

**DETERMINANTS OF FIRM SIZE IN KENYAN MANUFACTURING  
FIRMS CASE STUDY OF THIKA – KIAMBU COUNTY**

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award of the Degree of Master of Arts in Economics, University of Nairobi.**

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## DECLARATION

This thesis is my original work and has not been submitted for degree in any other university or institution.

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This thesis has been submitted for examination with our approval as university supervisors.

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## **DEDICATION**

I dedicate this work to my family, friends and relatives.

## **ACKNOWLEDGEMENTS**

I would like to thank everyone who has contributed to this work. Without their help and support, this thesis would not have been realized.

First, I would like to thank my supervisor Dr. Joy Kiiru and Dr. Osoro for their valuable advice and support, which made an important contribution to the realization of this thesis.

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## **ABSTRACT**

Most small and micro enterprises in Kenya have for a long time faced a challenge of growing into larger corporations. This is despite the reality that they form the basis upon which the economy of the country can be transformed. Most Small and Medium enterprises (SME) start small but end up not growing in size. This study focused on assessing the determinants of firm size by taking SMEs operating in the manufacturing industry. The study took a sample of 50 manufacturing firms that are operating in Thika Town, Kiambu County, Kenya.

The assessment was based on a model composed of Number of employees in the firm as the dependent variable indicating the size of the firm. Other variables taken as independent variables were initial startup capital, availability of raw materials, level of education of the key decision maker in the firm, relevant experience in years of the key decision maker in the firm, age of the key decision maker in the firm in years, age of the firm in years, interest rate (Central Bank Rate), Location of the firm referring to either rural or urban, annual tax paid and gender of the owner. These factors were perceived to have an effect on ability of a firm to grow. The business owners and managers were approached and interviewed on these issues that formed the basis of discussion of the findings. The study found out that these factors affect the ability of the firms to increase the number of workforce which indicated smallness of the firms. This study recommended the use of venture coaching, improved access to finance and expansion to international markets as the solution to enhance growth of the firms.

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## **LIST OF ACRONYMS AND ABBREVIATIONS**

<b>GDP</b>	Gross Domestic Product
<b>VAT</b>	Value Added Tax
<b>PTA</b>	Preferential Trade Area
<b>COMESA</b>	Common Market for Eastern and Southern Africa
<b>SME</b>	Small and Medium Enterprises
<b>ROA</b>	Return on Assets
<b>U.S.</b>	United States
<b>MSE</b>	Micro and Small enterprises
<b>OLS</b>	Ordinary Least Squares

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background to the study

Kenya is a resource poor country with rapid population growth and large proportion of population engaged in the agricultural sector. With limited access to fertile land, the agricultural sector may not be best placed to deliver sustained growth in per-capita income in the future. Since land is not an important factor for manufacturing production, then infertile land is less of a constraint to manufacturing. Manufacturing sector has a great potential of promoting economic growth and competitiveness of a country like Kenya. It is the third leading sector behind agriculture and horticulture in contribution to gross domestic product (GDP) in Kenya. The sector contributes approximately 10 percent of Kenya's GDP, 12.5 percent of exports and 13 percent of formal employment. (GoK, 2012)

The sector has experienced fluctuations over the years due to different financial conditions experiencing the lowest real GDP growth rate of 1.7 percent in 2008 and 2.6 percent in 2009 (East African Community Facts and Figures, 2010). This slow growth in the manufacturing sector can be attributed to both lack of domestic market owing to the depreciation of domestic currency and decreased foreign demand due to global financial crisis. In 2010, however, the real GDP growth rate increased to 5.6 percent showing an improvement in the sector performance (East Africa Community Facts and Figures, 2011). Kenya's manufacturing industry is mainly dominated by agro-processing which accounts for approximately 70 percent of manufacturing turnover and 18.4 percent of export earnings. In this sub-sector, food products contribute 73 percent of the production turnover. Other manufacturing sub-sectors in order of their importance includes; metal and allied, chemical and allied and building and construction (Osanoet *al* 2008).

A distinctive feature of Kenya's manufacturing sector is the coexistence of the modern sector alongside the rapidly growing informal sector. While the formal sector comprises mainly small, medium and large-scale enterprises, the informal sector consists of numerous open-air small and

micro-scale productive activities in towns and rural trading centers. A large proportion of their output is directed towards satisfying the needs of consumer goods and services domestically. These include items such as clothing, furniture, foodstuffs and motor vehicle repairs.

Since Kenyan independence, the country has pursued different strategies with the overall objective of industrialization. In the sixties and seventies, the country pursued the strategy of import substitution similar to many other African countries at the time. Most of the manufacturing firms were heavily protected in such sectors as leather, rubber, petroleum, industrial chemicals, cement and metal products. Although, the import substitution ensured domestic availability of products previously imported it distorted Kenya's industrial development by encouraging the creation of excess capacity, low technical efficiency and inability of the firms to penetrate external markets (Bigsten *et al* 2010).

In the early 1970s Kenya faced foreign exchange crisis, and the government tightened administrative controls of economy through higher tariffs, strict import licensing and price controls. These reduced the share of manufactured exports from 40 percent in 1964 to 10 percent in mid-1980s. Despite poor export performance, manufacturing in Kenya increased its share of GDP during the 1970s. At the same time there was a rapid expansion of informal manufacturing production of mainly simple consumer goods and services for low-income households. During 1980s and in early 1990s, the government introduced series of reforms to support manufactured exports. They included the export processing zones, manufacturing under bond, an export compensation scheme, and a duty or VAT drawback scheme. In measures aimed at increasing the level of manufactured exports, in 1983, Kenya entered the Preferential Trade Area (PTA) of Eastern and Southern Africa and in 1993 the Common Market for Eastern and Southern Africa (COMESA). Following the Structural Adjustment Programmes, in 1993, most of the administrative controls aimed at protecting local industry from competition and consumers from high prices were abolished, including import licensing and foreign exchange controls.

Despite the various strategies by the government to increase manufacturing level in the country, this sector continues to be confronted by various constraints including high indirect costs of doing business. It is estimated that Kenya's cost are higher than those of Uganda and Tanzania

(World Bank, 2007). These costs are made up of electricity, bribes, production lost on transit and security costs. In addition domestic manufacturing firms are also faced by high tax levels which they pay in form of corporate taxes. Another serious obstacle is finance where firm size is an important determinant of access to credit. Small firms in Kenya usually are unable to access credit for start-up and expansion. Other challenges facing manufacturing firms are corruption where firms are made to make informal payments to make things done as well as stringent regulations and red tapes (World Bank 2007).

Various development blue prints have been developed with the aim of improving the productivity and performance of manufacturing industry in Kenya. They include the Poverty Reduction Strategy Paper (2001-2004), the Economic Recovery Strategy for Wealth Creation and Employment 2003-2007 and Kenya Vision 2030. In particular, the Poverty Reduction Strategy Paper policy document recognizes the important role played by small scale enterprises in the poverty reduction efforts. The government has relentlessly committed itself to create conducive environment for the growth and competitiveness of the private sector through policies and programmes that address above constraints. The government has undertaken the initiative that includes the National Youth Fund, Women Enterprise Fund and Constituency Development Fund which underscores the government priority and facilitation of the citizenry in business especially in small enterprises.

Especially due to lack of funds for expansion most of the manufacturing firms in Kenya exists as small and medium enterprises (SME). The SME sector is very crucial in economies of developing countries with Kenya being no exception. Like in most developing countries, Kenya is faced with an ever increasing problem of unemployment that is made worse by declining levels of public sector employment. Small and medium enterprises in the country provide one of the most prolific sources of employment creation and income generation for poverty reduction. The sector is important for skilled persons who either lose formal sector jobs or are beginners in self-employment.

The sector is considered as an employer of last resort especially those who fail to secure jobs in the formal sector (Bigsten *et al*, 2000). In generating employment opportunities that can keep

pace with the even increasing labor force, the small and medium enterprises sector is expected to play a leading role. This will only be realized if the entrepreneurs seize the available opportunities to invest in productive enterprises, develop competitive industrial sector thereby creating jobs (GoK, 2005).

Unlike in most developing countries, Kenya is not endowed with large capital stock and technology. This condition has forced production processes for various commodities to rely heavily on labour intensive informal technologies rather than capital intensive. The manufacturing sector acts as producers of many intermediate and final goods and they are essential consumers of local goods and services. The manufacturing sector creates demand and supply for goods and services and also offers excellent opportunity for entrepreneurial development.

An important component in the manufacturing industry is the Jua kali sector which is comprised of small scale artisans who mostly apply appropriate intermediate technology. This sector given all conditions for growth can bring about industrial revolution in Kenya. The sector also acts as a breeding ground for medium and large industries, which are vital for industrialization. The sector provides training and acquisition of skills for masses of people outside the formal education and vocational systems cost effectively. To increase incomes and move away from the status of low-skill and low-capital economy, one avenue is through formal manufacturing sector which in addition can generate job opportunities for the rapidly growing labour force. As manufacturing firms grow in size, they benefit from economies of scale so that the average production costs falls as firms grows. In fact the country has recognized the importance of the manufacturing sector in the long-term economic development. In the government's planning document Vision 2030, the manufacturing sector is expected to contribute 10 percent annually to Kenya's GDP

Despite efforts made by the government, development partners and other stakeholders to promote manufacturing firms through technical and financial assistance, a number of constraints still continue to inhibit the performance and realization of the sector's full potential. As such an investigation to these factors hindering the performance of these enterprises is thus vital.

## **1.2 Statement of the problem**

Manufacturing firms especially the small and medium ones are recognized as providing a prolific source of employment creation, income creation and poverty alleviation. SMEs are identified for these roles due to their nature that enables them to cut across all sectors of the economy. A considerable attention has been focused on the sector in recent years due to this unique potential for employment and wealth creation.

A huge number of small informal firms are started in Kenya but hardly ends up being large or even medium formal firms. It is therefore important to carry out this study and offer an understanding of the factors hindering the growth of these enterprises and the relationship between firm size and the various factors influencing it.

## **1.3 Objectives of the study**

The overall objective of the study is to determine the factors affecting the size of firms in the Kenyan manufacturing sector and why firms start small and remain small.

### **1.3.1 Specific objectives**

1. To identify the factors that influences the size of Kenyan manufacturing firms.
2. Estimate the relationship between firm size and various factors influencing it.
3. Give policy recommendations for a vibrant manufacturing sector.

## **1.4 Significance of the study**

The manufacturing sector has been recognized as a provider of goods and services and also a driver in promoting competition and innovation and enhancing enterprise culture, which is necessary for private sector development and industrialization. According to past research, a huge number of small informal firms are started in Kenya but hardly ends up being large or even medium formal firms. It is therefore important to carry out this study and offer an understanding of the factors hindering the growth of these enterprises. Lack of finance, access to market and inadequate infrastructure has all along being cited as the main causes of slow growth of firms. Even though the government has intervened through various programmes, the situation has not improved as would be anticipated.

That aside, there is no much empirical work in Kenya particularly on the relationship between manufacturing firm's characteristics and their growth. This is because past studies, have mainly considered the general constraints that inhibits the realization of the sector's full potential. These constraints however, affect both small and large firms alike.

This study will use econometric analysis unlike most studies in Kenya which are descriptive in nature with only a few applying econometric techniques. An econometric study on manufacturing sector in Kenya will add to the existing literature that will go a long way in helping policy makers find the kind of assistance to be accorded to the manufacturing firms in Kenya with a view of enhancing growth in this sector. The study can also be adopted by other countries seeking to improve the performance of their manufacturing firms.



## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

The analysis of the determinants of firm size, which attempts to explain how various factors affect the ability of SMEs to grow form the basis of this literature review. Specifically the chapter discusses relevant theories that inform determinants of firm size. The extensive empirical evidence and tests of these theories can be found in the firm growth literature. As noted by Frank &Goyal (2008), to understand the evidence, it is important to recognize the differences of the various factors affecting the SMEs in their operations.

#### **2.2 Theoretical Reviews**

##### **2.2.1 Contracting cost theories**

According to Coase (1937) a firm will form when the costs of using the markets to form short-term contracts are higher than producing the good internally. The firm will expand to the point where the marginal cost of an additional transaction equals the cost of carrying out the transaction through the market or another firm. Diminishing returns to transactions and organization occur, resulting in decreasing efficiency as the size of the firm increases (Coase, 1937). This is due to diminishing returns to management. This implies that larger firms would develop if market transactions were more costly. This may be due to reasons such as weak property rights, uncertainty in the market regarding regulation, among others. When this occurs, it is more efficient for the firm to expand its scope of production to include these activities the market cannot efficiently provide. It is in relation to an increase in production, which will result in an increase in output, and or employment. There can be a positive relation between the size of a firm, and the range of activities involved in production. The firm size distribution may be expected to be larger in areas where market transaction costs are high, as firms in these markets may produce a larger range of products, or be more vertically integrated in production.

### **2.2.2 Transaction Cost Theories**

Transaction cost theory is developed from Coase's (1937) insight that organizational costs between firms are not zero (as is often assumed in economic theory) and are needed to explain the development of particular forms of economic organisation. Transaction cost theories of the firm are very similar to the contracting cost theory, but the focus is on the costs between firms not at the internal costs of firms. Transaction costs theory looks into the effects of the nature of transaction costs particularly in situations where relation-specific investments have been made by economic actors (Donkers and Verwaal, 2002).

Firms in equilibrium will undertake an activity if it is cheaper to provide it internally than to purchase the service in the market

### **2.2.3 Technological Theories**

An important assumption in the technological theories of the firm is that the firm is an adaptive, learning organisation, which responds to environmental shocks based on its objectives and philosophy on achieving these objectives (McConnell, 1979). The size of the market is a large determinant of the size of the firm. Larger markets can support larger firms and thus greater specialization within the firm. Specialisation of individual workers is then proportional to firm size (Kumar *et al* 1999). The greater the local market, the more the firm can take advantage of scale economies and increased specialisation, resulting in a more efficient production process. A larger local market can also support a larger number of firms, and thus, increased competition, spurring productivity and efficiency within the firm through specialisation.

### **2.2.4 Institutional Theories**

Institutional theories focus on the effects of the macroeconomic environment and institutions on the nature of firm size (Kumar *et al*, 1999).

### **2.2.5 Regulatory theories**

Regulatory issues associated with the firm vary in different markets and economies. In many industries, even though the firm has not changed structurally, the increased regulatory costs and restrictions will have a significant negative impact on the competitiveness of the firm (Kumar *et al* 1999). These increased costs therefore fall disproportionately on medium sized firms. The smaller firms then have an advantage in this area in which the regulatory compliance issues then forms a barrier to expansion on both the financial and regulatory compliance fronts. For

example, a firm that is seeking to expand may be limited by an environmental impact assessment, which can take up to a few years to complete. By this time, market dynamics and even technologies in production may have been significantly altered.

High corporate taxation can also drive many firms into the informal sector, which will lead to these firms staying small to keep off the government radar. Taxation in any form creates distortions and alters incentives. High company taxation decreases the returns on investment, lowering the optimal output of the firm. As such, small firms that do not pay tax benefit in this regard. Corporate taxation is therefore another barrier to expansion to small firms.

### **2.2.6 Financial theories**

The ability of firms to find external financing is an impediment to increasing size and even entering the market in the first place. This implies that there is a positive correlation between firm size and the availability of finance (or the cost of finance) or factors that promote the development of the financial services sector within a country. More developed financial markets allow for firms to expand, this also allows for a greater number of firms to receive finance to start up. Financial markets are positively correlated with both the size and number of firms in a given market. A decline in the costs of external finance will allow for a greater number of smaller, less efficient firms to enter the market (Rajan and Zingales, 2001b).

### **2.3 Empirical Literature**

One of the reasons why SMEs may experience difficulties in growth is in regard to sourcing finance for investment due to the informational opacity, which is assumed to be negatively related to the firm's size (Berger and Udell, 2008). Public information about SMEs is less voluminous because, in general, SMEs do not enter into contracts which details are available to the general public or covered in the press. This is one of the challenge which (Wilson, 2012) says can be tackled through empowering the SMEs through government institutions.

(Symeonidis 2007) extensively surveyed the literature on the links between innovation, market structure, and firm size, based on the Schumpeterian point of view that market power and large firms stimulate innovation. Symeonidis (2007) found that research and development spending rises proportionately with firm size. Large firms have an advantage in research and development and innovation when there are large sunk costs to research. The intensity of research and development and the opportunity for innovation are also industry specific, and depend on a

number of unique factors such as the existing technology, demand characteristics, institutional differences, and the interaction between different firms. Symeonidis (2007).

Kremer (2013) found that a greater inequality in human capital would lead to a greater dispersion in firm size due to the matching of human capital to potential growth rates of individual firms. In addition, an increase in institutional development at the country level would level the playing field for firms to enter the market and allow for these firms to reach their optimal levels of production. This is found in the data, where increasing judicial efficiency lowers the dispersion of firm size within a particular sector (Kumar, and Zingales, 2008). This also decreases the effects of human capital within a country.

According to the (World Bank 2010) developing countries have always the informal sector and the illegal competition as major barriers and constraints to their development and to the possibility of showing better performances. This fact increases the importance of analyzing this sector. This is also evident in Kenya where the government also imports some commodities that are locally available by local manufacturers like furniture (Mugo, 2010).

Child, (2003) identified transport, raw materials and equipment as major constraints towards performance of enterprises. The availability of raw materials at affordable prices and the right quality was an important determinant of success. His study found a positive relationship between quality of raw materials and quality of output. The same views are supported by (Berger, 2008) who emphasized the availability of raw materials as a critical component.

A study by Myroshnichenko (2004) regarding the determinants of the firm's size, it is obvious that a firm's profitability is negatively and statistically significantly related to the corporate capital structure. This evidence supports pecking order capital structure theory and is also consistent with the finding of Myroshnichenko (2004). The possible explanation for such a relationship is that firms with the higher profitability may use their net profit to finance their activity by themselves and not to employ debt financing. This means that they prefer internal funds to debt financing. The coefficients for firm's profitability are the greatest by their magnitudes. Thus, if the ROA increases by one standard deviation, the firm's debt-to-equity ratio decreases by 0.16 according to (2) specification, and 0.18 according to (5) specification Myroshnichenko (2004).

Niessen and Ruenzi (2007) focused on the gender differences in professional activities of company managers in the U.S. mutual fund industry. They control for manager's education and work experience and find out that female managers are more risk averse, they follow less extreme investment styles and trade less than male managers. Although there is no difference in average performance of these managers, female-headed mutual funds receive significantly lower inflows that may suggest that female managers might be stereotyped as less skilled.

In my paper I investigate whether manager's gender influences the corporate capital structure as a measure of riskiness of the firm's. Considering the existing literature, we expect a negative influence of female managers on the firm's leverage (debt-to-equity ratio). However, probably, it can be the case that indeed female managers are less likely to get a loan as banks can discriminate female-headed enterprises while making a decision about loan granting (Muravyev et al. 2008) This conclusion may affect our analysis as female-headed companies may employ less risky capital not because their managers are more risk averse and does not want to carry responsibility for the borrowings, but because they simply cannot receive these loans. It is worth saying that Muravyev et al. (2008) analyze very small companies (with several employees) for which their female managers are also the owners. In this case, manager's gender is important for a bank giving a loan and appears to be significant factor for loan decision because too much in firm's activity and performance depend exactly on the manager's (and owner's in this case) decisions. Focus is on the joint-stock companies for which managers are not always even shareholders. In this situation making decision on the loan bank does not pay such a great attention to the manager's gender because it is not only the manager but also the board of directors and a lot of other employees who make decisions influencing company's solvency and activity in general. That is why we presume that there cannot be the case when a joint-stock company cannot receive the loan because of its manager's gender.

Kimuyu and Omiti (2000) conducted a study on institutional impediments to accessibility of credit by micro and small-scale entrepreneurs in Kenya looked at the various institutional attributes. The study sought to explore the supply and demand side problems that constrict the component of credit market relevant to MSE sector and suggesting intervention for addressing such problems to improve their performance. The study used data generated through the MSE Baseline survey supplemented with a quick follow up survey on some of the credit related issues

not fully addressed in the Baseline Survey. Descriptive statistic and modest econometric approach were used to explore the relationship that sheds light on the nature of financial market relevant to MSEs in Kenya. The result indicated positive relationship between the age of both the enterprise and owners and inclination to seek credit. According to the study an analysis of enterprises that closed down indicates that more than one third of such enterprises closed for lack of working capital. On the issue of formality and gender, the study concluded that enterprises owned by males are more likely to seek credit than those owned by female, as do formal enterprises- thus impact of formality is statically significant According to the study, the older the enterprise and entrepreneurs, the more likely that the latter will seek business loan. However, the study noted that most of the enterprises do not probably live long enough to build contracts and reputation needed in seeking out and making use of credit In Kenya the mean age is found to be 4.2 years. The study also concluded that enterprises that have sole proprietorship type of ownership are less inclined to seek credit relative to those under other ownership structures.

Mugo (1991) did a study on determinants of entrepreneurial performance in small-scale firms in Kenya, Mathira Division; Nyeri district and expressed the same sentiments as above. The broad objective of her study was to determine and assess factors that affect the performance of entrepreneurs in small scale manufacturing enterprises. Profitability was used as proxy for performance and was regressed on factors identified as having influence on entrepreneurial performance, which included job training, experience, age, innovation activities, sex, and business management practices, availability of inputs, initial capital and capital labour ratio. The results showed that innovation activities, business management practices and availability of inputs have positive signs as expected and are significant at both 90% and 95% level of confidence. The level of initial capital and capital labour ratio were found to be positively related to profitability and are only significant at 80% level of confidence. Experience of entrepreneur though insignificant is positively related to profitability. Sex of the entrepreneur and availability of inputs are positively related to performance of the entrepreneurs and are statistically significant at 90% and 95% level of confidence respectively. However, the study differed from other studies in that on job training and the age of the entrepreneurs were both found to be insignificant. With exception of the two, all other variables yielded the expected signs.

Kimuyu (2002) study focused on impact of micro-level institution on revenue generation by MSEs in Kenya. He used descriptive and econometric results based on secondary data generated through the 1999 Baseline Survey of micro and small-scale enterprises in Kenya. The objective of the study was to explore the impact of micro level institutions on revenue generation by micro and small scale enterprises in Kenya. Augmented Cobb-Douglas production model, which includes an assortment of micro-level institutional variables, was used to explore the impact of micro level institutions on enterprise performance. He estimated the model by applying OLS method on the extracted data. The results showed that female ownership, informality and sole proprietorship have negative effects on the ability to generate revenue. Such ability, however increase with entrepreneur's age, education and membership in business support group. The study also revealed that rural-based enterprises and those that are irregularly operated are less productive than those that are urban based and regularly operated. The model is more modified and captures variables which have been left out in the previous models such as formality status, membership in support group, locality, regularity of operation and ownership-structure.

## **2.5 Overview of the literature review**

The analysis indicates that the SMEs sector is very important in regard to employment creation, income generation and poverty reduction. The studies identify further the various factors that affect the performance or growth of the MSEs, which includes, institutional, market, financial and social barriers. Of importance to this study are the micro-level institutional barriers such as education, age of entrepreneur and enterprises, initial capital, experience, sex, job training, formality of business and availability of raw materials. Only Kimuyu (2002) and Omiti (2000) focused on business activities, locality, formality status and ownership structure. However the studies reviewed do have various omissions mainly being the fusing of market and financial constraints amongst others highlighted in the literature reviewed and the entrepreneurs' individual characteristics, which are going to be addressed by this study.

Most of the studies reviewed consider entrepreneurship as the most important determinant for performance of the MSEs thus focusing mainly on entrepreneurial characteristic without reference to the enterprise attributes (Symeonidis, 2007 Kremer 2013 Kumar, and Zingales,

2008). However, this is inadequate as enterprise characteristics equally affect the performance of the MSEs thus it would be more comprehensive to include them.

Most studies found out that lack of education is a major constraint to the success of the enterprise (Kimuyu and Omiti, 2000; Kimuyu, 2001; Kimuyu, 2002). At the same time, some studies revealed a weak relationship between formal education and performance of Micro and Small enterprises (MSE). Some explanations suggest that this weakness might be that formal education is competitive with learning on the job. Such inconsistency necessitates the need for further empirical studies to establish if education actually affects the performance of the MSEs.

According to the studies reviewed, capital (both working and initial capital) and credit facilities have a share in explaining the business profits. However, some studies do not show any significant relationship between initial capital and profitability of the firm (Child, 1973 and Chuta and Leidholm, 1985). This study will use primary data in Kenya to address this inconsistency.

In these studies profit has been used as a proper success indicator (Child, 1973; Chuta and Liedholm, 1985; McCormick, 1988; Mugo 1991). However, two of the reviewed studies used output and productivity as indicators to measure performance, which might not be a good measure of performance among the MSEs. This study will also use profit function in linear regression analysis.

Moreover, most of these studies are mainly descriptive with only a few econometric studies; in addition, some of the few studies that are based on econometric method of analysis are country specific and use secondary data (Harris, 1969; Chuta and Leidholm, 1985; Matsebula, 1986), which cannot be used to generalize for Kenya. In addition, the few econometric studies carried out in Kenya targets only a single activity, manufacturing (McCormick, 1988; Mugo, 2001; except (Kimuyu, 2002) who targets other activities but uses secondary data. This particular study will be county specific giving focus to manufacturing sector and using primary data. This will give a clear picture in totality of the effect of institutional variable to performance of the MSEs.



## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.1 Model Specification

The model specified tries to capture the relationship between firm's growth captured as number of employees in the firm and the nine variables most of which are covered in the literature reviewed.

The model is specified as

$$G_n = f(\text{EDU}, \text{AGE}_e, \text{AGE}_b, \text{SEX}, \text{ICAP}, \text{LOC}, \text{AVI}, \text{REX}, \text{IR}, \text{TAX}, \text{U}) \dots \dots \dots (i)$$

Where:

$G_n$  = Number of employees in the firm

ICAP= Initial startup capital.

AVI= Availability of raw materials (dummy) Yes=1, No=0

EDU = Level of education of the key decision maker in the firm.

REX=Relevant experience in years of the key decision maker in the firm

AGE<sub>e</sub>= Age of the key decision maker in the firm in years

AGE<sub>b</sub>= Age of the firm in years

IR=Interest rate (Central Bank Reference Rate)

LOC= Location of the firm (dummy) 1=town 0 rural

TAX= Annual tax paid

SEX = Gender of the owner (dummy) 1=male, 0= female

However, the estimation of the above function may result in residuals that violate the assumption of normality of the errors. This is in simplifying assumption of classical linear regression model, and must be satisfied for the method of ordinary least squares to be the best linear unbiased estimator. To ensure normality of the residuals, the estimation equation used in this study is expressed in logarithmic form. The transformation is justified because it ensures that the errors are both homoscedastic and normally distributed. The log- linear function will be augmented by dummy variables. This enables us to capture the influence of those important variables that are not quantitative. In order to track the direction of the impacts of institutional factors on performance an econometric analysis will be used. Due to its computational simplicity a log linear regression is thus more preferred. A log- linear transformation is convenient because of its simplicity, easy to interpret since it is associated with direct estimates of elasticities. A log-linear transformation will enable us to interpret regression coefficients as elasticities in this case. The model to be estimated is therefore expressed as:

$$\ln G_n = \alpha_0 + \alpha_1 \ln EDU + \alpha_2 \ln AGEe + \alpha_3 \ln AGEb + \alpha_4 SEX + \alpha_5 LOC + \alpha_6 \ln ICAP + \alpha_7 \ln AVI + \alpha_8 \ln REX + \alpha_9 \ln IR + \alpha_{10} TAX + U \dots\dots\dots(ii)$$

Where:

ln stands for natural log

$\alpha_{i (1-9)}$  are structural coefficients for the institutional variables

$\alpha_0$  stands for constant

**Table 1: Expected signs**

<b>Variable</b>	<b>Direction of impact</b>	<b>Explanation of Expected Results</b>
Age of the main decision maker of the firm.	+	As entrepreneur's age increases it is expected that their businesses are more profitable due to gained business experience and access to resources through personal acquisition and inheritance
Relevant experience of main decision maker of the firm.	+	It is expected that job training enhances the skills of the entrepreneur and hence this influences his or her ability to operate the enterprise.
Educational achievement of main decision maker of the firm.	+	Increase in education is expected to lead to higher profitability as it enhances a person's managerial and technical skills and consequently influencing ability to operate the enterprise.
Age of enterprise	+	Older firms are likely to be generally more efficient than younger ones due to lessons of experience, which translates to improvement in enterprise performance.
Location:		Urban based since urban based have greater access to business services. Rural based enterprises are likely to be less profitable than
Availability of inputs	+	Availability of raw materials at affordable prices and right quantity is likely to be an important determinant of success
Initial capital	+	Firms with larger initial capital are expected to earn, higher profits since they are able to start on a larger scale and exploit market opportunities.
Interest Rate	+	This will be measured using the Central Bank Rate. It is expected the higher the rate the more difficult it will be to access credit, and the lower the CBR, the more affordable credit will be.
Taxes	+	Taxes reduces the profits to a firm. It is expected the higher the taxes, the lesser the net profit after tax
Access to credit	+	It is expected that accessibility to credit provide MSEs with capacity to exploit opportunities, which can facilitate their growth

### **3.2 Scope of the study**

The study will be confined to small and medium-sized firms in the manufacturing sector in Thika Town of Kiambu County. The locality is considered to be adequate for the purpose of this study

due to limitation of resources and time. The activities in the town will be considered to be typical of all manufacturing SMEs in the country. The locality is chosen because though urban it has got rural influence. The area is also familiar and easy to access since it's near Nairobi.

### **3.3 Data collection technique**

The data for this study will be collected through administering a questionnaire to fifty small and medium-sized firms in the manufacturing sector in Thika Town. The questionnaire is designed in a way that it ensures that captured qualitative information will be coded and entered using SPSS.

### **3.4 Sampling Technique**

A stratified sampling technique will be employed to collect data. The population will be divided into two strata namely, small enterprises and the other medium enterprises. This will produce better inferences about each subgroup that may be lost in a generalized random sample. Each stratum will comprise twenty five enterprises for the study and these will be selected based on number of employees the firm has. Each stratum will be treated as an independent population and random sampling will be employed to collect data in each stratum.

### **3.5 Estimation method**

The regression equation will be estimated using ordinary least squares (OLS) method and SPSS.

## **CHAPTER FOUR**

### **DATA ANALYSIS, INTERPRETATION AND DISCUSSIONS**

#### **4.1 Introduction**

This chapter presents descriptive data analysis, interview responses and tests of hypothesis. The chapter also presents the profiles of the respondents and the organizations which formed the sample of this study. Four objectives guided this study and these were: To identify the factors that influences the size of Kenyan manufacturing firms, to estimate the relationship between firm size and various factors influencing it, to give policy recommendations for a vibrant manufacturing sector.

Percentages, means and standard deviations were computed and presented in frequency tables. The results are presented and interpreted. The descriptive data presented in this chapter have been also used as the basis for testing hypotheses and making inferences.

#### **4.2: Survey Questionnaire Response Rate**

The population of the study comprised of the 50 respondents who were either owners of the businesses or representatives of the key decision makers in the firms. The return rate was 99.9 percent of the 50 firms targeted.

Drop and pick method was used while personal face to face visits boosted the data collection efforts. Personalized letters and follow-up telephone calls to the respondents also improved the response rate.

#### **4.3: Profile of the Respondents**

The questionnaire was administered to business owners and representatives in the targeted business firms based in Thika. A total of 50 respondents from the firms were interviewed.

##### **4.3.1 Education level of the Managers**

The study sought to establish the education levels accomplished by those running the SMEs in the targeted areas. As Kremer (2013) argued, entrepreneurs of formal firms are on average more

trained and more educated than their counterparts in informal firms, and this would determine the ability to lead the growth of the firms. The education levels of those approached are as shown in table 4.1.

**Table 2: Highest level of Education completed by the managers**

<b>Highest level of Education completed</b>		
	<b>Frequency</b>	<b>Percent</b>
Bachelor's Degree	28	56%
Master's Degree	10	20%
PHD Degree	4	8%
Diploma	8	16%
<b>Total</b>	<b>50</b>	<b>100</b>

Table 2 shows the distribution of respondents by level of education. The level of education of the respondents ranged from Bachelors to PhD degree. Those with Bachelor's degree were 56 percent, Master's Degree were 20 percent, PhD degree had contribution of 8 percent and 16 had attained form four certificate. Thus the majority of the respondents had a Bachelor's degree. The 56 percent who had a first degree and the 20 percent for Masters Level of education shows that the firms have well-educated owners undertaking the basic administration of their businesses. This is in line with Harris (1969) in his argument that lack of education is a major constraint to the success of the enterprises.

#### **4.3.2 Experience of the managers in running the business**

The determinants of the firm size as widely discussed in the literature brings about the issue of experience in expediting management function of the SMEs. The hot debates concerning the issue was argued by Muravyev (2008), who stated that if management is experienced, there are no arbitrage opportunities and frictions of any type in running a business firm. This study sought to establish the experience of those under the management of the target firms by asking the number of years they have been in the management level of such firms. The results were as recorded in table 3.

**Table 3: Years the firm has been in business**

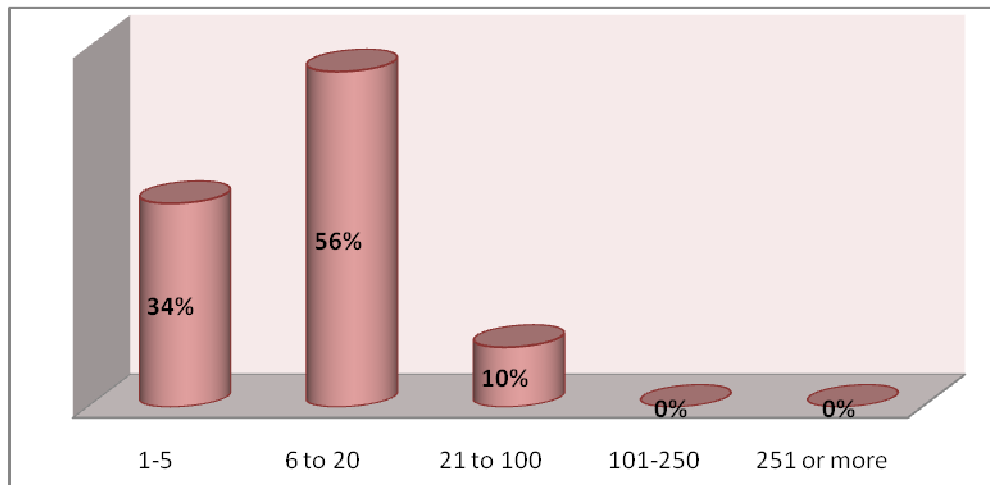
	<b>Frequency</b>	<b>Percent</b>
7- 15 years	30	60%
More than 15 years	10	20%
3 -7 years	5	10%
Less than 3 years	3	6%
less than 1 year	2	4%
<b>Total</b>	<b>50</b>	<b>100%</b>

According to the study and as shown in the table 3, a majority of the respondents (60%) of the respondents cited having their businesses in operation for a period ranging between 7- 15 years and 20% of the respondents have had their businesses in operation for a period exceeding 15 years. A minority (2%) have had their businesses in operation for less than one year. This has the implication that majority of the businesses have been in operation for a period depicting enhanced stability of performance and profitability. This is in support of Kimuyu (2002) who concluded in his study that experience of operation for SMEs enhances overall business performance.

#### **4.3.3 Number of employees.**

We have already referred that the size of workforce is a major indicator of the size and capacity of a firm. A firm has to make a decision on the size of workforce required. This is determined by productivity and need for increased productivity. The increase in workforce also has costs and benefits related to levels of production and economies of scale. This study sought to establish the number of employees each SME was able to sustain. The results are as shown in the figure 4.1.

**Figure 1: Number of employees**



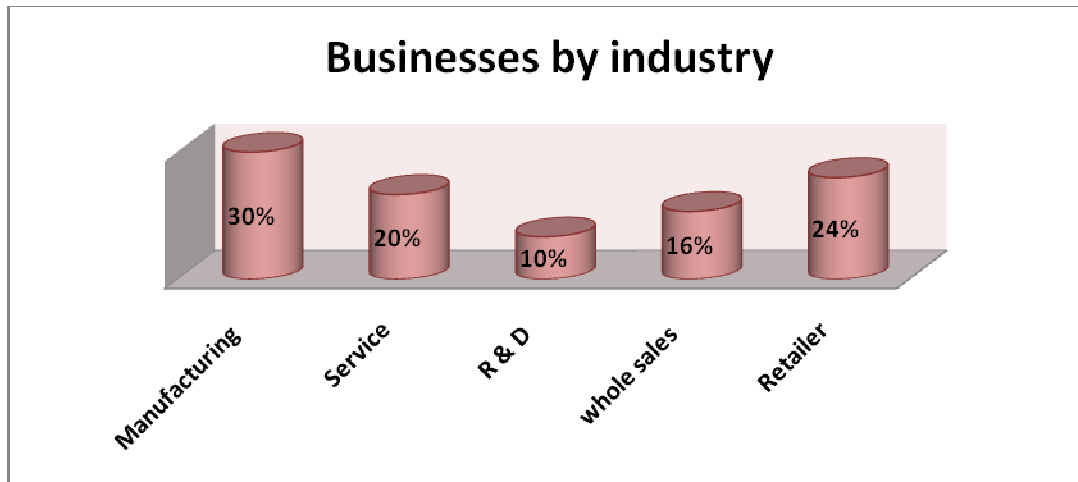
The study sought to establish the number of employees in each firm, a majority 56% had between 6 to 20 employees while 34% had between 1-5 employees. This has an implication that most of the firms require low labour input as is high labour inputs increase fixed costs.

#### **4.3.4 Target market**

It has been hypothesized by several researchers that engaging in the right industry enhances growth. Right industry is indicated by available size of market share the firm can command and availability of avenues for expansion. This study sought to understand the various industries that the SMEs that participated were operating in. this was to establish the relationship between the industry and the ability to grow. This is shown in the figure 4.2.

**Figure 2: Target market**



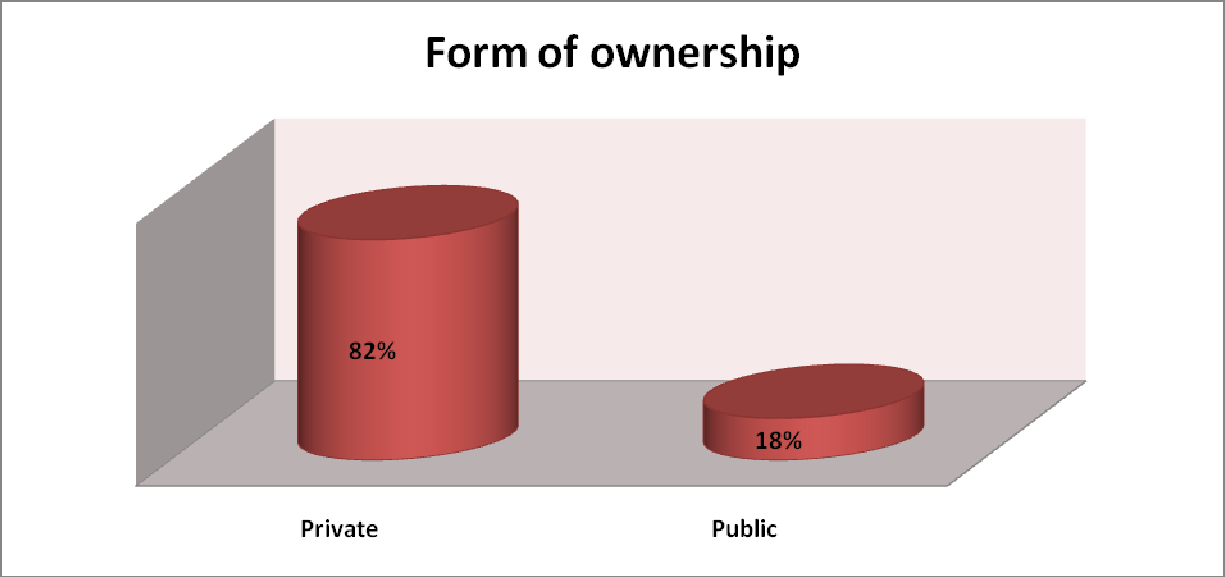


The market targets for most firms vary. They range from manufacturing as reported by 30% of the respondents, service firms as reported by 20%, R & D as reported by 10% of the firms, whole sales 16% and 24% for those who are engaged in retail industry. This displays the diverse nature of the business environment in Thika town.

#### **4.3.5 Capital Structure**

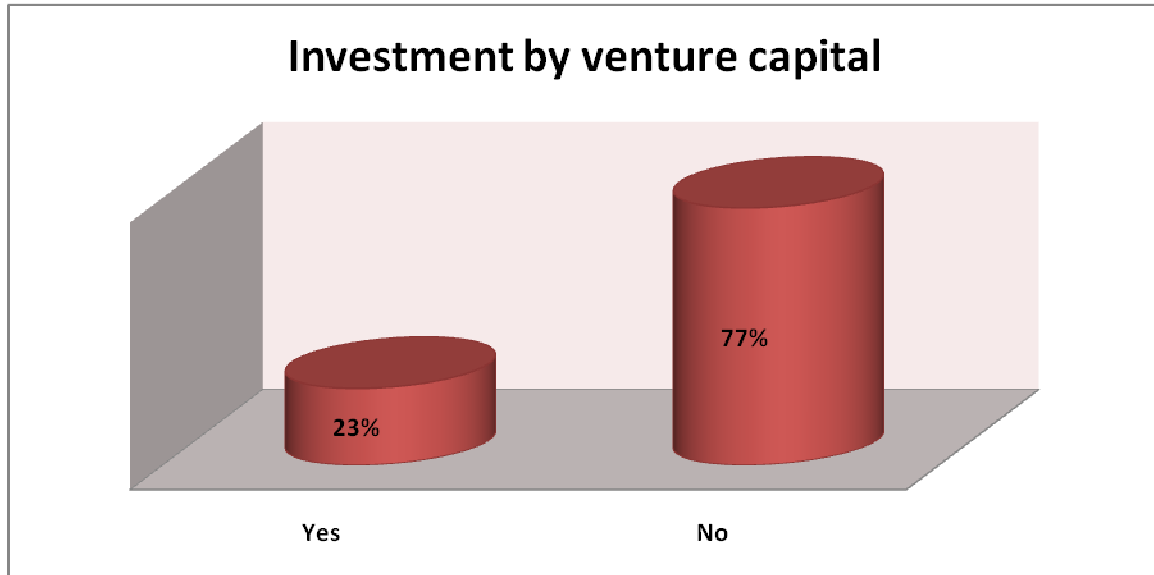
The corporate capital structure of a firm determines the possibility of a firm of accessing various sources of finance for the venture. Lack of foundations for valuation of SMEs affects the ability of the firms to expand due to regulation frameworks that are required for accessing external finance. The optimal debt-to-equity ratio is determined by the trade-off between costs and benefits of borrowings, with the firm's assets and investment plan. This study sought to establish the ownership structure of the firms participating in the study. This was between public and private options. The results are recorded in the figure 4.3.

**Figure 3: Form of Ownership**



Majority of the firms (82%) are privately owned while a minority (18%) is public entities. This shows that for most of the firms the locus of control lies with the owners of the firms for major decision making.

**Figure 4: Investment by venture capital**



Venture capital investment being one of the highly valued ways for enhancing business growth, for the firms covered in this study, it is not a common phenomenon as shown by only 23% of those who reported having their businesses being open to external investors.

**Table 4: Correlation Results for the Relationship between Number of employees and independent variables under study**

Variables	Pearson correlation coefficient
Relationship between number of employees (Gn) and other variables studied.	.760

P<0.01

Pearson's' Product moment correlation statistical technique was used to test the significance of the relationship between number of employees and other variables under study. The Pearson's' Product Moment Correlation co-efficient for number of employees showed a strong positive relationship with the other variables studied (r = .760, P< 0.01).

Simple regression analysis was also used to measure this relationship as shown in table 4. The correlation analysis was used in testing if a relationship exist while regression analysis was used for establishing the nature of the relationship.

**Table 5: Results of the Regression Analysis for the Relationship between number of Employees and firm performance**

Model	Unstandardized Coefficients		Standardized Coefficients		F	R	R - square	P-value
	B	Std Error	Beta	T				
(Constant)	2.300	0.830		2.333				.021
Number of employees	0.392	1.570	0.972	0.106	2.757	0.432	.392	.02

**Dependent Variable: Performance index**

The regression results presented in Table 5 show that number of employees 39.2 percent of variation in performance of the firms ( $R^2 = 0.392$ ,  $F= 2.757$ ,  $T= 0.106$ ,  $P< 0.05$ ). The value of F and P show that the regression performance is statistically significant. As a result conclusion can be made that number of employees influences performance of a firm and hence the size of the firm.

**Table 6: Descriptive statistics for the model variables**

Variable	Obs	Mean	Std. Dev.
IR	50	1.1089	1.8362
AGEe	50	0.0873	0.2824
EDU	50	0.3049	0.2484
ICAP	50	-0.0016	0.1122
TAX	50	0.1475	0.2799
AVI	50	12.5540	19.9696
AGEb	50	51.2669	9.0865

REX	50	19.0284	10.0889
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Table 6 shows the indicators such as interest rates (IR), Initial startup capital (ICAP), and effective tax rate (TAX). Obviously, the firms are on average fairly distributed growth as indicated by the ICAP mean in the sample of -0.0016. On average the manufacturing firms are growing as shown by their increase in number of employees as shown by the mean of 8.8795 and a Std deviation of 1.6414. Much of the income is however consumed in paying taxes which means the tax regime in Kenya high is hampering SMEs growth. This is shown by a high mean of Tax paid of 0.1475 compared to the low std. deviation of 0.2799. CEOs are on average 51 years old (AGEb) and have 19 years of working experience (REX). This kind of experience is good in lowering the level of risks realized out of poor and uniformed decision making.

**Table 7: Mean and standard deviations for Individual dimension determinants.**

		Mean	Std. deviation
Need for achievement	- Even if I have achieved something, I want to become better	0.9322	0.71594
	- I like to compare myself with others	6.4746	7.50207
	- I do everything in order to reach my goal	3.0339	2.08224
Risk taking propensity	- I love gambling	5.1186	1.01853
	- I dare to take action, even though it will be risky	2.1356	1.45762
	- I am ready to take risk	1.2542	0.99296
	Result of my business is strongly dependent on my own effort	3.0678	2.59839
External locus of control	I often have feeling that I cannot influence the thing happen to me	1.1017	4.47242
Sociability	After working time I often meet professionally relevant persons (customer, clients etc)	3.1186	4.52563
Fatalistic	Often making a decision is easy	8.8983	7.16765
Experience	I have enough experience working in the industry am engaged in.	10.5254	11.62853
	I have worked in the business for several years	8.4915	7.969
	I had entrepreneurial experience before I started this business	6.4234	5.066

The individual determinants to firm size were measured using 13 items rated on a yes, no basis. Interpretation is made based on the range of deviation of the standard deviation from the mean. A widely deviating standard deviation from the mean shows no association from the item rated. The first item asked respondents to rate if they have remained determined to always achieve higher. The mean for this item is 0.9322 with a standard deviation of 0.71594. This indicates that most of the firms' owners are in continuous urge to achieve higher goals set for the firms. Respondents were also asked to rate perception on whether they like to compare themselves with others. A mean score of 6.4746 and a standard deviation of 9.018 was obtained. This implied that most of the respondents believed that they don't compare themselves to others to rate their achievement. This was indicated by a wider deviation of the std. deviation from the mean.

On Risk taking propensity, the study measured the gambling tendency of the business owners. The rating indicates that the mean score is 5.1186 and the standard deviation is 1.01853. This suggests that most of the respondents feel that they are reluctant to take uncalculated risks like one associated with gambling. Secondly the respondents were asked to respond on their readiness to take risks. A mean of 2.1356 and a std. deviation of 1.45762 were realized. This had an indication that the business owners are ready to make ventures where risks are quite high while looking at the profitability of the ventures. Personal effort towards achievement of the firm was also rated. The mean score was 3.0678 and std. deviation was 2.59839. This implies that most organizations are doing quite well but all that owes to personal efforts of the business owners.

Respondents were also asked to rate if their perception on external locus of control by responding on whether they felt that they cannot influence a thing to happen. A mean score of 1.1017 and a std. deviation of 4.47242 was obtained. This shows that most of the respondents have a feeling that they can influence the direction that their businesses take in decision making. Sociability was also assessed by asking the respondents whether after working time they often meet professionally relevant persons (customer, clients etc). On this item a mean score of 3.1186 and a std. deviation of 4.52563 were attained indicating that most of the business owners are social and outgoing.

On experience, the respondents were asked to respond on whether; they have enough experience working in the industry am engaged in, have worked in the business for several years, and if they had entrepreneurial experience before starting the business. The mean scores of 10.5254, 8.4915

and 6.4234 and std. deviations of 11.62853, 7.969 and 5.066 respectively were obtained. This had the implication that most of the business owners cited having experience in the industry they invested in.

### **Organizational determinants of firm size**

Table 8 presents the organizational determinants of firm size. The means and standard deviations for each item are presented and discussed below. The table below illustrates the regression models which distinguish between the manufacturing sector, the Wholesale/retail sector and the services sector in terms of growth prospects.

**Table 8: Organizational determinants of firm size**

<b>Performance indicators</b>	<b>Mean</b>	<b>Std. Deviation</b>
The organization has been making profits (financial performance)	2.9322	.71594
The organization has a substantial market share in the industry	6.4746	7.50207
Revenue has grown substantially in our organization in the last 2years	3.0339	1.08224
The firm has enough employees	3.1186	1.01853
The organization's products/services are superior in quality compared with our competitors	7.1356	21.45762
The client numbers have increased in the last two years	2.2542	.99296
Overall performance of our organization over the last two years compared to our competitors has been very good	4.0678	2.59839
Employees are allowed to make decision themselves	9.1017	10.47242
Most decisions have to be made by managers	9.1186	24.52563
Working procedure is written down	8.8983	27.16765
Every employee does some specific tasks	10.5254	24.62853
Increased the firm's efficiency in undertaking its operations	8.4915	6.969

High customer care and satisfaction	9.4234	5.066
The organization has a substantial market share in the industry	6.3012	9.018

The firm determinants were measured using the above items. The first three items sought to establish financial performance of the firm. The first item asked respondents to rate if the firm made profit. The mean for this item is 2.9322 with a standard deviation of .71594. This indicates that most of the firms may be making medium profit and some small. Respondents were also asked to rate perception on whether their organization had substantial market share. A mean score of 6.3012 and a standard deviation of 9.018 was obtained. This implied that most of the respondents believed that they have a good size of market share in the industry.

On whether annual turnover has increased substantially in the organization, the rating indicates that the mean score is 2.0339 and the standard deviation is 0.08224. This suggests that most of the respondents feel that their sales growth is high. Revenue growth had a mean score of 3.0339 and the standard deviation was 1.08224. This implies that most organizations are doing quite well in growing the revenue from their businesses.

Respondents were also asked to rate if the firm has enough employees. The mean score obtained was 3.1186 and a standard deviation of 1.01853 was obtained. This means that majority of the respondents believe that they have enough employees. On whether the client numbers have increased in the last two years, the rating indicated that the mean score was 2.2542 and the standard deviation was .99296. This implies that majority of the organizations retain good number of clients/customers as well as experience positive acquisition of new clients.

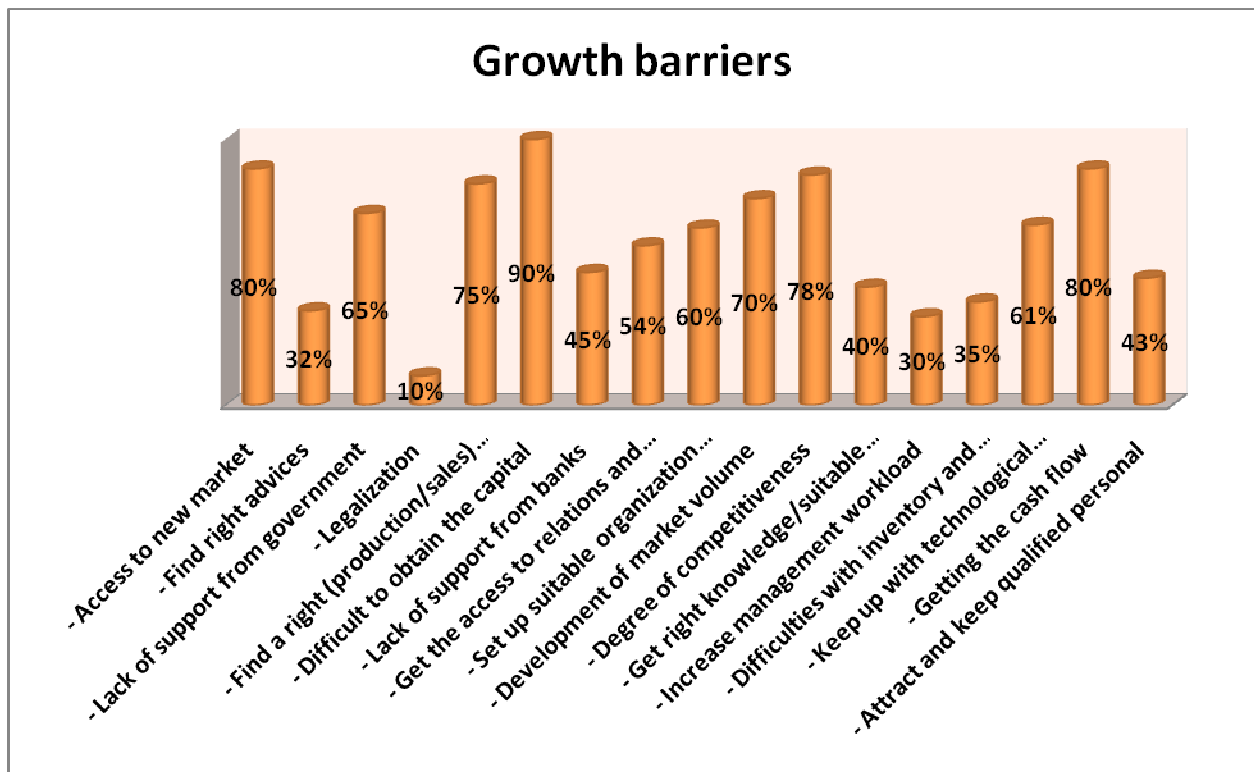
On whether Overall performance of our organization over the last two years compared to our competitors has been very good, the rating indicated that the mean score was 4.0678 and the standard deviation was 2.59839. This suggests that most of the respondents also believed that their performance was moderately high compared to previous years. The respondents were further requested to rate Employees are allowed to make decision themselves and whether there has been Increased firm's efficiency in undertaking its operations. For whether Employees are allowed to make decision themselves, the mean score obtained was 9.1017 and a standard deviation of 10.47242. Most of the respondents thus agreed that Employees are allowed to make decision themselves. On whether there is increased firm efficiency, the mean for this item was



8.4915 and the standard deviation was 6.969. This implied that most of the respondents believed that firms had a characteristic of high efficiency in its operations.

### Environmental dimension

Figure 5: Growth barriers

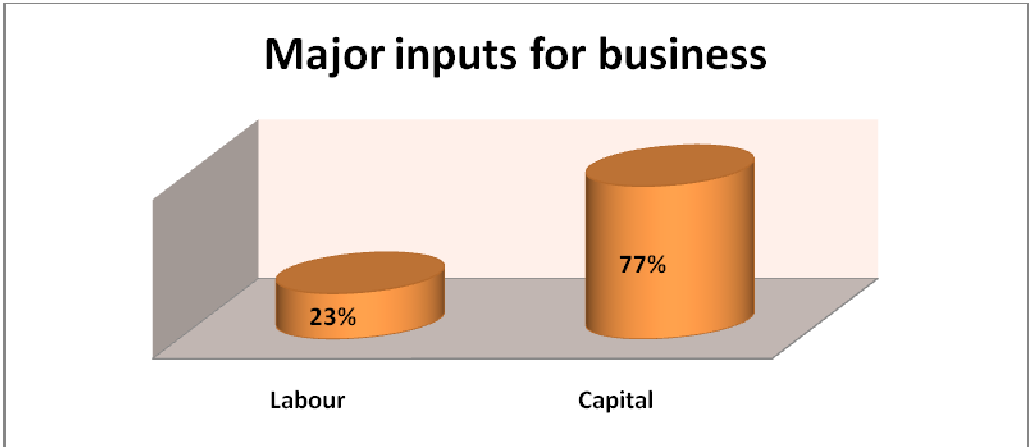


The figure 5 outlines the environmental factors that have acted as barriers to growth of the firms. The highly rated barriers to firm growth included; Access to new market with a rating reported by 80% of the respondents, difficulty in obtaining capital as reported by 90% of the respondents, finding the right location was also regarded highly as a growth barrier by 75% of the respondents. Getting cash flow was also reported by 80% of those interviewed.

### Availability of inputs

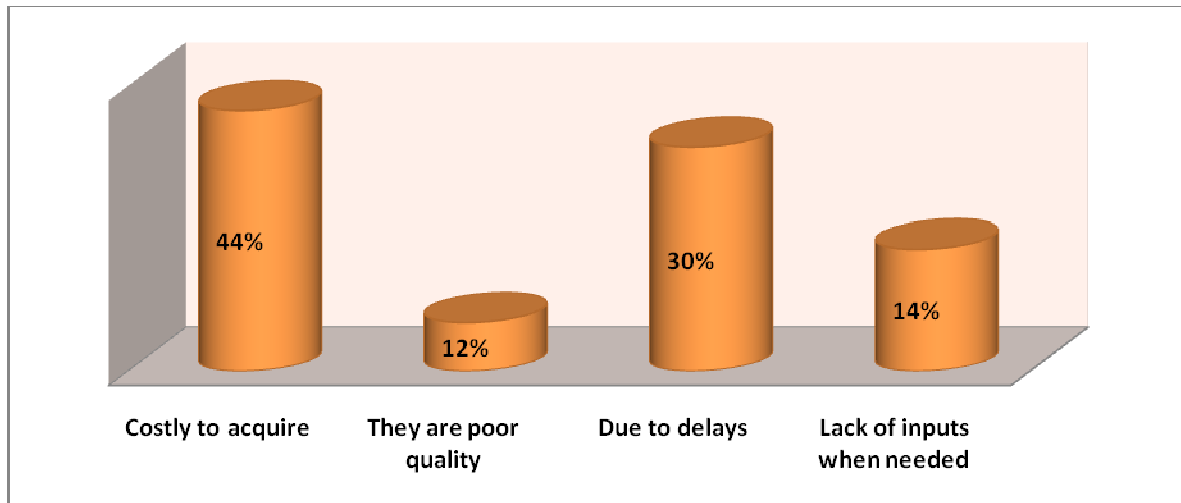
This includes identifying and creating strategies for seeking and using sources. The efficient flow of materials, supplies, and services at the right time and place streamlines the process and can significantly reduce cost.

**Figure 6: Major inputs**



Major input for majority of the respondents (77%) reported having capital as the main input for their businesses. However, as shown in figure 7 the ease of acquisition of the inputs has not been easy as the respondents cited high cost of acquisition (64%), delays in acquisition (55%), lack of inputs when needed (30%) and lack of desired quality (12%) as cited by those interviewed.

**Figure 7: Ease of acquisition of inputs**



The study established that majority of the firms in Thika face a challenge of acquiring inputs as reported by 44% of the respondents who said that it was costly to acquire inputs. Another 30% reported that it was not easy due to delays in acquisition. Those who said there was lack of inputs when needed were 14% while 12% said the problem was due to poor quality of inputs available.

**Table 9: Challenges faced by the manufacturing firms**

	<b>Frequency</b>	<b>Percent</b>
loss of work and less returns	1	1.7
upsetting the old practices with the new products	3	5.1
new technology requiring employees to be further trained hence high cost	14	23.7
more work, more expenses	7	11.9
economic effects	5	8.5
resistance to changes	6	10.2
getting qualified employees	5	8.5
competition from other firms	3	5.1
A lot of time needed in understanding new methods	5	8.5
<b>Total</b>	<b>50</b>	<b>100.0</b>

The study sought to establish if there were challenges involved in business growth. Some of the challenges highlighted were; loss of work and less returns, upsetting the old practices with the new products, new technology requiring employees to be further trained hence high cost more work, more expenses, economic effects resistance to changes, getting qualified employees, competition from other firms and a lot of time needed in understanding new methods. The percentages for mention of these challenges were 1.7%, 5.1%, 23.7%, 11.9%, 8.5%, 10.2%, 8.5%, 5.1% and 8.5% respectively.

## CHAPTER FIVE

### SUMMARY OF FINDINGS, RECOMMENDATIONS AND CONCLUSION

#### 5.1 Conclusion

Findings from the study are that the single most important reason for growth stated by respondents is that management or the leadership actually targeted growth as was indicated by the individual determinant items. Further important determinants were that internal to the organizations the market orientation, and successful introduction of new products or services.

This study concludes that some of the determinants to firm size and firm growth are; factors specific to individuals running the businesses, factors internal to the organization such as market orientation, financial performance and access to credit. Prevailing conditions in the environment also determine firm size. These are factors like; Competitive intensity, Market Dynamism and growth barriers. Company growth is apparently mainly the consequence of entrepreneurs taking active advantage of business opportunities. The most important reasons for non-growth provided by respondents included;

- Access to new market
- Find right advices
- Lack of support from government
- Legalization
- Find a right (production/sales) location
- Difficult to obtain the capital
- Lack of support from banks
- Get the access to relations and relevant networks
- Set up suitable organization structure
- Development of market volume
- Degree of competitiveness
- Get right knowledge/suitable technology

- Increase management workload
- Difficulties with inventory and suppliers
- Keep up with technological development
- Getting the cash flow
- Attract and keep qualified personal

## **5.2 Policy Recommendations**

**Entrepreneurship:** Certified coaching may help grow businesses and cross the bridge between pilot markets and mass markets. There are specific coaching programmes for entrepreneurs aspiring for high growth and high-growth programmes offering coaching. However, many businesses do not take advantage of coaching opportunities, and there is, as of yet, no appropriate infrastructure to encourage the replication of coaching networks throughout the country.

**Access to finance:** Improving access to venture capital (VC) may be a priority policy objective when supporting high-growth for businesses. Existing structures of public support for VC in Kenya may be revised in the years to come, aiming at establishing a Kenyan venture capital market.

**Internationalization:** Companies seeking to grow quickly need large international markets. However, the benefit of participating in platforms such as international networks may not be tangible enough for SMEs.

**Industry focus:** Business ecosystems are important for businesses growth and often cut across several industries. Targeting specific industries may thus neglect important links to other industries. Furthermore, empirical evidence suggests that high growth companies can be found in any industry.

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## Appendices

### Appendix I: Questionnaire

#### QUESTIONNAIRE

##### INTRODUCTION

I am a postgraduate Student at the University of Nairobi carrying out a research on the determinants of firm size in Kenyan Manufacturing firms, a case study of Thika Town of Kiambu County.

My main concern is to find out the institutional factor that affect the performance or success of these enterprises and provide policy recommendations to this concern. I am therefore requesting you to provide me with answers to the questions I intend to ask you on this subject to the best of your ability and knowledge. I wish to assure you that all information you give is purely for academic purposes and it will be treated with strict confidentiality.

Questionnaire No \_\_\_\_\_

##### A. GENERAL INFORMATION

A1	Date and time of the interview	
A2	Name of Enumerator	
A3	Place of interview	
A4	Firm Name	

##### B. Company Profile

Please estimate the number of employees in the firm.

1-5  6-20  21-100  101-250  251 or more

What is the type of your firm?

Manufacture  Service  R & D  whole sales  Retailer

3. How many years has your firm been in business?

Less than 3 year's  3 -7 years  7- 15 years  More than 15 years

4. Your job position in the firm:

Owner manager  Manager  Supervisor  Employee

5. Is the company private or publicly held?

Private Public

6. Has your company been invested by venture capital companies?

Yes No

### C. INDIVIDUAL DIMENSION DETERMINANTS

C1	Need for achievement	- Even if I have achieved something, I want to become better	Yes	No
		- I like to compare myself with others		
		- I do everything in order to reach my goal		
C2	Risk taking propensity ( to analyse risk appetite)	- I love gambling		
		- I dare to take action, even though it will be risky		
		- I am ready to take risk		
C3	Internal locus of control (managers leadership skills)	Result of my business is strongly dependent on my own effort		
	External locus of control	I often have feeling that I cannot influence the thing happen to me		
	Sociability	After working time I often meet professionally relevant persons (customer, advicer, etc)		
	Fatalistic	Often making a decision can even be done by tossing with a coin.		
C3	Experience	- How many years of working experience do you have in the industry in which your current business is engaged?		
		How many years did you work in this business?		
		How many years' working experience do you have?		
		Do you have entrepreneurial experience before you come to work in this business?		

**ORGANIZATIONAL DETERMINANTS OF FIRM SIZE**

<b>C1</b>	Firm age	- In which year did you start your business?		
	Work force	- How many full time employees in your business in 2012? (Categorical variable)		
	Centralization	- Most decisions have to be made by managers		
	Decentralization	- Employees are allowed to make decision themselves		
	Standardization	- The intended result of the work is specified in advance		
	Formalization	- Working procedure is written down		
	Specialisation (tasks)	- Every employee does some specific tasks		
	Specialisation (skills)	- Employees have function which only they can fulfill		
	Departmentalization	- How many management levels within your business?		
	<b>Market orientation</b>	- Do you measure customer satisfaction structurally and periodically?		
		- Helping and satisfying customers is the most important for us.		
		- We often discuss about how competitors do		
		- Management team often discuss the strong point of competitors		
		- We often share information about client wishes internally.		
		- All our internal procedures and rules are focused on fulfilling the needs in the market.		
		- We are always busy with customer needs that will emerge after some years.		
		- We focus on acquiring new customers with new needs.		
	<b>Financial performance</b>	- How would you describe the profitability of your company on average in the last five years?		
		How did the turnover develop in the last		

		five years		
		- How do you judge your financial performance compare to the important competitor in your sector?		
	<b>Extra Finance</b>	- Do you think that you need extra finance in the coming 2yrs		
	<b>Financial bottleneck</b>	- Do you experience bottlenecks in the financing of your business?		
<b>ENVIRONMENTAL DIMENSION</b>				
	<b>Competitive intensity</b>	- Our market share is threatened by intensive competition - Our market is characterized by strong competition.		
	<b>Market Dynamism</b>	- Customers constantly look for new product/service - Products and services become old very fast in our market		
	<b>Growth barriers</b>	- Access to new market - Find right advices - Lack of support from government - Legalization - Find a right (production/sales) location - Difficult to obtain the capital - Lack of support from banks - Get the access to relations and relevant networks - Set up suitable organization structure - Development of market volume - Degree of competitiveness - Get right knowledge/suitable technology - Increase management workload - Difficulties with inventory and suppliers - Keep up with technological development - Getting the cash flow - Attract and keep qualified personal		

#### D. AVAILABILITY OF INPUTS

D1	What major inputs do you use in your business?	1= Labour 2= Capital	
D2	Are they easily acquired?	1=Yes 2= No	
D3	If no why?	1 =Costly to acquire 2 =They are poor quality 3 =Due to delays 4= Lack of inputs when needed 5=Others	

#### E. LABOUR, CAPITAL AND TAXES

E1	Apart from yourself do you have any other employees?	1=Yes 2= No	
E2	If Yes how many are they?		
E3	Are there any problems you encounter in getting laborers?	1=Yes 2= No	
E4	If yes which problem?	1=Lack of laborers 2= Lack of money to pay wages 3= Others	
E5	What was the initial level of capital you stated the business with? Kshs		
E6	How much do you remit to the government in Taxes in a year?		
E7	What is your major source of credit?	1= Formal 2= Informal	
E8	If from formal sources, how often?		
E9	What are the average amounts you obtain of these formal sources?		
E10	What are your average amounts from informal sources?What are your average amounts from informal sources		

### **CONCLUDING REMARKS**

1. What are the main challenges faced by firms such as yours?
2. How do rate the business environment in which you are operating in?
3. What are your suggestions to increase productivity in firms such as yours?

**THANK YOU VERY MUCH FOR YOUR INFORMATION**

## Appendix II: List of Companies

### Participating firms

Kenya Vehicle Manufacturers Ltd
Intel Fire Group Of Companies
Saana Shoes Ltd
Thika Cloth Mills Ltd
Imara Enterprises Ltd
Ruiru Hardware Store Ltd
Waridi Garments
Alliance One Tobacco (Kenya) Ltd
Alpha Knits Ltd
British American Tobacco (K) Ltd
Manufacturing & Industry / Industrial services
Centrofood Industries Ltd
Dawaline Pharmaceuticals (K) Ltd
Manufacturing & Industry / Industrial services
Kenya Tanning Extract Co Ltd
Ready Timber Merchants
Salama Clothing Manufacturers
United Textile Industry (K) Ltd,The
Mama Millers Limited
Edkan Enterprises
Blue Post Hotel
Central Computers
Kenblest Limited
Flame Tree Security Ltd
Solka Marketing co. ltd
Ideal Properties Developers Ltd



Pathcare Kenya Ltd
Kenya Clay Products Ltd
Booth Extrusions Ltd
Twistiez Errands Ltd
Castle brewing Kenya
Centrofood industries
Century oil trading
City General Stores Limited
Capwell industries
Carnaud metal box
Castle brewing kenya
Centrofoodindustries
Kenblest
Leather industries of kenya
Limatec
Meneel millers
Mediselkenya
Prospectus
Thika motor dealers
Tristar bottlers
Colour International Ltd
Oswal Bakery Ltd
Pinnacle Valuers Ltd