

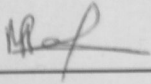
**CAPACITY UTILISATION IN MICRO AND SMALL ENTERPRISES (MSEs) :
THE CASE STUDY OF SMALL GARMENT ENTERPRISES IN THE
NAIROBI CITY COUNCIL MARKETS.**

**BY
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**A Management Research Project Submitted to the Department of Management
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Business and Administration, Faculty of Commerce,
University of Nairobi.**

2000

This research project is my original work and has not been presented for a degree in any other university.

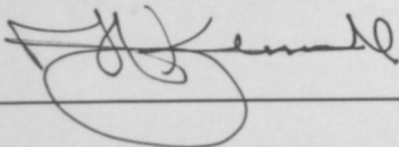


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This research project has been submitted for examination with my approval as the university supervisor.



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Dedicated to my daughter Fátima Apel Anyago

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ABSTRACT

This study concerns micro and small enterprises (MSEs), capacity utilisation decisions and the factors that influence these decisions. MSEs play a special role in the developing countries where they form the largest economic sector by number of employees. This sector is dogged by many constraints such as capital constraints, market and information failures, inappropriate laws caused by inappropriate regulation. Due to these prevalent constraints, a gap has been created between the MSEs and large scale sector. It is believed that it is this "missing middle" that can best drive the engine for rapid industrial and economic development which the country so badly needs. It is in light of this that this study will attempt to look closer into the problems faced by MSEs and a possible solution.

Capacity management is an operations strategy which has been considered as a means of assisting MSEs manage their capacity and do things better, thus improving their efficiency. By optimally utilising the existing capacity MSEs stand a chance to improve their efficiency and actually grow without necessarily investing a huge sum of money. Understanding the capacity utilisation decisions they make and the factors that impel them to make such decisions is therefore very crucial.

CHAPTER 1

INTRODUCTION

1.1. Definitions and concepts

Informal Sector can have different meanings. It can be in terms of degree of legality, the extent to which an enterprise is registered, pays taxes and obeys the regulations. The informal sector has the following main features; ease of entry, small scale of activity, self-employment, with a high proportion of family workers and apprentices, little capital and equipment, labour-intensive technologies, low skills, low level of organization with no access to organized markets, to formal credit, to education and training or services and amenities, cheap provision of goods and services, or provision of goods and services otherwise unavailable, low productivity and low incomes.

The National Baseline Survey of 1999, has divided the definition of MSE into three criteria, the first criterion defines MSE in terms of employment¹.

- The first criterion defines micro enterprises as those employing up to 10 workers (including the working owner) and small enterprises as those employing more than 10 up to 50 workers. If the size range 1-10 is considered micro in nature, then nationally more than 99% of the MSEs in Kenya are of the micro group, in fact 97% of these enterprises are in the size range of 1-5 workers. (CBS, et al. 1999). The study will therefore use the size range of 4-49 as definition for small enterprises.
- The second criterion is based on enterprises that are essentially non-primary businesses i.e. non-farm business activities excluding agricultural production, animal husbandry, fishing, hunting, gathering, and forestry.

¹Much interest in MSE is derived from its relevance to employment.

- The third criterion is non-farm-based business activities that involve some form of processing before marketing.

The term medium-sized enterprises used here refers to enterprises which are distinctively intermediate between the micro enterprises and the large enterprises. In terms of employees, they have 50-100 employees while the large enterprises have over 100 employees.

The term garment refers to all sorts or manner of clothing for men, women and children that is not a footwear.

The growth of an MSE can be measured in terms of increases in any one or more of the following variables: turnover, incomes, profits, the number of employees, capital investment and an increase in the overall worth of the enterprise. Growth in this study will be measured in terms of resources: equipment, floor space, employees. This is because in most cases entrepreneurs are not willing to give information about their financial status and some even do not say the truth. So such data is normally incomplete or distorted.

Employment refers to the total number of people working in an enterprise irrespective of whether family or non-family, receive salary/wages or not.

Capacity management refers to the rate of output that can be achieved from a process. It is concerned with matching the size of an operational facility to the demand that are placed upon it.

Capacity is a wide concept that should not be narrowly defined. Hayes and Wheelwright (1984) has listed at least eight important aspects of capacity that should be considered.

1. *Capacity depends on the interaction of various resource constraints, such as equipment, labour availability, storage space etc.*

2. *Capacity is mix dependent*, so capacity should be expressed in terms of aggregate measures such as sales dollar or “equivalent units”.
3. *Capacity is technologically based*, an estimate of capacity implies some assumption about the technology used.
4. *Capacity is dynamic*, in that as a manufacturing facility gains experience in producing something, and discovers and removes successive bottlenecks, its total capacity tends to expand with time, even without major new investments.
5. *Capacity is location specific*
6. *Capacity may not be sustainable* because normally when stated as so many units could have many meanings. For example it could mean the average output per month or the maximum achievable output for the period, or the best performance actually achieved in the past.
7. *Capacity depends on management policies*.
8. *Capacity is storable*, for instance maintaining excess equipment (to allow regular maintenance) or excess labour (to fill in for missing employees) is a form of stored capacity.

The terms business, firm, company and enterprise are used interchangeably to refer to an economic unit producing goods or providing services. (CBS et al. 1999).

Industrialisation is both the process of building up a country's capacity to convert raw materials into new products for consumption or further production, and the system that enables production to take place. The process of industrialisation implies increasing efficiency in the use of both labour and capital. It requires the mastery of existing and new technologies (McCormick, 1998).

1.2. Background to the Research Problem

Many developing countries are characterised by a large MSE sector as compared to the other sectors; Kenya is no exception. Kenya is often noted as the country where the study of MSEs was

first born under the rubric of informal sector some 27 years ago (ILO, 1972). The 1999 National MSE Baseline Survey found that there are about 1.3 million MSEs country-wide, employing some 2.3 million people (CBS et al. 1999) and this figure is expected to expand as the sector is expanding. This trend reflects structural changes in the labour market, where surplus labour force is shifting from formal to the informal sector (Kenya, Republic of, 2000). This is a clear indication that the MSE sector provides employment² for substantially more people than the formal sector. The formal sector employs some 1.7 million people (provisional figure for 1999), (Kenya, Republic of, 2000).

The MSE sector in Kenya is characterised by overcrowded production and concentrated markets, in which the majority of MSEs in a given sub-sector compete to produce and sell very similar products within limited spatial spaces (Abuodha, 1990). This results in a low level of sales and profit margins which indicates negative growth rates (Fisher, 1998).

Levels of sales and profit margins cannot be changed without a clear understanding of how the MSEs manage their capacity or even the factors that influence their capacity usage or non-usage. Perhaps the most prompting question is: "Why do they have an overcrowded production?" Overcrowded production could mean that supply surpasses demand, which could reflect a decision by these enterprises to stay ahead of demand by overproduction. It could be that these MSEs do not try to match demand with their operational facilities (they try not to run short by carrying excess capacity) and this is clear from the fact that they are able to produce more than the demand can absorb. This is an indication of capacity strategy- consciously intended or not

²Here employment simply means people working and not necessarily for salary or wage payment (CBS et al., 1999).

(passive strategy)³. One of the factors that is clearly operational in Kenya which could have influenced these decisions is the external environment. This decision to stay ahead of demand can be attributed to retrenchment and the general slowdown of the economy. Due to the current retrenchment exercise, more and more people are forced into the MSE sector without been ready for it and they end up being entrepreneurs in businesses because of the “me too” syndrome (choosing businesses in areas where they have seen their friends, peers or relatives excelling, and they think they too can make it) and therefore end up producing very similar products or services. This results in many players in a stagnant market, if not shrinking marketing because of the low purchasing power of customers due to the poor state of the economy. Because of the low purchasing power of the customers, the MSEs sometimes find it very hard to sell anything and therefore always find themselves ahead of demand.

The focus of this study is on capacity management practices in MSEs. The aim is to establish the capacity utilisation decisions of MSEs and the factors that influence these decisions. Capacity management, based on optimal capacity utilisation, serves the interests of an enterprise by encouraging initiatives that maximize benefits from capacity resources. For example, if an enterprise focuses its efforts on better management of its capacity, it can increase its available or existing capacity, through improved quality of its products and lower costs without a high capital investment. Product costing, based on optimal capacity utilisation, provides realistic yet competitive costs which in a highly competitive environment like in Kenya, is a competitive advantage. Therefore, capacity management in MSEs can be justified from an efficiency perspective. Idle capacity and non-productive capacity creates costs that distort product costs and

³The term passive strategy refers to a strategy or action that happen by chance rather than an actively pursued strategy.

lead to inefficiency of the enterprise. The end result is that an enterprise incurs costs which it is not able to account for. Proper cost management can create efficiency in enterprises. Proper cost management is possible through optimal capacity utilisation. Elimination of the idle capacity and non-productive capacity (or finding something useful to do with them) will save money for the enterprise and improve its efficiency. Capacity utilisation decisions are thus important and appropriate for managing and costing the enterprise's capacity. This study will focus only on managing capacity and not costing the capacity. Much cannot be achieved without understanding the management practices which are reflected in capacity utilisation decisions and also the factors that influence these decisions. These are the central concerns of this study.

This study recognises the important role medium sized enterprises play in the development of the economy of Kenya. MSEs are also very important because they are the seed bed for industrialisation but only medium sized enterprises can best drive the engine for rapid industrialisation. Unfortunately, the medium enterprise sector is underdeveloped in Kenya due to low graduation of MSEs into medium sized enterprises. It is for this reason that the study focuses on MSE sector (rather than medium enterprises sector), on practices that can improve its efficiency and promote their growth. Much has been written about MSEs particularly from the financial, business development and regulations perspective. Little has been documented on their capacity management practices that affect their efficiency and therefore growth.

1.3. Statement of the problem

Though several studies about MSE sector in Kenya and other countries exist, little effort has gone into studying the capacity utilisation decisions of MSEs. Most of the theoretical and empirical research in the context of business development support or promotion have neither discussed the

issue of managing capacity (which could improve efficiency) nor considered reasons for capacity decisions. This neglect exists despite the fact that capacity is a very important component of any business. In a highly competitive environment, concepts such as optimal capacity utilisation must be used to fine-tune performance in the relentless pursuit of competitive advantage (Maguire and Heath, 1997). Issues such as the significance of efficient enterprises (in terms of planning and a managing capacity) in industrialisation has not been adequately addressed. An assessment of the factors that influence the capacity utilisation decisions in MSEs is over due.

Due to the ever changing business environment, the capacity strategy may not be spelt out explicitly but the various decisions taken by the enterprise reflects the existence of such a strategy. For example, an enterprise may stay ahead of demand in adding capacity or lag behind it. Whichever the case, it reflects an important aspect of a capacity strategy; when capacity is to be added or reduced. This researcher is of the opinion that all enterprises, irrespective of their sizes, practise some form of capacity management even though it may not be explicitly spelt out. There is therefore need to investigate the practices of capacity management of MSEs that could hinder their growth. It is also useful to consider the motivation that usually compels enterprises to initiate such practices.

The study will attempt to fill the gaps identified above by examining capacity utilisation decisions and factors influencing these decisions in small garment enterprises in the Nairobi City Council markets. The basic research questions addressed are:

- (a) What is the nature of the capacity utilisation decisions that MSEs make?
- (b) What factors influence capacity utilisation decisions made by MSEs?

1.4. Purpose and Objectives of the study

The purpose of this study is to examine the capacity management practices of MSEs in Nairobi.

The specific objectives arising from the overall purpose are to:

- (a) to investigate and document capacity utilisation practices of MSEs in Nairobi; and
- (b) to investigate and document factors influencing the capacity utilisation decisions.

1.5. Importance of the study

This study will provide knowledge of the MSE capacity utilisation decisions and the factors that influence these decisions in the MSE sector. These are very important decisions which can promote or discourage MSE growth. Carrying inventory as finished goods is very common feature among *jua kali* artisans in Kenya. Excess capacity creates a capacity cushion. So if the artisan has a 10 percent capacity cushion it can be viewed as a 90 percent capacity utilisation. Unused capacity generally is expensive (Hayes and Wheelwright, 1984), why then would these MSEs have a capacity cushion? Besides if credit or capital (which is a capacity resource) is scarce, as has been identified in many studies (CBS, et al.1999), would it not be important to utilise it optimally?. These information is very important and should enable policy makers to formulate constructive and effective policies which are grounded on an understanding of the economic and non-economic factors promoting and discouraging MSE growth (McCormick, 1993).

The MSE sector is very important to the economy of Kenya as it contributes not only to employment but also to the country's GDP substantially. Even if the individual contribution of many MSEs is small, the sheer size of the sector and its overall contribution cannot be ignored (Daniels, 1999). With fiscal pressures constraining the growth of public sector employment and

with large enterprises in turmoil, often in response to the process of market liberalization, many observers see MSEs as a source of economic salvation (Mead, 1999). Though MSEs are seen as a source of economic salvation, they can only provide short-term solutions to problems of unemployment nationally. This is because of their inefficiencies and lack of proper management of their existing capacity. Medium-sized enterprises, on the other hand, are more efficient and can provide long-term solutions. Unfortunately the medium sized enterprises are missing or underdeveloped. But without more medium-sized firms, Kenya will have difficulty meeting its long term goals of employment creation, efficient production and technological development (McCormick, 1993). There is therefore an urgent need to look into and understand the practices of these MSEs that could hinder the growth of these MSE into medium sized enterprises. It therefore follows that this study is important not only to policy makers but also to the economy as a whole. The findings of this paper shall also serve as reference material for other studies in the sector.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

The focus of this study is on capacity management in MSEs. Specifically, the study examines their capacity utilisation decisions and factors influencing these decisions. The literature review will consist of literature on capacity management and capacity utilisation in the formal sector⁴. Similar literature in the MSE sector is limited. Though this is the case, some studies have pointed to problems or issues pointing to capacity in MSEs in Kenya.

In general studies have identified inefficiency as a feature of MSEs. This inefficiency also hinders the growth of this sector. Due to lack of growth of MSEs, a gap has been created between MSEs and the large enterprises. This gap is commonly referred to as the 'missing middle'. It is such medium-sized firms that are better placed in the quest for rapid industrial and economic development (Fisher, 1998). If firms grow because those directing them value expansion and can seize opportunities and overcome obstacles to creating a large enterprise (McCormick, 1993), then there is unquestionable justification for the need to study more about the sector's practices that could promote growth.

2.2. Capacity management

Capacity management is concerned with matching the size of an operational facility to the demands that are placed upon it (Naylor, 1996). This means that even if MSEs had the capability to adapt the latest technology into their operational facility or able to carry out a market research

⁴Formal sector refers to the large enterprise sector.

to determine the demand size, it is all useless if they are not able to match these two together. Capacity management is a two-way process in which both the scale of the facility and the size of demand should be managed or, at least, influenced (Naylor, 1996).

A capacity strategy evolves from the main business strategy and reinforces the other strategies and objectives adopted by a company. It has a lot to do with scanning the environment that the company is operating in and preparing for the possible scenario that may occur. To prepare for any possible scenario, decisions have to be made. The pattern of the firm's decisions over time often reflects the existence of such a strategy (Hayes and Wheelwright, 1984). Therefore the capacity strategy can be defined by knowing how or what to use as a sign for need for a change in capacity and the sizing of such changes. Answering these related questions that is - what will serve to signal the need for a change in capacity, the sizing of such changes, and the relationship of these aggregate capacity decisions to specific facilities decisions - help define the capacity strategy and affect its overall effectiveness (Hayes and Wheelwright, 1984).

The notion of a capacity cushion is a useful way to approach the development of a long-term capacity strategy (Hayes and Wheelwright, 1984). Demand is continuously changing. There is therefore need for such a cushion. There are three options or strategies that a company can follow:

(a) *Try Not to Run Short*

This policy implies that a company should build and maintain extra capacity (analogous to a safety stock in inventory management) so that the likelihood of running short is less than the likelihood of having excess capacity (Hayes and Wheelwright, 1984). When demand is not met due to shortages, a gap is created and other competitors will come in to fill this gap. One of the

ways of meeting demand is by carrying inventories either in the form of finished goods or parts and components that can be assembled quickly into finished goods. Such a policy requires the creation of a "capacity cushion" - an amount of capacity in excess of expected demand (Hayes and Wheelwright, 1984). Carrying inventory as finished goods is very common among *jua kali* artisans. So if an artisan has a 10 percent capacity cushion, it can be viewed as a 90 percent capacity utilisation. If unused capacity is expensive (Hayes and Wheelwright, 1984), why then would MSEs consider such a capacity cushion?

Some of the reasons why a company would adapt such a policy are:

- in case of unexpected demand, from a sudden large order placed by an existing customer or new customer, the company would be able to delivery fast without the expense of overtime and the disruptions resulting from the need to reschedule production or upset deliveries to other customers.
- a company will be in a position to take advantage of attracting new customers due to their competitors' inability to meet demand because of capacity constraints.
- a company can gain more market share from its competitors who are more interested in short-term profitability and return on investment.

The main disadvantage of the policy is that it is very risky This is because it requires precise knowledge of what products and what quantities will be demanded. If the forecasts are wrong, there is risk of not having enough products or a possible large inventory of obsolete products.

MSEs have exhibited this strategy in their operations, as can be seen in the *Kamukunji jua kali*. They too can use this option to their advantage, especially at the present time of power rationing in Nairobi and Kenya. Because of their flexibility, they are able to shift their operating hours so

that they can attract new customers due to the competitors inability to meet demand arising from power rationing.

(b) Build to the forecast

This policy implies that over time the company will attempt to match, as nearly as possible, its production capacity to the anticipated demand (Hayes and Wheelwright, 1984) so that the likelihood of an excess capacity is about the same as the likelihood of running short. Entrepreneurs in establishing and managing their firms, attempt to match their resources to perceived profit opportunities (Kirzner, 1979). This option may not be easy for MSEs because maintaining such a desired level is extremely difficult given that demand is continually changing.

(c) Maximize capacity utilization (conservative approach)

This policy implies that a company will build a negative cushion into the capacity plan, so that the likelihood of running short is greater than the likelihood of having excess capacity (Hayes and Wheelwright, 1984). A negative cushion translates to over 100 percent capacity utilisation which means less investment tied down for a non-value adding activity. This option ensures that a company utilizes its capacity to the maximum and therefore provides a higher rate of return on investment than would be possible with less utilization. This conservative approach simply substitutes one type of risk (having underutilised facilities) for another (losing potential sales). This approach may seem to be a better option for MSEs (considering that they have a low capital base) because it can improve their efficiency on the one hand but it may not be the best option the other hand because maximum capacity utilisation may be done at the expense of quality. The differing types of organisation evident in Nairobi's garment industry may well be the result of profit-making strategies tailored to fit the resources available to different groups of entrepreneurs (McCormick et al, 1997).

2.2.1 *Optimal capacity*

“How much capacity is enough?” This is a question that enterprises grapple with. What is the optimal level of capacity? How would future demand fluctuations be met? Probably there is no ideal or optimal capacity for all enterprises because it all depends on the circumstances given the series of trade-offs between speed of response, efficiency, flexibility and the risk averse (McCormick, 1993). A key finding of McCormick (1993) is that MSEs preferred to be ‘small and flexible’. This could mean that remaining small is a strategy to be flexible rather than exposing the enterprise to a high risk. This could be a reflection of their capacity utilisation decision, preferring to trade-off risk (which at times could mean foregoing growth or expansion opportunities) over flexibility as compared to their larger counterparts whose trade-off is usually between the speed of response and the investment required. Flexibility here simply means the basic capability or readiness of the firm to change, most especially in the face of new conditions (Ferrand, 1998). Considering their survival nature, it is no wonder that MSEs would prefer flexibility over risky ventures (which may be profitable). Some of the circumstances that can affect a firm's choice of optimal capacity depends on whether the risk associated is long-term or short-term. For instance, in a growing market there is usually relatively little long-term risk associated with having more production capacity than is absolutely necessary to meet expected demand, because almost certainly the company will need that extra capacity within a year or so (Hayes and Wheelwright, 1984). In the short-term, risk associated is substantial because it would not reflect well on the Return on Investment (ROI).

2.2.2 *Importance of capacity management to MSEs*

Capacity, simply defined, is the rate of output that can be achieved from a process (Naylor, 1996). For instance, a *jua kali* smith man needs to know how many *sufurias* he is capable of

producing in a day. Knowing the rate of output can help in estimating or planning how long it will take to deliver an order and to plan for the materials required for a period of time. Capacity management and planning (CMP) enables MSEs to set its response rate to the market. Other benefits related to CMP are better understanding of the business cost structure, workforce composition, technological levels, management and staff requirements and inventory requirements. If his business capacity is inadequate he may lose customers through slow service or to other competitors or even allow more competitors to enter into his specific niche. If the capacity is excessive, then he may have to reduce his prices to increase demand, underutilise or lay off the workforce/casual workers, carry excess inventory or seek additional less profitable products to stay in business.

Many MSEs would like to enter into contracts to supply larger businesses but often their capacity to do so falls short in one or more dimensions (Mead, 1998). This can be blamed on their poor CMP. In contract planning, MSEs need to improve their efficiency in planning and managing capacity to perform as reliable partners.

2.3. Capacity Planning in large enterprises

Capacity is a wide term that should not be narrowly defined when embarking on capacity planning. For instance, when dealing with capacity issues, there are usually two implicit but critical assumptions made, i.e. a capacity strategy deals with expansion and that expansion is a response to increased demand. Although such assumptions provide a useful starting point for capacity analysis, they are too narrow to deal adequately with management responsibilities (Hayes and Wheelwright, 1984), which should be more proactive than reactive in a competitive business environment. Though firms tend to consider expansion options only (because they

tend to wait too long before deciding to act), there are other options open to them such as joint venture arrangements, long-term purchase contracts or even increasing raw material inventories (Hayes and Wheelwright, 1984). MSEs, on the other hand, do not consider expansion option as obvious. Due to risk, they prefer not to "put all their eggs in the same basket". Therefore, instead of expanding enterprises they divert resources to other businesses, personal needs or invest in land or stock.

2.4 Capacity Utilisation

Capacity management, particularly capacity measurement, has recently attracted considerable renewed interest (Maguire and Heath, 1997). This is probably due to its importance in the pursuit of strategies such as continuous improvement (a management philosophy which the Japanese call kaizen) and cost management. To meet customer demands for greater variety, a company must constantly seek improvements that will increase flexibility without increasing cost. Many companies are currently turning to cost management and quality in their pursuit of a competitive edge. In the medical industry for instance, many hospitals today are ailing due to increased financial pressure. A more recent study conducted by Ernst and Young revealed that hospitals with 16% to 20% pretax margins today will be down to break-even in 5 years. Mecon⁵ sees the successful management of hospital costs as a synthesis of three factors: capacity management, demand management and quality (Hoffman, 1999).

A capacity model is reviewed in the next section to provide an understanding of the dimensions

⁵Mecon, Inc. of San Ramon, CA is a leading provider of cost management solutions to hospitals.

of capacity utilisation. The capacity model reviewed is based on Gantt's⁶ (1861-1919) description of current cost methods for capacity management.

2.4.1 *Capacity model*

A capacity model is used in the analysis of capacity utilisation. The Consortium for Advanced Manufacturing-International (CAM-I) has developed a capacity model which enables an analysis of both idle and non-productive capacity. The approach to capacity management that the CAM-I capacity model uses is similar in manner to Gantt's approach to current cost methods for capacity management as he describes in this statement,

“The view of costs so largely held, namely, that the product of a factor, however small, must bear the total expense, however large, is responsible for much of the confusion about costs and hence leads to unsound business policies”. (Stratton, 1996).

In general, the application of these principles associates expenses incurred in a period of time to the product produced during the same period of time (Stratton, 1996) meaning that the cost of a product will be higher in periods when production output is lower (even though nothing about the actual product has changed) and it will be lower in periods when production output is near capacity, the effect described by Gantt in his statement. The correct application of the matching principle would be to match the expense of the period to the activities performed in the period

⁶H.L.Gantt (1861-1919), a well-known industrial engineer made the following statement, ‘lack of reliable cost methods has, in the past, been responsible for much of the uncertainty so prevalent in our industrial policies; but with a definite and reliable cost method, which enables us to differentiate between what is lost in manufacturing and what is lost in business, it will usually become easy to define clearly the proper business policy’ (Maguire and Heath, 1997).

because the activities required to make the product used the resources and the products used activities. The products in Gantt's statement did not consume the costs. Therefore, CAM-I capacity model is based on the ability of the activity to produce its capacity and the expenses be matched to the activity's capacity. One key attribute of any activity is its capacity to produce the output intended (Stratton, 1996).

The capacity model has three principal categories of capacity utilisation:

- (a) *Productive capacity*, which is capacity utilised in producing good products and product improvement efforts.
- (b) *Non-productive capacity*, which refers to capacity utilisation where the utilisation does not produce good products or does not fall under the definition of idle. These activities include set-ups, maintenance, waste and standby.
- (c) *Idle capacity* is the capacity which is either doing nothing, not in demand (not marketable) or off limits due to legal, contractual or management concerns. For instance, capacity is idle in MSEs whenever they are not able to utilise this capacity due to closure that may be due to that may be due to harassment by city council 'askaris'.

The model has been successfully applied to larger enterprises. In fact as the CAM-I was developing the model they used these companies in their workgroup. Most of these companies started off with excess capacity but after the application of the model, they began to experience capacity shortage. Turning the primary question of 'what to do with idle capacity and how to account for it' to 'how to find more capacity without having to invest huge amounts of capital', the members of the workgroup found that by focusing on non-productive uses of capacity, their companies could save enormous sums of money (Stratton, 1996). This is a turning point that

MSEs need to experience also in order to perform better or better still, manage their capacity and do things better.

The capacity model described above may not be easily applied to the MSE sector because it requires a thorough understanding of the operation of the business, its processes and the underlying causes for capacity utilisation (or non-utilisation). Little effort has gone into studying capacity management in MSEs and therefore the factors that influence their capacity utilisation are not yet clear. It is for this reason that this study has made an attempt to analyse capacity utilisation decisions of MSEs and to examine factors influencing these decisions. The findings of this study therefore provide a basis to make decisions or the application of the model.

CHAPTER 3

RESEARCH METHODOLOGY

The study used the survey methodology for its investigations. The procedures followed in sample selection, data collection and analysis are described in this chapter.

3.1. Scope of the Study

The study covered small garment enterprises in Nairobi's city council markets (the four largest clusters in the garment sector in Nairobi). The study could have covered other small garment enterprises scattered all over Nairobi but due to time, cost and logistical constraints this could not have been possible. The study also focussed on two capacity resources only that is equipment/machines used by the enterprise and the employees employed by the enterprises. Because capacity is technology based, the technology will be reflected by the machines/equipments used by the enterprise.

The study analysed only the garment manufacturing subsector. The garment sector was chosen because of many problems facing this sector. A prime case in point here is competition which is making it increasingly difficult for the MSEs to maintain market share in their own backyard, to say nothing of making forays into international markets (Mead, 1999). If MSEs can improve their efficiency, they could be able to reduce their costs which could reduce their prices and thus give them a better chance to compete with their competitors at least locally.

3.2 Population and Sampling Frame

The population of the study is all the micro and small garment enterprises operating in Nairobi. Producers range from lone tailors using foot-powered machines to make a few garments a week, to large factories manufacturing for the export market (McCormick et al., 1997). This study

focused on micro and small enterprises (1 to 50 employees), unlike a similar study⁷ done earlier which targeted 4 to 49 employees. Preliminary pre-testing done by the researcher revealed that most enterprises had either reduced the number of employees or were not employing them permanently due to the current power rationing⁸. Therefore adapting a range of 4 to 49 employees sampling frame would not be appropriate for the study. The enterprises targeted were those that had been operating for more than 2 years.

There is an estimate of 4,000 MSEs in Nairobi city operating in garment manufacturing (Ongoing IDS-CDR African Business Systems Project). Of these, more than 70% are either one-person and 2-3 persons enterprises (McCormick et al., 1997). It was therefore expected that a large percentage of the enterprises interviewed would either be one-person or 2-3 persons enterprises.

Nairobi was chosen because it is an urban centre and according to McCormick and Abuodha (2000), the urban enterprises are not only more profitable than their rural counterparts but also begin with more capital at least four times more.

3.3. Sampling and Sample Size

An interesting characteristic of Kenyan MSEs is that they are normally unevenly distributed sectoral and spatially (McCormick, 1998). There are certain areas that have many of these types of enterprises crowded together (Wakah, 1999). This geographical distribution is attributed to

⁷See McCormick et al.1997.

⁸Power rationing started in 1998 due to drought and eased up by the end of 2000.

the inability of the MSE sector to gain access to strategic areas such as the industrial area (Abuodha, 1989).

Most of the garment enterprises are found in market centres (these include shopping centres and markets) or in the backyard of residential homes (McCormick et al., 1997). The location depends on the enterprise's organization of production, for instance, mass producers require large spaces for production, storage and packaging as well as a constant power supply (McCormick et al. 1997). These are normally the largest enterprises found in the Nairobi industrial area and the older industrial quarters in town. The smaller enterprises (customer tailors) are found everywhere: city centre, retail shops, suburban markets, shopping centres and residential estates. Large clusters are found in market centres notably in Kariobangi market, Gikomba market, Uhuru market and Kenyatta market. It is for this reason that the cluster method of sampling will be used. Samples were taken from these city council markets which form the larger clusters. The sample size was arrived at by computing 12% of the total number of enterprises in the chosen clusters. A total of 98 enterprises were selected for interviewing. The sample size of 98 is 12% of the total number of enterprises in the chosen clusters but only 2.4% of the total number of garment firms⁹. A simple random sampling was used to select the enterprise to be interviewed.

⁹Similar studies in MSEs have used small samples, less than 10% of the total population (McCormick et al., 1997; Wakah, 1999).

Table 3.1: Selection of study Enterprises

Area (Cluster)	Approx.no. of Enterprises	Sample size
Uhuru market	200	24
Quarry market	200	24
Kenyatta market	100	12
Kariobangi market	150	18
Ngara market	160	20
Total	810	98

3.4. Data collection

Both primary and secondary data were used in the study. The main instrument for data collection was a structured questionnaire, which was administered to respondents for primary data. The main methods of data collection were interviews and direct observation.

3.4.1. Primary data

Primary data were gathered from the enterprises using a questionnaire (see annex 1). The questionnaire consisted of both open-ended and closed questions which were administered to managers or owner-managers of the enterprises.

3.4.2. Secondary data

Secondary data were taken from surveys and studies made on the sector, for example, the 1999 National Baseline survey and management literature and books. This source of data was used to complement the study since the baseline survey did not provide information adequate for analysis. Thus the need to conduct a field survey of the enterprises in the sector.

3.5. Data Analysis

The completed questionnaires were edited to ensure completeness and consistency. This was

facilitated by a codebook that was developed before the data was entered into the computer using the SPSS package. Descriptive statistics such as frequencies, mean, mode and percentages were used to systematically and meaningfully display data for purposes of reporting the characteristics of the enterprises and at the same time provide adequate statistical support to the findings. Further analysis for example principal component analysis and factor analysis, were carried out to determine the factors underlying the observed characteristics and the capacity management practices. Simple cross tabulation was used to analyse the relationships among the variables.

The findings of the qualitative analysis based on opinions of respondents and data collected from the observation guide, were incorporated while interpreting the results of the quantitative survey wherever needed.

CHAPTER 4

FINDINGS

4.1 Introduction

This chapter presents and discusses the findings of the survey. The first section is on the description of the small garment enterprises with specific reference to business profile and biographical data of the enterprises. The next section will discuss the utilisation of capacity resources and the long-term capacity strategies in small garment enterprises that were surveyed.

4.2 Business Profile

In this section, the business profile of the garment enterprises is analysed. The following aspects are discussed: type of garment enterprise, type of garment products, enterprise capacity (in terms of production), determination of capacity, number of years in business and markets served by the enterprises.

4.2.1 Type of garment firms and products

The survey garment enterprises can be categorized into 3 organizational models:

- (a) Customer tailors, who produce to order and mostly high-fashion garments were the majority (63.9%).
- (b) Contract workshops (who are similar to customer tailor but produce in quantity) were the least (4.1%).
- (c) Mini-manufacturers, who use a scaled-down version of mass production technology to produce garments were 32%. They usually serve the lower class in the market but also engage in making a few high fashion garments (see table 4.1 for more details).

Table 4.1 : Distribution of type of enterprises and products

Characteristics	Kenyatta market		Kariobangi market		Uhuru market		Quarry market		Ngara market	
	n=12	%	n=18	%	n=24	%	n=23	%	n=20	%
Type of garment firm										
customer tailor	12	100	16	88.89	4	16.67	12	52.47	18	90
contract workshop	0	0.0	1	5.56	0	0.0	1	4.35	2	10
mini manufacturer	0	0.0	1	5.56	20	83.33	10	43.48	0	0.0
Products produced										
standard garments	1	8.33	3	16.67	15	62.5	14	60.87	3	15
High fashioned garments	10	83.33	15	83.33	9	37.5	9	39.13	17	85
notes: one respondent did not provide product information Difference between market (location) were very significant for type of garment firm (chi-square=53.38, significance=0.00) and for products (chi-square=30.28, significance= 0.00019).										

The location of the enterprises depends on the organization of production. It is no wonder that the location (market) of the enterprises was very significant (at 0.00) for the type of garment firm. Uhuru and Quarry markets were dominated by mini manufacturers type of firms; they had larger stall spaces than the other markets though lighting was very poor, especially in Uhuru market. This affected their performance not only because of the added cost of buying fuel for lighting but also the effect of poor lighting on the employees' vision, which in turn affected their morale in the long run. Majority (63%) of the enterprises were customer tailor type of firms and were small in size in terms of the space they occupy. All the enterprises interviewed in Kenyatta market were customer tailor type. Contract workshops formed only 4.1% of the sample (very close to the findings of McCormick et al., 1993). The type of garments produced were either standard garments or high fashioned garments. Because the majority of the enterprises (60%) were

customer tailor, the percentage of high fashioned garment producers was also the highest. Standard garments producers were 36%. Refer to table 4.1 above for summary of this information: type of garment firms, product and location.

4.2.2 Capacity and determination of capacity

As was expected, the rate of output was high in those markets that had more mini-manufacturers. The enterprises reported total output ranging between 56 to 72,000 units of garments (finished) annually, with an overall mean of 4,020.58 units of garments annually . The total number of garment units produced annuaaly was 389,996, with a modal rate of output of 2,880 units of garment. The enterprises were producing a total of 389,996 units of garments annually, with majority (9.3%) of the enterprises producing 2,880 units of garments. Kenyatta market, which had mainly customer tailors enterprises had a lower output rate. The difference in output rate between the markets is very significant at 0.0025 (see table 4.2).

Table 4.2: Distribution of capacity (in terms of production) annually by markets

No. Of garments produced	Kenyatta market		Kariobangi market		Uhuru market		Quarry market		Ngara market	
	n=12	%	n=18	%	n=24	%	n=23	%	n=20	%
50-500	7	58.3	4	22.2	2	8.3	2	8.7	5	20
501-1500	4	33.3	6	33.3	4	16.7	3	13.0	12	60
1501-3000	-	-	5	27.8	6	25	6	26.1	2	10
3001-5000	1	8.3	1	5.6	4	16.7	4	17.3	-	-
5001-10000	-	-	1	5.6	5	20.8	5	21.7	-	-
10001-20000	-	-	1	5.6	-	-	2	8.7	1	5
>=20001	-	-	-	-	3	12.5	1	4.35	-	-

notes: The chi square statistic for difference in rate of output between the markets is 48.1, with a significance of 0.0025

Though the difference in output between the markets is very significant, it is not the same case within the type of garment firm. Within the different types of garment firm, the difference is very significant for the customer type of garment firm at 0.001 and less significant for contract workshop firm at 0.287. There is no significant difference for the mini-manufacture firms, as shown in table 4.3 below.

Table 4.3: Chi-square tests for difference in rate of output between markets by type of garment firm

Type of garment firm	Chi-square value	df*	Asymptotic Significance (2-sided)
Customer tailor	53.04	24	0.001
Contract workshop	5.00	4	0.287
Mini-manufacturer	10.924	12	0.535

*Number of degrees of freedom

Markets such as Kenyatta market have lower rate of output because they produce more of high fashioned garments (83.3%), which normally take longer to produce than standard garments (see table 4.2). However, it should be noted that these rates are not sustainable firstly because capacity, as stated, is either, an average output (30.9% of the enterprises chose this as what they use to determine capacity) , or maximum achievable output (6.2%) or the best performance actually achieved in the past (59.8%). Secondly, capacity may not be sustainable also because capacity is dynamic. This is due to the learning effect. Learning effect is the accumulation of experience, knowledge, markets and networks that improves the output of a firm. As an enterprise gains experience in producing something, its rate of output increases with time.

Table 4.4: The distribution of number of garment produced annually by type of garment firm by number of years in business.

Years in business	No.garments produced annually	Type of garment firm			Total
		Customer tailor	Contract workshop	Mini-manufacturer	
1-10	50-500	13	2	2	17
	501-1500	20	-	2	22
	1501-3000	6	1	7	14
	3001-5000	2	-	2	4
	5001-10000	4	-	5	9
	10001-20000	2	-	2	4
	Total		47	3	21
11-20	50-500	3	-	-	3
	501-1500	4	-	2	6
	1501-3000	3	-	1	4
	3001-5000	3	-	3	6
	5001-10000	-	-	2	2
	10001-20000	1	1	-	2
	Total		14	1	8
21-30	501-1500	-	-	1	1
	1501-3000	-	-	1	1
	10001-20000	1	-	-	1
21-30	501-1500	-	-	1	1
	1501-3000	-	-	1	1
	10001-20000	1	-	-	1
	Total	1	0	2	3

Notes: capacity was significantly different between the years the business were started for the 1-10 year range (chi-square = 0.049, significance = 21.11). Chi-square values for 11-20 and 21-30 ranges are 17.49 and 3.000 respectively with significance of 0.064 and 0.223.

Table 4.4 shows a cross tabulation of number of garments produced annually by the type of

garment firm and number of years in business. Capacity was significantly different between the years the business were started for the 1-10 yrs period only. But interesting enough there was only a slight difference between the periods 1-10 yrs and 11-20 yrs but a very large difference between these two periods and the 21-30 range (see table 4.4). This could be attributed to the effects of liberalisation. The first phase of liberalisation was around seventeen years ago (1984). The impact of liberalisation started to be felt in Kenya ten years ago (1990) and the economy deteriorated, the proportion of enterprises established before liberalisation has remained small. Because of the hard times many enterprises did not survive. The sample results reveal that only 26.8% of the enterprises that were started before the impact liberalisation managed to survive liberalisation despite challenges both in the strategic decisions and capacity utilisation. Table 4.4 clearly shows that businesses that were started between 21-30 years ago had a higher capacity than the ones that were started much later. The other 73.2% of the enterprises were started after liberalisation. There was no significant difference in years in business between the markets at the 5% significance.

4.2.3 Markets served by the enterprises

In most countries, the issue listed in first place as the principal problem facing enterprises was that of markets. Many MSEs find that they are selling a limited range of products in restricted and saturated markets; if they seek to increase their production, they find it difficult to sell the extra output (Mead, 1999). About 28% of the sample served the local area (see table 4.5). The highest percentage 35.1% served the regional area. Enterprises that have done better have found a way of addressing the problem of extra out put: by selling in niche markets, by being established in favourable locations, by finding more favourable marketing arrangements (Mead, 1999). Only 4.1% of the enterprises interviewed served Ugandan and Tanzanian

markets and these enterprises were found in Uhuru market (3 were mini manufacturers and 1 customer tailor). The three mini manufacturers had formal education (two with upper secondary education and one university/college level of education). It is worth noting that the entrepreneur who had university/college level of education had no formal training in dressmaking like the rest and yet his rate of output was the highest (72,000 annually) in the sample. This finding is contrary to other studies (Mead, 1999) which have indicated that both education and training is necessary for the success of an enterprise. The success of the enterprise could be attributed to good management skills which is very crucial for the growth of any enterprise but is a problem facing the MSE sector. Marris and Somerset, 1971, pointed at managerial problems as a constraint in MSEs.

Table 4.5: Distribution of enterprises and the markets they serve

Cluster	Local market*	Regional market**	National market	Uganda/Tanzania market	no answer given
Kenyatta market	3	7	2	-	-
Kariobangi market	4	5	9	-	-
Uhuru market	6	7	7	4	-
Quarry market	4	8	11	-	-
Ngara market	10	7	2	-	1
Total	27(27.8%)	34(35.1%)	31(32%)	4(4.1%)	1(1%)
There was no significance in markets the enterprises served between the markets at 5% level of significance.					

* Refers to the area and neighbourhood around the enterprise

** Refers to Nairobi area

4.3 Biographical data

More education gives entrepreneurs additional skills and opens up higher level professional

networks that can be tapped when the need arises (McCormick et al.; 1993). About 94% of respondents had at least some form of formal education, with the majority (40.2%) having attained upper secondary education. Only 4.1% had higher education (see table 4.6). Contrary to earlier study by McCormick et al.; (1997) mini-manufacturers were the most educated with more than half (55%) having attained upper secondary education and higher. This change could be because earlier mini-manufacturers were mostly women and in Kenya as in many developing countries women have fewer educational opportunities than men (King and Hill, 1993). This trend is fast changing.

Table 4.6: Distribution of level of education by enterprise type

Education level	Customer Tailor		Contract workshop		Mini-manufacturers		Row total	
	n	%	n	%	n	%	n	%
no formal education	4	6.5	-	-	1	3.2	5	5.2
Lower primary	5	8.1	-	-	1	3.2	6	6.2
Upper primary	16	25.8	2	50	7	22.6	25	25.8
Lower secondary	11	17.7	2	50	5	16.1	18	18.6
Upper secondary	24	38.7	-	-	15	15.5	39	40.2
University/college	2	3.2	-	-	2	2.1	4	4.1
Column total	62	63.9	4	4.1	31	32	97	100
There is no difference in level of education between the various types of firms at 5% significance level.								

Customer tailors have a particular need for training and that is why majority (90.3%) of them had attained some form of training. Though other studies have indicated that education and training can help enterprises take advantage of market opportunities for example in relation to business linkages, where MSEs sell to larger buyers (Mead, 1999) this was not the case as

indicated by our earlier findings where the successful entrepreneur had only education but no training (see section 4.2.3). Though training may not be necessary for an entrepreneur to have, it is very important for the employees. Training is very important particularly for the employees in the utilisation of the capacity resources. Untrained employees may not be qualified to produce quality garments and therefore may take longer than necessary to produce the garments. This takes up both more machine hours and employee hours which may be termed as waste because they are non productive. Majority (81.9%) of the entrepreneurs who had employees (85.5% of them had employees) had employed skilled employees. A very small percentage (4.8%) had employed unskilled employees while the rest were either trainees or casuals.

All of the contract workshop entrepreneurs had attained some training. Only 14% of the entrepreneurs had no training (42.86% were customer tailor and as was expected the majority 57.14% were mini manufacturers).

Table 4.7: Distribution of enterprise type by training

Have you received training?	Customer tailor		Contract workshop		mini-manufacturer		Row total	
	n	%	n	%	n	%	n	%
Yes	56	90.3	4	100	23	74.2%	83	85.6
No	6	9.68	-	-	8	25.8%	14	14.4
There is no significant difference in training between the various firm type at 5% significance.								

4.4 Business Growth

Business growth was determined by calculating the profits of the enterprises over a period of two years and also getting response from the entrepreneur themselves on their opinion on

whether or not they had experienced growth. About 87% entrepreneurs stated that they had experienced growth. The areas that they had experienced this growth are as follows.

Table 4.8: Areas of business growth

Areas of growth	Current year		1 year ago		2 years ago		Other years	
	n	%	n	%	n	%	n	%
sales volume	18	18.6	47	48.5	50	51.5	20	20.6
Production lines	22	22.7	21	21.6	18	18.6	3	3.1
Profits	13	13.4	50	51.5	49	50.5	20	20.6
Employment	8	8.2	24	24.7	31	32	19	19.6
Increase in stock	19	19.6	42	43.3	45	46.4	20	20.6
New businesses	3	3.1	4	4.1	6	6.2	2	2.1

Majority (51.1%) of the enterprises had experienced growth in profits one year ago and in sales volume two years ago. It was noted that a low percentage of enterprises started new businesses. Times are hard for most business especially with globalisation and also limited access to credit facilities are a major contributor to this low growth in the area of starting new businesses. A high percentage of enterprises experienced growth in all areas except in production lines 2 years ago. This shows a decline in the growth of enterprises. According to the entrepreneurs, the past year and current year were the worst year for their business. The growth experienced by the enterprises were mainly due to new markets (table 4.9).

Table 4.9: Factors contributing to growth

Factors	No. of enterprises	Responses %	Cases %
New markets	77	84.6	92.8
New products	6	6.6	7.2
New technology	3	3.3	3.6
Experience of owner	1	1.1	1.2
High quality of product	1	1.1	1.2
High demand for the products	2	2.2	2.4
Total	90	98.9	108.4

As was expected, credit and or loan was not a contributor to the growth because MSE enterprises do not have easy access to credit/loan (CBS,et.al; 1999). New markets was the highest contributor (84.6%)to growth; because of competition, entrepreneurs have to venture into new markets to survive. It was followed by new products and new technology. Only 2 entrepreneur contributed high demand of products to the growth of their enterprises. These results are similar to an earlier study (McCormick, et.al.; 1997) where nearly all (98.6%) of the entrepreneurs listed low demand as either extremely important or very important reason why small businesses fail to grow.

Assessing the overall demand for the products over the last 2 years revealed that majority 60.8% had experienced decrease in the demand of their products. About 23% had experienced no change at all while 15.5% had experienced an increase in the demand of their products. Low demand for new clothes is due to the current economic situation whereby the customer's purchasing power is reducing. This has a very serious implication on the

enterprises because it affects their growth. McCormick, et.al. (1997) study revealed that most entrepreneurs see low demand as a serious barrier to firm growth.

4.4 Capacity utilisation

Capacity management is concerned with decisions about the optimal use of existing facilities as well as decisions about expansion, contraction, replacement or the use of alternative technologies. Optimal use of existing facilities (in this case the capacity resources are restricted to employees and machines only) could be the level of capacity usage that provides an optimal return. Therefore, low returns could be an indication of low level of capacity utilisation. Idle and-non productive capacity causes low level of capacity utilisation. If these two kinds of capacity can be understood and utilised effectively, enterprises can improve their returns because they open up opportunities for savings.

4.4.1 Capacity Resources

Capacity resources should be valuable to enterprises because they add or create value. Here value creating resources were limited to human capital and organisation capital (machines/equipment). The enterprises interviewed had more machines (344) than employees (233). The study was conducted during a period of power rationing and many employees were laid off. Employees were paid according to what they produced; when there is low demand, the enterprises do not incur unnecessary costs. Therefore it can be said that the enterprises utilised the capacity resources differently. None of the enterprises had more employees than they needed. Though employees were less, 64.9% of the enterprises were satisfied with the number of employees they had and did not need any more. The 35.1% of the enterprises who needed more employees did so for these reasons;

- needed employees in case of demand increase (and only when demand increases),
- intended to expand their business,
- had many machines and less employees to operate them,
- wanted trainees only (they were cheaper) to assist them increase their production level,
- wanted to increase their production levels, and
- wanted to increase their labour so as to increase productivity.

About 63.9% of the enterprises were satisfied with the number of machines they had. The other respondents (36.1%) needed more machines for the following reasons:

- more specialised machines
- to meet increasing demand
- to expand business
- as a form of investment
- to increase the number of trainees
- to increase production level
- to keep up with the latest technology
- to match the number of employees

4.4.2. Idle and Non-Productive Capacity

More than half (51.5%) of the respondents admitted having employees who were idle at times while majority (69%) of them had idle machines. Close to 70% of the enterprises had employees who were non productive and an overwhelming 81% had machines which were non productive. This is not surprising considering that they had more machines than they

actually needed. Idle and non productive capacity resources do not add any value to the enterprise nor customer and therefore they can be termed as waste. These wastes are normally hidden and should be made visible in order for these enterprises to understand its cost to the enterprises. Idle machine and employee hours were calculated to show the wasted hours that could have been used for other productive activities. Table 4.10 shows the length of time (hours) the capacity resources are idle.

Table 4.10: Mean idle and non productive hours

capacity resources	Idle hours		
	Daily	Weekly	Monthly
Machines	5.13	11.40	31.27
Employees	3.7	7.23	27.05
Total	8.83	18.63	58.32

On average the machines were idle for 5.13 hours while employees were idle less hours at 3.7 hours. The hours are less in the case of employees because the employees were paid only what they produced and when there was no work, they work elsewhere. To improve returns, the entrepreneurs have a responsibility to reduce idle capacity by either disposing of it or by selling it as additional product (eg. hiring or selling the machines and firing, or paying employees for only what they produced). The reasons given for the idle hours are:

- Demand is low
- Power rationing
- Owner of business is away (the business is closed)
- Employees are on leave, and
- Lack of money to purchase materials.

Machines were non-productive because;

- they were spoilt,
- missing spare parts,
- lacking of servicing,
- under repair/maintenance,
- or because of the power rationing problem.

The machines were either spoilt or under repair often probably due to their age. About 29% of the machines were over 10 years, with the oldest being 38 years old, 21.5% of the machines were 5-9 years and 47% were 0-4 years. One would expect that these machines would be of the latest technology because they were reasonably new machines (0-4 years old). This was not the case. Majority (89.7%) of the respondents were using foot-powered machines while only 9.3% of them said they were using motor-powered machines. None had specialised machines which is higher in technology. Their choice of technology is a clear indication of capacity management because capacity management concerns decisions about the use of alternative technology. In this case the use of alternative technology was due to power rationing problem. Therefore it was a strategy to manage a complexity that had arisen and not lack of technological capability¹⁰.

The employees on the other hand were non-productive because;

- they were sick,
- when waiting for materials,

¹⁰It has been argued before that much of the existing technology available to MSEs is either insufficiently productive to create a secure livelihood with available resources or cannot produce goods of a quality or type that enables them to break into new, expanding or more demanding markets, (Jeans, 1999).

- when they were learning new patterns/design,
- when they have difficulty in adjusting to change of capacity (e.g. when demand increases and capacity is increased to meet this demand),
- when they were on leave,
- if they had poor training,
- when machines are spoilt,
- when demand, is low, and
- when they are fatigued.

Capacity in the enterprise was not utilised optimally and therefore this also affected the returns as shown in table 4.11.

4.4.2 Enterprise Profits

Table 4.11: Distribution of the current years returns

Profits range	frequencies	%
-26,000-0	30	30.9
1-3,000	19	19.6
3,001-9,000	18	18.6
9,001-15,000	15	15.5
15,001-25,000	10	10.3
25,001-55,000	4	4.1
>=55001	1	1

Profits were also calculated by subtracting the sales from the costs, as an indicator of growth. Though 2 years ago had the lowest profits (Kshs.-41,100), it also had the highest percentage of profits of 22.7% of the enterprises earning between Kshs 20001-40000 while the current

year had the highest percentage of enterprises with negative growth (earnings between Kshs.-26000 and 0). The highest profits recorded was 2 years ago at Kshs.193,150. The low profits are due to the deteriorating state of the economy¹¹ and the many constraints dogging the sector¹².

Majority (56.7%) of these enterprises used their profits on non-business responsibilities such as paying school fees, building houses, purchasing land etc instead of reinvesting into the business (table 4.12). Only 20.2% reinvested their profits back into the businesses. Because of lack of reinvestment, most MSEs remain the same size, if not closed. Other studies have indicated that majority of entrepreneurs divert business resources or profits to other non-business activities, (Ferrand,1998; Marris and Somerset, 1971).

Table 4.12: Uses of profits by enterprises

Uses	% of enterprises
Daily expenditure	29.6
Non-business activities	28.8
Expanded business(reinvest)	20.2
Purchased assets	13.5
Saved	3.4
Purchased land	1.9
Started another business	1.1
Built house	0.7
No answer given	0.7
Total	100

¹¹This indicated by the low purchasing power of customers and other economic indicators, Economic Survey, 2000

¹²Problems facing MSEs vary by sector, see CBS et.al.1999 for list of the problems.

The average profit has been decreasing in the past two years . The current year's average profit was very low at Kshs.6,791 compared to Ksh.13,874 profits for a year ago and Kshs.16,746 profits made two years ago. The current years profits were very low because of the high costs the enterprises were incurring in their expenditure (e.g. salaries, inputs, and other daily operation costs). On average the enterprises were currently incurring a cost of Kshs.23,676 compared to 26,786 and 49,730 for one and two years ago respectively. Sales which can also be used to measure capacity have also been declining in the past two years. The average sales were much higher two years ago at Kshs. 45,029 , followed by a year ago at Kshs. 40,355 and current year kshs.30,526. This reduction in capacity (in terms of sales) is a clear indication of low level capacity utilisation, largely due to the reasons mentioned in table 4.13.

Table 4.13: Major Problems faced by Enterprises

Problem	frequency	%of responses	%of cases
Competitors	82	31.7	84.5
Raw material shortage	47	18.1	48.5
Lack of qualified skilled employees	15	5.8	15.5
Access to market opportunities	77	29.7	79.4
Lack of space	23	8.9	23.7
Interference from local authorities	15	5.8	15.5
Totals	259	100.0	267.0

4.4.3 Capacity Utilisation Decisions

To tackle the above mentioned problems the enterprises had to constantly make decisions about the optimal use of existing capacity resources. These decisions had to be made in order for the enterprises to be competitive. Hence, they had to constantly seek improvements that

will increase flexibility. This forced them to make changes in their capacity utilisation.

Majority (25.8%) of the enterprises changed their capacity usage as often as weekly, followed by 19.6% of the enterprises who made capacity changes after every 4 months, 17.5% made changes monthly, while 10.3% made changes every three months.

The capacity utilisation decisions that the enterprises made were;

- to carry excess capacity by staying ahead of demand (70.1%),
- to carry less than the demand (3.1%)and
- to match anticipated demand with production capacity (26.8%).

It is possible for MSEs to expand but it may not be possible because they have no plan to accommodate such a serious decision. If they were serious about it they would reinvest their profits back to the business of which majority do not¹³. Therefore expansion remained only as an intention for most enterprises and not a decision made or decided upon. About 24% strongly agreed that they had intentions to expand while 70.1% agreed on the same though they had not actually decided on it or enacted on it. This is probably because they had idle and non-productive capacity and therefore expanding would not make sense unless the capacity utilisation would improve. Whichever the case, their intentions still reflect some sort of a capacity strategy, that is, knowing when capacity will be added. Of course this may not be definitely soon. It is a capacity strategy because the entrepreneurs know how and what to use as a sign for need for change in capacity. Majority (61.9%) used increase of demand as a sign to increase capacity. Increased efficiency can also be used as a sign but the MSEs are not very

¹³See table 4.13, only 20.2% of the entrepreneurs reinvested the profits into the business.

efficient; otherwise, they would not be having idle or nonproductive capacity.

It should, however, be noted that not all idle capacity is waste. There are certain issues within control of the managers of enterprises but others are beyond their control. There are external factors that affect capacity utilisation decisions of an enterprise which are beyond the manager and/or owner's control. For example, in some of the markets enterprises have to remain closed because the markets are not opened on Sundays. Idle capacity that arises from such a situation should be accounted as the cost of providing services in such a location with restrictions. On the other hand, the manager can choose to retain idle capacity. This is a strategy used in order to be flexible enough to serve a certain clientele. For example a manager can retain idle capacity in order to be able to serve a loyal client (who puts in big or many orders) in case the client wants something extra to be added to the product or increase the number of products purchased to be more than what was initially ordered. This only works if the value added through flexibility exceeds the cost of providing excess capacity required to be flexible.

If optimal capacity utilisation increases the efficiency of an enterprise then how far can a firm increase its output by simply increasing its efficiency without absorbing further resources? And increase of resources is expansion. Therefore for these MSE to turn expansion into a decision instead of an intention they need to improve their capacity utilisation which means that capacity utilisation decision has to be made. About 49% of the enterprises agreed that they had intentions to remain more or less the same size. This is not surprising because it has been recorded that MSEs prefer to remain small and flexible (McCormick, 1993) because they are risk averse. Choice to be small and flexible is a capacity utilisation decision.

About 70% of the enterprises chose to carry excess capacity. There is very little risk associated with this decision because the excess capacity may be required later for example, at a high business season such as Christmas or Easter season. Excess capacity can be used as a competitive edge by the enterprises. Excess capacity can be in the form of inventories which can be bought at a discount if bought in bulk. And in the same way products produced in bulk consume less production costs as compared to less products. Lower costs mean that it is possible to reduce product prices which is a way of influencing demand instead of waiting for demand to pick up and react to it. Influencing demand is proactive and capacity management. The reasons why the enterprises carried excess capacity is shown in table 4.14. Majority (37.3%) carried excess capacity because they wanted to save time of production. This is a good enough reason to carry excess capacity because if goods are not delivered on time a customer can opt to do business elsewhere.

Table 4.14: Reasons why enterprises carry excess capacity

Reason	Frequency	% of responses	% of cases
Displaying in order to attract new or more customers,	6	6.8	9.0
Target new market niche, targeting those customers who prefer ready made clothes	14	15.9	20.9
Save on production time so incase of increase of demand or sudden demand surge, the enterprise is able to respond promptly without having to incur expense of overtime.	25	28.4	37.3
Compete with other enterprises selling garments	2	2.3	3.0
To market existing stock when production is low	1	1.1	1.5
Stay in business because when demand is low the enterprise would have to close if it had decided otherwise. For instance if they had decided to match to demand and demand is low they wouldn't have anything to do.	1	1.1	1.5
Serve customers who buy in bulk	1	1.1	1.5
Take advantage of fluctuating prices	2	2.3	3.0
Stock own design and price	7	7.9	10.5
Have ready cash (from the sale)	4	4.5	6.0
Minimise costs particularly production cost and overhead costs	11	12.5	16.4
For quick sale	2	2.3	3.0
To avoid power rationing problem	4	4.5	6.0
Fear of fluctuating costs of materials	3	3.4	4.5
High demand of the product.	2	2.3	3.0
Total	88	100.0	131.3

Majority (93.2%) carried excess capacity in form of finished products, 2.7% in the form of excess production resources and 4.1% in form of general purpose cushion.

About 3% of the enterprises carried less capacity and 26.8% of them match their capacity to demand. These enterprises preferred these strategies because of the disadvantages of carrying

excess capacity. The reasons they gave for these choice of strategies are;

- to be able produce customer request,
- materials are bought by the customers (so the entrepreneurs do not have to stock materials),
- lack of capital,
- to avoid over production,
- to avoid losses due to change of fashion,
- it would be uneconomical to carry excess capacity.

4.4.4 Business Philosophy and Policies

The philosophy an enterprise follows is very important because it determines the decisions the entrepreneur makes. Capacity utilisation decisions are also determined by the philosophy the enterprises follow. Unfortunately, most MSEs do not have business plans and yet capacity strategy should evolve from the main business strategy so that it reinforces the other strategies and objectives adapted by the enterprise. An enterprise's approach to managing capacity should be congruent with all its other efforts; otherwise, there would be conflicts. Therefore there is a need for a plan of how all these efforts will work in harmony. About 69 (71.1%) of the enterprises interviewed had not developed any business plans. This could then explain why majority (30.%) of the enterprises had recorded negative profits as was shown table 4.12 in section 4.4.2 . No planning is a sure way of planning to fail. For example, if a manager of an enterprise chooses to carry excess capacity by fully utilising the resources 100%, he/she would not be able to achieve this congruence because full utilisation is not necessarily consistent with elimination of wasteful, idle and non-productive capacity. Of course, elimination of wasteful capacity should be aimed at by all enterprises. It should be further clarified that full utilisation

is not equal to effective utilisation. Full utilisation as a production target may not be consistent with a quality target of zero defects. Effective utilisation produces defect-free products which benefit the customers but full utilisation may not (Maguire and Heath, 1997).

About 40% the respondents had developed business plans, of which majority (63.3%) of them had not changed the business plans despite the changing business environment. Only 20% of the those who had developed business plans had changed their business plans more than 3 times while 20% had changed twice or once.

Business policies are very important because they determine how capacity will be utilised. The earliest time reported on opening business was 5.30 a.m. and the latest was 9 am. It was policy for the majority of the enterprises to operate at an average of 10 hours per day starting at 8 a.m. (40.2% of the enterprises) and closing at 6 p.m. (51.5% of the enterprises). About 43% of the enterprises were operated 6 days (Monday to Saturday) in a week while 7.2% of them worked all the days of the week without rest. Other policies that had been formulated by the enterprises are as follows;

Table 4.15: Business policies formulated by enterprises

Business policy	frequency	responses	cases
Flexibility in terms of working hours and days in order to meet demand	4	15.4	22.2
Keep up with fashion (looking out for the latest fashion in magazines or from other tailors)	3	11.5	16.7
Employees entitled to monthly pay even during leave	1	3.8	5.6
Leave guarantee to all employees	5	19.2	27.8
Maintaining regular customers	1	3.8	5.6
Employees to meet set production volume	2	7.6	11.2
Supply products in time	2	7.6	11.2
Make high quality products	1	3.8	5.6
Employees to report on time to work	1	3.8	5.6
Employees expected to be part of decision-making	1	3.8	5.6
Employees guaranteed leave during public holidays only	1	3.8	5.6
Employees to work during public holidays also	3	11.5	16.7
Employees are guaranteed unpaid leave	1	3.8	5.6
Totals	26	100.0	144.4

These policies give an indication of how capacity resources particularly employees are utilised by the enterprises. Some of the policies are basic provisions requirement in the Employment Act but not all employers followed the act as can be noted in table 4.15 above. About 17% of those enterprises that had business plans, did not guarantee annually leaves to their employees and they are also expected to work during public holidays. If it is policy for employees to work through out the year without leave the employees will be fatigued and loose morale after some time and this affects the response rate to the market. Majority (27.8%) of the enterprises guaranteed annual paid leave to their employees. About 6% expected their employees to report to work on time. If it is policy for employees to walk in any time without restrictions, then the enterprise may not be able to respond to the market in case of increased demand or even

deliver on time. If it is policy to deliver on time then the rate of output should be such that there are no delays and that can affect the utilisation of the capacity resources.

4.4.5. Factors that Influence Capacity Utilisation Decisions

A good decision can only be made after analysing all the available information and that is why it is very important to scan¹⁴ the environment. To make a capacity utilisation decision, the environment the enterprise is operating in, should be scanned in order to know the consequence of a decision and prepare for possible scenarios (these possible scenario are at times the factors that influence their decisions) that may occur. Majority (87.6%) of the enterprises had scanned the environment before making any decision. Table 4.16 below shows the number of enterprises who had scanned the environment or not and the decisions they decided on, after scanning or not scanning. Although there is no significant difference in the capacity decision made between those who scanned the environment and those who did not, it is worth noting that of those who scanned the environment, the highest percentage (72.9%) decided to carry excess capacity or stay ahead of demand and yet this is the most risky decision and MSEs are meant to be risk averse. This decision requires absolute knowledge of what fashion of garment will be required and what quantity. Though fashion is very dynamic, it is possible for these entrepreneurs to know fashion trends but only if they are ever on top of fashion (scanning the environment).

¹⁴Scan means to study or assess the situation the enterprise is operating in. Enterprises scan the environment by keeping in touch with the latest trend through the customers, magazines etc. They do not carry out a systematic survey as such.

Table 4.16: Distribution of the decisions made by enterprises after scanning the environment

Decision	Scanned environment		Not scanned environment		Row total	
	n=85	%	n=12	%	n=97	%
Stay ahead of demand	62	72.9	6	50	68	70.1
Lag behind demand	2	2.35	1	8.3	3	3.1
Match anticipated demand with production	21	24.7	5	41.7	26	26.8
There is no significant difference in the decisions made between those who scanned and those who did not.						

It is not surprising that majority (80.8%) of those who decided to match their capacity to anticipated demand had scanned the environment. It is not possible to estimate or anticipate demand without scanning it. The enterprises were asked to state the reasons for scanning or not scanning the environment. Majority (43.0%) scanned the environment in order to keep up with fashion. Others scanned the environment to;

- know the general market trends (12.8%),
- stay in business (4.6%),
- increase sales/production/profits (1.2%),
- determine demand for the product (10.4%),
- search for new/latest technology (1.2%),
- meet the challenge of high competition (2.3%),
- produce quality products (7.0%),
- determine selling price (9.3%),
- avoiding keeping machines idle (1.2%),
- assess production costs (2.3%),

- assess fluctuating prices (2.3%),

Those who scanned the environment were able to prepare or deal with the factors that could influence their capacity utilisation decisions. Some of the factors that influenced their decisions are:

Table 4.17: Factors that influence capacity Utilisation

Factors	Frequencies	%of Response	%of Case
Increase of demand	56	45.9	58.3
Decrease of demand	25	20.5	26
Technological change	22	18	22.9
External environment	17	13.9	17.7
Fluctuating demand	2	1.6	2.1
Total	122	100	127.1

Majority (58.3%) of the respondent's capacity utilisation decisions were influenced by increase of demand (table 4.18). This is not surprising because companies are generally reluctant to forgo opportunities to grow with their markets (Hayes and Wheelwright, 1984). Decrease of demand was the second factor that influenced capacity utilisation. Due to the poor economic situation in the country the purchasing power of customers has been reduced resulting in low demand (very few customer placing orders for the products). Therefore the enterprises are forced to seek other markets (for instance target the ready made clothes market) and attract new or more customers by producing excess capacity (in the form of finished goods). About 23% of the respondents were influenced by technological change. Technological change refers to changes that could require the enterprises to replace or upgrade its machines in order to be competitive. Technology they used was reflected by the

machines they used. It was not surprising that majority (45.1%) of the enterprises used foot-powered machines instead of the latest technology which are motor-powered (22.8%). It was a capacity utilisation decision to use foot-powered machines in response to the power rationing problem that was going on. The use of alternative technology as a strategy in order to be competitive reflects the existence of capacity utilisation decision made among MSEs. A very small percentage (0.5%) used the high tech machines which are specialised.

About 18% of the respondents had their decisions affected by external environment. Factors in the external environment like limited access to credit has affected their decisions. Because credits is not easily accessible and the entrepreneurs need capital they are forced to either carry less capacity or build to forecast. Also the high competition has forced some entrepreneurs to constantly keep to the latest fashion. Therefore they cannot have excess capacity in the form of finished products because fashion is highly dynamic. Only 2.1% of the enterprises were affected by fluctuating demand.

CHAPTER 6

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.1. Introduction

The MSE sector faces many challenges. Managing capacity is only one of them which many have not yet considered to exploit and yet it has a lot of potential for growth. High competition has made it almost impossible to increase sales. The only other option to increase the profit margins is by reducing production and overhead costs. It is possible to reduce costs through proper capacity management. Enterprises carry capacity which can be termed as waste because it is not adding any value to the enterprise or customer. This waste is hidden and therefore not very obvious. This study was designed to determine capacity utilisation by garment MSEs in Nairobi.

6.2 Summary of the Findings

There were three types of garment enterprises identified by the study. They were customer tailors (63.9%), contract workshop (4.1%) and mini-manufacturers (32%). All of the enterprises interviewed in Kenyatta market were customer tailors (12%). Majority (64.5%) of the mini-manufacturer were found in Uhuru market, while 32.3% were found in Quarry market. Only one mini manufacturer was found in Kariobangi market. Majority of the contract workshops were found in Ngara market (50%), while Quarry and Kariobangi markets had one each. These made either high fashion garments (61.9%) or standard garments (34.9%). To determine their capacity the enterprises either used average output (30.9%) or maximum achievable output (6.2%) or the best performance actually achieved in the past (59.8%). Majority of the enterprises served the regional market (35.1%). The other markets served by the enterprises were the local markets (27.8%), national market (32%) and the Ugandan and

Tanzanian markets (4.1%). About 44% of the entrepreneurs had an education level of upper secondary and higher and majority (85.6%) of them had received some training.

The enterprises interviewed had 344 machines and 233 employees. These capacity resources were utilised differently in that the employees were laid off whenever the demand went down while the machines were left. Therefore the cost of paying employees was not very high since they were paid only what they produced while the machines incurred overhead costs whether they were productive or not. On average the machines were idle for 5.13 hours daily while employees were idle less hours at 3.7 hours.

About 70% of the enterprises carried excess capacity, mostly because it saves time on production. The other 30% chose to either to match their production to demand or carry less capacity.

The capacity utilisation decisions the enterprises made were either to stay ahead of demand (70.1%) or lag behind demand (3.1%) or match anticipated demand with production (26.8%).

The factors that influenced these decisions were; increase of demand (58%), decrease of demand (26%), technological change (23%), external environment (18%) and fluctuating demand (2%).

6.3 Recommendations

Low demand was a common problem amongst the enterprises and they blamed it on the poor economy which affected the customer's purchasing power. Therefore policies that can improve the economy should be formulated in order to increase demand. Enterprises should also be

more proactive, than reactive, by trying to influence demand through product price reduction. Prices of products can only be reduced by reducing costs. There is room for cost reduction through better capacity management. The researcher is of the opinion that it is possible for these MSEs to better manage their capacity resources because they do exhibit some capacity strategy which may not be obvious but it does exist. The strategies can be identified through the various capacity decisions they make. For instance many entrepreneurs made excess garments for purposes of displaying and selling ready made clothes instead of waiting for orders from customers who have reduced and also at times delay in payment and yet the enterprises has incurred costs in serving the customer. By making excess garments they are trying to influence demand by attracting new or more customers by keeping up with the latest fashion. This is a strategy, to stay a head of demand by carrying excess capacity.

It is recommended that entrepreneurs should find a way to utilise their capacity effectively. The entrepreneurs have an option of hiring out excess capacity like the machines when the demand is low. Another option is to lease machines instead of buying, because they may not need when the high season peak is over. In this way they do not incur extra capital costs for no reason. Costs should only be incurred when a productive activity is carried out.

It is also recommended that Non-Governmental Organisations (NGOs) should assist the entrepreneurs in the area of technology. They could come up with machines that are cheaper and easier to maintain with spares parts that are affordable and available for the entrepreneurs. They should also find ways to assist the entrepreneurs access credit facilities. Though they have reached a number of entrepreneurs, majority of the entrepreneurs still lack credit facilities. It is further recommended that they should not only get access to credit but they

should also be taught how to manage the loans (funds are also capacity resources). Due to the fact that funds are scarce, they should be better managed and utilised effectively.

It is also recommended that the policy makers should understand the environment these enterprises operate in, the constraints that are on their way of success and come up with policies that will not as much as protect them but provide an enabling environment, that gives them a fair chance in the business environment.

The recommendations made are confined to the optimal utilisation of existing capacity instead of expansion. Many entrepreneurs did not have business plans and expansion can only be successful through proper planning so that all the other business efforts are in harmony. Once the enterprises have turned the question of “what to do with idle capacity” to “how to find more capacity without having to invest huge amounts of capital” then they are ready for expansion.

6.4. Conclusions

The success of a manufacturing organisation is largely measured by the effectiveness with which it utilises the various kinds of assets entrusted to it: facilities, technologies, and skills, (Hayes and Wheelwright, 1984). Capacity management of any enterprise is crucial for its success. A question was posed to the enterprises, inquiring about the problems they were facing. None mentioned any capacity management problem. It is therefore important for the enterprises to identify the bottlenecks in its operations, by focusing its effort on better managing and controlling its production processes. In the end they will be able not only to increase its available capacity but improve the quality of its products and lower costs, without

necessarily investing thousands of shillings. Once the true cost of productive and idle capacity is understood, opportunity for savings becomes significant. When the enterprises realise that idle capacity costs, the entrepreneurs/managers can quickly find ways of utilising it or disposing of the idle capacity which is generating cost. Further research can be done on these area

- Assessment of low capacity utilisation in MSEs (nature and extend of low capacity utilisation),
- Costing of capacity and applicability of the capacity model in MSEs, and
- Also a comparative survey research can be done on the medium sized enterprises so as to find out whether the size of the enterprise has its unique capacity management style or some comprehensive practises can be identified among sample them.

6.5. Limitations

Information on MSEs capacity management is limited. There is information on other issues such as problems facing MSEs, investment decisions etc. and most of these studies were cross-sectional data which might only be applicable to a particular period of time.

Small firms are so varied, even within a single industry, firms and entrepreneurs differ tremendously. This report looks broadly at capacity utilisation decisions and factors that influence these decisions. The study does not consider the difference in the various garments for instance making shirts and a *kitenge* is very different. Making shirts is much easier and cheaper than making a *kitenge* which has a higher price tag and takes longer to make than a shirt.

The study analyses 97 enterprises only and considers this as a representative of the entire small garment enterprises in Kenya.

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Appendix 1: QUESTIONNAIRE

A: BUSINESS PROFILE

1. Market _____
2. Type of garment firm;
 - a. customer tailor
 - b. contract workshop
 - c. mini-manufacturer
 - d. mass producer
3. Name of enterprise _____
4. Type of garment products
 - a. Standard garments
 - b. High fashioned garments
 - c. others (specify) _____
5. How many garments do you produce;
 - a. Weekly _____
 - b. Monthly _____
 - c. Annually _____
6. How do you determine the capacity of the enterprise?
 - a. Average output per month
 - b. Maximum achievable output for the period.
 - c. The best performance actually achieved in the past.
 - d. Others, specify _____
7. No. Of years in business _____
8. Which of the following markets best describes the primary market(s) that your business serves?
 1. Local
 2. Regional Area
 3. National (district/province)
 4. International

B: BIOGRAPHICAL DATA

9. Position of the respondent
 - a. owner
 - b. manager
 - c. owner/manager
 - d. other, specify.
10. Education level
 - a. No formal education
 - b. Adult education
 - c. Lower primary
 - d. Upper primary
 - e. Lower secondary
 - f. Upper secondary
 - g. University/college
11. Have you had any training? a. Yes b. No
12. If yes, please specify the type of training and length of period in training?

C. PERFORMANCE OF FIRMS

Business Growth:

13. Have you experienced any growth in your business?

1. Yes 2. No

14. If yes complete the table below: (Place a tick where appropriate)

Area of Growth	Current year	One Year Ago	Two years ago	Other years specify
1. Sales volume				
2. Production lines				
3. Profits				
4. Employment				
5. Increase in stock				
6. New businesses				
7. Others (specify)				

15. If yes, what has contributed to this growth (major reasons)?

- a. Loans/credit b. New Markets
 c. New products d. New technology
 e. Others (specify) _____

16. Assess overall demand for your products over the last 2 years

- a. Increased b. No change c. Decreased

17. Income from the enterprise

Items Per Month	Currently	1 year ago	2 years ago
a. How much sales do you make per Month?			
b. How much did you spend on inputs?			
c. How much did you pay on salaries/wages?			
d. How much did you pay for monthly rent, security and storage?			
e. How much did you spend on electricity and water (if any)			
f. How much did you pay for transport?			

g. How much did you spend on other operating costs (specify them)			
h. TOTAL MONTHLY COST			
i. Estimate profit for the year from the enterprise			

18. What have you done with the profit from the enterprise in the last two years?

- a. Purchased assets
- b. For non-business responsibilities eg paying school fees
- c. Reinvested (expanded business)
- d. Saved
- e. Used for daily expenditure
- f. Purchased land
- g. Started another business
- h. Others (specify).

Please give your assessment of the overall performance of your business using the response scale given below to indicate the level of performance that your business has achieved.

1. Very Low 2. Low 3. Moderate 4. High 5. Very High

19. Sales growth for the past 2 years _____
20. Average profitability in the last 2 years _____
21. Ability to attract & maintain employees
(e.g. longest serving employees Vs newest) _____
22. Quality of your products _____
23. Service to your customers _____
24. Satisfaction and morale of employees _____
25. Potential for growth in sales/profits
in the next 2 years _____
26. Development of new or improved
products/services _____

27. Development of new or improved _____
production methods
28. Please indicate, in order of priority, four major problems faced by your firm.
- Competitors
 - Raw material shortage
 - Lack of qualified skilled employees
 - Access to market opportunities
 - Lack of space.
 - Interference from local authorities
 - Others specify _____
29. What are the causes of the problems?

D: BUSINESS PHILOSOPHY

30. Have you ever developed a business plan for your business? a. Yes b. no
31. If Yes, what have you included in your business plan?
- _____
 - _____
 - _____
 - _____
32. When did you develop this business plan? _____
33. How many times have you changed it since then?
- Never
 - Once
 - Twice
 - More than three times.
34. To what extent would you agree with the following statements:

S.A = Strongly Agree A = Agree D = Disagree S.D = Strongly Disagree

	S.A	A	D	S.D
I consider my business successful				
I am satisfied with income my Primary business generates				
My employees are happy with their jobs				
My products/services are superior				

I intend to keep my business more Or less of its present size				
I intend to expand my business				

35. What are the business policies? (For instance what time do you open, close the enterprises etc)

E. CAPACITY UTILISATION

36. Utilisation of capacity resources

Question	Machines	Employees
1. How many do you have?		
2. What type are they?	1. Foot-powered machines 2. Motor-powered machines 3. Specialised machines 4. Others specify _____ _____ _____ _____	1. Trainees 2. Skilled employees 3. Unskilled employees 4. Skilled casuals 5. Unskilled casuals 6. Others specify _____
3. Are they the standard required for the jobs?	1. Yes 2. No	1. Yes 2. No
4. When did you purchase/employ/hire?	1. Machine 1 _____ 2. Machine 2 _____ 3. Machine 3 _____ 4. Machine 4 _____ 5. Machine 5 _____ _____ _____ _____	1. Employee 1 _____ 2. Employee 2 _____ 3. Employee 3 _____ 4. Employee 4 _____ 5. Employee 5 _____ _____ _____ _____
5. Is there any time when idle?	1. Yes 2. No	1. Yes 2. No

6. If yes, what is the reason(s) for its been idle		
7. For how long (in hours) can it be idle 1. A day 2. A week 3. A month	 	
8. Is there any time when non-productive?	1. Yes 2. No	1. Yes 2. No
9. What are the reasons for being non-productive?		
10. Do you think you need more machine/employee?	1. Yes 2. No	1. Yes 2. No
11. If yes, why do you need more?		

37. Do you make all your garments, from start to finish? a. yes b. no

38. If no, why not?

a. out source some activities

b. lack of the certain material

c. Lack of certain machines (different technology)

d. Others specify _____

39. Why do you out source some of the activities

a. to reduce cost

b. lack of proper equipment

c. lack of employees with skills

d.to meet demand

e.Others specify _____

F.LONG-TERM CAPACITY STRATEGIES

40. How often do you change your capacity usage or non-usage?

41. What are the factors that influence your decisions on how to use or not use capacity?

a.Increase of demand

b.Decrease of demand

c.Technological change

d.External environment

e.Other specify _____

42. What long-term capacity strategies does your company use

a.Stay ahead of demand (carry excess capacity)

b.Lag behind demand (carry less capacity)

c.Match anticipated demand with production capacity (build to forecast)

d.None

e.Others specify

43. If yes why do you follow the chosen strategy

44.If you carry excess capacity, in what form do you carry it?

a.Inventory

b.Excess production resources such as excess equipment, people, floor space and system

c.Cash capacity for expansion

d.General purpose cash cushion.

45. Why do you carry excess capacity?

46. Why do you prefer the chosen form of capacity?

47. When there is low demand, what do you do with excess capacity

a. Nothing, lies idle b.Hire out equipment

c.Sell out equipmentd. d. Fire employees

e.stop taking in casuals

48. Do you scan the environment the enterprise operates in? a. Yes b. No

49. If yes, why _____

50. If no, why not _____

51. Do you prepare for possible scenario that may occur?

a. Yes b. No

52. If yes how do you prepare?

THANK YOU