

**TOTAL QUALITY MANAGEMENT AND COMPETITIVE  
ADVANTAGE OF SMALL AND MEDIUM ENTERPRISES IN  
NAIROBI CITY COUNTY**

**BY**

**GITANGU IRENE WANJIKU**

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## **DECLARATION**

I, the undersigned, declare that this research project proposal is my original work and that it has not been previously presented for a degree at the University of Nairobi or any other university.

SIGNED.....

DATE.....

**Irene Wanjiku Gitangu**

**D61/68462/2013**

This dissertation has been submitted for examination with my approval as the supervisor.

SIGNED.....

DATE.....

**Mr. Ernest O. Akelo**

**Senior Lecturer**

**School of Business, University of Nairobi**

## **DEDICATION**

This project is dedicated to my parents, Mr. and Mrs. Gitangu, my siblings Michael, Dennis, Kevin and Mercy and to my friends.

Thank you so much for your endless encouragement and support and for believing in me. God bless you so much.

## **ACKNOWLEDGEMENT**

I would like to thank our Heavenly Father for granting me His grace to carry out and finish up this research project successfully.

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## **LIST OF ABBREVIATIONS**

TQM	-	Total Quality management
SMEs	-	Small and Medium Enterprises
MSME	-	Micro, Small and Medium Enterprises
GOK	-	Government Of Kenya
ISO	-	International Organization for Standardization

## **ABSTRACT**

Total Quality Management is an approach which focuses on improving the organization's effectiveness, efficiency and responsiveness to customers' and other stakeholders' needs by actively harnessing people's skills and competencies in the pursuit of achieving sustained competitive advantage. Although it is generally accepted that Total Quality Management (TQM) can generate a sustainable competitive advantage, there is, surprisingly, little research that has been carried out in developing countries. Most of the literature that supports this has come from developed countries. In developing nations like Kenya, Small and Medium scale industries (SMEs) play a vital role in providing employment and boosting the economy of the country. The objective of the study was to identify the critical success factors that contribute to competitive advantage in SMEs in Nairobi and to establish a guideline that management can use to improve their firm's competitive advantage above their competitors.

This study included a questionnaire survey where small and medium enterprises claiming to adopt Total quality management practices in their structure of governance were questioned. From the results, the study aimed to deduce that the content of TQM is capable of producing a competitive advantage to SMEs.

Results established that there exists a correlation between total quality factors and competitive advantage. Results inferred from the questionnaire survey is that the small and medium scale enterprises in Nairobi are trying cope with new quality management practices to increase the productivity. From the findings, the study recommends that SMEs should establish quality management systems and improve on their quality management programs to ensure effective TQM implementation and for the overall success of the company.

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# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Background of the study**

In today's world, organizations are facing the growing challenges from global competition and more sophisticated customers in terms of what they want and their changing needs. Competition has become a major challenge which chief executives must meet effectively to remain in business. Organizations have started adopting appropriate management strategies in the field of quality, to succeed in the market place and small scale enterprises are of no exception. Most managers agree that for an organization to be successful it must change continually in response to significant development, such as customer needs, technological breakthroughs and government regulations (Eke, 2001). Globalization of market and operations forces organizations to rethink their quality problems and in turn their overall organization competitiveness. In order to be successful in this global market, organizations should dedicate themselves to improving productivity and quality in a timely and collaborative manner (Dobyns & Crawford, 1994).

One of the main ideas that came from the Japanese industry is Total Quality Management (TQM), which means that all workers within a given organization must participate in improving the product or service quality. To achieve world class customer service, Total Quality Management (TQM) techniques, supported by management commitment and good organization will provide objective means of improving quality and hence the overall organization competitiveness. TQM is an integrated approach to satisfy internal and external customers, planning and managing processes. It involves quality planning, quality control, quality assurance and quality improvement. It is among the new techniques that modern organizations now employ with very good effect to secure and keep their customers permanently satisfied.

The role played by the small business has a vital input in the socio-economic and welfare development of any nation and cannot be overestimated. Small and medium industries are the back bone of modern economy. They are the major aspect in upholding private sector development and joint venture hence they need to remain competitive and produce high quality outputs, which is of paramount importance not only at macro level but also at micro level. Small and medium scale enterprises are often the suppliers of goods and services required by large scale enterprises, and if

they lack quality in their goods and services, it will have an adverse effect on competitive ability of the large scale units. Small and Medium Enterprises (SMEs) not only contribute significantly to improved living standards, employment generation and poverty reduction but they also bring about substantial domestic or local capital formation and achieve high levels of productivity and capability. TQM is considered an important quality improvement tool in large scale industries. However the awareness and adoption of TQM techniques in small & medium enterprises is still growing.

### **1.1.1 Total Quality Management**

TQM is a necessity, it is a journey, and it will never end (Ho, 1999). What exactly does it entail then? First and foremost, there is the need to separate the words and define them. Total means everyone associated with the company is involved in continuous improvement (including customers and suppliers if possible), quality means customers' (expressed and implied) requirements are met fully and management means executives are fully committed (Ho, 1999).

The methods for implementing TQM came from the teachings of quality 'gurus' such as Philip B. Crosby, W. Edwards Deming, Armand V. Feigenbaum, Genichi Taguchi, and Joseph M. Juran. TQM, in the form of statistical quality control, was invented by Walter A. Shewhart. It was initially implemented at Western Electric Company, in the form developed by Joseph Juran who had worked there with the method. TQM was demonstrated on a grand scale by Japanese industry through the intervention of W. Edwards Deming—who, in consequence, and thanks to his missionary labors in the U.S. and across the world, has come to be viewed as the "father" of quality control, quality circles, and the quality movement generally.

For Deming (1986), quality represents “a predictable degree of uniformity and dependability at low cost and suited to the market”. From his point of view “quality should be aimed at needs of the consumer. He preached that to achieve the highest level of performance requires more than a good philosophy – the organization must change its behavior and adopt new ways of doing business. His philosophy resulted in the 14 Points of TQM, which can be summed up by saying management must redesign their processes and systems to: Plan, Do, Check and Act (PDCA).

Definitions from other gurus include, “fitness for use” (Juran, 1988), “the minimum loss imparted by the product to society from the time the product is shipped” (Taguchi, 1986), “in its essence a way of managing the organization” (Feigenbaum, 1986), “correcting and preventing loss, not living with loss” (Hoshin, 1986) and “conformance to requirements” (Crosby, 1979)

Total Quality Management (TQM) is a comprehensive and structured approach to organizational management that seeks to improve the quality of products and services through ongoing refinements in response to continuous feedback. It is a comprehensive management approach that works horizontally across an organization, involving all departments and employees and extending backward and forward to include both suppliers and clients/customers. TQM views an organization as a collection of processes. It maintains that organizations must strive to continuously improve these processes by incorporating the knowledge and experiences of workers. The simple objective of TQM is “Do the right things, right the first time, every time.” TQM is infinitely variable and adaptable.

### **1.1.2 Competitive Advantage**

A competitive advantage occurs when an organization acquires or develops an attribute or combination of attributes that allows it to outperform its competitors. These attributes can include access to natural resources or access to highly trained and skilled personnel human resources. Firms could seek to achieve advantage over competitors through low prices or aim to build up competitive advantage by offering unique products which are characterized by valuable features, such as quality, excellent performance, innovation, and customer services (Porter, 1985). Additionally, Resource-based view states that resources are most important for gaining a competitive advantage and certain characteristics and combinations of these resources can create sustainable competitive advantage.

Competitive advantage is a key determinant of superior performance, and ensures survival and prominent placing in the market. Superior performance is the ultimate, desired goal of a firm; competitive advantage becomes the foundation. It gives firms the ability to stay ahead of present or potential competition and ensure market leadership. The most used measures of competitive advantage in TQM literature are

improved revenues, growth in market share, product quality and customer satisfaction (Shenawy et al., 2007).

Shenawy et al. (2007) show that firms with TQM could achieve competitive advantage, because it leads to improved financial performance, improved customer satisfaction, faster response to competitive environment and improved product quality. Kumar et al. (2009) improvements in quality and productivity through effective TQM enable firms to increase their market share and to charge higher prices for their products, which, in turn, results in higher profitability. Increased market share and product quality leads to competitive advantage for firms. In contrast to Kumar et al. (2009), Jimenez and Costa (2009) describe that TQM leads not only to higher quality products but also to cheaper products through cost efficiency which generates competitive advantage.

### **1.1.3 Small & Medium Enterprises (SMEs)**

There is hardly any unique, universally accepted definition of small & medium enterprises because the classification of business into small or large scale is a subjective and qualitative judgment (Ekpeyong & Nyong, 1992). Various criteria such as the number of employees, size of operation, investment in fixed assets, investment in plant and machinery, use of power etc. are taken by world countries to differentiate small scale industry from medium scale and large scale industries.

In Kenya the (MSME Bill, 2009) defines SMEs in terms of employees, annual turnover, investment in plant and machinery, equipment investment and registered capital. For this paper the definitions of Small and Medium Enterprises sector in Kenya are based on employment size. A micro-enterprise is defined as having no more than 10 employees; a small enterprise with 11-50 employees; and a medium enterprise with between 50 to 100 employees while large enterprises have over 100 employees (Louis & Annette 2005; Parker and Torres, 1994).

Small and medium enterprises play an important role in the Kenyan economy and are accorded high priority in the development policy (GOK, 2007). According to the Economic Survey (2006), the sector contributed over 50 percent of new jobs created in the year 2005. Approximately 80% of Kenya enterprises are small and medium enterprises which are highly attractive to investors (Ministry of Trade and Industry,

2003). According to Beck and Levin, (2005) SMEs enhance competition and entrepreneurship hence have external benefits on economy wide efficiency, innovation and aggregate productivity. They are the primary vehicles by which new entrepreneurs provide the economy with a continuous supply of ideas, skills, and innovations (CACCI, 2003). Globally there is an agreement that SMEs hold the key to economic growth based on the fast growth of enterprises and their role in generation of employment. According to Normah (2007) the concentration of SMEs has a close relationship with the dominant economic activities. SMEs dominate the world economies in terms of employment and number of companies, yet their full potential remains remarkably untapped (Schlogl, 2004; Omar, Arokiasamy & Ismail, 2009).

## **1.2 Problem Statement**

To many SMEs, the applicability and utility of TQM remains a challenge. It is generally recognized that Small and Medium Enterprises (SMEs) face unique challenges, which affect their growth and profitability and hence, diminish their ability to contribute effectively to sustainable development. However, it cannot be denied that SMEs enjoy many advantages over large scale enterprises and also, effective implementation of TQM, with commitment, can bring about noticeable improvement in product/service quality and organizational performance.

The small and medium enterprises (SMEs) play an important role in the Kenyan Economy. According to the Economic Survey (2006), the sector contributed over 50 percent of new jobs created in the year 2005. Despite their significance, past statistics indicate that three out of five businesses fail within the first few months of operation (Kenya National Bureau of Statistics, 2007). In Nairobi, the SME sector's contribution has fallen short of its potential due largely to lack of effective quality management and coordinated effort to support SMEs operations. Most SMEs struggle to operate, manage and improve their businesses efficiently in order to consistently deliver quality products and services on time (Osugwu, 2008). Among the numerous challenges to increase performance and growth of most of these companies include quality management practices.

It seems however that the awareness of the concept and its principles is still very low in developing countries, most especially in small and medium scale enterprises (SMEs), and therefore, not much has been done to actualize the benefits. According to

Goh and Ridgeway (1994), SMEs have been slow to adopt quality management techniques in comparison with large organizations in less developing countries.

Studies by Elimuti and Kathawala (1999) indicate that the adoption of quality by small businesses has been minimal. The initial emphasis for a long time has been measuring the success of a business in relation to mass production. Research has confirmed the strategic benefits of quality programs and better quality is proven to contribute to greater market share and return on investment (Cole, 1992; Phillips, Chang & Buzzell, 1983), lower manufacturing costs; improve productivity (Garvin, 1988) and improve the area of strategic performance (Zhang, 2000).

A study by Asamba (2014) on Total Quality Management and competitive advantage of commercial banks in Kenya showed that Commercial banks in Kenya have introduced innovative measures, all in the interest of enhancing customers' comfort. However, these efforts which aim at bringing satisfaction to the customers seem to be futile. Customers' preferences and expectations seem not to match up with the bank's initiatives. The study found that there is significant correlation between the implementation of Total Quality Management practices and customer satisfaction and business. Customer satisfaction increases profitability, market share, and return on investment which leads to competitive advantage.

In a similar study, Awino et al. (2012) in their study on Total Quality Management and competitive advantage of firms in the horticultural industry in Kenya, showed that it is not total quality that has been posting different results, but lack of effective implementation of total quality. A crucial finding was the poor evidence of the leadership concept and the tendency of taking quality certification as an end by itself. It is demonstrated that most of the certified companies do not understand the philosophy behind quality management and, therefore, cannot implement it effectively.

Research shows that most SMEs loose between 5%-15% of sales revenue as a result of the lack of attention to quality (McMahon, 2001). This suggests that formal quality management systems are important tools contributing to the growth and development of SMEs while offering the firms competitive advantage. Growth is the second most important goal of a firm, the most important one being firm survival. Aversion to growth has been said to be the principal reason why most SMEs stagnate and decline

(Clark et al., 2001). So, is there a relationship between TQM and competitive advantage?

### **1.3 Research Objectives**

The following were the main objectives of the research:

- i. To establish the awareness and adoption of TQM concept and practice among small and medium enterprises in Nairobi
- ii. To establish the practices of TQM and competitive advantage in small and medium enterprises
- iii. To determine the relationship between TQM and competitive advantage?

## **CHAPTER TWO LITERATURE REVIEW**

### **2.1 Introduction**

A review of literature was conducted to gain an understanding of the nature of total quality management and competitive advantage in SMEs in Nairobi. There is considerable literature covering quality management in SMEs in developing countries which aided in providing a general understanding of how TQM can lead to competitive advantage. This literature examined the TQM principles, the results of adopting them and their relationship in leading to competitive advantage in SMEs.

### **2.2 Total Quality Management**

Powell (1995) describes TQM as an integrated management philosophy and a set of practices that emphasizes various aspects in a firm. For example, TQM might lead to continuous improvement, meeting customers' requirements, increased employee involvement/teamwork and problem-solving. TQM requires firms to coordinate a wide range of behavioral, tacit- and intangible resources (Powell, 1995). TQM success appears to depend critically on executive commitment, open organization, and employee empowerment, and less upon such TQM staples as benchmarking, training, flexible manufacturing, process improvement, and improved measurement (Powell, 1995).

Hackman and Wageman (1995) describe that achieving TQM's normative outcomes is rooted in four interlocked assumptions about quality, people, organizations, and the role of senior management. Additionally, Reed et al. (1996) argue that TQM is a business strategy. They mention that TQM goes beyond process and should address strategy content options, which are product design efficiency, product reliability, process efficiency and market advantage. Furthermore, Easton and Jarrel (1998) define TQM as a management system which include key characteristics as process focus, quality focus, customer focus, employee involvement and development, supplier focus.

According to Douglas and Judge (2001), implementation of TQM within the organizations is accomplished through a set of practices that supports the philosophy of TQM. These TQM practices can be combined with other organizational assets to increase performance and generate competitive advantage (Douglas & Judge, 2001).

So, in order to put the TQM philosophy into work, a set of TQM practices need to be implemented in firms.

### **2.2.1 Benefits of Total Quality Management**

There is a growing body between the adoption of Total Quality Management and improved firm performance (Easton, 1998). Given the link that exists between competitive advantage and performance, it is perhaps not too surprising that it has been claimed that TQM or similar quality management practices can be used to generate a competitive advantage (Young, 1996).

A major long-term benefit of Total Quality Management relates to customer satisfaction. TQM aims at improving quality, and identifies the best measure of quality as matching customer expectations in terms of service, product, and experience. TQM interventions quantify problems and aim to achieve the best state defined in terms of such customer expectations.

Some examples of the application of Total Quality Management to improve customer satisfaction include; reduction of waiting time by changing the method of appointment scheduling or client handling; making changes to the delivery process so that the product reaches the customer faster; and better quality products requiring no repairs improving customer loyalty

Among the major benefits of Total Quality Management is improvement in Organizational Development. TQM heralds a change in the work culture by educating all employees on quality and making quality the concern of everybody, not just the Quality Control department. The focus on quality leads to a proactive work culture aimed at preventing mistakes rather than correcting mistakes.

Total Quality Management's focus on teamwork leads to the formation of cross-departmental teams and cross-functional knowledge sharing. Such interventions lead to many benefits such as; improvement in communication skills of individual employees and overall organizational communication; knowledge sharing, resulting in deepening and broadening of knowledge and skill-set of team members, and the making of a learning organization; and flexibility for the organization in deploying personnel, contributing to rightsizing, and ensuring cost competitiveness.

Another benefit of Total Quality Management is that TQM promotes the concept of internal customer/supplier satisfaction. For instance, the HR department considers employees as internal customers and processes their queries or requests within the specified time limit.

A major application of benefits of Total Quality Management relate to Human Resource Management. Application of TQM in an organization brings about the following benefits to the Human Resources of an organization; it extends the ownership of the business process to each employee involved in the process by empowering them to rectify mistakes on the spot without supervisor review or action; it thrusts on eliminating mistakes and improving productivity contributing to accomplishment of targets faster; it thrusts on quality leads to identifying skill-deficiencies in employees and providing training and other interventions to bridge such deficiencies. The enhanced productivity brought about by TQM translates to better profits for the organization, and consequently better wages.

### **2.3 TQM Practices**

TQM critical success factors are practices within firms oriented towards quality, TQM links with customers, links with suppliers, process control and human resources (Forza & Fillipini, 1997). Jimenez and Costa (2009) categorize TQM elements in two categories which are technical and intangible elements. Technical elements are process control and problem-solving tools, and intangible elements are leadership, organizational culture, commitment and empowerment (Jimenez & Costa, 2009). Hendricks and Singhal (2000) mention that implementing TQM effectively requires that firms move away from inspection and towards approaches that are based on prevention and customer focus.

Achieving effective TQM requires top management commitment, training and education of employees, employee involvement, continuous process improvement, developing long-term relationships with suppliers, and a real focus on quality throughout the organization (Hendricks & Singhal, 2000). In line with this, Taylor and Wright (2003) describe that effective TQM practices include quality objectives in strategic planning processes and involvement of management and employees in implementation process. Furthermore, Kaynak (2003) mentions that the TQM practice management leadership is important for effective TQM.

TQM factors, as they have been detected in recent studies are the following: top management commitment, employee empowerment through training and education, employee involvement, continuous process improvement, long-term supplier relationship and quality focus. The literature support the assumption that these practices are needed to have an effective TQM system. Further, these practices are selected, because they cover both technical elements and intangible elements within firms. Technical elements are process improvement and quality, and intangible elements are top management commitment, training and education, employee involvement and supplier relationship.

### **2.3.1 Management Commitment**

In most organizations, top management typically acts as a leader or driving force in the implementation of the TQM such as creating values, goals and systems for customer's satisfaction. The critical role played by the top management through strong commitment is essential to ensure the effective implementation of the TQM. To ensure the top management perform their responsibilities effectively, they need to be skilled in communication, team building, measurement, decision-making and self-management (Koehler & Pankowski, 1996).

If all these elements can be implemented effectively, it can lead to effectiveness of TQM strategies in various dimensions including the TQM work processes, work environment, cost savings and customer needs. Puffer and McCarthy (1996) provide a framework for leadership in a TQM context and argue that top management's ability to create a vision and promote change is at the heart of successful TQM implementation. The seminal TQM literature declares that commitment from top management is an important part of leadership, and it should be demonstrated with both directive and supportive behavior.

### **2.3.2 Customer Focus and Satisfaction**

Customer expectations are increasing and changing with the dynamics of global environmental changes. Organizations are benchmarking one another so as to unravel the secrets behind their successes. It has long been recognized that customer satisfaction plays a crucial role for success and survival in ever increasing competitive market (Fen & Lian, 2001). According to Quirke (1995), the major challenge to

organizations is how to acquire customers, retain them, build relationships with them and discover ways of being more valuable to them before the competition does. No organization can achieve this without continuously improving not only its products or services but also processes and people.

Therefore, the implementation of TQM can be considered as a failure if value added service cannot be provided to the customers consistently (Thiagarajan & Zairi, 1997). In order to fulfill the needs of the customers, SMEs need to focus on all criteria of products and services that contribute to the value and customer's satisfaction (Hunt, 1995). To achieve these objectives emphasis should be given to the interaction between an organization and its customers as this is very important (Flynn, 1994). From the interaction with the customers, the organization is able to determine the critical specifications for them to obtain vital information directly.

### **2.3.3 Benchmarking**

The requirement in practical benchmark is to gain competitive advantage through systematic comparison. Benchmark refers to the measurement and analysis of products, services and techniques of competitors in the same sector (Ahire et al., 1996). In other words, the benchmark allows organizations to be constantly one step ahead of other competitors. Among the criteria that can be served as a benchmark are the effectiveness of internal processes, customer and employee satisfaction. Undebatably, the benchmark can enhance various dimensions of organizational performance leading to a sustainable competitive advantage.

### **2.3.4 Relationship with Suppliers**

Suppliers play an important role in determining the success of TQM. The qualities of products manufactured or services provided depend on the extent of quality of the materials supplied or by flexibility, speed and cost of the services provided by the suppliers (Ahire et al., 1996). Realizing the importance of the role of provider, Deming emphasized that an organization should stop the practice of choosing suppliers based on cost only. There is a need to build a solid relationship with qualified suppliers despite the small amount. Qualified suppliers are referred to the good, reliable, competitive and cooperative suppliers (Ahire et al., 1996). Furthermore, eligible suppliers must meet the prerequisite specifications and request

that are ultimately able to improve the quality of manufactured products. Furthermore, long-term relationship with a supplier apart from the selection of quality suppliers enables organizations to have a positive impact.

### **2.3.5 Continuous Improvement**

The philosophy of TQM is built from the principle of continuous improvement of the entire team in the organization to meet customer's needs (Benavent et al., 2005). As described by Deming (1986), organizations need to improve the production and service systems consistently to improve quality and productivity, hence reducing costs. However, organizations nowadays need to expand the aspects of continuous improvement and not only focusing on the product or service context and the direct process, but also on the management of the organization itself and that it also needs to improve (Dean & Bowen, 1994). In other words, continuous improvement is not a specific agenda but a continuous journey that involves every element of the organization involved.

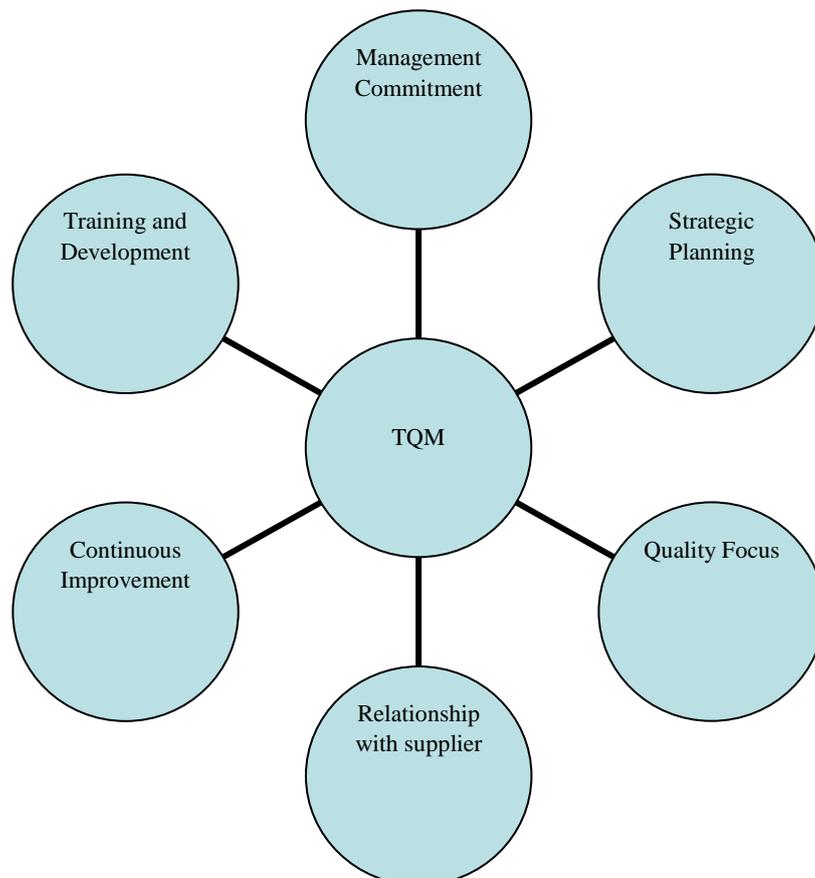
### **2.3.6 Employee Empowerment (Training and Development)**

Crosby said that the idea of causing quality to become a normal part of an organization's operating arsenal did not catch on automatically (Crosby, 1996). It takes training and development of staff towards the organizational objectives of continuous improvement to meet up with sophisticated customers' needs and excel the competitors in the global market economy. Organizations should take into account that before external customers can be satisfied, some of the obstacles to the internal customers, that is, the employees should be dealt with in order to create the conditions necessary for them to produce and deliver quality.

In commenting on the effectiveness of continuous improvement in achieving organizational quality objectives, Stahl (1995) posts that training and development should not be seen as a one-time event but a lifelong process. Many organizations recognize today that due to the massive changes taking place in the business world, booster shots of training and development are needed throughout employee careers. This will help them to acquire the necessary skills to initiate improvement strategies that would add value to customers.

### 2.3.7 Quality focus

Reed et al. (1996) describe quality as both producing products to specification and meeting customers' expectations. Meeting the needs and expectations of customers is a key input to TQM. (Reed et al., 1996). In line with this, Easton and Jarrel (1998) describe product and service quality as emphasis on customer requirements and customer satisfaction. Hendricks and Singhal (2000) mention that producing high quality products increases customer satisfaction and loyalty. Mehra et al. (2001) define quality as what is dictated by the market dynamics and what is demanded by the customer. Furthermore, Chong and Rundus (2004) describe that focus on quality in production and processes improve product and service quality, which in turn lead to higher customer satisfaction. Thus, real quality focus throughout the organization is the main principle of effective TQM. There is no general definition of quality, but the literature describes that quality focus is about meeting requirements and needs of customers with high 14 quality products. Focusing on quality in whole organization and producing of high quality products increases customer satisfaction.



**Figure 2.1: TQM Practices**

Source: Author (2015)

## 2.4 Competitive Advantage

There are two complementary models of competitive advantage, both of which are grounded in economic theory (Conner, 1991; Porter, 1980, 1985). The first model (the market-based model) focuses on cost and differentiation and contends that the environment selects out firms that are inefficient or that do not offer products for which consumers are prepared to pay a premium price. This theory of advantage is mainly driven by external factors (opportunities, threats, and industry competition) and, as Porter (1985) points out, sustaining an advantage means presenting competitors with “a moving target.” The second model centers on the firm's resources and is driven by factors that are internal to the firm. Idiosyncratic resources that provide operational superiority or help create a superior market position allow the firm to generate superior returns. In this resource-based theory model, sustainability of advantage relies upon competitors not being able to imitate resources.

Resources include “assets, capabilities, organizational processes, firm attributes, information, and knowledge,” and can be classified in terms of physical, human, or organizational capital (Barney, 1991). Human and organizational capital are viewed as being the main drivers of competitive advantage because, unlike physical capital, they are not as easily acquired in factor markets. Hall (1992, 1993) points out that the “lasting and superior nature of intangible resources” (e.g., employee know-how, ability to manage change) are sources of sustainable advantage. Lado and Wilson (1994) see human resource systems as important because they are “firm specific, produce complex social relationships, are embedded in the firm's history and culture, and generate tacit organizational knowledge.” Heterogeneity among firms' human and organizational resources is at the heart of the resource-based view of competitive advantage.

The firm with resources that are different from and superior to those of competitors have the ability to generate economic rents. In Barney's (1991) terms, resources must be both rare and valuable, and if an advantage is to be sustained beyond the short term, the resources must also be imperfectly mobile (i.e., they cannot be easily obtained on the open market by competitors). Schonberger (1992) describes that quality provides competitive advantage, so quality management systems like TQM could generate competitive advantage for firms. Powell (1995) mentions that TQM is

a potential source of sustainable competitive advantage for companies. Powell (1995) concludes that firms with implemented TQM combined with tacit resources (e.g. employee empowerment) can outperform competitors with the accompanying TQM ideology.

So, Powell (1995) mentions that firms which have adopted TQM obtain competitive advantage over firms that do not adopt TQM. Furthermore, Reed et al. (1996) describe that TQM could lead to competitive advantage, because improved quality is linked with higher profits and increased market share. Douglas and Judge (2001) also describe that organizations which adopted TQM practices achieved competitive advantages. They mention that TQM practices function as an independent system in organization and when combined with other organizational assets it generates competitive advantage (Douglas & Judge, 2001).

Shenawy et al. (2007) suggested a model for TQM that incorporates five major components of TQM which are top management commitment and leadership, teamwork, culture, training and education, and process efficiency. All these components are positively related with competitive advantage, which means that TQM positively influences competitive advantage of the companies (Shenawy et al., 2007). The authors present most used measures of competitive advantage in TQM literature, which are improved revenues, growth in market share, product quality and customer satisfaction (Shenawy et al., 2007). So, Shenawy et al. (2007) show that firms with TQM could achieve competitive advantage, because it leads to improved financial performance, improved customer satisfaction, faster response to competitive environment and improved product quality.

## **2.5 Total Quality Management and Competitive Advantage**

The application of Total Quality Management brings forth all-round benefits and makes the organization more competitive. In the new business environment marked by demolition of barriers and free flow of information and products, organizations retain their competitive advantage by reducing prices, improving existing products and innovating new products. TQM is a business strategy that allows organizations to achieve all these and much more.

Sustainability of advantage means that competitors in the market cannot imitate valuable resources, which generates competitive advantage (Barney, 1991). In order to sustain competitive advantage, competitors need to build barriers to imitation. This enables companies to sustain their advantage over a long period of time. A firm has a sustained competitive advantage when it is implementing a value creating strategy not simultaneously being implemented by any current or potential competitor and when these other firms are unable to duplicate the benefits of this strategy (Barney, 1991). Thus, competitive advantage could be achieved through inimitability and non-substitutability. Reed et al. (2000) describe that complexity and tacitness are the main drivers of barriers to imitation. From resource-based theory, we know that tacitness resides within resources, but complexity is the result of interaction among resources. So, this study will focus on complexity and tacitness in order to measure sustainability. Complexity and tacitness could provide inimitability, which is needed to achieve sustainable competitive advantage.

TQM examines the components of commitment by management, training of employees, strategic planning, customer focus, continuous improvement and their interaction when considering the potential for competitive advantage. It has been argued that top management's vision for the future can be a source of competitive advantage (Collins, 1991; Hamel & Prahalad, 1994; Schoemaker, 1992). Schonberger's (1992) conclusions on the role of training as a link between an organization's quality management strategy and its ability to create and maintain an advantage is likely valid but, unfortunately, he does not provide any clear statements on how training actually achieves this linkage. Brown and Karagozoglu's (1993) study of accelerated new product development showed that training was a key part of the strategy for competitiveness in over half of the hi-technology firms in their sample and, not surprisingly, research has also shown that training improves quality (Pfeffer, 1995).

The strategy content of TQM can generate a cost- or differentiation-based advantage. There is agreement among Crosby, Deming, Feigenbaum, Ishikawa, and Juran that the purpose of quality management is to reduce costs and improve customer satisfaction. These ideas fit closely with the market-based view of competitive advantage arising from a superior cost structure or being able to differentiate products in a way that adds value for customers; i.e., the reduced rework and savings that

emerge from improving product quality can help lower a firm's cost structure, and by producing products that better satisfy the requirements of customers, there is the potential for differentiation. Total Quality Management demolishes the myth that increased quality results in increased costs and decreased productivity. TQM proves that quality is actually the key to decreased costs, and better productivity and positions quality as a critical component of strategic business advantage.

Reed et al. (1996) argued that TQM content includes four main components—generating a market advantage, enhancing product design efficiency, boosting product reliability, and increasing process efficiency—and they deduced that a fit is required among the orientation of the firm, the firm's environment, and the four main components of TQM to improve firm performance. For example, firms with a customer orientation operating in environments with high levels of uncertainty should focus on creating a market advantage and on product design efficiency to improve revenues and reduce costs, respectively. For firms with an operations orientation in an environment with low uncertainty, a concentration on product reliability and process efficiency will produce improved revenues and reduced costs, respectively.

A market advantage arises from being market-driven (Day, 1990), which provides the potential for product differentiation through better identification of the needs of customers and the ability to anticipate competitors' product offerings. Likewise, firms that can offer products with a higher reliability than those offered by competitors are, in effect, differentiating their product offerings to customers. Better product design efficiency reduces costs by eliminating parts that do not add value which, in turn, makes products easier to reduce. And, improved process efficiency, which arises from experience curve effects and learning, also reduces costs. We can therefore again conclude that TQM has the potential to generate competitive advantage. However, in this instance, the conclusion is sophisticated by the not unreasonable caveat that the creation of any advantage depends not only on TQM but also on the fit between the strategy, firm orientation, and the environment.

## **2.6 Summary**

Whether in small or medium enterprise, Total Quality Management must be customer driven at all levels. SMEs need to focus on cost control through continuous improvement, so as to earn adequate profits and to deliver goods and services that

customers expect at a price they want to pay. Thus they strive to control their market by gaining and holding market share through commitment by leadership, employee empowerment, customer focus and satisfaction, benchmarking, maintaining good supplier relationships, and continuous cost and quality improvements.

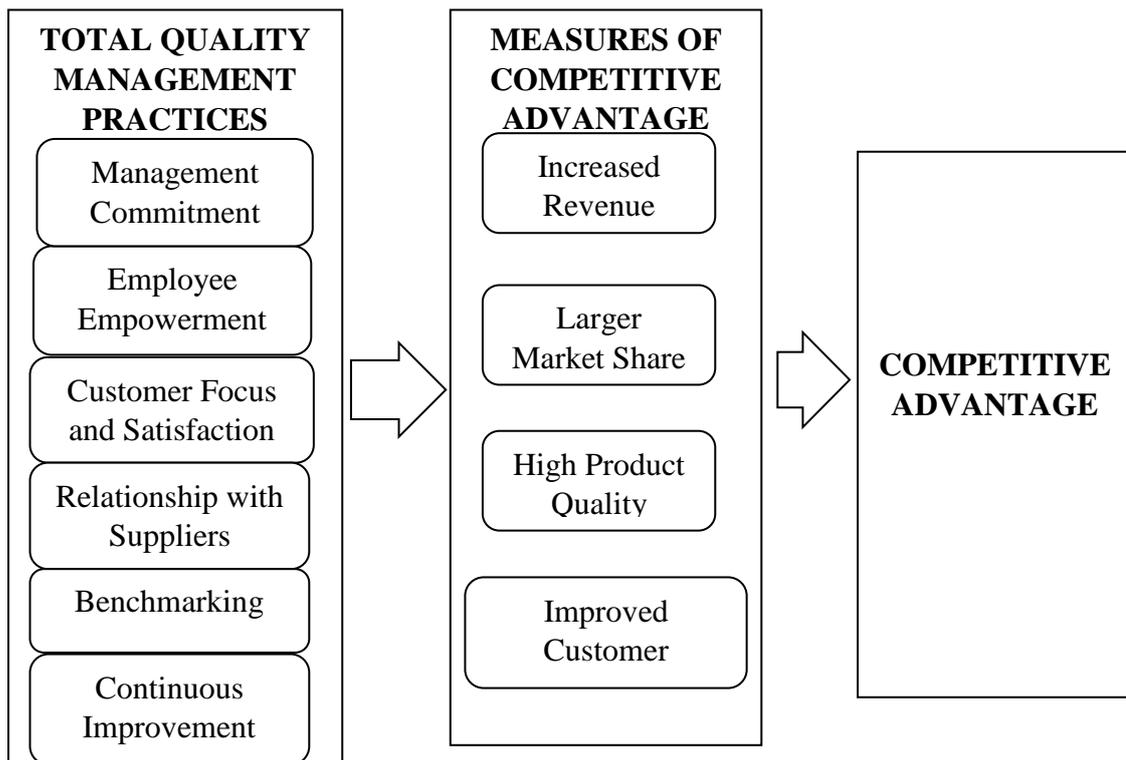
In a study of 180 firms in India, to recognize the critical success factors of TQM practices in Indian SMEs, it inferred that the Indian small and medium scale manufacturing enterprises are trying cope with new quality management practices to increase the productivity. A similar study in Ghana on 116 respondents revealed that quality management when implemented and practiced in Ghanaian small businesses improved the performance of these businesses and helped in the growth of SMEs. The study demonstrated that Ghana owner managers believe quality management is a key-contributing factor to firm growth and sustainability.

These studies satisfied the findings of various research scholars regarding TQM application in SMEs in other parts of the world. On a broader picture, it can be said that leadership and top management vision paves a path for the quality practices to execute in the firms with a clear quality policy. Customer focus is also vital for a SME to sustain and proper care is to be taken to provide adequate service and have feedback from the customer. The study in Ghana revealed that the measurement, analysis, and knowledge management variables must not be overlooked, as careful analysis of customer's information directed the firm on its production policy. Continuous improvement programs with recognition and incentives to employees were prime consideration of the management as revealed by the survey in India but at the same time the Indian SMEs were trailing behind with the factors like fact based management and employee involvement.

The above factors should be given more stress to improve the productivity of the firms. The results indicate that total quality management holds the key to achieve competitive advantage in Indian manufacturing firms. Different components such as utilization of quantitative techniques in process, benchmarking activities, periodic quality audits, item segregation, quality circles, involvement in quality management association, training to employees should be strengthened to create a better quality management environment in the SMEs.

From these studies, it shows that TQM will help SMEs to achieve; improvement, development and growth of the organization from small to medium and to large; customer loyalty; improved product quality; cost reduction and waste avoidance; less error-prone operations; reduction of operating costs; building a happy and bright work-place which is worth-while to work in; improved company image; higher morale and motivation of workforce; and higher productivity.

## 2.7 Conceptual Framework



Source Author (2015)

**Figure 2.2 : Conceptual Framework**

The research framework in figure 2.1 proposes that effective TQM will have an impact on competitive advantage and sustainability of this advantage. Effective TQM is possible through a set of practices. These practices of effective TQM are top management commitment, employee empowerment through training and education, continuous process improvement, long-term supplier relationships and quality focus. The main goals of TQM are process efficiency and improvement, product quality, employee involvement and customer satisfaction. Studies indicate that effective TQM improves revenues, market share, product quality and customer satisfaction. This generates competitive advantage for firms. Also, existing findings indicate that effective TQM provides high complexity and tacitness. These enable firms to sustain their competitive advantage.

## **CHAPTER THREE RESEARCH METHODOLOGY**

### **3.1 Introduction**

This chapter discusses the methodology used in carrying out the research in detail. It includes the research design, instruments used in data collection, sample and sampling technique used, description of tools, instruments used in data collection and the ethical issues observed. It also discusses the techniques used in data analysis.

### **3.2 Research Design**

This study was conducted to research the relationship between TQM and competitive advantage in small and medium enterprises in Nairobi. The propositions of this research are derived from the existing findings in the literature to answer the research question. So, this indicates that this research had a deductive approach. Empirical data was collected through semi-structured questionnaires. Herewith, this study focused on companies that were claiming to adopt TQM practices within their organization. Award nominees and prize winning companies were also among those interviewed to determine the relationship between TQM and competitive advantage. The collected empirical data was used to test the propositions and provide an explanation to answer the research question

### **3.3 Target Population**

The study focused on SMEs in Nairobi and its selected environs namely Athi River, Ruiru and Limuru. To achieve a fair level of representation, organizations, covering manufacturing, trading, oil and gas, banking, insurance, investments and services were selected. According to Nairobi City Council, Licensing department, there are approximately 98,608 SMEs categorized in the different sectors. The key sub-sectors of the economy were considered and SMEs that have been nominated for awards in organization performance were also selected as part of the sample.

### **3.4 Sampling design**

The study had a sample size of 96 companies. This was arrived at as a result of using a confidence level of 90% and a margin of error of 10% based on a population size of

approximately 98,000. The 96 companies were selected using proportionate stratification. The strata sample sizes were determined by the following equation:

$$n_h = (N_h / N) * n$$

where  $n_h$  is the sample size for stratum  $h$ ,  $N_h$  is the population size for stratum  $h$ ,  $N$  is total population size, and  $n$  is total sample size.

The population was segregated into several mutually exclusive subpopulations or strata herein referred to as business categories as shown in Table 3.1.

**Table 3.1: Target Population and Sample Size**

<b>Business Category</b>	<b>Strata Pop.</b>	<b>Calculation</b>	<b>Strata Sample Size</b>
General Trade, wholesale, retail	69067	$(69067/98608) * 96$	67
Transport, Storage and Communications, Agriculture	6211	$(6211/98608) * 96$	6
Catering, Professional & Technical Services, Private Education, Health	11052	$(11052/98608) * 96$	11
Industrial Plants, Factories, Workshops, Contractors	12278	$(12278/98608) * 96$	12
<b>Total</b>	<b>98608</b>		<b>96</b>

### 3.5 Data Collection

Primary data was used in this study. It was collected using self-administered questionnaires. A drop-and-pick later method was used to administer the questionnaires.

#### *Structured questionnaires*

The structured questionnaire was categorized into 3 sections:

- i. Section 1- General Information, Experience and background
- ii. Section 2 - Effective TQM practices
- iii. Section 3 - Competitive Advantage in terms of market share, customer satisfaction, product quality and revenues

### **3.6 Data Analysis**

The data obtained from the data collection methods was analyzed by use of descriptive statistics (frequencies and percentages) and inferential statistics. Descriptive statistics in form of frequencies, means and standard deviations was utilized to analyze data obtained from the SME observations schedule (pre-test and post-test results). Correlation analysis was used to analyze the degree of relationship between TQM and competitive advantage using the various indicators.

#### **3.6.1 Analysis Objective**

*To study the awareness and adoption of TQM concept and practice among small and medium enterprises in Nairobi*

Descriptive and inferential statistics was used to determine the level of awareness and adoption of TQM in small and medium enterprises. This was based on the answers given by the respondents

*To examine the practices of TQM and competitive advantage in small and medium enterprises*

Quantitative data was collected through structured questionnaires in order to achieve this objective. The different factors/ principles of TQM were examined and calculation of mean and Standard Deviation of each factor was done.

*To find out whether adopting TQM practices leads to competitive advantage*

Correlation analysis was used to find the relationship between TQM and competitive advantage. Correlation between the variable of TQM and those of competitive advantage and sustainability were measured and examined. The findings provided evidence whether effective TQM generates competitive advantage for companies. This study helps researchers better understand the relationship between effective TQM practices and competitive advantaging SMEs. Furthermore, the findings provide useful guidance for managers about having an effective TQM system within their firms.

## CHAPTER FOUR DATA ANALYSIS, FINDINGS AND DISCUSSION

### 4.1 Introduction

This chapter presents data analysis and the findings of the study on total quality management implementation and competitive advantage in SMEs in Nairobi.

### 4.2 Data Analysis and Findings

A total of 96 questionnaires were distributed, 67 questionnaires were successfully filled and collected. This gives a response rate of 70%. This is presented in table 4.1

**Table 4.1: Distribution of Respondents by Sector Type**

Type of industry	No. of Firms	Percentage
General Trade, wholesale, retail	48	71.6
Transport, Storage and Communications, Agriculture	4	5.97
Catering, Professional & Technical Services, Private Education, Health	7	10.4
Industrial Plants, Factories, Workshops, Contractors	8	11.9
Total	67	100

From *Table 4.1*, 71.6% of the firms were in the general trade, wholesale and retail industry, 5.97% of the firms were in the transport, storage, communication and agriculture sector, 10.4% in the catering professional and technical services sector while 11.9% of the firms were in the industrial plants, factories, workshops and contractors sector. This signified that majority of SMEs are in the general trade, wholesale and retail sector as represented by a percentage of 71.6.

#### 4.2.1 Demographic information

This section highlights the demographic data collected in terms of gender, age, education background, number of employees in the firms and positions held by the respondents in their organization.

**Table 4.2: Distribution of Respondents by Gender**

	Frequency	Percentage
MALE	40	60
FEMALE	27	40
TOTAL	67	100

It is clear from the findings as tabulated in *Table 4.2* that 60% of the respondents who participated in the study are males where as 40% were females. This shows that the workforce comprised of more men than women.

**Table 4.3: Distribution of Respondents by Age**

	<b>Frequency</b>	<b>Percentage</b>
21 - 25	11	16.4
26 - 30	24	35.8
31 - 45	17	25.4
46 - 50	11	16.4
Above 50 years	4	6.0
<b>TOTAL</b>	<b>67</b>	<b>100</b>

From *Table 4.3*, most of the respondents, 12.5% indicated that they were aged 30 years and below, 25% were between 31-40 years of age, 33.3% of the respondents were aged between 41-50 years while 29.2% were aged between 50 or more years. This implied that respondents from diverse age groups were incorporated in the study.

**Table 4.4: Distribution of Respondents by Education background**

	<b>Frequency</b>	<b>Percentage</b>
Secondary level	6	8.3
Diploma	14	20.8
Undergraduate Degree	28	41.7
Postgraduate & Above	19	29.2
<b>TOTAL</b>	<b>67</b>	<b>100</b>

From *Table 4.4*, a majority 41.7% of respondents indicated that they had attained first degrees only, 20.8% had attained diplomas with 8.3% being in possession of secondary school certificate. 29.2% of the respondents had attained masters & above. This signified that the respondents had academic qualifications and therefore well placed to participate in the study.

**Table 4.5: Distribution of Respondents by Number of Employee in the firm**

<b>Work Force</b>	<b>Frequency</b>	<b>Percentage</b>
2 -10	2	3.0
11 - 20	19	28.4
21 - 50	30	44.8
51 - 100	13	19.4
100 +	3	4.4
<b>TOTAL</b>	<b>67</b>	<b>100</b>

From *Table 4.5*, 73.2% of the respondents were in small scale enterprises while 19.4% of the respondents were in medium scale enterprises.

**Table 4.6: Distribution of Respondents by Position held in the organization**

	<b>Frequency</b>	<b>Percentage</b>
Top Management	11	16.4
Middle Management	39	58.2
Support Staff	17	25.4
TOTAL	120	

Based on the findings from *Table 4.6*, a majority 58.2% of respondents were under middle management, 16.4% are top management and 25.4% are support staff. This signified that all employees were given a chance to respond to the questionnaires so as to get an unbiased view of TQM implementation in the firms.

#### **4.2.2 TQM Implementation Analysis**

This section highlights the level of TQM implementation in the firms in terms of its proper implementation and when TQM was adopted in the firm.

**Table 4.7: Level of TQM implementation in the firm**

	<b>Frequency</b>	<b>Percentage</b>
Strongly Disagree	3	4.5
Agree	38	56.7
Strongly Agree	26	38.8
TOTAL	67	100

Only 4.5% of the respondents thought that proper TQM implementation was not key. Majority of the respondents, 56.7% agreed that proper implementation of TQM is key in their firm. This signifies that TQM has to be properly implemented in order to achieve its benefits.

**Table 4.8: Level of TQM adoption in the firm**

	<b>Frequency</b>	<b>Percentage</b>
Never	4	6.0
Less than 1 year	17	25.4
1 – 5 years	25	37.3
Above 5 years	21	31.3
TOTAL	67	100

Majority of the respondents, i.e. 37.3% of the respondents indicated that they had implemented TQM between 1- 5 years. 31.3% of the respondents had implemented TQM more than 5 years ago while 25.4% of the respondents had implemented TQM

less than a year ago. 6% of the respondents admitted that they had never implemented TQM in their firm. Firms that had implemented TQM for a longer period of time seemed to be having more competitive advantages than those that had implemented it for a short period. This is as a result of the better understanding and commitment to the TQM philosophy.

### 4.2.3 TQM Factors Analysis

Based on review of literature, various critical factors affecting total quality management were well communicated with the respondents and their response was incorporated in the survey. Respondents were asked to grade a variety of attributes under every factor on a scale of 1 to 5. (Where; 1= strongly disagree; 2= Disagree; 3= Neutral; 4= Agree; 5= Strongly disagree)

**Table 4.9: Statistics on Executive Commitment/ Leadership & Vision**

<b>Number of Respondents = 67</b>	<b>Mean</b>	<b>SD</b>
A top executive decision to commit fully to quality programs	4.13	0.82
Top executives actively championing quality programs	4.27	0.73
Planning & implementing improvement techniques	4.01	0.84
Focus on product quality rather than yield.	3.86	0.69
Company has an effective quality improvement plan	4.10	0.70
Policies and plans are well communicated to the employees	3.96	0.60
Company has a clear quality policy	4.09	0.77
Management involvement in planning and implementing of TQM.	4.15	0.71

From *Table 4.9*, respondents agreed that the management championed the quality programs in the organization as indicated by *table 5.1* above with a mean of 4.27 and a standard deviation of 0.73. They also agreed that there was management involvement in planning and implementation of TQM, indicated by the mean 4.15 and supported by a standard deviation of 0.71. Other factors to show executive commitment, such as companies having effective quality improvement plans, focus on product quality with means of 4.10 and 3.86 show that successful implementation of TQM leadership is very much important and the maximum enterprises have good management policy. It is apparent from *table 5.1* that leadership and management vision to commit and champion quality programs plays a most vital role in functioning of quality management practices in the firms.

**Table 4.10: Statistics on Customer Focus and Satisfaction**

<b>Number of Respondents = 67</b>	<b>Mean</b>	<b>SD</b>
Inclusion of customer feedback.	4.28	0.74
Techniques to determine customer satisfaction.	3.73	0.81
Program to implement customer service.	4.25	0.77
Actively seeking customer inputs to determine their requirements	4.31	0.62
Top management involvement in planning quality	4.34	0.73

Based on the findings in *Table 4.10*, the respondents agreed that there is great satisfaction with the level of involvement of customers and that their inputs were sought to determine their requirements. There was inclusion of customer feedback and customer inputs were sought to determine their requirement. These are justified with the results as shown in the table with means of 4.28 and 4.31 respectively. The findings signify that customer satisfaction is key since it helps firms to evaluate their performance during making of any product. Inclusion of feedback helps the firm to re-examine their product and helps them to take any decision for any future modifications in their products

**Table 4.11: Statistics on Relationship with suppliers**

<b>Number of Respondents = 67</b>	<b>Mean</b>	<b>SD</b>
Working more closely with suppliers	2.93	0.73
Requiring suppliers to meet stricter Quality specifications	2.36	0.62
Requiring suppliers to adopt a Quality program	2.77	0.56

It is seen from *Table 4.11* that not much care is taken in the relationship with suppliers. According to the findings, most respondents disagreed that they worked closely with their suppliers. They did not necessarily require their suppliers to meet stricter quality specifications and they did not require suppliers to adopt quality programs. These are indicated by means of 2.93, 2.36 and 2.77 respectively. These findings indicate that the firms may produce sub-standard products since strict quality programs are not followed by their suppliers. Firms should take necessary steps to ensure that their suppliers standardize their product to ensure that the firms make their products more reliable.

**Table 4.12: Statistics on Performance Measurement/ Benchmarking**

<b>Number of Respondents = 67</b>	<b>Mean</b>	<b>SD</b>
Primary consideration of quality in product design	4.26	0.93
Getting feedback from technical experts.	4.23	0.81
Inclusion of customer feedback.	4.29	0.76
Multi-functional review of product /service design	3.61	0.85
Ensuring benchmark activities.	3.52	0.74
Application for ISO 9000 certification	4.33	0.86
Company application for recognition.	2.96	0.56
Utilization of quantitative techniques in process.	3.72	0.78
Utilization of quantitative techniques in product design	3.69	0.69

From *Table 4.12*, majority of the respondents agreed to performance measurement of TQM through inclusion of customer feedback, application of ISO 9000 certification, , primary consideration of quality in product design as indicated by means of 4.29, 4.33 and 4.26 respectively with standard deviations of 0.76, 0.86, and 0.93 respectively. However, respondents were neutral in their opinions in factors such as ensuring benchmark activities, multi-functional review of product/ service design and utilization of quantitative techniques in production design, indicated by means of 3.52, 3.61 and 3.69 respectively. It is seen that not much care is taken in this matter and products are made only to meet the customer demand. It is one of the major reasons for the failure of Kenyan products in international markets as most products fail to qualify the quality tests. SMEs in Nairobi should be aware of the quality standards of their counterparts.

From the findings SMEs are seen to take less care in the process management and more importance is given to final output. This type of culture should be avoided and better mode of production must be prevailed.

**Table 4.13: Statistics on Employee Empowerment**

<b>Number of Respondents = 67</b>	<b>Mean</b>	<b>SD</b>
Organization of regular meetings.	4.02	0.88
Encouragement of employees	3.11	0.54
Training on problem-solving techniques.	2.93	0.60
Clarity and formality in goals.	3.43	0.74
Presence of quality circles.	2.67	0.75
Incentives to employees.	3.25	0.67
Integration of training lessons to work processes	3.73	0.85

*Table 4.13* shows that most respondents were neutral in their views on employee empowerment whereby they felt that the encouragement of employees was neutral

with a mean of 3.11, that clarity and formality of goals was also neutral with a mean of 3.43 and incentives to employees was at a mean of 3.25. Also, respondents disagreed on the factor of training on problem-solving techniques and presence of quality circles as shown by means of 2.93 and 2.67 respectively. This signifies that employees needed to be better empowered in their places of work.

Employee improvement form critical success factors during implementation of TQM practices in SMEs but these factors are somehow sided by most enterprises and these factors have to be improved in order to have successful implementation of TQM.

**Table 4.14: Statistics on Continuous Improvement**

<b>Number of Respondents = 67</b>	<b>Mean</b>	<b>SD</b>
System on item segregation.	3.56	0.86
Signboards and labels.	4.05	0.82
Records management system.	4.18	0.70
Cleanliness.	4.0	0.73
Programs on waste elimination	3.92	0.81
Periodic quality audits	4.14	0.78
Review of departmental targets.	4.233	0.56

Majority of the respondents recorded that there were continuous improvement policies in place. From the findings, respondents agreed that there were programs on waste elimination and that periodic quality audits were done, indicated by means of 3.92 and 4.14 respectively. Also, there were reviews of departmental targets and records management systems. These findings signify that majority of the SMEs implement the quality improvement practices in the overall management structure of the enterprises.

Now days, enterprises are also taking utmost care in implementing continuous improvement plans in their production structure to make maximum use of man, machine, and material. These findings are similar to the findings of Reed et al. (1996). They mention that through continuous improvement and process efficiency with TQM, companies could produce high quality products.

The above tables on executive commitment, customer focus, relationships with suppliers, performance measurement, employee empowerment and continuous improvement show that small and medium enterprises in Nairobi are also following the same type of TQM structure as those followed by their counterparts in other parts of the world. SMEs in Nairobi are trying to satisfy with the findings of various

research scholars regarding various critical factors like satisfaction of customer, effective participation of management and employees, incentives and reward schemes, communication system, supplier's power, statistical quality control, fast result techniques, quality arrangement and cost involved, systematic techniques.

#### 4.2.4 Competitive Advantage Factors Analysis

This section looks at the competitive advantage factors which are; increased revenue, increased market share, increased product quality and higher customer satisfaction. Individual analysis of the factors was carried out and discussed here. Respondents were asked to grade a variety of attributes under every factor on a scale of 1 to 5. (Where; 1= strongly disagree; 2= Disagree; 3= Neutral; 4= Agree; 5= Strongly disagree)

**Table 4.15: Respondents Statistics on Revenues**

<b>Number of Respondents = 67</b>	<b>Mean</b>	<b>SD</b>
Over the past 3 years, our financial performance has been outstanding	3.21	0.56
Over the past 3 years, our financial performance has exceeded our competitors'	3.57	0.82
Over the past 3 years, our revenue (sales) growth has been outstanding	3.85	0.63
Over the past 3 years, we have been more profitable than our competitors	3.27	0.77
Over the past 3 years, our revenue growth rate has exceeded our competitors'	3.66	0.73

From the analysis on *Table 4.15*, respondents were neutral about the fact that over the past 3 years, their financial performance had been outstanding as indicated by a mean of 3.21. They further recorded that that their revenues growth had been outstanding with a mean of 3.85. Respondents were also not certain as to whether they were more profitable than their competitors over the past 3 years as indicated by a mean of 3.27. This signifies that most of the companies underline that increasing the revenues is not the main target regarding TQM. Also, it is important to take into account that TQM is just a co-factor for higher revenues. It can be said that there is an indirect relation between TQM and improved revenues. Thus, it can be concluded that effective TQM practices would improve revenues though not directly as increase in revenues is also dependent on other factors.

Findings show that effective TQM does not directly increase the revenues, because other factors also play a role. This is not in line with the findings of Lemak et al. (1997), who present that commitment to TQM is associated with improved revenues.

**Table 4.16: Respondents Statistics on Market Share**

<b>Number of Respondents = 67</b>	<b>Mean</b>	<b>SD</b>
Our firm's market share has improved since implementation of TQM	4.63	0.76
Our market share is higher than our competitors after implementation of TQM	4.42	0.64
Our volume sales have increased after the implementation of TQM	4.47	0.83
Our customers are more satisfied with our products after the implementation of TQM	4.01	0.68
Our share of distribution is more than our competitors after implementation of TQM	4.21	0.86

Table 4.16 shows that majority of the respondents strongly agreed that their market share had improved since implementation of TQM as evidenced by a mean of 4.63 and a standard deviation of 0.76. Respondents also underlined that their market share was higher than their competitors after TQM with a mean of 4.42. From the findings, respondents underlined that their volumes in sales had increased after implementation of TQM. Also respondents strongly agreed that their share distribution was more than their competitors after TQM implementation. These results present that after implementing the TQM program, companies increased in general their market share. Also, their market shares were relatively higher compared with their competitors. So, it can be concluded that effective TQM has improved market share of companies.

Findings show that effective TQM practices improve market share. After implementing the TQM program, market shares are higher than before and also relatively higher than competitors. These findings are in line with Reed et al. (1996), who state that improved quality through TQM is associated with increased market share.

**Table 4.17: Respondents Statistics on Product Quality**

<b>Number of Respondents = 67</b>	<b>Mean</b>	<b>SD</b>
Before implementing TQM, our firm's level of product quality was high compared with our competitors	2.51	0.52
Competition in our industry is mainly on price, not product or service differentiation	4.27	0.63
Demand for our products has been growing rapidly in the past 3 years	4.02	0.84
After implementing the TQM program, our firm's level of product quality is higher compared with your competitors	4.17	0.87

*Table 4.17* shows that majority of the respondents agreed that after implementing the TQM program, their firms' levels of product quality was higher compared with their competitors as indicated by a mean of 4.17 and that demand for their products had been growing rapidly in the past 3 years with a mean of 4.27. However, the respondents disagreed that before implementing TQM, their firms' levels of product quality were higher compared with their competitors with a mean of 2.51. Thus, the findings showed that companies have relatively higher product quality after implementation of TQM. Furthermore, compared with competitors, majority of the companies clearly underlined that their product quality was higher after TQM. This indicates that effective TQM improves product quality of companies. Results in this study show that product quality of companies is improved through effective TQM.

**Table 4.18: Respondents Statistics on Customer Satisfaction**

<b>Number of Respondents = 67</b>	<b>Mean</b>	<b>SD</b>
After implementation of TQM, customers are loyal-they rarely switch to new firms or competitors	4.03	0.77
Before implementing the TQM Program, our firm's customers were satisfied.	2.11	0.54
After implementing the TQM program, our firms' customer satisfaction has improved.	4.33	0.78
After implementing TQM, our firm's level of customer satisfaction has improved compared with our competitors	4.02	0.62

According to *Table 4.18*, respondents recorded that after implementing the TQM program, their firms' customer satisfaction had improved and that after implementing TQM, their firm's level of customer satisfaction had improved compared with their competitors with means of 4.33 and 4.02 respectively. Respondents also recorded that after implementation of TQM, customers were loyal and they rarely switched to new firms or competitors with a mean of 4.03 and a standard deviation of 0.77. The findings clearly show that after implementing TQM, companies significantly improved their customer satisfaction. Furthermore, after TQM, firms' level of customer satisfaction was much higher compared with the competitors than before TQM indicated by a mean of 4.33 and 2.11 respectively.

So, the findings provided strong evidence that effective TQM improves customer satisfaction. Also, after implementing, the level of customer satisfaction is higher than before implementing TQM. Similarity of these findings can be seen in the existing literature from Chong and Rundus (2004). They describe that effective TQM

increases customer satisfaction, because of focus on quality. In addition, Yusof et al. (1997) mention that companies can meet requirement of customers and increase their satisfaction through effective TQM.

#### 4.2.5 Correlation analysis

Correlation analysis was used to find out the relationships between the variables. This was used to find out the strength of the relationships between the variables, if any, and whether positive or negative. This section presents the results of the correlation analysis.

**Table 4.19: Correlation between TQM and competitive advantage**

Number = 67	1	2	3	4	5	6	7	8	9	10
1 Executive Commitment	1									
2 Customer Focus and Satisfaction	0.43*	1								
3 Relationship with suppliers	0.44*	0.46	1							
4 Performance Measurement	0.42*	0.49	0.52	1						
5 Employee Empowerment	0.33*	0.26	0.34	0.61	1					
6 Continuous Improvement	0.30*	0.31	0.43	0.44	0.53	1				
7 Customer Satisfaction	0.6**	0.51*	0.34*	0.52*	0.20	0.35	1			
8 Market Share	0.30*	0.35*	0.13	0.50*	0.14	0.28*	0.60*	1		
9 Product Quality	0.28*	0.34*	0.26	0.49*	0.38*	0.34*	0.50*	0.68*	1	
10 Increase in revenue	0.30*	0.34*	0.27	0.47*	0.17	0.26	0.67*	0.76*	0.48*	1

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

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

Factors making up competitive advantage correlated strongly with factors making up total quality. The factor with the strongest correlation was customer satisfaction which related with other factors at  $p < .05$ ,  $p < .01$ , and  $p < .001$ , except with employee

empowerment factor with an  $r$  of 0.20. The factor that followed customer satisfaction was reduction in waste then increase in revenue. The TQ factor that registered highest correlation was leadership at 0.60 followed by performance measurement at 0.52 then customer focus at 0.51 all against customer satisfaction indicating that there is a strong relationship between customer satisfaction and major factors making total quality management. There is, therefore, clear and sustained positive relationship between level of total quality implementation and competitive advantage.

This study has researched the impact of effective TQM on competitive advantage. The research aimed at companies with effective TQM and how the practices of effective TQM influence their competitive position. In general, it can be concluded that companies with effective TQM achieve competitive advantage. The results show some similarities with the findings in the existing literature.

The results underline the importance of effective TQM for companies and show its impact to the managers. The findings show that some TQM practices such as top management commitment and continuous process improvement are very essential in order to have an effective TQM system. This should attract the attention of managers and they should focus especially on these practices for an effective TQM.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter presents the summary of the data findings relationship between TQM and competitive advantage in SMES in Nairobi. The conclusions and recommendations are drawn here too. The chapter is therefore structured into summary of findings, conclusions, recommendations Limitation of the study and suggestion for further research.

#### **5.2 Summary of Findings**

An important finding is that all top managements of companies participate actively in the TQM program. In fact, top management commitment is one of the most important practices for effective TQM. Top managements actively coordinate and integrate the TQM processes and practices throughout their companies. Because of active participation in TQM program, the top managements clearly communicate the importance of TQM to the employees. The way of communication is different in each company, but the main idea is similar. Top managements set their strategy and targets based on TQM and communicate it further to the managers and employees.

The study also revealed that the constraints facing Total Quality Management implementation for SMEs in Nairobi as employee involvement and training. The findings showed that most firms do not continuously train their employees in TQM. The employees are only trained initially when TQM is first adopted and then no further or little training is done.

From the findings however, most firms seemed to focus on their customers' satisfaction. Customer satisfaction leads to efficient and effective service delivery. Maintaining constant communication with customers to ensures that the consumers of the service are satisfied. Customers always form the pinnacle in any structure of an organization. A product is always designed in accordance to the requirements of the consumers with a motto of satisfaction to the customer. So feedback from the costumer is very vital for a successful implementation of quality management. Feedback from the customers helps them to evaluate their performance during making of the product. Inclusion of feedback helps the firm to re-examine their product and helps them to take any decision for any future modifications in their products.

The research findings of this study imply that the major constraint to TQM implementation is cascading the program to the bottom of the pyramid. Management should ensure TQM awareness to all staff levels. Most organization use bits and pieces of the TQM principles more especially organization use TQM principles that support their existing organization culture thus leading to ineffective TQM implementation.

From the results, it was established that the correlations between total quality factors and individual competitive advantage outcomes of customer satisfaction; increase in revenue; increase in market share and product implied that there was a moderately strong, positive and very significant relationship between the variables. Customer satisfaction showed a significant impact on all parameters except in increase in market share. Customer focus had significant impact on customer satisfaction, increase in revenue, and product quality. Performance measurement had significant impact on both customer satisfaction and product quality, while leadership had significant impact on customer satisfaction. Supplier partnership had significant impact on product quality. Of the six total quality factor criteria in the study, four had significant impacts on the four competitive advantage outcomes of increase in revenue; customer satisfaction; increase in market share; and product quality.

### **5.3 Conclusion**

The results inferred from the questionnaire survey is that the small and medium scale enterprises in Nairobi are trying cope with new quality management practices to increase the productivity. The study also satisfies the findings of various research scholars regarding TQM application in SMEs in other parts of the world. On a broader picture, it can be said that leadership and top management vision paves a path for the quality practices to execute in the firms with a clear quality policy. The triumph of a quality improvement program depends much on commitment of the top management and their vision to implement them. Management should clearly communicate their quality goals to their employees and make understand on how to achieve the goals clearly. Clear planning is essential for the management to implement these quality improvement programs in their organization. These programs and planning increases the cost of production marginally but ultimately it can lead to better functioning of the firm.

Customer focus is also vital for SMEs to achieve and sustain competitive advantage, and proper care is to be taken to provide adequate service and have feedback from the customer. Continuous improvement programs with recognition and incentives to employees are also prime consideration of the management which the survey showed but at the same time that SMEs are trailing behind with the factors like employee development and training/ employee empowerment.

The above factors should be given more stress to improve the productivity of the firms. The results indicate that total quality management holds the key to achieve competitive advantage in SMEs in Nairobi.

#### **5.4 Recommendations**

In order to have an effective TQM implementation, the TQM factors have to be implemented effectively within firms. These practices of effective TQM are top management commitment, training and education of employees, continuous process improvements, long-term supplier relationships and performance measurements. The role of leadership, employee participation and empowerment, customer focus and satisfaction, maintaining supplier relationships, continuous improvement, and performance measurement are apparent for the success of the firm in terms of market share, profitability, customer satisfaction and overall product quality.

The study recommends that SMEs should establish quality management systems and improve on their quality management programs to ensure effective TQM implementation and for the overall success of the company. Executive management should be involved in TQM practices and spearhead TQM implementation at all levels of the organization. According to the findings, the customer focus, sector was found to be doing slightly better than leadership, but still not to the standard envisaged of a total quality organization. The view that the customer is the reason for an organization's existence (Ohmae, 2005) seems not to be internalized by SMEs in Nairobi. Firms should strive to ensure that they involve their customers in product and service design and that continuous feedback is gotten from the customers so as to continuously improve on their products.

The other important aspect of total quality, namely performance measurement should also be constantly measured so as to drive company's strategy formulation and analysis of performance.

### **5.5 Limitations of the study**

An important limitation of this study is the small sample, which makes this study unrepresentative. The small sample in this study decreases the generalizability. Additionally, this study focuses on limited variables in order to measure competitive advantage and sustainability. There could be more variables used to measure and evaluate competitive advantage and sustainability. The study faced limitation of time during data collection and respondents took long to fill the questionnaires thus delayed the duration for data analysis and presentation.

### **5.6 Suggestions for further Research**

Academics could use bigger samples to increase generalizability and reliability of the findings. Studies in the future could focus on companies with different characteristics from different sectors to examine the impact of effective TQM on competitive advantage. This will explain whether the success of TQM depends on characteristics of firms.

Furthermore, future studies could focus on more measures of competitive advantage and sustainability to estimate the impact of effective TQM. This will increase the reliability of the findings.

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## APPENDICES

### Appendix I: Structured Questionnaire

#### Important information

All the information gathered in this interview will be used for academic purpose only and kept confidentially such that identity of the interviewee cannot be identified. The interview will take approximately 20 minutes

#### SECTION I. Experience and background (Confidential)

1. Please indicate your current age \_\_\_\_\_
2. Please indicate your gender       Male                       Female
3. Please indicate your highest degree of education  
 Postgraduate       Undergraduate       Diploma                       Other
4. What is your current position in your current firm? \_\_\_\_\_
5. How large is your current firm in terms of number of employees?  
 2 – 10               11 – 30               31 - 50               51 – 100                
Above 100
6. How many years have you been in top management position?  
 <1 year               2- 5 years               More than 5 years
7. Is proper TQM implementation key to your firm?  
 Strongly Disagree               Agree                       Strongly Disagree
8. When was TQM (be) adopted within your firm?  
 Never               <1 year ago               2- 5 years ago               More than 5  
years ago
9. How important do you consider TQM for your company on a scale of 1-10?  
Not Important 1    2    3    4    5    6    7    8    9    10  
Very Important
10. Did you work before for a company with TQM system?  
 Yes                       No

**Main Research (Confidential)**

**SECTION II. Effective TQM practices**

Indicate your implementation of the Quality features given below, on a **1 to 5 scale** (Where; 1= Strongly disagree; 2= Disagree; 3= Neutral; 4= Agree; 5= Strongly disagree)

<b>TQM Factors</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Executive Commitment/ Leadership &amp; Vision</b>						
1	A top executive decision to commit fully to quality programs					
2	Top executives actively championing quality programs					
3	Planning & implementing improvement techniques					
4	Focus on product quality rather than yield.					
5	Company has an effective quality improvement plan					
6	Policies and plans are well communicated to the employees					
7	Company has a clear quality policy					
8	Management involvement in planning and implementing of TQM.					
<b>Customer Focus and Satisfaction</b>						
1	Inclusion of customer feedback.					
2	Techniques to determine customer satisfaction.					
3	Program to implement customer service.					
4	Actively seeking customer inputs to determine their requirements					
5	Top management involvement in planning quality					
<b>Relationship with suppliers</b>						
1	Working more closely with suppliers					
2	Requiring suppliers to meet stricter Quality specifications					
3	Requiring suppliers to adopt a Quality program					
<b>Performance Measurement/ Benchmarking</b>						
1	Primary consideration of quality in product design					
2	Getting feedback from technical experts.					
3	Inclusion of customer feedback.					
4	Multi-functional review of product /service design					
5	Ensuring benchmark activities.					

6	Application for ISO 9000 certification					
7	Company application for recognition.					
8	Utilization of quantitative techniques in process.					
9	Utilization of quantitative techniques in production design					
<b>Employee Empowerment</b>						
1	Organization of regular meetings.					
2	Encouragement of employees					
3	Training on problem-solving techniques.					
4	Clarity and formality in goals.					
5	Presence of quality circles.					
6	Incentives to employees.					
7	Integration of training lessons to work processes					
<b>Continuous Improvement</b>						
1	System on item segregation.					
2	Signboards and labels.					
3	Records management system.					
4	Cleanliness.					
5	Programs on waste elimination					
6	Periodic quality audits					
7	Review of departmental targets.					

### SECTION III. Competitive advantage

(1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree).

	1	2	3	4	5
<b>Revenues</b>					
Over the past 3 years, our financial performance has been outstanding					
Over the past 3 years, our financial performance has exceeded our competitors'					
Over the past 3 years, our revenue (sales) growth has been outstanding					
Over the past 3 years, we have been more profitable than our competitors					
Over the past 3 years, our revenue growth rate has exceeded our competitors'					
<b>Market share</b>					
Our firm's market share has improved since implementation of TQM					
Our market share is higher than our competitors after implementation of TQM					
Our volume sales have increased after the implementation of TQM					
Our customers are more satisfied with our products after the implementation of TQM					
Our share of distribution is more than our competitors after implementation of TQM					
Our firm's market share has improved since implementation of TQM					
<b>Product quality</b>					
Before implementing TQM, our firm's level of product quality was high compared with our competitors					
Competition in our industry is mainly on price, not product or service differentiation					

Demand for our products has been growing rapidly in the past 3 years					
After implementing the TQM program, our firm's level of product quality is higher compared with your competitors?					
<b><i>Customer satisfaction</i></b>					
After implementation of TQM, customers are loyal-they rarely switch to new firms or competitors					
Before implementing the TQM Program, our firm's customers were satisfied.					
After implementing the TQM program, our firms' customer satisfaction has improved.					
After implementing TQM, our firm's level of customer satisfaction has improved compared with our competitors					
After implementing TQM, our firm's level of customer satisfaction has improved compared with our competitors					

## Appendix II: Target Population

Business Category	Business code	Description	Total count
1	110	Medium Trader Shop or Retail Services	15,774
	115	Small Trader, Shop or Retail Service	53,293
3	315	Small Transportation Co.	2,249
	335	Small Petrol Filling	790
	365	Small Storage Facility	813
	380	Small Communications Co.	158
4	415	Small agric. Producer/Processor/Dealer	2,201
5	515	Medium Lodging House With Restaurant Or bar	258
	518	Small Lodging House With Restaurant/Bar	205
	524	Medium Lodging House	305
	527	Small Lodging House Basic Standard	397
	546	Small Restaurant With Bar	917
	549	Large Eating House; Snack Bar; Tea House	522
	552	Medium Eating House; Snack Bar; Tea House	1,010
6	610	Medium professional services firm	437
	615	Small professional services firm	5,166
	630	Medium financial services	406
	635	Small financial services	443
7	735	Small private health facility	52
	740	Doctor/ Dentist/Physiotherapist	871
	760	Small Entertainment Facility	63
8	815	Small Industrial Plant	644
	825	Medium Workshop, Services-Repair Contractor	2,907
	830	Small Workshop Service Repair Contractor	8,727
<b>Total</b>			<b>98,608</b>

Source: Nairobi City Council, Licensing Department

These business categories are as follows:

1. General Trade, Wholesale, Retail, Stores, Shops, Personal Services:
2. Hawkers. There are no statistics in terms of numbers for this group and consequently this group will not be sampled.
3. Transport, Storage and Communications:
4. Agriculture, Forestry & Natural Resources Extraction:
5. Accommodation and Catering:
6. Professional & Technical Services:
7. Private Education, Health and Entertainment Services
8. Industrial Plants, Factories, Workshops, Contractors