

**IMPACT OF TOTAL QUALITY MANAGEMENT AND OPERATIONAL
COMPETITIVENESS OF THE MANUFACTURING SECTOR; THE CASE
OF UGANDA CLAYS LIMITED-KAJJANSI**

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**A RESEARCH REPORT SUBMITTED TO THE COLLEGE OF ECONOMICS AND
MANAGEMENT IN PARTIAL FULFILMENT OF THE REQUIREMENTS
FOR THE AWARD OF A BACHELOR'S DEGREE IN SUPPLY &
PROCUREMENT MANAGEMENT OF KAMPALA
INTERNATIONAL UNIVERSITY**

OCTOBER, 2019

DECLARATION

This research report is my original work and has not been presented for any degree or any other academic award in any university or institution of learning. I am entirely responsible for everything written in this report.

Signed .....

Date 18th/10/2019.....

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APPROVAL

I confirm that the research report is done under my supervision as the university examiner supervisor.

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Date.....
21/11/2019

DEDICATION

First of all, I would like to dedicate this piece of work to my beloved parents and siblings. May the Almighty Allah bless you all!

ACKNOWLEDGEMENT

I wish to extend my greatest gratitude to God Almighty for without Him in my life this achievement would not have been possible,

My special thanks go to my parents for helping me in my studies and for believing in me. Special gratitude goes to my dear friends for the moral, financial, emotional and spiritual support throughout my studies.

I would also like to thank my lecturer and my supervisor Mr. Ayasi. Asadi who guided and helped me complete this piece of work. Thank you for your patience

I extend my sincere thanks to the management of Kampala International University Uganda for having organized and offered me the knowledge and skills in the field of course.

My gratitude goes also to friends and classmates. In one or many ways you have contributed to the fulfillment of this work. Thank you.

Finally, I thank all who contributed directly or indirectly to the completion of this work. Their actions are an indestructible monument within the bottom of my heart

May the Almighty Allah reward you all!

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ABSTRACT

The aim of the research is to determine the critical factors of total quality management and to measure their effect on operational performance at Uganda Clays Limited. The study was guided by three objectives and these included determining the TQM practices used by Uganda Clays Ltd, establishing the effect of TQM practices on operational Competitiveness at Uganda Clays Ltd and, establishing the relationship between Total Quality management and operational competitiveness. The research adopted a descriptive research design. Data was collected using a self-administered questionnaire that was distributed to 25 senior and middle level managers at the firm that were selected randomly. It was found that if TQM is implemented well, it produces a variety of benefits such as meeting the customers' needs which is key in manufacturing, improved internal communication and better problem solving. Generally, the five TQM philosophies that were being researched on had a positive correlation to the operational performance of the firm. Since, the data in the research was collected from top managers of the organizations on the basis of their subjective evaluations; objective performance indicates the findings might have elements of subjectivity considering that they will be involved in implementation of the TQM philosophy in the firm. The research implication is that the firm's senior management must consider their internal strategic management processes, training and involve other staff, and their own role in championing total quality approaches to managing organizational performance.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

As a result of increasing global competition, the manufacturing industry, like all other industries, has to continuously change in order for businesses to remain productive and efficient. A growing number of businesses are going multinational to strategically position themselves in global markets and worldwide manufacturing operations. Changing business conditions have prompted manufacturers to design equipment to accommodate new products without expensive retooling (Koh and Guneseckaran, 2006). The planned flexibility realized through agile manufacturing allows manufacturers to change their focus and enable them to adapt to different market segments. Flexible manufacturing systems techniques are being utilized and are enabling companies to offer lower costs, faster turnaround time and quality that meet or exceed customer expectations (Powell, 2004). He further points that, a firm needs to identify improvement opportunities in product quality, material handling, product design time, manufacturing setups, factory and office overhead. Integration and standardization can facilitate these improvements.

One of these approaches that have been developed to improve firm's processes and therefore increase flexibility is the total quality management (TQM). A wide range of management issues, techniques and approaches have been brought together under the general banner of Total quality management. These factors include process management, quality system, statistical quality control, teamwork, quality policy, zero defect, training and education, planning measurement of quality cost and benchmark management (Salaheldin, 2009). The implementation of TQM is accomplished through a set of practices that supports the TQM philosophy (Dean & Bowen. 1994). TQM philosophy dictates that the practices function as an interdependent system that can combine with other organizational assets to generate competitive advantage. As Schendel (2004) pointed out, competitiveness is based not on individual assets or practices that can be easily duplicated, but on the combination of a series of assets that he labelled "compound assets."

Manufacturing firms that exhibit strong emphasis on structural control of procedures, operations, and work activities have been found to exhibit a stronger relationship between their TQM implementation and financial performance (Lillrank, 2008). This finding supports observations made by Powell (2005) that continuous improvement can effectively be integrated into an organization via job descriptions and other administrative procedures. By standardizing the use of specific TQM tools and techniques within an organization's formal procedures, it appears that hospitals can continuously improve effectiveness and efficiency (Shortell et al., 2005). It appears that organizations that provide employees access to key information and empower them to adapt their processes to environmental changes are better able to use TQM for competitiveness.

1.2 Statement of the Problem

To gain the full potential of TQM, manufacturing firms like Uganda Clays Limited (UCL) must implement all the practices to the greatest extent possible. Proper implementation of TQM in manufacturing firms is a critical determinant in enhancing organizational performance (Shortell et al., 2005). However, Haim (2003) notes that there has been little in the way of independent measurement of TQM practices and their impact as a source of a firms competitive advantage. Construction sector in Uganda is expanding at an increasing rate and is becoming intensely competitive with the entry of potential players into the market. As such, every organization needs to adopt some strategies which will enable it to have a competitive edge over the others and improve its performance. As competition intensifies, many firms continue to seek profitable ways in which to differentiate themselves from competitors and adoption of TQM practices is one of the methods. This current research will seek to establish the effect of TQM as a source of operational competitiveness at Uganda Clays Limited.

1.3. General Objective

The main aim of the study was to establish the effect of Total Quality Management on Operational Competitiveness at Uganda Clays Limited

1.3.1 Research Objectives

The study was guided by the following specific objectives;

- 1) To determine the TQM practices used by Uganda Clays Ltd.
- 2) To establish the effect of TQM practices on operational Competitiveness at Uganda Clays Ltd.
- 3) To establish the relationship between Total Quality management and operational competitiveness at Uganda Clays Ltd

1.4 Research Objectives

- 1) What are the determinants of TQM practices used by Uganda Clays Ltd?
- 2) What is the effect of TQM practices on operational Competitiveness at Uganda Clays Ltd.?
- 3) What is the relationship between Total Quality management and operational competitiveness at Uganda Clays Ltd?

1.5 Scope of the study

1.5.1 Geographical Scope

Uganda Clays is leading manufacturer of quality baked clay building products in Uganda. It uses state of the art kilns to currently provide the building materials in a brick-red color. The company's products are categorized into roofing tiles, bricks, maxpans, quarry floor tiles and others. UCL is located 14KMs along Entebbe Road in Kajjansi- Wakiso District and operates with plants in Kajjansi and Kamonkoli (eastern Uganda).

1.5.2 Content scope

The study aimed at establishing the effect of Total Quality Management on Operational Competitiveness at Uganda Clays Limited and specifically determined the TQM practices, effect of TQM practices and established the relationship between TQM and operational competitiveness.

1.5.3 Time scope

This study was conducted within a timeframe of 3 months ranging from June to August 2019 and covered a period of one year (i.e. from January-December, 2018), the period when the industry experience significant quality complaints from clients especially regarding the quality of tiles on the market.

1.6 Significance Study

This study will be of value to the management of the Uganda Clays Limited in decision making processes as to how to adapt to TQM practices as a strategy in offering quality service/products to consumers.

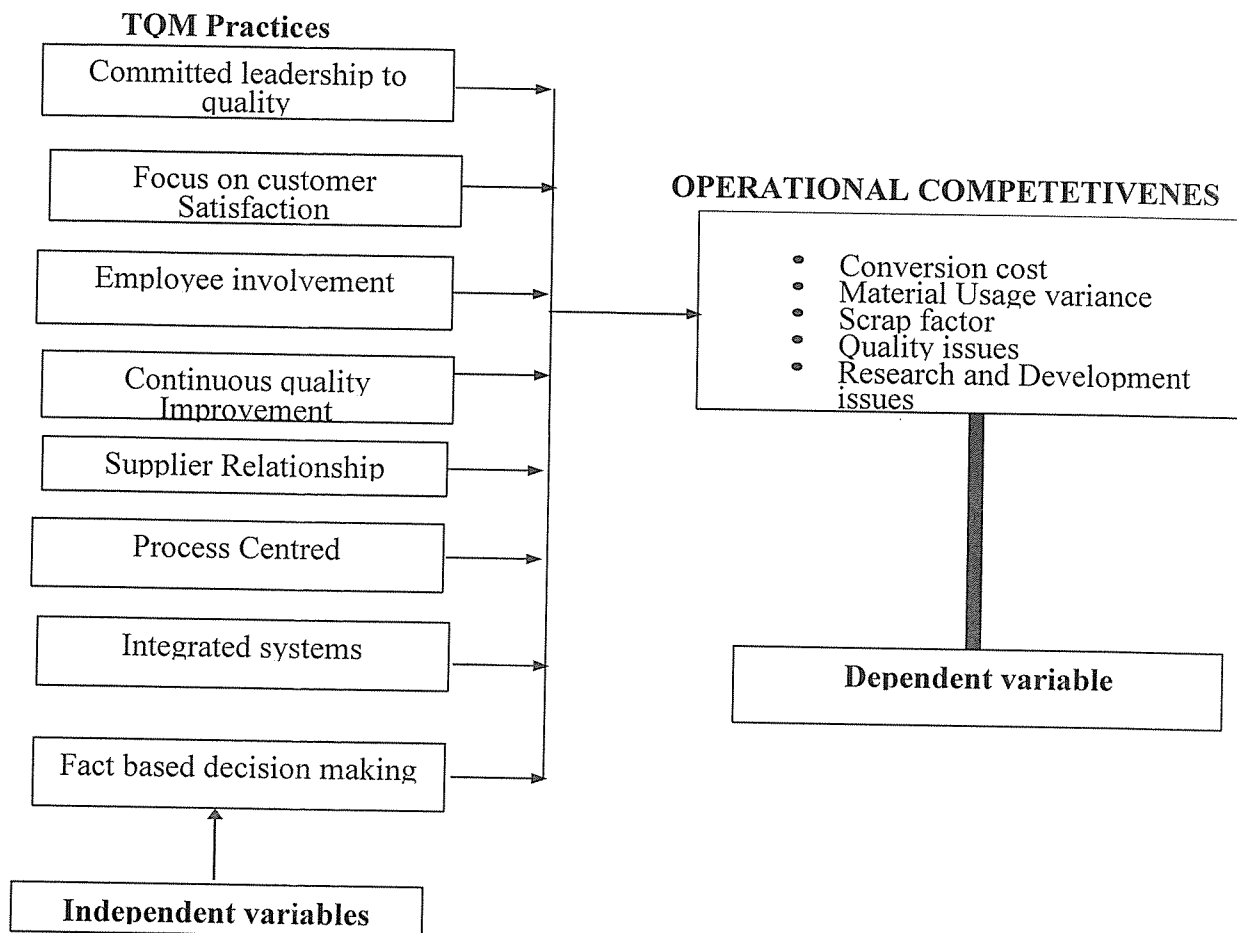
This study will benefit the **Government** through policy formulation. This study will aid the board members in enacting policy's that will govern quality operations at the industry level.

Scholars: This study is expected to increase body of knowledge to the scholars as it will assist future scholars, researchers and practitioners in the area of manufacturing and pharmaceutical industry best practices and TQM adoption as they will be able to find materials besides areas where they can advance their research on the related subjects.

1.7 Conceptual Framework

A conceptual framework can be defined as a set of broad ideas and principles taken from relevant fields of enquiry and used to structure a subsequent presentation (Reichel and Ramey, 1987). The schematic diagrams below will not only guide the study but will also show the interrelationship among the key variables in the study as illustrated in Fig. 2.1.

Fig.2.1 Conceptual Framework



Source: Researcher's own conceptualization, 2019

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter provides information from publications on topics related to the research problem. It examines what various scholars and authors have said about total quality management. The chapter covers: theoretical foundation of total quality management, total quality management practices, organizational competitiveness and total quality management and competitiveness, summary and conceptual framework

2.2. Key Concepts

2.2.1 Total Quality Management

Total Quality Management (TQM) is the art and science of managing the whole to achieve excellence and is based on six basic principles which are known to be its pillars. TQM is the culture of an organization committed to customer satisfaction through continuous improvement. This culture varies from one country to another and between different industries, but has certain essential principles, which can be implemented to secure greater market share, increased profits, and reduced costs (Kanji & Wallace, 2000). A review of extant literature on TQM and continuous improvement programs identifies 12 common aspects: Committed leadership, adoption and communication of TQM, closer customer relationships, benchmarking, increased training, open organization, employee empowerment, zero defects mentality, flexible manufacturing, process improvement, and measurement (Kaynak, 2003).

Today customers are demanding quality in products, services and in life. They have become increasingly discerning and have started looking for options more in tune with their basic needs, requirements and self esteem. In fact, they are prepared to pay a premium for a quality product or service (Lillrank, 2008). One of the approaches that seem to provide the solution to the aforesaid challenges is the management philosophy of total quality management. The role of TQM is widely recognized as being a critical determinant in the success and survival of both manufacturing and service organizations in today's competitive environment. TQM is also seen

as a source of competitiveness, innovation, change and new organizational culture (Kanji & Wallace, 2000). Any decline in customer satisfaction due to poor service quality would be a serious cause of organizational failure.

2.2.2 Operational Competitiveness

Competitiveness is the ability of companies, industries, regions, nations, and supranational regions to generate, while being and remaining exposed to international competition, relatively high factor income, and factor employment levels on a sustainable basis (Gulati, 1999). Accordingly to Porter he believes that competitiveness is the underpinning of prosperity, based on productive potential of a nation's economy, which in turn is ultimately set by the productivity of its companies determined by sophistication of company operations and strategy and quality of micro-economic business environment. A firm's sustainable competitiveness derives from its ability to assemble and exploit an appropriate combination of resources. It is achieved by continuously developing existing and creating new resources and capabilities in response to dynamic market conditions.

The atmosphere of high global competition demands a higher level of capacity to maintain or increase steadily the performance of the business. Vos (2005) considered that the managers or owners of management skills are very limited, by which it must be improved so that companies are able to successfully implement business strategies that will improve their competitiveness. However, there are several disagreements about the competitiveness measurement, due the used indexes and interpretations have generated polemic. Salaheldin (2009) believes that competitiveness can be measured through seven indexes: nature of competitiveness, capacity for innovation, the brand extension, restriction of the regulations of the environment, quality in the education of mathematics and science, quality in the education system, and ease of access to credit. Powell (2004), who did not specify how the performance measurement should only have eight rates for their calculation: physical infrastructure, human capital, efficiency of goods market and work, efficiency of financial market, technological development, opening and market size, sophistication of business, and innovation, thereby reducing its application. The competitive performance of companies in global consumer markets therefore will be

determined by their capacity to deal simultaneously with the competition factors of price, quality, delivery time, flexibility and innovation (Pandora, 2009). Simply said, competitiveness at the enterprise level may be nothing more than applying the concept of continuous improvement to the parameters that determine the competition factors of the company.

2.2.3 Total Quality Management and Competitiveness

The widespread diffusion of quality management techniques will make an organization, an economic sector and eventually a country more competitive. The crucial issue that determines the competitive success of a company is the ability to integrate the results of quality improvement, which is crucial for consumer satisfaction, with measures of profitability. In open economies, companies that are relatively more competitive than their rivals expand their market share because consumers are satisfied with specific characteristics of their products or services. Consumer satisfaction may be associated with one or more of the following elements of an organization's products or services (Pandora, 2009). Salaheldin (2009) findings showed that the application of TQM elements which include: leadership, people management, customer focus, strategic planning, information and analysis, and process management has a significant positive relationship to the business competitiveness. Reed et al., (2006) 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 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 (Kanji & Wallace, 2000), 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 produce while at the same

time improved process efficiency, which arises from experience curve effects and learning, also reduces costs.

2.3 Theory

2.3.1 Resource Based Theory

This theory suggests that capabilities are an important contributor to organizational performance (Tippins and Sohi, 2003). They point that Capabilities refer to an organization's ability to assemble, integrate, and deploy valued resources (Amit and Schoemaker, 1993). They are rooted in processes and business routines. Grant (1995) describes a hierarchy of organizational capabilities, where specialized capabilities are integrated into broader functional capabilities such as marketing, manufacturing, and IT capabilities. Functional capabilities in turn integrate to form cross-functional capabilities such as new product development capability, customer support capability, etc. Also, gaining competitiveness, firms' resources reside within a firm and therefore an advantageous competitive position of a firm is built on value-creating resources that are critical inputs into the production and distribution of its products and services (Barney, 1991). Also, suggests that attaining and maintaining a sustained competitiveness requires the availability of strategic resources that are heterogeneous in nature, not perfectly mobile, not imitable, and non-substitutable without great effort (Barney, 1991). Examples of such rare and non-imitable resources could be the appropriate use and allocation of core competences (Lo'pez, 2005) or there configuration of organizational routines so as to respond better to the dynamic and rapid changes of the market (Eisenhardt and Martin, 2000). TQM entails practices, such as empowering employees, investing in customer relations, and building effective communication channels. TQM can contribute to the improvement of performance by encouraging the development of assets that are specific, produce socially complex relationships, are steeped in the history and culture of the company and generate tacit knowledge. All these features correspond to the conditions, which, according to the RBV, allow a sustained competitiveness (Barney, 1991).

2.4 Total Quality Management Practices

Total Quality Management (TQM) is the art and science of managing the whole to achieve excellence and is based on six basic principles which are known to be its pillars. TQM is the

culture of an organization committed to customer satisfaction through continuous improvement. This culture varies from one country to another and between different industries, but has certain essential principles, which can be implemented to secure greater market share, increased profits, and reduced costs (Kanji & Wallace, 2000). A review of extant literature on TQM and continuous improvement programs identifies 12 common aspects: Committed leadership, adoption and communication of TQM, closer customer relationships, benchmarking, increased training, open organization, employee empowerment, zero defects mentality, flexible manufacturing, process improvement, and measurement (Kaynak, 2003).

Anthony et al, (1989) described 11 TQM practices; management commitment, role of the quality department, Training and education, employee involvement, continuous improvement, supplier partnership, product/ service design, quality policies, quality data and reporting, communication to improve quality, and customer satisfaction orientation. Suresh chandar et al, (2002) expanded the practices even further and came out with 12 major practices comprising of top management commitment and visionary leadership, human resource management, technical system, information and analysis system, benchmarking, continuous improvement, customer focus, employee satisfaction, union intervention, social responsibility, service scopes and service culture. Brah et al, (2000) in their study on TQM and business performance in Singapore service sector has come out with 11 constructs of TQM implementation, which are top management support, customer focus, employee involvement, employee training, employee empowerment, supplier quality management, process improvement, service design, quality improvement rewards, benchmarking and cleanliness and organization. Based on the above literature, the research will select on the following six main practices of TQM implementation for this study. All practices are selected due to their usefulness and relevance to the service and manufacturing organizations. Customer focus and continuous improvement are among the principles of quality that has been most written about. Brah et al, (2000) have identified that top management commitment, customer focus, employee empowerment and employee involvement are among the critical aspects of TQM that can determine the success of TQM programs in the service environment. They are: management support and commitment, employee involvement, employee empowerment, information and communication, customer

focus and continuous improvement. This study adapts Reliability, Assurance, Empathy, Tangibility and Responsiveness as determining TQM in manufacturing firms.

2.3 Operational Competitiveness

Competitiveness refers to keenness or urge to compete. It indicates the capabilities of a firm or a sector or a nation to compete successfully (Djankov and Hoekman, 2011). Competitiveness is sustained through constant improvement and upgrading. It allows the maintenance and improvement of the enterprise's competitive position in the market that enables business to survive against its competition over a long period of time. Competitiveness has become a prominent business and government concern in the era of globalization. Competitiveness is a multi-dimensional concept in the sense that being competitive requires superiority in several aspects. Mahmood and Harrison (2001) emphasize that competitiveness depends on the capacity of domestic industries to innovate and upgrade. Porter (1990) posits that competitiveness depends on strong domestic rivals, aggressive home-based suppliers and demanding home markets. It calls for domestic firms to adopt highly efficient and productive methodologies such as faster innovations, effective marketing strategies and most appropriate labour-capital-resource combinations in production activities.

Competitiveness is evidently a decisive factor for survival in the business world. To achieve it requires setting priorities, which can be defined as a set of options of varying importance that a firm needs to have to compete in the market over a determined time frame (Santos *et al.*, 2009). According to Davis (2001), besides costs, quality and flexibility, fast delivery and good service are competitive priorities. Delivery is related to the speed factor, because it entails supplying products quickly, while service involves the way products are delivered and accompanied after sales. He also points to another priority, consisting of offering products that do not harm the environment and that are produced by processes with the same characteristic. A combined analysis of various authors in the business administration area shows an emphasis on the following factors that determine competitiveness: quality, cost, flexibility and reliability, or dependability (Kaynak, 2003). Machado-da-Silva and Barbosa (2002) believe that implementing successful knowledge management creates a flexible competitiveness that is hard

to imitate, because it goes beyond the limits of physical resources, which are rigid and easy to imitate, and extends to an exclusive aspect of the organization that is difficult for others to appropriate. Therefore, the firm acquires competitiveness by means of the relationship of knowledge with the ability to innovate and to configure a flexible structure capable of reacting favorably to the frequent changes in its environment. The study of competitiveness factors is important to achieve the most suitable method for developing products and processes, with the use of the best practices and at the lowest possible costs, to make high quality products and get them to market quickly so as to satisfy consumers' needs. Mastery of the critical factors is indispensable for an organization to perform better and thus meet its goals. Assessments and accreditations may not be the sole solution to such challenges as these mainly focus on inputs and outputs of the system in contrast to TQM principles which are based on a holistic approach. It is believed by many that the application of TQM may help overcome such challenges by improving staff morale, increasing efficiency and meeting the expectations of all stakeholders in a society.

2.4 Relationship Between Total Quality Management and Competitiveness

After considering the relationship between TQM and firm performance in a sample of U.S. firms, Powell (2005, p. 31) concluded that "the empirical results suggested that TQM can result to competitiveness." Given that TQM is a strategy, it has been providing a unifying framework that brings a range of "good management practices" to bear simultaneously. 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; through reduced rework/scrap and savings that emerge from improving product quality and by producing products that better satisfy the requirements of customers.

Reed et al. (2006) 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. They gave an example that 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, 2000) 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 (Douglas and Judge, 2001). Better product design efficiency reduces costs by eliminating parts that do not add value which, in turn, makes products easier to produce and consequently reduce the costs. Hence it can therefore again conclude that TQM has the potential to generate competitiveness.

Rose and Ito (2006) point that the creation of knowledge through TQM-linked activities helps in the deployment of distinctive competencies that is at the heart of the organization. TQM allows for both the company's adaptation to its environment and the deployment of leadership abilities through the articulation and communication of a shared vision (Webley & Cartwright, 2006). TQM contributes to the enhancement of know-how through human resources policies that encourage employee creativity and breaks down the organization's frontiers and favours the setting up of associate relationships with both clients and suppliers. Youssef *et al.*, (2006) in addition point that

TQM favours a reduction in the variability of processes and in lead times, and also promote the decentralization of the decision-making process, and the use of techniques such as quality function deployment, which allow for customer, needs to be incorporated into design specifications. In addition, TQM contributes to the improvement of the company's reputation, through the good relationships maintained with clients, suppliers and amongst the employees themselves, and through the generation of high expectations in the attainment of good performance.

2.5 Summary

The chapter has addressed whether the capabilities generated by TQM are related to competitiveness both in literature and empirical reviews. The main intent of this is to explore the relationship between TQM and competitiveness, whether the claims in the TQM literature that the strategy can produce a sustainable competitiveness are justified. From the studies, it is evident that there exists evidence to show that TQM can generate a cost or differentiation-based

competitiveness. Using concepts from resource-based theory and systems theory, it has been shown how the process of TQM has the potential to create sustainability of competitiveness. The individual components of the strategy's process embody tacitness and are a complex system, thus producing the causal ambiguity that can protect a TQM-based advantage from imitation. The components of TQM that were discussed and are thought to be a source of competitive advantage include leadership, customers, employees, suppliers and continuous improvement.

The operational competitiveness of a manufacturing firm, like PZ Cussons, is influenced by the conversion cost which refers to variable financial cost that is dependent on labour, utilities that goes in converting the raw material to the final finished product, the lower the cost the better the rate. Typical conversion cost per metric ton is Ugx. 18,000 for combined factory operations i.e. toiletries and soap factories. The material usage variable conversion efficiency in terms of material input verses the finished product output ,for instance if the material input is 100MT and the finished product is 95MT the MUV is 5MT plus the scrap factor, likewise the smaller the index the better . The scrap factor in the conversion for a particular run, SKU" there is scrap factor that is build up in bill of material (BOM) and any deviation from the BOM will impact on the conversion in terms of scrap factor, which is basically loss of the raw materials

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methodology that was used to carry out the study. The chapter describes the proposed research design, the target population, data collection instruments and the techniques for data analysis.

3.2 Research Design

The research design adopted was descriptive research design. According to Cooper and Schindler (2000), a descriptive research design is concerned with finding out the; who, what, where, when and how much. Furthermore, a research design is structured, has investigative questions and part of formal studies. The design will be appropriate because the main interest will be to explore the viable relationship and describe how the factors support matters under investigation.

Descriptive design method provides quantitative data from the chosen population. This design will provide further insight into research problem by describing the variables of interest. Best and Kahn (2002) asserts that descriptive design involves describing, recording, analyzing and interpreting condition that exists. The advantage of this method is that it is quite easy to plan and execute and it enables the gathering of data on a variety of issues related to the concept.

3.3 Sources of Data

The major sources of information/data to be used by the researcher will primarily comprise secondary and primary sources depending on ease, accessibility and availability.

3.3.1 Primary Sources

The study used primary data. Primary data was used for the study as it enabled the researcher to answer the research objectives since the questions are tailored for the study. A questionnaire, as the data collection instrument of choice is, easy to formulate and administer and also provides a

relatively simple and straightforward approach to the study of attitudes, values, beliefs and motives (Robson, 2002). All the items in the questionnaire were measured with a five-point Likert scale ranging from disagree (1) to strongly agree (5) to ensure consistency and the ease of data computation (Brah and Lim, 2006).

3.3.2 Secondary sources

The information was obtained from textbooks, magazines, journal articles and library search for relevant literature. This helped in enriching the researcher with relevant knowledge and provided wide array information required for this study.

3.4 Instruments of Data Collection

3.4.1 Interviews

Both structured and unstructured interviews were employed. The structured interview helped in directing the researcher and keeping him focused on the subject. The unstructured interviews also helped in soliciting for more in-depth information.

3.4.2 Questionnaires

The questionnaire was administered through “drop and pick later” method to the manufacturing company. The structured questionnaire was used to collect data on the total quality practices and competitiveness of Uganda Clays Ltd. The questionnaires consisted of both open and closed ended questions designed to elicit specific responses for qualitative and quantitative analysis respectively. There was follow-up to ensure that questionnaires are collected on time and assistance to the respondents having difficulties in completing the questionnaires.

3.5 Sample Size and Selection

The respondent of this study consisted of the company employees of all levels who work in both production and commercial departments. The company is divided into supply chain which comprises factory, Engineering, Quality and Assurance, Research and Development,

Procurement and Logistics which are branded as the Manufacturing team. There is Finance team, Marketing team, Sales team and finally the Human Resource team which are branded as the commercial team. According to Uganda Clays Limited there are 200 employees in the manufacturing department alone and 50 staff in commercial department.

3.6 Sampling Techniques

From the list of the employees in each cadre, a systematic sampling procedure was used where every 10th staff member in the list was picked to form the sample respondents. From this sampling design, 25 respondents were selected. Based on the nature of the study, the respondents were expected to be familiar with quality practices and to be involved in the process of operational performance evaluation. The researcher purposively sampled respondents with sufficient understanding of the discipline of quality management on operational competitiveness.

3.7 Research Procedure

An introductory letter from the Department of HR and Supply; Kampala International University was obtained to the management of Uganda Clays Ltd to seek permission so as to conduct the research. The research was conducted basing on convenience and appointments from management and then questionnaires were administered.

3.8 Data Analysis

The data collected was analyzed using descriptive statistics including percentages, mean and standard deviation and presented using tables, pie chart etc. A mean of 3 or above was to indicate the extent to which the total quality management practice influence the competitiveness of the company. A standard deviation of 1 or above was an indication that there is a high variation among the respondents on the extent to which the variable influence competitiveness of the company. A Pearson correlation analysis was done to establish the relationship existing between different independent variables. Once the data was collected, the questionnaires were edited for accuracy, consistency and completeness. However, before final

analysis is performed, the data was cleaned to eliminate discrepancies and thereafter, classified on the basis of similarity and then tabulated. The responses were then coded into a numerical form to facilitate statistical analysis.

3.9 Limitation

The study is subject to some methodological limitations. First, it is suggested that the size and nature of the sample must be enhanced to ensure variability and control for possible extraneous variation. While the sample is restricted to only a single firm and a single industry, it would be recommended that data should be gathered from various sectors and industries in Uganda. In addition since, the data in this research was collected from top managers of the organizations on the basis of their subjective evaluations, objective performance indicators should also be employed in the analysis. Further, the study did not account for certain behavioral factors – related to employees’ and managers’ characteristics, attitudes, and experience levels – as well as organizational factors – such as structure, size, and business nature – that play a moderating role in the relationships highlighted in this study.

CHAPTER FOUR

DATA INTERPRETATION AND ANALYSIS OF FINDINGS

4.1 Introduction

The research objective was to establish the relationship between total quality management and operational competitiveness at Uganda Clays Limited. This chapter interprets and analyses the findings of the study with regard to the research objective. The analysis is presented in mean and standard deviations while the findings are presented in frequency distributions and tables.

4.2 Background Information

The demographic information considered in this study included the respondent's level of education and the period that they had worked at Uganda Clays Limited. This information is necessary because the respondents' competence of answering the questions ably will be dependent on their level of education and also the period in which they will have worked in the organization. A total of 25 questionnaires were issued out. The completed questionnaires were edited for completeness and consistency. Of all the questionnaires distributed 19 were fully filled and collected back. The returned questionnaires represented 76% response rate which was deemed to be adequate in the realization of the research objectives.

4.2.1 Educational Level of the Respondents

The respondents were asked to indicate their highest level of education. The competence of a respondent is assumed to have a direct relationship with one's education level, *ceteris paribus*, and it will be expected that those respondents that will have attained higher education level and worked in the organization for more years will be in a better position to give the correct answers to the questions asked. The results are provided in table 4.1 over leaf.

Table 4.1: Respondents Educational Level

		Percent	Cumulative Percent
Post graduate level	5	26	26
University	8	35	61
Tertiary College	6	39	100
Total		100.0	

Source: Primary data, 2019

From the table above it is found that all the respondents had tertiary college qualification which in this case is a diploma (39%), university education (35%) while those respondents with a post graduate qualification were 26%. From the results, the respondents were deemed to be competent enough to answer according the researchers questions.

4.2.2 Continuous service with the organization

This is the duration of continuous service that the respondents had worked at Uganda Clays limited. The result is represented in table 4.2 below.

Table 4.2: Length of Continuous Service

	Frequency	Percent	Cumulative Percent
Less than five years	5	26.3	26.3
5-10 years	4	21.1	47.4
Over 10 years	10	52.6	100.0
Total	19	100.0	

Source: Primary data, 2019

The findings above indicates that majority of the respondents (52.6%) had been working in the organization for a period more than 10 years while 47.4% had been in the organization for less than 10 years. On the basis of the same finding more than 73% of the respondents had worked in the firm for more than 5 years and this means that they will be conversant with the operational practices in the firm.

4.3 Total Quality Management Practices

The respondents were requested to indicate the extent to which various TQM practices are being employed in the firm. The range was „very low extent (1)“ to very great extent (5). The scores of very low extent/low extent have been taken to present a variable which had a mean score of 0 to 2.5 on the continuous Likert scale; ($0 \leq M.E < 2.4$). On the other hand scores of 3.5 to 4.8 on the continuous Likert was taken to be great extent and very great extent. On the question of whether the firm had adopted total quality management practice in its operations,

all the respondents answered to the affirmative that indeed TQM practices are being employed at Uganda Clays Limited. This finding would assist the researcher to determine how the effect of the TQM practices on the operational competitiveness.

Table 4.3: TQM constructs applied in the firm

Statement	Mean	Std. Deviation
Committed leadership to quality	4.2842	.67104
Employee involvement	3.6526	.52427
Supplier quality management	4.2105	.78733
Training	3.6316	.83070
Continuous quality improvement	3.7420	.47140
Process management	4.3684	.49559
Customer focus	4.0737	.70483
Strategic planning	3.5474	.77986
Information and analysis	3.1053	.97526
	3.8461	

Source: Primary data, 2019

There are different critical success factors of TQM practices and the researcher sought to establish the extent to which different TQM practices are employed at the firm. From the findings, management of the manufacturing process was found to be a popular practice across the firms departments (mean=4.3684) as well as the having a committed leadership (mean=4.2842) and the organizations focus being directed to meeting the customer expectation and needs (mean=4.0737). However, analysis of information (mean=3.1053) and the strategic planning (mean=3.5474) was found to have a low commonality in the organization. This could be due to the position that the strategic planning task is ordinarily undertaken by the senior management team without much involvement of the middle and low level staff.

The higher level of standard deviation (SD=0.97526) shows that there was much variation in the answers provided the respondents. This finding is consistent to one by Reed et al. (2000) who observed that the two components of TQM (process and content) interact with each other,

and it is this interaction that generates the desired operational performance in the organization. They argued that the content component contributes to competitive advantage, while the process component generates sustainable advantage since the operations of the firm will need to be sustainable to guarantee the going concern of the firm. This finding therefore conforms to the resource based view (RBV) of the firm, and considers TQM elements as either a source of differentiation/cost leadership advantage, or a generator of barriers to imitation given their inherent complexity and tacitness. The researcher also investigated individual 5 elements of total quality management and their results follows.

4.3.1 Performance Measures

An effective means of improvement of organizations processes involves following a systematic process of planning, implementation and evaluation. In order to carry this out, standardized process operations are essential, various tools for improvement should be used, performance indicators must be obtained and information must be gathered through benchmarking and self-assessment. The researcher sought to establish how the firm applies performance measures in improving its operations and the results are presented in table

Table 4.4: Performance measures employed in the firm

Performance measures		
	Mean	Std. Deviation
The company ensures there is continuous improvement of its products	4.2105	.65498
The company meets customer specifications	3.7316	1.16479
The company ensures there is timely delivery	2.8947	.93659
Products are produced within budgets	3.8737	.69669
Overall mean	3.6776	

Source: Primary data, 2019

From the findings in the table above, the firm ensures there is continuous improvement of its products through the adoption of better processing system (mean=4.2105) was found to be common process being undertaken by the firm with a lower standard deviation (mean=3.7316),

it means that there was congruence among the respondents. The ability of the firm to produce its products within the budgets was also found to be effective TQM practice in the firm. Mann (2002) pointed that TQM is not only a management tool for producing quality products and services, but also a process that leads to increased productivity and a more favourable competitive position. As quality improves there will be less wastage or rework and customer satisfaction will also be enhanced. As Crossby (2007) opined, TQM requires an organization culture where all individuals are concerned with quality, want to produce quality products, and where they can freely question practices that do not produce quality. This therefore requires operations that are flexible enough to adapt to market requirements. Better product design efficiency reduces costs by eliminating parts that do not add value which, in turn, makes products easier to produce.

4.3.2 Top Management

The top management's ability to create a vision and promote change is at the heart of successful TQM implementation. Top management of a firm needs transformational leadership skills and therefore has the potential to create barriers to imitation. The results on the top management effect on TQM implementation is presented in table 4.5 below.

Table 4.5: Top management commitment

Statement	Mean	Std. Deviation
Top management clearly understands the fundamental spirits and principles of quality management	4.3316	.83070
The departmental heads accept responsibility for quality of goods	3.9316	.68399
Top management of the company has objectives for quality performance	4.0368	.99119
The company's plan always incorporates external customers, suppliers and other stakeholders	3.4526	1.26814
Data is analyzed using computer for managers to make decisions	3.1632	.87191
Overall Mean	3.7832	

Source: Primary data, 2019

The findings show that top management clearly understands the fundamental spirits and principles of quality management (mean=4.3316) and the top management of the company having objectives for quality performance (4.0368). However the employment of computers to analyze all the TQM practices application in the firm was found to have a lower mean. The ability of the firm to incorporate external customers, suppliers and other stakeholders views in the manufacturing process had a higher variation (SD=1.26814). As Downton (2003) noted, the commitment of top leadership in the organization should not be viewed simply as an emotion, but it should be considered as a desire to satisfy a personal need, from the freedom and opportunity to take action, and from making investments and sacrifices that will ultimately produce a profit to the firm.

4.3.3 Customer focus

The role of customers in the firm's management of quality was also explored and the results are presented in table 4.6 below.

Table 4. 6: Customer Focus on TQM

Statement	Mean	Std. Deviation
The company responds quickly to customers complaints	4.0895	.08418
The company has effective process for resolving customer complaints	3.7105	.78733
The company undertakes customer orientation	3.0000	.81650
Customer requirements are effectively disseminated and understood	2.8947	.31530
Overall Mean	3.4237	

Source: Primary data, 2019

Increased quality helps a firm to retain current customers and create greater customer loyalty, which in return may increase market share and financial performance. The findings show that the company responds quickly to customers complaints (mean=4.0895) as well as aiming to achieve effective process for resolving customer complaints. However, it was found that the firm is slow in disseminating customer requirements to the relevant departments within the organization for effective management of the suggestion. The ability of the firm to address

customer complaints and always strive to have positive engagement with Key Accounts (KA), key distributors (KD) and traditional market has helped the firm differentiate its operations with that of competitors and consequently achieve the necessary operational competitiveness.

4.3.4 Employee Involvement

In realization of an organizations quality management practices, employees' participation and ownership of the strategy is important. This is because organizations employees play an important link between training and firm performance and that accelerated new product development can be achieved through employee training and as Pfeffer (2005) shows training improves quality. The results of employee involvement as an ingredient of TQM is presented in table 4.7 below.

Table 4.6: Effect of Employee Involvement

	Mean	Std. Deviation
Employees are involved in planning and design	3.6316	.49559
Employees proactively champion certification of quality management system	4.4842	.74927
The employees are provided with feedback on their quality performance	4.3316	1.06513
All employees believe that quality is their responsibility	4.1789	0.9130
Overall Mean	4.1566	

Source: Primary data, 2019

The results show that the firm's employees are proactive champions of quality management system, such that they all believe in the need of embracing the tenets of TQM. In recognition of the same, the firm provides necessary feedback on the TQM process to the employees so that a sense of ownership to the process is achieved. This feedback increases the teamwork on employees since to address an emerging challenge, various groups of staff will be required to come together and address the issue at hand.

Consequently, employee's involvement in the problem solving stage of a TQM process was found to be an integral part of the organizations strategy. This finding is consistent with the finding of Eisenhardt & Tabrizi, (2005) who pointed that teams are appropriate when there is a need for the coordination of activities, where work needs to be creative, or where major

breakthroughs in performance are required. Further, to providing an innovative approach to solving production problems, cross-functional teams also can help reduce product development times.

4.3.5 Supplier Relationship

The choice of suppliers and how businesses are effectively integrated to obtaining proper complementary skills from the suppliers is an important issue. Strategic sourcing by a firm should consist of strategic outsourcing and supplier capability analysis. The results on the supplier relationship as a factor in the TQM principle is provided in table 4.7 below.

Table 4.7: Supplier Partnership

	Mean	Std. Deviation
Suppliers work closely with the company in product development	4.1211	1.07061
Use of customer complaints as a method to initiate improvements in current processes	4.2105	1.22832
The company evaluate the performance of suppliers	3.6632	1.24017
The company evaluates longer relations offered to suppliers	4.4211	1.07061
Overall Mean	4.104	

Source: Primary data, 2019

From the table above, it is found that the firm places more prominence in developing a longer term relationship with suppliers (mean=4.4211) who are expected to provide the necessary long-term competitiveness. In order to improve on their services the company addresses customer complaints as a method to initiate improvements in current processes. As Kaufman (2002), noted better relationships between retailers and their suppliers also improve prospects of new product acceptance. Retailers take risks in placing untried products on the shelves. The risks take several forms. The retailer's reputation is at stake if the product does not perform well, and consumers may hold the retailer responsible for selling substandard products.

4.4 Effect of TQM on Organizational Competitiveness

For quantitative analysis the study used two methods. At first, correlation is used to measure the degree of association between TQM practices and operational performance of the firm. Since TQM practices are numerous, the study identified the crucial factors associated the practice. Pearson and Spearman correlations are calculated for all variables used in the study starting with the Pearson's correlation results.

4.4.1 Pearson and Spearman's Correlations

Table 4.8 below shows the Pearson and Spearman's correlation coefficient generated from the data. Consistent with Shin and Soenen (1998), the spearman's rank correlation coefficients are on the upper right triangle while the Pearson product moment correlation coefficients are on the lower left triangle. Pearson's Correlation analysis is used for data to establish the relationship between variables such as those between employment of the TQM practices and operational performance of the firm.

Table 4.8: Pearson and Spearman's Correlation Coefficient

		OP	PM	TMC	CF	EI	SR
OP	Pearson Correlation	1	.464	.398	.386	.102	.259
	Sig. (2-tailed)		.043	.133	.003	.444	.047
PM	Pearson Correlation	.464	1	.517	.633	.604	.042
	Sig. (2-tailed)	.043		.000	.000	.000	.754
TMC	Pearson Correlation	.398	.517	1	.431	.832	.094
	Sig. (2-tailed)	.133	.000		.001	.000	.479
CF	Pearson Correlation	.386	.633	.431	1	.139	.169
	Sig. (2-tailed)	.003	.000	.001		.293	.200
EI	Pearson Correlation	.102	.604	.832	.139	1	.062
	Sig. (2-tailed)	.444	.000	.000	.293		.638
SR	Pearson Correlation	.259	.042	.094	.169	.062	1
	Sig. (2-tailed)	.047	.754	.479	.200	.638	

Source: Research Data 2019

The results show that there is a positive relationship between a firm Operation performance (OP) and the firms process management (PM), top management commitment (TMC), customer focus (CF), employee involvement (EI) and supplier relationship. However, a strong association is realized by effective management of the firms' processes. The adoption of an efficient process in the firm is dependent by a strong top management involvement and this shows that the top management leadership is a critical factor in ensuring the success of a TQM process in a firm.

These results indicated that the level of TQM implementation is positively and significantly related to both perceived operational performance of the firm. It appears that the degree to which the entire TQM philosophy is implemented with therefore determine how the firms operational performance will be supporting the achievement of the firms goal. This position is consistent with that of (Kaynak, 2003). Further, there is an association, though not strong, between implementation of TQM practices and some of the non-financial measures such as market share growth and supplier relationship and this finding is inconsistent with the one made by Samson and Terziovski (1999) found support for the relationship between some non-financial measures (i.e. export growth, market share growth, innovation growth, cost of quality, etc.) and implementation of TQM practices.

CHAPTER FIVE

SUMMARY CONCLUSIONS, DISCUSSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the key findings of the study as well as the conclusions, limitations of the study, and recommendations for further research.

5.2 Summary

The main intent of this research was to establish the total quality management and operational competitiveness at Uganda Clays limited. The finding of this study is that TQM is both a driving force to competitive strategy selection and an important resource to achieving improved operational performance. It was found that if TQM is implemented properly, it produces a variety of benefits such meeting the customers' needs, improved internal communication, scrap level reduction, changeover losses, better problem solving bottom line positive returns on investments. It was also found that the success of a TQM program increases when its implementation is cascaded down the entire employees cadre since it requires the reformation of the corporate culture and the permeation of the new business philosophy in the organization.

These results indicated that the level of TQM implementation is positively and significantly related to both perceived operational performance of the firm. It appears that the degree to which the entire TQM philosophy is implemented with therefore determine how the firms operational performance will be supporting the achievement of the firms goal. Based on the study's findings, the most important factor was found to be the role of top management. This is because the success of TQM applications hinges on strong leadership that must be initiated by the top management. Quality improvement plans proposed by several scholars strongly emphasize the commitment of top management. The top management of the organization is directly responsible for determining an appropriate organization culture, vision, and quality policy which will in turn affect the operations performance of the firm. Generally, the study found that the five TQM philosophies that were being researched on had a positive correlation to the operational performance of the firm.

5.3 Conclusion on the Study

The globalization trend being witnessed has made organizations to come up with strategies of how to achieve their objectives efficiently and the adoption of different operational philosophies has been embraced as one of the strategies. This study suggests the importance of incorporating TQM programs into the strategy choice process in order to continuously improve operations, customer relations, and overall performance. The finding indicate that financial performance measures such as revenue, net profits, and profit to revenue ratio are partially explained by the implementation of TQM practices. On the other hand, TQM practices provide a better explanation on financial performance through non-financial performance criteria such as market development and market orientation. The most important TQM practice was found to be the top leadership management. Hence, companies should be suggested to develop formal reward and recognition systems to encourage top leadership involvement and participation, support teamwork and provide feedback to the employees.

The TQM process is a system with interactive components, and committing to just one part of the system is unlikely to produce the desired effects. Thus, TQM is more than supplier orientation or leadership but instead it is all of them together, and successful implementation means that effort and perseverance are required to find the right balance for each organization. Consequently, because of the internal tacitness and complexity, attempted imitation of what other firms have done to be successful as far as implementation of TQM is concerned might not be tenable.

5.4 Recommendation of the Study

The research findings highlight the role of the management on business planning, the need for employee involvement in TQM and focus on the customer. This implies that senior management must consider their internal strategic management processes, training and involvement of their staff, and their own role in championing total quality approaches to managing organisational performance. It was also found that different firms have adopted different forms of quality management programs but the results are immediate. Consequently, it

managers need to know that quality management improve performance and that the results are not in the short term but instead mid-term to the long term operations of the firm.

5.5 Areas for Further Research

In light of these limitations, future research is recommended to use mixed methods research in order to validate the results of this research, and apply a longitudinal study to better capture the relationships between TQM, strategy, and performance. Conducting a replication study with random sample selection can enhance the methodological rigor of the study and increase the possibility of having a better and a supported external validity. Also, another possible source of data could be the customers whose opinions, along with those of executives, can give a better insight of the TQM- performance relationship. Furthermore, taking into consideration certain factors that may have a moderating role in these relationships, such as the country culture, could enrich the research results.

REFERENCES

- Amit, R., and Schoemaker, P. J. H. (1993), Strategic assets and organizational rent. *Strategic Management Journal*, 14, 33-46.
- Barney, J.B. (1991), "Firm resources and sustained competitive advantage", *Journal of Management*, Vol. 17 No. 1, pp. 99-120.
- Brah, S., Tee, S. and Rao, B. (2000), "Relationship between TQM and performance of Singapore companies", *International Journal of Quality & Reliability Management*, Vol. 19 No. 4, pp. 356-79.
- Djankov, S., and Hoekman, B. (2011), "Conditions for Competition and Multilateral Surveillance", *The World Economy*, Vol.21, pp.1109-28.
- Douglas, T.J. and Judge, W.Q. (2001), "Total quality management implementation and competitive advantage: the role of structural control and exploration", *Academy of Management Journal*, Vol. 44 No. 1, pp. 158-69.
- Eisenhardt, K.M. and Martin, J.A. (2000), "Dynamic capabilities: what are they?", *Strategic Management Journal*, Vol. 21 Nos 10/11, pp. 1105-1121.
- Kanji, G.K. and Wallace, W. (2000), "*Business excellence through customer satisfaction*", Total Quality Management, Vol. 11 No. 7, pp. 979-98
- Kaynak, H. (2003), "The relationship between total quality management practices and their effects on firm performance", *Journal of Operations Management*, Vol. 21, pp. 405-35
- Koh, S.C.L. and Gunasekaran, A. (2006), "A knowledge management approach for managing uncertainty in manufacturing", *Industrial Management & Data Systems*, Vol. 106 No. 4, pp. 439-59.
- Mahmood, A. and Harrison, F. E. (2001), "Comparative versus Competitive Advantage, and Competitiveness in Developing Countries", *Socio- economic Development in the 21st Century*, New Delhi: Deep and Deep Publications Pvt. Ltd.
- Pandora (2009), "Quality management as a competitiveness tool", Delft, Technical University Delft.

- Porter, M., Ketels, C., and Delgado, M. (2006), "The microeconomic foundations of prosperity: findings from the business competitiveness index", *The Global Competitiveness Report 2006-2007*, World Economic Forum.
- Porter, M.E. (1990), *Competitive Strategy*, London: Collier Macmillan Publishers.
- Powell, T. C. (2004). Total quality management as competitive advantage: a review and empirical study. *Strategic Management Journal*, 16, 15-37.
- Reed, R., Lemak, D.J. and Montgomery, J.C. (2006), "Beyond process: TQM content and firm performance", *Academy of Management Review*, Vol. 21 No. 1, pp. 173-202.
- Salaheldin, S.I. (2009), "Critical success factors for TQM implementation and their impact on performance of SMEs", *International Journal of Productivity and Performance Management*, Vol. 58 No. 3, pp. 215-237.
- Santos, M., Kennerley, M., V., Gray, D. and Neely, A. (2009), "Towards a definition of a business performance management system", *International Journal of Operations & Production Management*, Vol. 27 No. 8, pp. 784-801.
- Schendel, D. (2004), Introduction to competitive organizational behavior: toward an organizationally based theory of competitive advantage. *Strategic Management Journal*, 15 (winter).
- Sureshchandar, G., C. Lin, C. and Chang, S. (2002), A conceptual model for total quality management in service organizations. *Total Quality Management & Business Excellence*, 12(3): 343-363.
- Tippins, M.J., and Sohi, R.S. (2003), "IT Competency and Firm Performance: IS Organizational Learning a Missing Link?," *Strategic Management Journal* (24), pp. 745-761.

APPENDICES

APPENDIX I: Questionnaire

Please give answers in the spaces provided and tick (✓) in the box that matches your response to the questions where applicable.

Section A: Demographic Information

1. What is your gender?

a) Male ☐ b) Female ☐

2. What is your highest level of education qualification?

Post graduate level ☐ University ☐

Tertiary College ☐ Secondary ☐

3. How long have you worked with the company?

Less than five years ☐ 5-10 years ☐ Over 10 years ☐

Section B: Total Quality management practices

4. Has your company adopted total quality management?

Yes ☐ No ☐

5. The following are total quality management practices; to what extent does it apply in the company? Use 1-Not at all, 2-Small extent, 3-Moderate extent, 4-Great extent and 5-Very great extent.

Total Quality Management Practices	1	2	3	4	5
Committed leadership to quality					
Employee involvement					
Supplier quality management					
Training					
Continuous quality improvement					
Process management					
Customer focus					
Strategic planning					

Information and analysis						
Process management						

6. To what extent has the following total quality management practices influenced the performance of your company? Use 1) Strongly disagree; 2) Disagree; 3) Moderate extent; 4) Agree; 5) Strongly Agree

	Performance measures	1	2	3	4	5
1	The company ensures there is continuous improvement of its products					
2	The company meets customer specifications					
3	The company ensures there is timely delivery					
4	Products are produced within budgets					
	Top management commitment	1	2	3	4	5
1	Top management clearly understands the fundamental spirits and principles of quality management					
2	The departmental heads accept responsibility for quality of goods					
3	Top management of the company has objectives for quality performance					
4	The company's plan always incorporates external customers, suppliers and other stakeholders					
5	Data is analyzed using computer for managers to make decisions					
	Customer Focus	1	2	3	4	5
1	The company responds quickly to customers complaints					
2	The company has effective process for resolving customer complaints					
3	The company undertakes customer orientation					
4	Customer requirements are effectively disseminated and understood throughout the workforce					
	Employee Involvement	1	2	3	4	5
1	Employees are involved in planning and design					
2	Employees proactively champion certification of quality management system					
3	The employees are provided with feedback on their quality performance					
4	All employees believe that quality is their responsibility					
	Supplier Relationship	1	2	3	4	5

Suppliers work closely with the company in product development					
Use of customer complaints as a method to initiate improvements in current processes					
The company evaluate the performance of suppliers					
The company evaluates longer relations offered to suppliers					

7. To what extent has the adoption of total quality management practices by your company resulted in the following competitiveness measures? **5) Greater extent; 4) Great extent; 3) Moderate extent; 2) Low extent; 1) Very low extent**

Organizational Performance	1	2	3	4	5
Cost reduction					
Increased Innovation					
Increased flexibility					
Social satisfaction					
Increase in profitability					
Increase in market share					
Increasing orders					
Improved product reliability					
Improving product quality					