

**STRATEGIC QUALITY MANAGEMENT AND
COMPETITIVENESS IN POWER SUPPLY:
A CENSUS STUDY FOR GENERATORS SUPPLIERS IN KENYA**

DAN MUTURI MWAI

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DECLARATION

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Signature.....Date.....

Dan Muturi Mwai

D61/70899/2014

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

Signature..... Date.....

Prof. Gituro Wainaina

Department of Management Science

School of Business

University of Nairobi

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DEDICATION

This project is dedicated to my wife Cecilia Wanjiru and my children Parmenas Mwai, Peninnah Wangui and Parin Maina for their love, support and understanding when I was pursuing my project.

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ABBREVIATIONS AND ACRONYMS

ERC	Energy Regulatory Commission
GDC	Geothermal Development Corporation
IPPs	Independent Power Producers
KenGen	Kenya Electricity Generating Company Limited
KETRACO	Kenya Electricity Transmission Company
KPC	Kenya Power Company
KPL	Kenya Power Limited
KPLC	Kenya Power and Lighting Company Limited
MOEP	Ministry of Energy and Petroleum
MW	Mega Watts
QMS	Quality Management Systems
RBV	Resource Based View
REA	Rural Electrification Authority
SQM	Strategic Quality Management
TQM	Total Quality Management

ABSTRACT

Electricity is the main source of power in Kenya and majority of the users are inconvenienced when the main grids supply fails. This leaves the users with an option of relying on the back-up from the standby power generators installed by the suppliers on their behalf. To meet customers' needs generators suppliers are required to adopt five key operations strategies namely quality, flexibility, speed, location and cost in order to survive in the market. The study sought to evaluate the Strategic Quality Management (SQM) practices and competitiveness in power supply by generators suppliers in Kenya. To achieve this objective, the study used a census survey. The population of the study consisted of generators suppliers in Nairobi, Kenya. The study focused on 16 generators suppliers in Kenya. This population was considered appropriate because of their uniqueness in the adoption of SQM practices. Primary data was collected by use of a semi-structured questionnaire. Primary data was collected from business development managers or their equivalents in each of 16 generators suppliers in Kenya. Descriptive statistics was used to establish the frequency of implementation of SQM practices and the challenges faced during implementation. A regression model was used to establish the relationship between SQM practices and competitive advantage adopted by authorized generators suppliers in Kenya. The findings revealed that the most popular SMQ practices that were used by generator suppliers in Kenya were as follows: customer focus, leadership and continuous improvement. The study found a positive relationship between SQM practices and competitiveness of generator suppliers in Kenya. The study also faced significant time and funding constraints, which limited the scope of the study. This limited the scope of this study since the local generator re-sellers were not considered and, therefore the findings obtained in this study may not be accurate in making generalizations of all the generator suppliers in Kenya. The study recommends that generator suppliers should adopt contemporary SQM practices to meet local and international standards. This will provide a platform for generator suppliers in Kenya to build on their innovation and diversification of their products and services to achieve consistent power supply and minimize power black outs.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Business operates in an environment of customers, regulators, suppliers and competitors. Every quality or related initiative will change, eliminate or create activities. Under this framework, each such change is evaluated in terms of how it fits in with the process, business and the environment. To succeed in implementation of SQM, the firm should practice the following cost of quality, quality function deployment, target analysis and other quality management mechanisms. The use of these mechanisms under the congruence management framework is a practical way of deploying SQM, thereby making quality management more effective and successful (Williams, 2007).

Black and Porter (2006) explain that many firms which practice independently sound management methods to implement higher quality fail because these methods are either not aligned with strategy or because these methods are not properly coordinated with each other. Therefore, effective quality management cannot be practiced in isolation from other initiatives and from the overall strategy of the firm. The SQM is the formulation and deployment of quality management within the overall framework of strategic planning, in a way that is aligned with all the other initiatives such as process re-engineering, focus on customer requirements, cost management, inventory control and target analysis. Alignment of quality initiatives is not an automatic process; it requires a systems framework and management mechanisms for deployment (Dean & Bowen, 2001).

The responsibility for change in any organization rests on management. Deming (1982) argued that firms should practice continuous improvement of products and services to meet customer needs and to stay ahead of competition squarely on management. In fact, the major emphasis of Deming's philosophy on quality management is that top management must orient them to innovate and commit resources constantly to support innovation and continuous improvement if they aspire to achieve quality products and services that meet customer needs.

1.1.1 Strategic Quality Management Practices

Dean and Bowen (2001) define SQM as the integration of the principles of quality management into all the three steps of strategic planning. This means that the quality concepts are integrated into vision and goals of the firm, in the formulation of the policies and actions required for change management and in the deployment of the strategy. The SQM, however is useful not only in large or established organizations, but also in new firms which are in a fast growth period. It is likely that the newer firms might not have explicitly incorporated SQM in their strategic planning process.

The SQM is the process by which quality management activities focus towards the long range direction and progress of quality enhancement strategies by ensuring careful formulation of activities and process that improve the quality of goods and services offered by an organization. Black and Porter (2006) indicated that proper implementation of SQM practices is a key ingredient towards achieving continuous improvements by integrating quality control measures.

The SQM is intended to serve the quality needs of customers through commitment and core competence to gain strategic advantages over rivals that cannot be duplicated. This enables the firm to produce quality goods and services at an affordable cost. The organization is able to make maximum use of its capabilities to gain to offer value-adding goods and services with the sole purpose of meeting customers' satisfaction (Dean & Bowen, 2001).

1.1.2 Competitive Advantage

Droge and Markland (2004) stated that competitive strategy is the distinctive approach which a firm uses or intends to use to gain a competitive edge in the market place. Barney (2000) view competitive strategies as more skill-based and involving strategic thinking, creativity, execution, critical thinking, positioning and the art of warfare. Competitive strategy aims to establish a cost effective and sustainable position against the forces that determine industry competition.

Porter (2004) state that competitive strategies are designed for situations where only partial information is available, whereas an optimal solution requires complete

knowledge of all circumstances, or of the future. The extent of market orientation in a firm must be in harmony with the competitive strategy adopted. The importance of the match between business strategy and marketing strategy has been empirical as evidenced by Barney (1991).

1.1.3 Relationship Between Strategic Quality Management and Competitiveness

Obert and Spencer (2006) argued that organizations implement SQM practices to achieve and maintain a competitive edge in the market. This is brought about by enhancing the firm's efficiency in its operations and minimizing the costs of operation. The SQM leads to reduced set-up time, allowing improved schedule attainment and correspondingly faster response to market demands and, thus reduces cycle time.

Proper implementation of SQM allows the firm to produce differentiated goods and services to improve customer value. Greene (2001) maintains that SQM is performed at the top organizational level down to the lower organizational levels; it integrates improved systems and processes that aim at producing flexible goods and services to accommodate the different needs of the customers (Williams, 2007).

Passion and Limam (2006) explained that SQM helps the firm to minimize waste and improve efficiency and this enables the firm to enhance its competitiveness to quality improvement efforts with the aim of harnessing the human, material and information resources organization-wide in continuously improving products or services that will allow the delivery of customer satisfaction.

1.1.4 Power Generation, Distribution and Regulators in Kenya

In 1954 Kenya Power Company (KPC) was formed to develop electricity generating facilities in the country under the management of Kenya Power and Lighting Company Limited (KPLC). The KPLC was mandated to manage the power generation, distribution, transmission and regulation in Kenya since 1997. The electric power act was put in place by the government in 1997 that saw eight companies formed to share functions. The Kenya Electricity Generating Company (KenGen),

formerly KPC was formed in 1998 and mandated to manage all the public power generating facilities in Kenya that produces at least 70 to 80 percent of the power output. KenGen in turn sells the power to Kenya Power Limited (KPL) which transmits distributes and retails power to both commercial and domestic customers in Kenya (Energy Regulatory Commission (ERC), 2014).

Ministry of Energy and Petroleum, (MOEP) is charged with the responsibility of providing clean, secure, sustainable and affordable energy services to achieve socio-economic development while protecting the environment. Similarly, Rural Electrification Authority (REA) facilitates the pace of rural electrification in Kenya. The ERC approves power purchase between KPL and the power generating companies in Kenya. This includes reviewing and adjusting of power tariffs as well as enforcing environmental and safety regulations within the power sector. Kenya Electricity Transmission Company (KETRACO) plans, design, builds and maintain power transmission lines and the subsequent substations. The Independent Power Producers (IPPs) are the privately owned power generating companies in Kenya. They generate and sell power to the national grid. Geothermal Development Corporation (GDC) specifically develops and manages the geothermal resources in Kenya. This company is 100 percent owned by the government (GDC, 2014).

KenGen being the main producer of electricity in Kenya has laid down policies and procedures that guide firms to generate sustainable power for transmission. KenGen ensures that all power-generating plants comply with Environmental Impact Assessment (EIA) studies and a certificate is used prior to commencement. This aims to achieve waste reduction, preventing pollution, increase the stakeholder's confidence, improve company image and enhance customers' satisfaction (Ngina, 2014), (Kengen, 2015).

1.1.5 Generator Suppliers in Kenya

Kenya has experienced rapid economic growth that has resulted to an increase in power demand throughout the country. The current demand stands at 2,500 Mega Watts (MW) and it is anticipated to rise to 15,000MW by 2030 as per Vision 2030 plan (Juma, 2007). The Kenya Vision 2030 is guided by the three pillars namely

economic, social and political. It is estimated that the economy will grow at a rate of 10percent per annum for the next 25 years (Kenya Vision 2030, 2007). This form of growth is expected to increase power requirements, resulting to an increase in demand for standby power generators.

Power generators distributors in Kenya are headquartered in Nairobi with branches in other major towns in Kenya, such as Mombasa, Kisumu, Nakuru, Eldoret and Thika among others. More than a decade ago, there were very few generator dealers in the country due to the high cost of investment required to start a dealership and the low demand locally due to slow pace of development. Kenya has for long been relying on hydroelectric power and this resulted to massive power cuts in 2000 after the rains failed for a long period. This resulted to majority of the power consumers to turn to generator back up power, resulting to increase in demand for the generators, thus attracting new entrants in the market to meet the demand (Wanyiri, 2010). Appendix III shows a list of the local generators suppliers in Kenya. The listed suppliers represent different international manufacturers locally as authorized dealers.

In a bid to meet customers' needs, generators suppliers are required to adopt five key operations strategies namely quality, flexibility, speed, location and cost in order to survive in the market. The generators suppliers should consider adopting SQM practices to gain sustainability and competitiveness. These practices should match power sector requirements and ERC regulations, which are aimed to safeguard the environment and promote socio-economic growth (ERC, 2014).

1.2 Research Problem

The strategic impact of quality is so far-reaching that companies which do not accept quality as the measure against which all corporate efforts are gauged will not be well-positioned in the marketplace of the future. Spitzer (2005) posits that strategic quality goes beyond competitive advantage through functional excellence. If quality initiatives are to succeed, they must be implemented organization-wide because all functions are interrelated. A consequence of the need for a company-wide quality initiative is that the formulation of such a strategy must involve all management levels.

Electricity is the main source of power in Kenya and majority of the users are inconvenienced when the main grids supply fails. This leaves the users with an option of relying on the back-up from the standby power generators installed by the suppliers on their behalf. At times, the generators give customers a second dilemma when they fail to start after KPLC supply fails (Wanyiri, 2010). In some occasions, generators start normally and stalls due to some technical faults. Other challenges incurred by generators users includes poor quality equipment, sub-standard workmanship during installation stages, service and maintenance not being done on time, lack of spare parts when required, lack of internal training and high cost of providing good and services due to lack of local regulation in place.

Oriare (2011) studied the application of Total Quality Management (TQM) in strategic management at Safaricom Limited. The study found that the application of TQM in the Kenyan communication sector leads to increased productivity and ability to compete in the global market. Wathiru (2013) investigated SQM implementation practices by horticultural industry in Kenya; The Case of Pollen Ltd. The results showed that SQM was implemented to gain competitiveness in the horticultural industry. Ngugi (2013) examined the strategic supplier relationship management in the mobile telecommunication industry in Kenya. The results pointed out that strategic supplier relationship management programs was a key drive towards achieving competitive advantage in the telecommunication industry in Kenya. Wanyiri (2010) assessed TQM practices in the thermal power plants in Kenya and the results revealed implementation of TQM principles has string impact on organization performance.

Several studies have shown that TQM leads to competitiveness. This study sought to investigate the influence of SQM on competitiveness in the context of authorized generator suppliers in Kenya by attempting to answer the questions; what are the SQM practices used by generators suppliers in Kenya? what are the challenges of SQM practices faced by generators suppliers in Kenya? and what is the relationship between SQM practices and competitive advantage of authorized generators suppliers in Kenya.

1.3 Research Objective

The general objective of this study was to evaluate SQM practices and competitiveness in power supply by generators suppliers in Kenya. The specific objectives were to:

- i. Determine SQM practices used by generators suppliers in Kenya
- ii. Determine SQM practices challenges faced by generators suppliers in Kenya
- iii. Establish the relationship between SQM practices and competitive advantage of authorized generators suppliers in Kenya.

1.4 Value of the Study

The findings of this study will be useful to authorized generators suppliers in Kenya; they will understand the importance of using SQM practices and how this contributes to competitiveness. This will enable the generator suppliers to tailor their goods and services in a manner that suite customer needs and, thus improved customer satisfaction.

The research findings will also be adopted by other organizations in different industry especially the authorized local dealers who deal with heavy machineries. This includes compressors, earth-movers, lifts, graders, hospital equipment and farm equipment among others.

Policy makers, for instance ERC will use the findings of this study to set policies that promote generator suppliers to adopt SQM practices that lead to competitiveness and sustainability. This will improve the quality of services offered to the consumers.

Students of operations management will use this work to broaden their knowledge on SQM practices and how it contributes to competitiveness and suitability. The findings will also point out the best SQM practices that enhance competitiveness. This study will serve as a point of reference to researchers interested in this area or other related disciplines.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section provides a theoretical perspective, SQM practices, barriers of implementing SQM, role of SQM in competitiveness, empirical review and the conceptual framework.

2.2 Theoretical Perspective

Barney's (1991) explains differences in performance between organizations as being the result of the unique combination of resources possessed by each organization. Resource Based View (RBV) theory has developed to become one of the key paradigms used to explain the source of sustained advantage over competitors (Barney, 2000). Gronroos (1996) explains that RBV focuses on the use and deployment of resources, development of resource-based core competencies and eventual competitive advantage that result from this process.

The RBV framework is commonly adopted to explain how organizations can develop and sustain a competitive advantage through the application of the heterogeneous resource base. There are differences in the literature with regard to which resource characteristics are considered relevant (Barney, 1991). However, resources are a source competitive advantage if they are valuable, scarce, inimitable, non-substitutable, durable, appropriate and organizational focused Barney's (2001). Valuable, rare, inimitable, organizational focused framework appears to be the most commonly adopted and used in empirical studies (Andersen, 2007).

Strategic assets are often referred to as core competencies, organizational capabilities (Grant, 1991) or dynamic capabilities (Andersen, 2007). Clearly, strategic assets involve complex patterns of interaction and coordination between resources (including capital assets and people), processes and knowledge, in order to effectively transform inputs into outputs (Porter, 1980). Grant (1991) highlights that strategic assets are more important than individual resources, however resources are essential in developing strategic assets.

2.3 Strategic Quality Management Practices

There are various SQM practices used by firms to gain competitive advantage. This study discusses the following SQM practices customer focus, leadership, continuous improvement, people, participation and partnership and strategic quality planning.

2.3.1 Customer Focus

Crosby (1979) argues that improving customer satisfaction and service and increasing competitiveness is the key objective of the firm. This can be achieved through establishing good relationships with the suppliers to mitigate the costs and resources involved in the creation of products as well as improve efficiency and effectiveness. The SQM focuses on reducing inventory levels and respective costs increasing profits and improving cooperation between the suppliers and the final consumer (Feigenbaum, 2001).

In most cases, the procurement specifications released by buyers are an equivocal while suppliers do not argue against buyers on the specifications in the bidding process. This may expose the firm to non-performance resulting to delayed delivery of goods and services, hence create a negative picture of the organization due to failure to meet customers' expectations. Going by the findings of Casadesus and de Castro (2005), the organization should align its systems and processes to accommodate quality management practices in all its distribution functions, this will boost efficiency and ensure on time delivery of goods and services. Deming (1982) pointed out that SQM is part of Quality Function Deployment (QFD) used in identifying the distinct and potential needs and preferences of its users for example the use of fishbone chart to investigate the factors affecting the satisfaction level of users and then use Pareto chart to find out the key factors.

2.3.2 Leadership Effectiveness

According to Deming (1986) SQM highly depends on the effectiveness of the kind of leadership in place. This is because quality effort can get actual effect only with the recognition and support leadership. In the organization, the leader ensures that the organization work towards an effective system that guarantees the customers quality delivery of goods and services. This is attained through establishing a development

strategy and operation targets within the transportation and distribution channels that influences the actual efficiency and effectiveness of the quality effort of all the other members.

Deming (1982) stated that “a leader should consider adequately the needs and the expectation of other members through establishing a clear, realizable and coincident holistic target and then lead and inspire the other members to strive jointly for the target”. Ishikawa (1985) averred that leadership is important in order to focus on the creation and maintenance of such an internal environment, that people become completely involved in reaching the organization’s quality objective. Also, a greater attention has been given to appropriate leadership styles that are responsible for sustaining competitiveness on producing value adding good and services at a reduced cost than competitors.

2.3.3 Continuous Improvements

Casadesus and de Castro (2005) indicated that that continuous improvement is one of the focuses of modern quality research and practice. Firms must improve the quality of product and service continuously to reduce the cost of producing the products. Quality goods and services are essential for enhancing customers’ satisfaction. Firms are appreciating the concept of SQM in improving delivery of goods and service to the customers. This significantly reduces the cost of producing goods and services to achieve competitive advantage.

The process of quality management is a continuous process; the management of the organizations should provide adequate support to all its employees to ensure that quality management practices are implemented and maintained in the organization. Casadesus and de Castro (2005) further indicated that to achieve this task, all the members suppliers, sellers, and logistics providers, must improve their product and service respectively so as to construct the continual improvement of products and services. To ensure sustainability in quality management, the organization should find ways and practices of improving performance of organization through benchmarking to enhance a continuous improvement in order to gain competitiveness (Passion & Limam, 2006).

2.3.4 Strategic Quality Planning

Achieving excellence in quality and market leadership requires a strong future orientation and a willingness to make long-term commitments to customers, employees, stockholders, suppliers and the community (Oakland, 2002). The quality goals as well as the strategic and operational plans need to reflect these commitments. They should be developed in concrete terms and highly focused. Also, they need to address training, employee development, supplier development, technology evolution and other relevant factors that bear on quality. They need to embody the short-term and long-term needs. In addition, the goals should be integrated into the overall corporate business strategies.

Communicating goals and objectives to all employees in the organization is extremely useful in motivating them to rally round and making quality their top priority. Strategic planning process is important in formulating quality improvement strategies. Quality planning must be integrated into the overall corporate strategic planning process of the organization. Juran, on the other hand, has built quality planning into the Juran trilogy as one of the three managerial processes in developing the products, systems and processes required to meet customer needs. He has further stressed the need for developing stretch goals, which cannot be met unless something extraordinary is needed to accomplish excellence in quality (Oakland, 2002).

2.3.5 People, Participation and Partnership

The word “people” in this core concept refers to the employees who are hired by the company under unionized or non-unionized agreements, as well as the vendors who supply material and components. As pointed out by Ishikawa (1985), all employees must work together to achieve quality and productivity objectives so that the product or service meets customer satisfaction. This requires a fully committed, well-trained and involved work force in all quality activities. Necessary actions to formulate and implement people strategies for creating a quality culture and changing the organizational structure to do the right things right the first time and every time are to be seriously considered (Ishikawa, 1985).

Feigenbaum (2001) indicated that reward and recognition systems, quality of work-life environment consisting of safety, health, well-being and morale, education and training to reinforce full participation should be part of the system. Training should be reinforced through on-the-job applications of learning, involvement and empowerment. Similar strategies should be developed to communicate quality requirements to suppliers and unions in building partnerships with them to elevate their quality performance. The building of such partnerships should address long-term objectives for mutual investments and evaluate progress and methods to accommodate to changing conditions. To effect positive changes, it is necessary not only to let vendors understand the need for quality systems and processes to supply quality material and components, but also to equip them with the necessary knowledge, skills and tools (Deming, 1982).

This core concept is perhaps the most difficult, but significant one to address. According to Juran (1989) there is an inherent conflict between the functional organization and multi-functional processes. We need multi-functional processes to get things done in accomplishing quality objectives. Therefore, there is need to find ways to integrate traditional (vertical) hierarchies, which exist in corporations, with multi-functional (horizontal) processes to reduce conflicts and make workers more productive. This is the reason why Deming (1982) underscored the importance of breaking down barriers between departments, driving out the fear among workers to work effectively, and removing barriers that rob hourly workers as well as engineers and managers of their pride of workmanship, and establishing instead multi-functional processes to improve quality of products and service (The European Quality Award, 1994).

2.4 Competitive Advantage

Competitiveness means involvement in a business rivalry for markets. It has become common to describe economic strength of an entity with respect to its competitors in the global market economy in which goods, services, people, skills, and ideas move freely across geographical borders. Firm level competitiveness can be defined as the ability of firm to design, produce and or market products superior to those offered by competitors, considering the price and non-price qualities (Black & Porter, 2006).

Competitiveness processes are those processes, which help identify the importance and current performance of core processes such as strategic management processes, human resources processes, operations management processes and technology management processes. The competitiveness process can be viewed as a balancing process that complements traditional functional processes such as operations management and human resources management. It enhances the ability of an organization to compete more effectively (Barney, 1991).

Competitiveness involves the combinations of assets and processes where assets are inherited natural resources or created infrastructure and processes transform assets to achieve economic gains from sales to customers. Outcomes can be achieved through competitive potentials through the competitiveness process, some authors view competitiveness with the competency approach. They emphasize the role of factors internal to the firms such as firm strategy, structures, competencies, capabilities to innovate, and other tangible and intangible resources for their competitive success. This view is particularly among the resource-based approach towards competitiveness (Barney, 2001). Ability to develop and deploy capabilities and talents far more effectively than competitors can help in achieving world-class competitiveness.

2.5 Barriers to Strategic Quality Management Practices Implementation

One of the main hurdles of implementing SQM is the departmentalization and fragmentation of organizations (Anderson, 2004). Such a departmental structure with individual responsibility centers makes the administration of rewards and penalty easy. Unfortunately, it creates an internally focused and narrow departmental mind-set among managers. Each manager is concerned only about his or her departmental measures and hands off the product to the next department.

Droge and Markland (2004), indicate that quality management under this system requires extensive inspection at all points of hand-off. Prevention becomes nobody's responsibility and inspection takes precedent. There is no process ownership and the co-ordination between different activities in the process is weak; this lack of process co-ordination kills quality management. Individual responsibility places departmental managers in conflicting positions and makes it impossible to have good

cross-departmental teamwork, which is essential for quality management. It also makes the managers focus on the short-term and internally on the departmental performance rather than on the customer or the environment.

Green (2001) explains that it is usually impractical to change the whole organizational reporting in a short time. Most progressive firms introduce a reporting structure that measures the effectiveness of actions with respect to process and business goals in addition to the traditional departmental reporting structure. Gradually, the departmental measures are de-emphasized and the process and the business measures are given more importance. Moreover, the measures should be used to plan the future actions and decisions, not to penalize individuals. Eventually, this leads to flat, networked, team organizations, more as a result of working rather than as a deliberate mandate from the top (Emery & Summers, 2001).

Sura (2001) argued that the second most troublesome barrier to SQM implementation was lack of a common information system across the different organizational units. This is especially true of organizations, which grow by acquisition. The acquired firms are likely to have different information systems and different operational procedures. Often, even the variable definitions and the transaction information collected from the field are different. This slows down and complicates forecasting and the assessment of the organizational environment. It also complicates the communication across the different parts of the organization.

Most firms have realized these problems associated with non-uniform information and data systems and have undertaken enterprise-wide information initiatives. In the absence of such enterprise-wide systems, SQM implementation is necessarily crippled. To some extent, strong and supportive leadership can compensate for this barrier. The most critical barrier to SQM implementation is the lack of top management involvement. It is not a project or a program that can be delegated to the lower echelons of management. Congruence management is required at all levels and is possible only if the top managers are fully committed to the holistic approach. If they are not, SQM cannot be implemented (Droge & Markland, 2004).

2.6 Strategic Quality Management Practices as a Source of Competitive Advantage

Implementation of SQM practices helps firms to differentiate their products and services hence offers them an opportunity to access quality goods at an affordable cost (Black & Porter, 2006). Further SQM, minimizes cycle time allowing on-time delivery of goods and services. Dean (2001) pointed that the expectations of the customer's needs to be actively managed rather than passively accepted. The SQM aids firm to mitigate set-up time, improved schedule attainment and correspondingly faster response to market demands and thus enhances competitiveness.

Jha and Noori (2006) indicate SQM leads to continuous commitment for improvement by everyone in the organization. It creates a cultural environment whereby employees make it their responsibility to practice implementation of SQM. Continuous improvement translates into adaptation to business environment. This leads to a constant evaluation and re-alignment of processes towards the changing business environment. This leads to constant examination and improvement of quality processes and procedures and activities that lead to improved customer satisfaction.

Green (2001) explains that SQM enables information sharing between employees in an organization. This lowers communication costs and improves efficiency in quality decision-making. Bowen argues that SQM calls for continuous training and education to employees at all levels. This highly motivates and improves commitment by the top management in providing resources and a conducive environment that guarantees implementation of SQM. This positions the firm as unique in the market and thus improved competitiveness.

Implementation of SQM practices allows the organization to design products and services that meets the needs of the customers in terms of costs and flexibility. This improves customers' satisfaction leading to repeat business. For example, if the product designs team is always provided with the customer preference information either directly by making the designers comes into contact with customers or through a reporting system, they are more likely to use customer preference as a design choice

mechanism than otherwise. This improves customers' satisfaction leading to competitiveness (Dean & Bowen, 2001).

2.7 Empirical Review

Chron (1991) suggested that SQM practices, like other management programs, are contingent on strategy. He insisted that TQM methods should be very useful for strategies emphasizing incremental or continuous improvement for their products and processes, but less attractive to fast-moving organizations whose strategies require innovation, or radical changes in a short period of time.

Krishnan et al., (2003) made a similar statement that quality management programs are likely to be most effective when a company in a stable strategic position wishes to enhance its competitive position through long term improvements in product performance and customer satisfaction. They indicated that quality programs are less beneficial for companies whose strategies involve radical re-structuring or competitive repositioning. Spitzer (2005) described TQM as the source of competitive advantage. He showed how quality management can help a company build generic lead time, leverage competitive asymmetries, and create preemption potential, all of which are crucial to sustainable competitive advantage. The implication is that quality management can create these sources of competitive advantage and that companies should build strategies around them. Obert and Spencer (2006) explored the relationship between strategy and quality.

Droge and Markland (2004) investigated the relationship between quality management and competitive advantage in manufacturing firms in Europe. A descriptive survey research design was used to establish the relationship between quality management and competitive advantage of manufacturing firms in Europe. A linear regression model was used to establish the relationship between quality management and competitive advantage. The results concluded that quality management was positively related to competitive advantage.

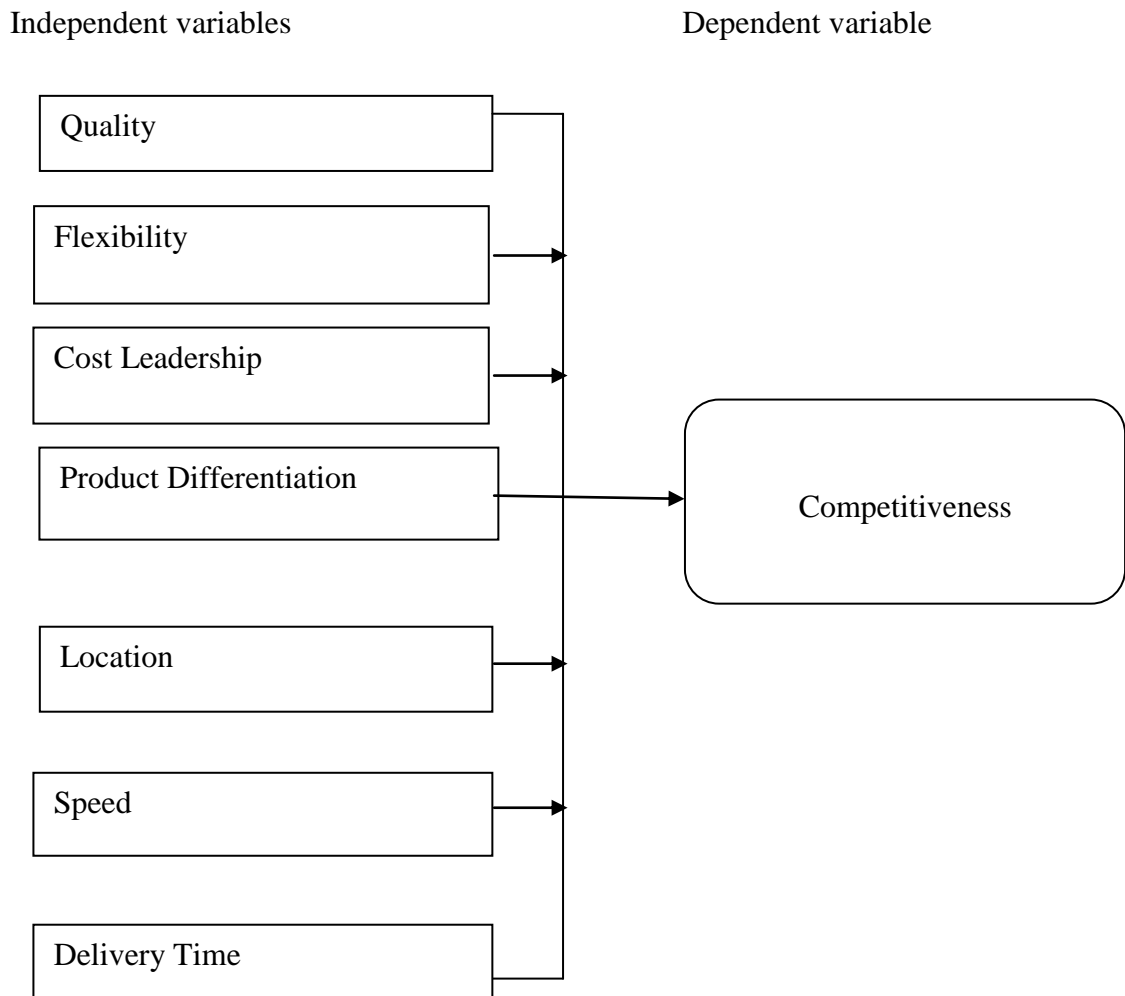
Table 2.1 Summary of Literature Review

Author	Study	Specific Objectives	Methodology	Major Findings
Wathiru (2013)	SQM implementation practices by horticultural industry in Kenya	<ul style="list-style-type: none"> Establish the extent of QMS implementation and SQM principles practiced in the horticultural industry in Kenya. Ascertain benefits and challenges related to the implementation of QMS 	A descriptive study, target population was 53 respondents from Pollen Ltd comprising of managers and supervisors. Data was from both primary and secondary sources.	Implementation of QMS and QMS led to improved quality.
Oriare (2011)	Application of TQM in strategic management at Safaricom Limited	<ul style="list-style-type: none"> Investigate whether application of TQM can lead to increase in organizational and customer orientation to achieve a competitive edge. Investigate the relation between the application of TQM and increase in organizational performance and efficiency 	Study used a case study for Safaricom Limited as a model example.	Results showed that application of TQM in Kenya communication sector leads to increased productivity and ability to compete globally
Wanyiri (2010)	An assessment of TQM practices in the thermal power plants in Kenya	<ul style="list-style-type: none"> Explore application of TQM principles in electrical energy generation management by thermal plants in Kenya. Assess continuous improvement of systems, leadership and management practices. Establish the level of focus on customers and involvement of staff in decision-making. 	A descriptive research was done targeting five plants and five representatives were selected from each plant to achieve a sample size of 25 respondents. Questionnaire was used to collect primary data.	Results found that implementation of TQM principles has strong impact on organizational performance
Droge and Markland (2004)	Impact of quality management on competitive advantage of manufacturing firms in Europe	<ul style="list-style-type: none"> Determine the relationship between quality management and competitive advantage. 	A descriptive research design was used 76 quality assurance managers were targeted	Results indicated that quality management was positively related to competitive advantage of manufacturing firms

2.8 Conceptual Framework

The conceptual framework shows the relationship between the independent variable(s) and the dependent variable. The independent variables include quality, flexibility, cost leadership, product differentiation, location, speed and delivery time. The dependent variable is customer focus as shown in Figure 2.1 below.

Figure 2.1 Conceptual Framework



Source: Author, 2015

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter provides an outline of the research methodology that was used in this study. It consists of the research design, study population, sampling, data collection and data analysis.

3.2 Research Design

This study used a census survey; Kothari (2005) posit that a census survey provides the fullest and most reliable picture of the population and its characteristics at a particular point in time to which the census relates. In the census, data is collected at a specified time from the entire population; in contrast to other surveys, in which information is collected from only a small part of the residents, and from that conclusions are reached regarding the general population.

Cooper and Schindler (2009) described research design as a blue print for the collection, measurements and analysis of data. The research adopted a formal study of question crystallization while the data collection method used was communication study. The control variables were based on ex post facto design whereas the purpose of study was descriptive and the time dimension was cross-sectional based.

3.3 Study Population

The population of this study consisted of generators suppliers in Kenya. The study focused on 16 authorized generators suppliers in Kenya. This population was considered appropriate because of their uniqueness in the adoption of SQM practices.

3.4 Data Collection

Primary data was collected by use of a semi-structured questionnaire. The questionnaires were in the form of Likert scale where respondents were required to indicate their views on a scale of 1 to 5. The questionnaire had four sections; section A sought data on the profile of the organization and the respondents, section B sought to address the first objective of this study which was to determine SQM practices used by generators suppliers in Kenya. Section C sought to achieve the second objective of

this study which was to describe the challenges of SQM practices faced by generators suppliers in Kenya. Section D addressed the third objective of the study, which was to establish the relationship between SQM practices and competitive advantage adopted by authorized generators suppliers in Kenya. Primary data was collected from business development managers or their equivalents in each of 16 authorized generators suppliers in Kenya. This category of respondents was highly considered since they are deemed to understand SQM practices used by the generators suppliers in Kenya. The questionnaires were administered by drop and pick later method at an agreed time with the researcher.

3.5 Data Analysis

The data collected was sorted, cleaned and coded before analysis. Data analysis was done using descriptive statistics; mean and standard deviation for objective one and two. Analyzed data was presented in tables and charts. A linear regression model was used to establish the relationship between SQM practices and competitive advantage adopted by authorized generators suppliers in Kenya using the following model.

$$CA = \beta_0 + \beta_1 QA + \beta_2 FL + \beta_3 CL + \beta_4 PD + \beta_5 LO + \beta_6 SP + \beta_7 DT + \varepsilon$$

Where

CA is competitive advantage, β_0 is CA intercept, β_1 , β_2 , β_3 , β_4 , β_5 , β_6 and β_7 are regression weights, QA is quality, FL is flexibility, CL is cost leadership, PD is product differentiation, LO is location, SP is speed, DT is delivery time and ε is the error term

Table 3.1 Summary of Research Methodology

Objectives	Nature of Data	Questionnaire	Data Analysis
Determine SQM practices used by generators suppliers in Kenya	Primary	Section B	Mean, standard deviation, frequency and percentage
Describe the challenges of SQM practices faced by generators suppliers in Kenya	Primary	Section C	Mean, standard deviation, frequency and percentage
Establish the relationship between SQM and competitiveness of generator suppliers in Kenya	Primary	Section D	Linear regression analysis

Source: Author, 2015

CHAPTER FOUR

FINDINGS AND DISCUSSION

4.1 Introduction

This chapter presents the analyzed data and findings that were obtained from the primary data as well as the discussion. In order to check for accuracy, consistency and completeness, all the questionnaires that were successfully filled and returned, were cross-checked to ensure that they were filled correctly.

4.2 Response Rate

Sixteen questionnaires were distributed to sales engineers of all authorized generators suppliers in Kenya. Out of the 16 questionnaires that were distributed, all of them were successfully filled and returned; this represented a response rate of 100 percent.

4.3 Reliability

To successfully conduct the data collection exercise the participants were briefed in advance on the importance of the study by the researcher. Permission was sought for participation in order to have adequate support. Guidance on how to answer the questionnaire was given by the researcher to enhance completion rate and improved accuracy of data collected. Kothari (2004) puts forth that the procedure for assessing the content validity of a measure is to use an expert in a particular field.

4.4 Current Title or Position

Respondents were asked to indicate their current title or position in order to determine whether they were in a position to give correct information about SQM practices and competitiveness in power supply by authorized generators suppliers in Kenya. The findings are presented in Table 4.1 below.

Table 4.1 Current Title or Position

Title	Frequency	Percent
Production development manager	1	6.25
Sales manager	9	56.25
Quality manager	1	6.25
Customer Relations Manager	5	31.25
Total	16	100.00

Source: Research findings

From the findings in Table 4.1, it was revealed that 56percent respondents were sales managers; there was a tie of 6.3 percent of the respondents who were both production development managers and quality managers. Another 31 percent of the respondents were customer relations managers. From the findings it can be concluded that most of the respondents were either sales managers or customer relations managers.

4.5 Length of Service in the Current Position

The study sought to determine the length of service by the respondents in their current positions. The findings are presented in Table 4.2 below.

Table 4.2 Length of Service in the Current Position

Length of Service	Frequency	Percent
Less than 5 years	6	37.5
5-10 years	4	25.0
10-15 years	4	25.0
Above 15 years	2	12.5
Totals	16	100.0

Source: Research findings

From the above findings, more than 60 percent of the respondents had served in their current position for a period of more than five years, 38 percent of the respondents had served in their current position for less than five years. Only 13 percent of the respondents had served above 15 years. This implies that most of the respondents had a relevant work experience in the current positions to give reliable information.

4.6 Length of Service in the Organization

The respondents were asked to indicate the duration that they had served in the organization to determine whether they were in a position to provide accurate and reliable information with regard to how SQM practices contributes to competitiveness among generator suppliers in Kenya. The findings are presented in Table 4.3 below.

Table 4.3 Length of Service in the Organization

Length of service	Frequency	Percent
Less than 5 years	5	31.25
5-10 years	4	25.00
10-15 years	3	18.75
Above 15 years	4	25.00
Totals	16	100

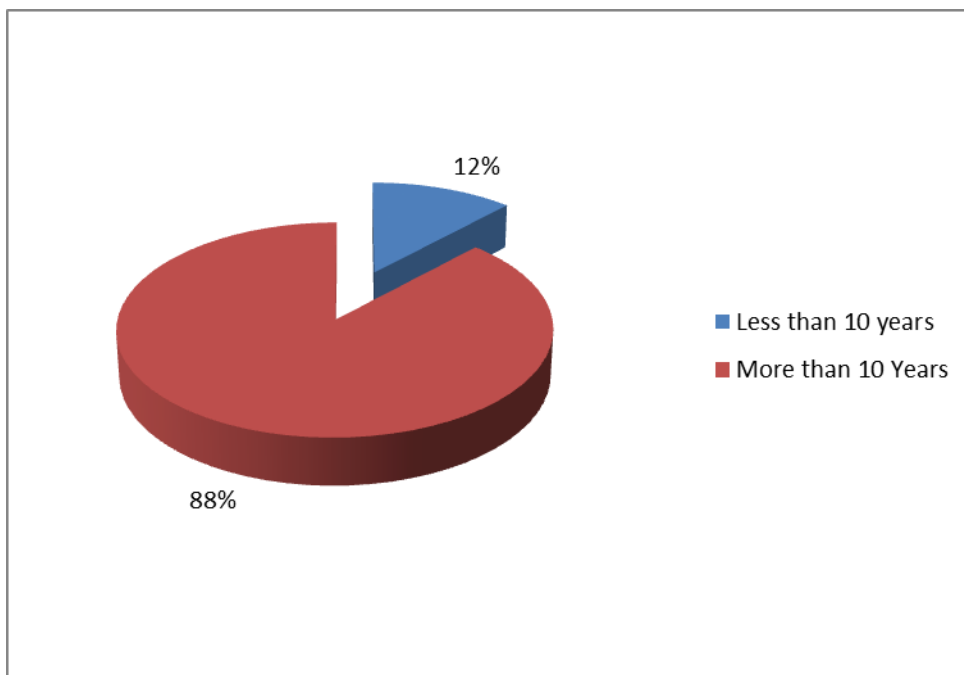
Source: Research findings

From the above findings, 32 percent of the respondents had served in the organization for less than 5 years; at least 50 percent of the respondents had served in the organization for more than 10 years. The above findings is an indication that majority of the respondents had a better understanding of how SQM practices influences competitiveness of generator suppliers.

4.7 Duration that the Organization Had Been in Operation

The study sought to determine the duration that the organization had been in operation to establish whether that period was sufficient for implementation of SQM practices in a manner that would it bring out a clear understanding of how SQM contributes to competitiveness among generator suppliers in Kenya. The findings are presented in the Figure 4.1 below.

Figure 4.1 Duration of Operation



Source: Research findings

From the above findings, 88 percent of the respondents accepted that most of the generator suppliers had been in operation for more than 10 years. Only 12 percent of the respondents indicated that generator suppliers had been in operation for less than 10 years. This means that most generator suppliers had been in operation for more than 10 years.

4.8 Strategic Quality Management Practices

The study sought to determine SQM practices used by generator suppliers in Kenya.

Below are the results of the findings presented in Table 4.4.

Table 4.4 Strategic Quality Management Practices

Customer Focus	N	Mean	SD ¹
Firm ensures quality delivery of goods and services	16	4.77	1.231
Firm provides competitive products and services	16	3.85	1.322
Products and services meets customer satisfaction	16	3.78	0.978
Organization offers flexibility for goods and services offered	16	3.68	1.343
Leadership	N	Mean	S.D
Firm has effective leaders to implement SQM	16	3.68	1.343
Firm's top management support SQM	16	4.01	.671
Top management considers the needs of its customers	16	3.77	.659
Top management allocates resources to implement SQM	16	3.16	.546
Continuous Improvement	N	Mean	S.D
Our organization deliver goods and services on time	16	3.61	.641
Sharing of information	16	3.56	.940
No manual delivery of information	16	3.76	.699
Authorization of transactions is done online	16	3.34	.476
The organization maintains database of all potential suppliers	16	3.79	.723
People, Participation and Partnership	N	Mean	S.D
Effective coordination of quality functions and activities	16	3.10	.986
There is reduced lead time	16	3.51	.771
Joint and planning decision making systems	16	2.98	1.244
There is improved reliability between the organization and suppliers	16	3.06	.978
Strategic Quality Planning	N	Mean	S.D
Participative decision making	16	4.01	.876
Employee's involvement in key quality decisions	16	3.35	.578
The organization formulates quality improvement strategies	16	3.16	1.112
The organization integrates quality planning process	16	3.01	.976

SD¹ Standard Deviation

Source: Research findings

From the above results, it was observed that the most popular customer focus practices used by generator suppliers was ensuring on-time delivery of goods and services and value adding goods and services to meet customer satisfaction. The results are as follows mean scores 4.77, 3.85 and 3.78. Their respective standard deviations were 1.231, 1.322 and 0.978. The results indicated that some of the leadership practices that contributed to SQM were support and allocation of resources and the mean and standard deviation scores were, respectively 4.01 and 3.77 and 0.671 and 0.659.

With regard to continuous improvement, the findings revealed that the organization maintained a data-base of suppliers and there was no manual delivery of information. The mean scores were 3.79 and 3.76 and the standard deviation were 0.723 and 0.699.

It was further observed that there was effective coordination of activities in the organization. The mean score was 3.10 and standard deviation was 0.986. Most generator suppliers were found to practice strategic quality planning through implementing participative decision-making and employee's involvement in key quality decisions. The mean and standard deviation scores were 4.01, 3.35 and 0.876, 0.578 respectively. It can be concluded that most generator suppliers implemented SQM to a large extent. However, the most popular SQM practices used by the generator suppliers were customer focus, leadership and continuous improvement.

4.8.1 Role of Strategic Quality Management Practices and Competitiveness in Generator Suppliers in Kenya

The study sought to determine the role of SQM practices on competitiveness in generator suppliers in Kenya. The findings are presented in Table 4.5 below.

Table 4.5 Role of Strategic Quality Management on Competitiveness

Parameter	Frequency	Percent
Totally Agree	1	6
Agree	9	56
Not Agree	5	32
Not Sure	1	6
Total	16	100

Source: Research Findings

From the above findings, it was revealed that 56 percent of the respondents agreed that SQM practices contributed to competitiveness among generator suppliers in Kenya while 32 percent of the respondents did not agree. The findings show that majority of the respondents agreed that SQM practices led to competitiveness of generator suppliers in Kenya.

4.9 Competition in the Industry

The respondents were asked to comment about competition in their industry. Below are the results of the findings presented in Table 4.6 below.

Table 4.6 Competitions in the Industry

Parameter	Frequency	Percent
Weak competition	1	6
Strong competition	9	57
Very strong competition	5	31
Hyper competition	1	6
Total	16	100

Source: Research Findings

From results in Table 4.6, the findings show that majority of the respondents confirmed that there was a strong competition among generator players in Kenya. This was accounted for by more than 80 percent of the respondents. Only 6 percent of indicated that there was weak competition among generator suppliers in Kenya. It can be concluded that there was a strong competition among generator suppliers in Kenya.

4.9.1 Strategic Quality Management Measures used in the Organization

The study sought to determine the extent to which SQM measures were used by the generator suppliers in Kenya. The findings are presented in Table 4.7 below.

Table 4.7 Measures of Strategic Quality Management

Strategic Quality Management Measures	N	Mean	SD
Reduced complaints	16	4.15	.957
On-time deliver	16	3.47	.923
Customer satisfaction	16	4.16	.678
Operating efficiency	16	4.04	.776
Reduced cycle time	16	3.92	.916
Productivity	16	4.81	.657
Valid N (list wise)	16		

Source: Research findings

From the above findings, the study found that the most popular SQM measures used by the generator suppliers in Kenya were productivity, customer satisfaction, reduced complaints and operating efficiency. The mean scores of these SQM measures were 4.81, 4.16, 4.15 and 4.04, respectively and the standard deviations were, respectively 0.657, 0.678, 0.957 and 0.678.

4.9.2 Competitive Strategies

The respondents were asked to rate the following parameters quality, lead time and cost when dealing with competitive strategies. The findings are presented in Table 4.8 below.

Table 4.8 Competitive Strategies

Competitive Strategies Measures	N	Mean	SD
Quality	16	4.10	.757
Lead time	16	3.56	.723
Cost	16	4.05	.918
Flexibility	16	3.73	.695
Valid N (listwise)	16		

Source: Research findings

From the above findings in Table 4.7, it was observed that quality and cost were most important parameters to consider when selecting and implementing competitive strategies among generator suppliers in Kenya. The mean scores were 4.10 and 4.05 respectively and the respective standard deviation were 0.757 and 0.918. From the findings, it can be concluded that cost and quality were critical in implementation of competitive strategies among generator suppliers in Kenya.

4.9.3 Relationship between Strategic Quality Management Practices and Competitive Advantage

To achieve this objective, the study used four independent variables that were considered sufficient in establishing the relationship between SQM and competitiveness among generator suppliers in Kenya. These variables were flexibility, cost leadership, location and product differentiation. Linear regression analysis was used to determine the extent to which the independent variables contributed to the dependent variable and the results are presented in Table 4.9 below.

Table 4.9 Relationship Between Strategic Quality Management Practices and Competitive Advantage

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.984 ^a	.969	.958	.30584		
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	32.409	4	8.102	86.616	.000 ^b
	Residual	1.029	11	.094		
	Total	33.437	15			
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	-.045	.211		-.212	.836
	Flexibility	-.029	.301	-.024	-.096	.925
	Cost Leadership	.543	.253	-.410	-2.147	.055
	Product Differentiation	2.064	.300	1.811	6.887	.000
	Location	-.457	.253	-.457	-1.804	.099

a. Dependent Variable: competitiveness

b. Predictors: (Constant), Location, Cost Leadership, Flexibility, Product Differentiation

From Table 4.9 above, Adjusted R Square (0.958) shows that there was a high explanatory power of the dependent variable by the independent variables; only 4.2 percent was explained by other variables. To test for the overall significance of the model, F-value and p-value were used. Since the p-value was less than the level of significance ($p\text{-value} < \alpha$; $0.000 < 0.05$), then the results indicate that, competitiveness was influenced by flexibility, cost leadership, location and product differentiation and these variables taken together were statistically significant in predicting the relationship between SQM practices and competitiveness of generator suppliers in Kenya. However, among the independent variables, it was only the product differentiation, which was significant since p – value was less than level of significance ($p\text{-value} = 0.000 < \alpha = 0.05$). In addition, from the above findings in Table 4.8, the linear regression model obtained was as follows; $CA = 2.064PD$, which meant that a unit increase in product differentiation increased competitiveness by 2.064 units.

4.10 Challenges of Implementing Strategic Quality Management Practices

The study sought to determine the challenges faced by generator suppliers in Kenya during implementation of SQM practices. The findings are presented in the Table 4.10 below.

Table 4.10 Challenges of Implementing Strategic Quality Management

Strategic Quality Management Practices	N	Mean	SD
Rigid organization culture	16	4.16	1.221
Lack of management commitment	16	4.11	1.345
Resistance to change	16	4.02	1.205
Inadequate resources	16	4.12	1.011
Lack of qualified and experience staff	16	3.01	1.107
Inadequate leadership for quality	16	3.41	1.233
Quality is expensive	16	3.86	.789
Lack of effective measurement of quality improvement	16	3.97	.911

Source: Research findings

From Table 4.10 above, the most common challenges facing generator suppliers in Kenya were rigid organizational culture, lack of management commitment, resistance to change, inadequate resources and the fact that quality is expensive. The respective mean scores were 4.16, 4.11, 4.02, 4.12 and 3.97, whereas the standard deviation were 1.221, 1.345, 1.205, 1.011 and 0.911, respectively.

4.11 Discussion

From the analyses, it was observed that the most popular SQM practices among generator suppliers in Kenya were customer focus, leadership and continuous improvement. Further, the findings revealed that the most common challenges facing generator suppliers in Kenya are rigid organizational culture, lack of management commitment, resistance to change, inadequate resources and the fact that quality is expensive.

The findings also revealed that SQM practices played an instrumental role in contributing to competitiveness among generator suppliers in Kenya. The linear regression analysis indicated that there existed a relationship between SQM practices and competitiveness of generator suppliers in Kenya.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The general objective of this study was to evaluate SQM practices and competitiveness in power supply by authorized generators suppliers in Kenya. The study sought to determine SQM practices used by generators suppliers in Kenya, determine SQM practices challenges faced by generators suppliers in Kenya and establish relationship between SQM practices and competitive advantage of authorized generators suppliers in Kenya. Data was collected from all the 16 generator suppliers in Kenya.

5.2 Summary

The study looked into the demographics of the respondents to determine whether they were in a position to give accurate and reliable information. With regard to the respondents' length of service in the current position and in the organization, the findings revealed that most of the respondents had worked for more than five years in the organization and current position and thus were in a position to provide accurate and reliable in relation to SQM practices used by generator suppliers and their influence on competitiveness.

With regard to the first objective of this study, the findings indicated that most generator suppliers implemented SQM practices to a large extent. However, the most popular SQM practices used by generator suppliers were customer focus, leadership and continuous improvement.

With regard to the kind of competition that the generator suppliers are exposed to, it was found that there was a strong competition among the generator suppliers in Kenya. About the measures used by generator suppliers to measure SQM practices, the findings revealed that the most essential measures were productivity, customer satisfaction, reduced complaints and operating efficiency.

The findings revealed that the main challenges hindering implementation of SQM practices by generator suppliers in Kenya were rigid organizational culture, lack of

management commitment, resistance to change, inadequate resources and the fact that quality is expensive.

The linear regression results indicated that there was a relationship between SQM practices and competitiveness among generator suppliers in Kenya. These findings were consistent with a study conducted by Droge and Markland (2004) who investigated the relationship between quality management and competitive advantage in manufacturing firms in Europe. The results indicated that quality management was positively related to competitive advantage.

5.3 Conclusion

From the findings, most generator suppliers used SQM practices to a large extent. The most popular SMQ practices that were used by generator suppliers in Kenya were customer focus, leadership and continuous improvement. Further, it can also be concluded that even though most generator suppliers adopted SQM practices they faced various challenges during implementation. These challenges included rigid organizational culture, lack of management commitment, resistance to change, inadequate resources and the fact that quality is expensive.

The study also indicated that there existed a high relationship between SQM practices and competitiveness of generator suppliers in Kenya. This was confirmed through a linear regression analysis that was done on relationship between SQM practices and competitiveness among generator suppliers in Kenya.

5.4 Limitations

During this study, two main constraints; time and funding limited the scope of this study. The generators re-sellers were not considered and therefore the findings obtained in this study may not be accurate in making generalizations of all the generator dealers that work and operate in Kenya. The study was specifically limited to the authorized warranty holders from the overseas manufacturers. Most of the employees thought that the process was tedious and non-paying. Therefore, it was hard to convince the respondents to fill and complete the questionnaires on time. This

significantly affected the level of efficiency by the researcher in collecting the primary data on time.

5.5 Recommendation

The study recommends that generator suppliers should adopt contemporary SQM practices to meet local and international standards. This will provide a platform for generator suppliers in Kenya to build on their innovation and diversification of their products and services to ensure consistent power supply and minimize power black outs. In addition, the study recommends that all the generator suppliers operating in Kenya should be authorized in order to effectively execute their role in power supply across the country. This will increase power generation and thus boost performance of key sectors of the economy.

The ERC should ensure that all the power suppliers in Kenya implement SQM practices through conducting regularly audits to ensure that all quality standards, policies and procedures are observed in order to deliver quality services to the customers and the economy. The study also recommends that organizations that aspire to be leaders in SQM practices should benchmark themselves with the best performing firms globally in order to find out SQM practices used by other firms in enhancing competitiveness. This will provide more insights on the best SQM practices to increase profitability and value addition.

5.6 Suggestions for Further Research

Further to this study, it would be advisable to investigate on the influence of various factors such as regulatory environment or any other factors either as independent or moderating mediating variables that can influence generator suppliers in adopting and implementing SQM practices. A comparative study could be conducted in another country, in the sub-region, or in developed countries to ascertain SQM practices used by generator suppliers and their influence on competitiveness. The findings obtained will enable the researcher to make a comparison after which plausible conclusions can be made based on the findings.

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APPENDICES

Appendix I Letter of Introduction

Dan Muturi Mwai,
University of Nairobi,
School of Business,
P.O Box 30197,
Nairobi.

Dear Sir/Madam,

I am a Masters student at the University of Nairobi, School of Business, in partial fulfillment of the requirement for Master of Business Administration. I am conducting a survey on the Strategic Quality Management and Competitiveness in Power Supply by Authorized Generators Suppliers in Kenya.

I am glad to inform you that you have been selected to form part of the study. I would therefore kindly request you for assistance in completing the attached questionnaire which forms a major input of the research process. The information and data will be strictly be used for academic purposes only and strict confidence shall be observed on the same. Your co-operation will go a long way in ensuring the success of this project. I would like to thank you in advance for your time and consideration.

Yours Sincerely,

Dan Muturi Mwai
D61/70899/2014

Appendix II: Sample Questionnaire

This Research is conducted with the authorization of the University of Nairobi, Faculty of commerce and School of Business. (Please tick responses as appropriate. where necessary tick as many items as you find relevant.)

Section A General Information

Demographic Information of the Respondents

1. What is your current title or position?
 - a. Products Development Manager
 - b. Sales Manager
 - c. Service Manager
 - d. Quality Manager
 - e. Customer Relations Manager
 - f. Other (specify).....
2. How long have you worked in your current position?
 - a. Less than 5 years
 - b. 5 to 10 years
 - c. 10 to 15 years
 - d. Above 15 years
3. How many years have you worked for the organization?
 - a. Less than 5 years
 - b. 5 to 10 years
 - c. 10 to 15 years
 - d. Above 15 years
4. Duration that the organization has been in operation
Less than 10 years More than 10 years

Section B Strategic Quality Management Practices

Please indicate the extent to which you agree with the following statements on the SQM practices used by Generator suppliers in Kenya. The scale below will be applicable: 1=very small extent, 2= small extent, 3= moderate extent, 4= Large extent, 5= to a very large extent.

No	Statement	1	2	3	4	5
	Customer Focus					
1	The firm ensures quality delivery of goods and services					
2	The firm provides competitive products and services					
3	The products and services meets customer satisfaction					
4	The organization offers flexibility for goods and services offered					
5	The firm offers a variety of products to all classes of customers					
	Leadership					
1	The firm has effective leaders to implement SQM					
2	The firm's top management support SQM					
3	The top management considers the needs of its customers					
4	The top management allocates resources to implement SQM					
	Continuous Improvement					
1.	Our organization deliver goods and services on time					
2.	Sharing of information					
3.	No manual delivery of information					
4.	Authorization of transactions is done online					
5.	The organization maintains database of all potential suppliers					
	People, Participation and Partnership					
1	Effective coordination of quality functions and activities					
2	There is reduced lead time					
3	Joint and planning decision making systems					
4	There is improved reliability between the organization and suppliers					
	Strategic Quality Planning					
1	Participative decision making					
2	Employee's involvement in key quality decisions					
3	The organization formulates quality improvement strategies					
4	The organization integrates quality planning process					

Section C Establish the Role of Strategic Quality Management Practices and Competitiveness of Generator Suppliers in Kenya

- 1) SQM have influenced competitiveness of generators suppliers in Kenya to a big extent.
 Totally agree [] Agree [] Not agree [] Not sure []
- 2) How would you describe competition in the industry in your catchment area?
 Weak competition []
 Strong competition []
 Very strong competition []
 Hyper competition []
- 3) Who do you consider as your major competitor?

- 4) To what extent are the following SQM measures used in the organization? Rank by placing a tick in the appropriate place. 1= Least extent 2= Low extent, 3= Neutral, 4= Moderate extent and 5= Great extent

No	Description	1	2	3	4	5
1	Reduced Complaints					
2	On-time deliver					
3	Customer satisfaction					
4	Operating efficiency					
5	Reduced Cycle time					
6	Productivity					

5. How do you rate the following when dealing with competitive strategies 1= Least extent 2= Low extent, 3= Neutral, 4= Moderate extent and 5= Great extent

No	Description	1	2	3	4	5
1	Quality					
2	Lead time					
3	Cost					
4	Flexibility					

Section D Challenges

To what extent has the organization faced each of the following challenges in the implementation of SQM. Indicate the extent using the scale: 1= No extent, 2= Little Extent, 3=Moderate extent, 4=Large Extent and 5= Very Large extent.

No	Parameter	1	2	3	4	5
1	Rigid Organization Culture					
2	Lack of Management Commitment					
3	Resistance To Change					
4	Inadequate Resources					
5	Lack of Qualified and Experience Staff					
6	Inadequate Leadership for Quality					
7	Inadequate Planning					
8	Lack of Proper Training					

THANKS ALL FOR YOUR PARTICIPATION

Appendix III List of Generator Suppliers in Kenya

1. Mantrac (K) Ltd,
2. Car & General (K) Ltd
3. Blackwood Hodge Kenya Ltd
4. Ryce Engineering
5. Achelis Materials Handling Ltd
6. Rift Valley Machinery Services Ltd
7. Electrowatts Ltd
8. Aggreko Kenya Energy Ltd
9. Avery (E.A) Ltd.
10. Gaston Kenya Ltd
11. Atlas Copco Eastern Africa Ltd
12. Yorpower Manufacturing Ltd
13. Hypertech Electrical Services Ltd
14. Delta Trading Equipment's Company Ltd
15. Morison Engineering Ltd
16. Simba Corporation Ltd

Source: (Africa Review Magazines of Business and Technology, 2006 to 2015)