነው ለጠቅላይ ልማት

ሠ. የተለየ ሆኖ ለጠቅላይ ልማት

ሀ. የተለየ ሆኖ ለጠቅላይ ልማት

ላ. የተለየ ሆኖ ለጠቅላይ ልማት

7. በተቆ 7 ላይ መሠረት የድርጅት የገቢ ለውጥ ምን ዓይነት ለውጥ ነው?

13. በአጠቃላይ ድርጅትዎን ሲገመገሙት ያለዎት የሽያጭ ሁኔታ እና ያለዎት የሰራተኞች ብዛት ከባለፉት ጊዜያት አንፃር ሲዎዳደር እንዴት ይመለከቱታል

G. በጣም ጭማሪ አለው ለ. ጭማሪ አለው

ሐ. ቀንሰዋል መ. ህጣም ቀንሰዋል

ሠ. ባለበት ሁኔታ ላይ ነው

ክፍል አኦ: በ አነስተኛና መካከለኛ ተቋማት እድገት ላይ ተፅእኖ የሚያሳድሩ ጉዳዮች ከዚህ በታች ተዘርዝረዋል። ከተዘረዘሩት ችግሮች የእርስዎን የሰራ ዘርፍ ይበልጥ ተፅእኖ የሚያሳድሩትን በደረጃ ያመለክቱ። ለእያንዳንዱ ጥያቄ ከ አማራጮቹ አንድ ጊዜ ብቻ (✓) ምልክት በማድረግ ምላሽ ይስጡ። 5 = በጣም እስማማለሁ 4 = እስማማለሁ 3 = ለመወሰን እችላለሁ 2 = አልስማማም 1 = በጣም አልስማማም

ተ.ቁ	1.0 የሰው ሀብት ብቃት እንክፍኞች	5	4	3	2	1
1.1	የትምህርት ደረጃ በእድገት ላይ እንከን ፈጥሮ					
1.2	በድርጅት ውስጥ የሰራፊጠራ እንደት ያዩታል					
1.3	እውቀትዎን ለማሻሻል ስልጠናዎች ወስደዋል					
1.4	የentrepreneurship ስልጠናዎች ወስደዋል ያዉቃሉ					
1.5	የሰው ሀይል ለድርጅት እድገት ያለው አስተዋፅዖ ክፍተኛ ነው					

ተ.ቁ	3.0 ስራ አመራር ክህሎት ጋር የተያያዙ ችግሮች	5	4	3	2	1
2.1	በ ሰራተኞች መካከል ግጭት የሆነ የሰራተኛ ሀላፊነት ክፍፍል አለመኖር።					
2.2	በዋጋቸው ተመጣጣኝና ተደራሽ የሆኑ ስልጠናዎች እጥረት።					
2.3	ውጤታማ ያልሆነ የሀብት አጠቃቀም።					
2.4	ደካማ አደረጃጀትና ውጤታማ የሆነ የሰራተኛ ጥንኑነት ትስስር አለመኖር።					
2.5	የ ሰለጠኑ እና ልምድ ያላቸው ባለሙያዎች አለመኖር።					
2.6	የ ረዥም ጊዜ የቢዝነስ እቅድና ለለውጥ ተነሳሽነት አለመኖር።					

ተ.ቁ	3.0 ከ ፋይናንስ ጋር የተያያዙ ችግሮች	5	4	3	2	1
3.1	በቂ የሆኑ የብድር አቅርቦት አለመኖር።					
3.2	የብር አያያዝ ከህሎት ችግር።					
3.3	ባንኮችና ሌሎች አብዳሪ ተቋማት ለማበደር የሚጠይቁት ከፍተኛ የማሰያዣ መጠን።					
3.4	ባንኮችና ሌሎች አብዳሪ ተቋማት ለማበደር የሚከተሉት ዉስብስብ ና አሰልጥኒዎች።					
3.5	የሰራ ማንቀሳቀሻ ብር እጥረት።					
3.6	የፋይናንስ አጠቃቀም ከህሎት ችግር።					

ተ.ቁ	4.0 ከመሰረተ ልማት ጋር የተያያዙ ችግሮች	5	4	3	2	1
4.1	የኤሌክትሪክ ሀይል መቆራረጥ።					
4.2	ወጥ የሆነ የኮሚኒኬሽን ሽፋን አለመኖር (ሰልክ፣ ኢንተርኔት)።					
4.3	የተቆራረጠና በቂያልሆነ የውሃ አቅርቦት።					
4.4	የቢዝነስ ልማት አገልግሎት እጥረት።					
4.5	በቂ እና ፈጣን የሆነ የትራንስፖርት አገልግሎት አለመኖር።					
4.6	በቂ የደረቅና ፈሳሽ ቆሻሻማስወገጃ ስርዓት አለመኖር።					

ተ.ቁ	5.0 ግብይት ናተዛማጅ ችግሮች	5	4	3	2	1
5.1	በቂ የሆነ የገበያ እድል አለመኖር።					
5.2	አዲስ የገበያ አማራጭን የመፈለግ አዳጋችነት።					
5.3	የወደፊት የገበያ ፍላጎትን መተንበይ አለመቻል።					
5.4	በቂ የሆነ የግብይት መረጃ አለመኖር።					
5.5	ግብይትን በተመለከተ ጥናትና ምርምር ከሚያካሂዱ ተቋማት ጋር ግንኙነት አለመፍጠር።					
5.6	ምርቶችን በአግባቡ አለማስተዋወቅ።					

5.7	ደካማ የሆነ የደንበኛ አያያዝ።					
5.8	ዘላቂ የሆነ የምርት ጥራት አለመኖር።					
5.9	በምርቶች ላይ ደንበኛን ያላገናዘበ አግባብ ያልሆነ የዋጋ ተመን እና ጭማሪ።					
5.10	ከተለያዩ ስኬታማ ድርጅቶች ጋር የገበያ ጥምረት አለመኖር።					
5.11	በገበያ ላይ ከፍተኛ ዉድድር መኖር።					
5.12	ለድርጅቱ አስፈላጊውን የገበያን ድርሻ ለይቶ አለማወቅ (target market) ።					
5.13	ከከባቢ ውሁኔታ ጋር ተለዋዋጭ የገበያ ስርዓት አለመኖር።					
5.14	ማህበረሰቡ ያለው ጥሩ ያልሆነ አመለካከት።					
ተ.ቁ	6.0 አጠቃላይ የሆኑ የድርጅት ገደቦች ተፅዕኖ ያላቸው ችግሮች ይገምግሙ	5	4	3	2	1
6.1	ድርጅት በቢዝነሱ ላይ ቆይቶ ጊዜ አነስተኛ መሆን።					
6.2	የድርጅት አነስተኛ መሆን።					
6.3	በድርጅቱ ውስጥ የተሳለጠ አስተዳደር አለመኖር።					
6.4	በከህሎቱ የዳቦረ ና ልምድ ያለው የሰው ሀይል አለመኖር።					
6.5	የገበያ ችግር መኖር።					
6.6	ከፋይናንስ ጋር የተያያዙ ችግሮች።					
6.7	የመሰረተልማት ችግሮች።					

❖ በድርጅት ላይ ተፅዕኖ ያሳደሩ ተጨማሪ ጉዳዮች ላይ አስተያየት ካለዎት ይጠቀሱልን

ከምስጋና ጋር ።

Appendix C

Model outputs

Correlation between growth in assets, assets and age

```
. pwcorr grassets lnasseti lnage, sig
```

	grassets	lnasseti	lnage
grassets	1.0000		
lnasseti	-0.6136 0.0000	1.0000	
lnage	-0.4105 0.0000	0.2249 0.0005	1.0000

Correlation between growth in sales, assets and age

```
. pwcorr grsales lnasseti lnage, sig
```

	grsales	lnasseti	lnage
grsales	1.0000		
lnasseti	-0.1426 0.0279	1.0000	
lnage	-0.3796 0.0000	0.2249 0.0005	1.0000

Correlation between growth in sales, growth in assets growth in employment and experiance

```
. pwcorr experiencelevel grsales grassets gremp, sig
```

	experi~1	grsales	grassets	gremp
experience~1	1.0000			
grsales	-0.1854 0.0041	1.0000		
grassets	-0.1913 0.0030	0.3378 0.0000	1.0000	
gremp	0.0707 0.2775	0.1858 0.0040	0.0026 0.9677	1.0000

Model parameter results done by stata

Source	SS	df	MS	Number of obs = 238		
Model	3.1689351	8	.396116888	F(8, 229) = 6.79		
Residual	13.3642595	229	.058359212	Prob > F = 0.0000		
Total	16.5331946	237	.069760315	R-squared = 0.1917		
				Adj R-squared = 0.1634		
				Root MSE = .24158		

grsales	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
lnasseti	-.0065391	.0096901	-0.67	0.500	-.0256324	.0125541
lnage	-.2246795	.036668	-6.13	0.000	-.2969292	-.1524298
ehf	.0058955	.0048428	1.22	0.225	-.0036465	.0154376
emcf	.0005922	.0038659	0.15	0.878	-.0070251	.0082095
eff	.0095127	.0047972	1.98	0.049	.0000604	.018965
EIF	-.0084012	.0040801	-2.06	0.041	-.0164406	-.0003619
emkf	.0020059	.0019709	1.02	0.310	-.0018776	.0058893
egf	-.0071843	.0043279	-1.66	0.098	-.0157119	.0013434
_cons	.72902	.1413481	5.16	0.000	.4505109	1.007529

1.0 Human capital factors

Sectors		H.F1.1	H.F1.2	H.F1.3	H.F1.4	H.F1.5
Textile and garment	Mean	3.871	3.957	3.843	3.657	4.186
	N	70	70	70	70	70
	Std. Deviation	1.2385	.9991	1.2352	1.2025	.8391
Food processing	Mean	3.773	3.545	3.591	3.364	4.045
	N	22	22	22	22	22
	Std. Deviation	1.1925	1.0568	1.2212	1.4325	.9989
Wood and metal work	Mean	3.214	3.518	3.982	3.821	4.357
	N	56	56	56	56	56
	Std. Deviation	1.6149	1.2503	.9815	1.2077	.9803
Construction	Mean	3.522	3.711	4.022	3.856	4.333
	N	90	90	90	90	90
	Std. Deviation	1.5377	1.3090	1.1706	1.2857	1.0277
Total	Mean	3.576	3.723	3.920	3.744	4.269
	N	238	238	238	238	238
	Std. Deviation	1.4585	1.1937	1.1538	1.2585	.9608

2.0 Management and competency factors

Sectors		Man.F2.1	Man.F2.2	Man.F2.4	Man.F2.3	Man.F2.5	Man.F2.6
Textile and garment	Mean ^o	3.843	3.986	3.843	4.029	3.657	3.571
	N	70	70	70	70	70	70
	Std. Deviation	1.1246	1.0143	1.0445	1.0352	1.2263	1.0844
Food processing	Mean	3.636	3.714	3.818	4.227	3.864	3.909
	N	22	21	22	22	22	22
	Std. Deviation	1.4975	1.1464	1.1807	1.3428	1.1253	1.2309
Wood and metal work	Mean	3.643	3.714	3.375	3.518	4.071	3.518
	N	56	56	56	56	56	56
	Std. Deviation	1.2853	1.2017	1.3956	1.3347	4.0175	1.3881
Construction	Mean	3.433	3.889	3.700	3.467	3.700	3.433
	N	90	90	90	90	90	90
	Std. Deviation ^o	1.4994	1.2934	1.4018	1.4394	1.3694	1.4919
Total	Mean	3.622	3.861	3.676	3.714	3.790	3.538
	N	238	237	238	238	238	238
	Std. Deviation	1.3501	1.1796	1.2895	1.3226	2.2422	1.3331

3.0 Financial factors

Sectors		Fina_F3.1	Fina_F3.2	Fina_F3.3	Fina_F3.4	Fina_F3.5	Fina_F3.6
Textile and garment	Mean	3.814	3.886	3.986	3.786	3.943	3.843
	N	70	70	70	70	70	70
	Std. Deviation	.9524	.9712	.8596	.9463	1.1019	.9576
Food processing	Mean	4.091	3.591	3.909	3.773	3.773	3.727
	N	22	22	22	22	22	22
	Std. Deviation	1.1916	1.2596	1.1916	1.2318	1.0204	1.0320
Wood and metal work	Mean	4.018	3.482	4.000	4.018	3.768	3.571
	N	56	56	56	56	56	56
	Std. Deviation	1.2576	1.4141	1.1909	1.2134	1.2932	1.3329
Construction	Mean	3.767	3.644	3.867	3.822	3.911	3.733
	N	90	90	90	90	90	90
	Std. Deviation	1.3073	1.4007	1.2826	1.3948	1.2238	1.4206
Total	Mean	3.870	3.672	3.937	3.853	3.874	3.727
	N	238	238	238	238	238	238
	Std. Deviation	1.1888	1.2802	1.1364	1.2150	1.1840	1.2414

4.0 Infrastructure factors

Sectors		Infra_F4.1	Infra_F4.2	Infra_F4.3	Infra_F4.4	Infra_F4.5	Infra_F4.6
Textile and garment	Mean	4.071	4.000	4.114	4.086	3.643	3.971
	N	70	70	70	70	70	70
	Std. Deviation	1.0539	.8341	.8434	.7939	1.2163	1.0068
Food processing	Mean	4.500	4.136	4.227	3.909	4.364	4.455
	N	22	22	22	22	22	22
	Std. Deviation	1.0118	1.3903	1.2699	1.0650	1.0486	.9625
Wood and metal work	Mean	4.071	3.893	3.768	3.571	3.679	3.500
	N	56	56	56	56	56	56
	Std. Deviation	1.2484	1.3167	1.2791	1.2189	1.4536	1.2358
Construction	Mean	4.267	4.133	4.289	4.167	3.856	3.989
	N	90	90	90	90	90	90
	Std. Deviation	1.1689	1.1238	1.1041	1.1342	1.5255	1.2586
Total	Mean	4.185	4.038	4.109	3.979	3.798	3.912
	N	238	238	238	238	238	238
	Std. Deviation	1.1434	1.1226	1.1084	1.0809	1.3906	1.1821

5.0 Marketing factors

Sectors		MK_F5.1	MK_F5.2	MK_F5.3	MK_F5.4	MK_F5.5	MK_F5.6
Textile and garment	Mean	4.186	4.229	3.957	4.271	4.200	6.286
	N	70	70	70	70	70	70
	Std. Deviation	.8562	.8017	.9237	.6352	.6937	10.1255
Food processing	Mean	4.136	4.091	4.136	4.227	3.955	4.318
	N	22	22	22	22	22	22
	Std. Deviation	1.1253	1.0193	1.0372	.9726	.9501	.9455
Wood and metal work	Mean	4.089	3.571	3.804	3.821	4.161	3.554
	N	56	56	56	56	56	56
	Std. Deviation	1.1798	1.3465	1.2709	1.1616	.9101	1.2493
Construction	Mean	4.056	4.200	3.778	4.122	4.078	4.011
	N	90	90	90	90	90	90
	Std. Deviation	1.2663	.9853	1.3049	1.0475	1.0624	.9772
Total	Mean	4.109	4.050	3.870	4.105	4.122	4.601
	N	238	238	238	238	238	238
	Std. Deviation	1.1197	1.0662	1.1710	.9773	.9174	5.6468

5.0 Continued table on Marketing factors

Sectors		MK_F5.7	MK_F5.8	MK_F5.9	MK_F5.10	MK_F5.11	MK_F5.12	MK_F5.13	MK_F5.14
Textile and garment	Mean	3.771	4.129	3.986	4.186	4.129	3.843	4.200	3.943
	N	70	70	70	70	70	70	70	70
	Std. Deviation	1.0097	.8327	.9853	.7282	.7971	.9874	.7727	1.0886
Food processing	Mean	4.000	3.955	3.773	4.000	4.091	3.727	3.818	3.955
	N	22	22	22	22	22	22	22	22
	Std. Deviation	.9258	.9989	1.1925	1.0235	1.2309	1.1622	1.0970	1.2527
Wood and metal work	Mean	3.357	3.429	3.429	3.786	3.750	3.661	3.518	3.089
	N	56	56	56	56	56	56	56	56

	Std. Deviation	1.4451	1.4252	1.4630	1.1396	1.2685	1.2399	1.2791	1.3521
Construction	Mean	3.533	3.856	3.656	3.900	4.178	3.678	3.878	3.544
	N	90	90	90	90	90	90	90	90
	Std. Deviation	1.4931	1.2322	1.3588	1.1808	1.1075	1.2793	1.2705	1.4776
Total	Mean	3.605	3.845	3.710	3.966	4.055	3.727	3.882	3.592
	N	238	238	238	238	238	238	238	238
	Std. Deviation	1.3167	1.1822	1.2811	1.0469	1.0875	1.1751	1.1523	1.3555

6.0 General factors

Sectors		Gen.F6. 1	Gen.F6. 2	Gen.F6. 3	Gen.F6. 4	Gen.F6. 5	Gen.F6. 6	Gen.F6. 7
Textile and garment	Mean	3.900	3.971	3.829	3.729	4.043	4.014	3.829
	N	70	70	70	70	70	70	70
	Std. Deviation	.9502	.9475	.9627	1.2617	.8754	.8596	.9627
Food processing	Mean	3.500	3.955	3.500	3.636	3.727	3.818	3.773
	N	22	22	22	22	22	22	22
	Std. Deviation	1.3363	1.0901	1.1019	1.0486	1.1205	1.1396	1.2699
Wood and metal work	Mean	3.321	3.464	3.304	3.464	3.768	4.000	3.643
	N	56	56	56	56	56	56	56
	Std. Deviation	1.3765	1.3344	1.4387	1.3479	1.2932	1.1755	1.4197
Construction	Mean	3.811	3.889	3.600	3.811	4.267	4.156	4.144
	N	90	90	90	90	90	90	90
	Std. Deviation	1.2973	1.1460	1.3475	1.3145	1.0145	1.0591	1.0553
Total	Mean	3.693	3.819	3.588	3.689	4.034	4.046	3.899
	N	238	238	238	238	238	238	238
	Std. Deviation	1.2437	1.1460	1.2556	1.2844	1.0747	1.0403	1.1576



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