

**THE EFFECTS OF TOTAL QUALITY MANAGEMENT ON
PROFITABILITY: THE CASE OF INTERNATIONAL
ORGANIZATION FOR STANDARDS (ISO) CERTIFIED COMPANIES
IN KENYA**

**BY
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DECLARATION

I declare that this dissertation is my original work and has not been previously published or submitted elsewhere for award of a degree. I also declare that this contains no material written or published by other people except where due reference is made and author duly acknowledged.

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ABSTRACT

Total Quality Management (TQM) is an accepted technique to ensure performance and survival of businesses in modern economies. Recent studies claim that the successful implementation of TQM could generate improved products and services, as well as reduce costs, lead to more satisfied customers and employees, and eventually improved financial performance. The purpose of this study was to establish whether this nature of relationship exists between TQM and financial performance in ISO certified companies in Kenya. The objective of this study was, therefore, to establish the effect of the implementation of TQM in ISO certified companies in Kenya. This study was a survey focused on establishing management environment, quality control tools and techniques, focus on customer and focus on supplier relationship affect ROA as a measure of financial performance. All the 38 ISO certified companies formed the sample of this study effectively making it a census. Data was collected by a questionnaire delivered by hand to the selected ISO certified company and collected after a week. The study found that management environment, quality control tools and techniques, focus on customer and focus on supplier relationship affected the returns of ISO certified companies. However, the regression analysis showed a weak relationship among the variable. This indicated by the constant term, 6.68 which was not significant; the coefficient of quality management environment, -24.27 which was statistically insignificant; the coefficient of focus on customers, 12.27 which was statistically insignificant; the coefficient of quality control tools and techniques, 7.06, which was statistically insignificant; and the coefficient of focus of supplier relationship, 7.37, which was also statistically insignificant. The study recommends that ISO certified organizations should put in place strong management environment policies. The policies should focus on putting in place a favorable work environment and ensuring sufficient financial resources that will enable achievement of organizational objectives and boost profitability. Focus on the customer should also be strengthened. Companies should put in place more effective mechanisms for quality control. Supplier relationship should also be strongly managed.

Keywords: TQM, Profitability, ISO Certification

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DEDICATION

This research is dedicated to my daughters Tweety and Tashi for their love during the entire period I was working on the project.

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ACRONYMS AND ABBREVIATIONS

ISO	International Standards Organization
ROA	Return on Assets
MBO	Management By Objectives
ROI	Return On Investment
SGS	Société Générale de Surveillance
SIQ	Swedish Institute for Quality
SME	Small and Medium Enterprises
SPC	Statistical Process Control
TQM	Total Quality Management
USA	United States of America

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Total Quality Management (TQM) is a technique used to ensure that the performance and survival of businesses in the modern economies is ensured according to Katller and Armstrong (2004). TQM model integrates management techniques, resources, and requires support from the top management. A successful implementation of TQM generates improved products and services at lower costs. This results into a set of satisfied customers and employees, eventually resulting into improved financial performance (Hendriks and Singhal, 1997).

The intense Global competition matched with the demand for high quality products by customers have made organizations to understand that the only way of survival is the delivery high quality products. Many quality sensitive organizations have, consequently, resorted to using significant amounts of their funds on the quality (Eriksson and Hansson, 2002).

Total Quality Management (TQM) is widely applicable in management. The use of TQM has been found increase customer's satisfaction ensuring the participation of all personnel (Demirbag, Tatoglu, Tekinkus, and Zaim, 2006). The goal of TQM is to implement a management system and organizational culture that ensures the customer satisfaction (Eriksson and Hansson, 2002).

The emerging of new competitive strategies replaces the established management doctrines and rendering them obsolete. This coupled with intense competition has means that only the organization that makes a marked difference can survive. In the era of

advanced in information technology in which information is easily accessible leading to organizations facing a never imagined kind of competition. Competition is now world based. Organizations have to compete from all over the world against well informed and hard to please customers. Further, customer satisfaction needs keep changing requiring new expectations and standards (Nosakhare, 2000).

Evidence indicates that TQM is the way to become globally competitive. Further, TQM is an effective management tool that can provide businesses with stability, growth and prosperity (Issac et al, 2004). Many organizations embrace the Total Quality Management concept as a way of surviving the consequences of a deregulated global competition. However, TQM remains an unclear and ambiguous concept due to the difficulty of defining the term quality.

1.1.1 The concept of total quality management

Concept of Total Quality Management is multifaceted and focuses on providing customer satisfaction. Total Quality Management as a systems approach to management that focuses on the improvement of value to customers by designing and continually improving organizational processes and systems (Stalh, 1995). According to Rampey and Roberts (1992) TQM is a people centered management system aiming at constant increase in customer satisfaction at continued cost reduction. In this view, TQM is concerned with managing an entire system.

Gbodinowo (1997) defined TQM as a senior management led companywide initiative intended to improve effectiveness and to build quality into the service delivered. Involvement of the whole work force and a commitment to doing the right things correctly were emphasized. He asserted that the principles of TQM apply equally to

manufacturing industries, service industries, training provision, although practices may differ. Ciampa (1992) saw it as the state of an organization in which all the activities of all functions were designed and carried out in such a way that all external customer requirements were met while reducing internal time and cost, and enhancing the workplace climate. According to Dahlgaard, et al (1998) Total Quality Management is a corporate culture featuring increased customer satisfaction, continuous improvements requiring all employees' participation.

1.1.2 The concept of ISO certification

ISO is an International Organization for Standards, which was established in 1947 in Switzerland and is composed of technical committees. These committees provide user-friendly guidelines for organizations in processing, manufacturing, printing, servicing, forestry, and in electronics. In 1979 the ISO Technical Committee (ISO/TC 176) was formed to make a set of guidelines standardize world industries (Nurre, Gunaman and De-Almeida, 2000).

ISO 9000 is a set of five International Standards for Quality Assurance. ISO 9000 contains guidelines for the other four standards. ISO 9001 is directed to suppliers who do a lot of design and customization; ISO 9002 provides standards for production and installation; ISO 9003 provides guidelines for final test and inspection while ISO 9004 helps managers to develop a substantial quality system (Bureau of Business Practice) (Nurre, Gunaman and De-Almeida, 2000).

As worldwide customers demand ISO 9000 standards, ISO 9000 is becoming increasingly prevalent. As more international companies come into the market, companies become more competitive. The increase in competition leads to improved

quality and decreased cost of the product, thus creating a better environment for the consumer (Nurre, Gunaman and De-Almeida, 2000).

1.1.3 The concept of profitability

Profitability is one of the measures of financial performance of a firm and it means the ability of a firm to make profit. Different conditions and different variables are used to assess financial performance (Park, 2006). Some financial performance of organization include profit, cost, return on investment (ROI), return on assets (ROA). In this study, profitability will be captured using return on asset (ROA).

According to Petersen and Schoeman (2008) ROA focuses on the operational efficiency of an organization while the ROE and ROI measure returns to equity holders and the potential growth on their investment. This study focuses on quality in totality which is a result of the operational environment. This, therefore, indicates why ROA is preferable as a measure of financial performance.

1.1.4 ISO certification in kenya

Guchu and Mwanaongoro (2012) provide a detailed procedure companies in Kenya follow to get ISO certification. First the management must be commitment and an ISO project team in place. The management should have faith in the benefits of being registered and be actively involved in registration process. Quality policy and objectives have to be specified by the management and made clear to all levels of the organization. The ISO project team should be formed for developing and implementing an effective quality management system.

The second stage, which is self assessment, involves evaluation of existing quality so as to formalize and demonstrate the way things are done. Further, it involves demonstrating that things are done right, monitoring what is being done and improving on it where necessary. This stage sets basic audit standards consisting of adequacy and compliance audits. In the third stage, awareness and training are done in which all personnel involved in quality affecting tasks are trained on the development of quality manuals, procedures. It also involves training them on identification and implementation of improvement processes and on how to audit compliance with the Quality Management System. The fourth stage involves developing an action plan. The quality management process and documentation is then adopted by all (Guchu and Mwanaongoro, 2012).

The sixth stage involves the Selection of a certification body. The key elements to consider when selecting the certification body include; customers' expectations and preferences; government regulations; international recognition; auditor's knowledge, experience and their qualifications. After identifying and selecting the certification body, the company can then apply for registration (Guchu and Mwanaongoro, 2012).

The seventh stage involves defining responsibilities and authority of all personnel managing, performing and verifying activities which affect the quality system. Job descriptions and specifications should be prepared for each level of staff including the operators in each section. This will lead to the eighth stage which involves Training operators and implementing the quality management system. After this the firm conducts an internal quality audit and the management reviews the audit results. The tenth (the final stage) involves applying for the on-site certification audit. If certification is awarded, continual improvement of the quality management system should be done. In

Kenya ISO certification is done by Kenya Bureau of Standards, SGS, Bureau Veritas Quality International and CVA international (Guchu and Mwanaongoro, 2012).

1.2 Statement of the Research Problem

Many empirical studies have examined relationships between managerial practices, dimensions of quality and business performance. Study by Eriksson (2002) showed that Companies that had implemented TQM recorded a significantly higher return on assets than their competitors during the post implementation period of TQM. A study by Shahin (2011) on Boutan Industrial Corporation using current ratio, quick ratio, return of assets ratio, return on equity ratio, debt to total assets ratio, and total assets turnover ratio fund that TQM can have strong and positive influence on financial performance and status of the organization.

A survey study by Hansson (2003) on small enterprises using secondary data from Swedish Institute for Quality (SIQ) compared the financial data of the small Companies before and after implementation of TQM. Despite the study finding a strong relationship between TQM and financial performance, the relationship was negative in some Companies for the period studied. The research by Hendricks and Singhal (2001) found a positive effect of TQM on financial performance. Other researchers like Chapman et al (1997) had found a negative incidence of TQM on all of the measures of performance. York and Miree (2004) found a neutral result. Another study by Awino, et al (2012) on horticultural Companies in Kenya contends that TQM did not automatically lead to superior performance of Companies, but equally warn that this may be due to issues not specifically to do with TQM, but in the unique conditions prevailing in the firm implementing it. Karani and Bichanga (2012) found that the use of TQM at Kenya

Wildlife Services had challenges that made it hard to translate to high performance. a study by Mulili (2011) found that the use of TQM contributed positively to the financial performance of East African Breweries. There seems to be no clear relationship between the implementation of TQM and ISOs' financial performance measured by ROA. To fill this gap, this study provides answers to the following questions with regard to ISO certified companies: does the management environment affect profitability? Is there a relationship between quality control tools and techniques and profitability? How does customer focus affect profitability? and how does supplier relationship affect profitability?

1.3 Research Objectives

The general objective was is to establish the effects of implementation of TQM on profitability in ISO certified companies in Kenya.

1.3.1 Specific objectives

The specific objectives were to:

- i. To establish how management environment affects profitability in ISO certified companies in Kenya.
- ii. To investigate the relationship between quality control tools and techniques and profitability in ISO certified companies in Kenya.
- iii. To critically evaluate how customer focus affects profitability in ISO certified companies in Kenya.
- iv. To determine how supplier relationships affect profitability in ISO certified companies in Kenya.

1.4 Research Hypotheses

The following hypotheses guided this study;

Concerning the relationship between management environment and profitability the following hypotheses guided the study:

H₀: Management environment does not affect profitability

H_i: Management environment affects profitability

Concerning the relationship between quality control tool and techniques and profitability the following hypotheses guided the study:

H₀: Quality control tool and techniques do not affect profitability

H_i: Quality control tool and techniques affect profitability

Concerning the relationship between focus on the customer and profitability the following hypotheses guided the study:

H₀: Focus on the customer does not affect profitability

H_i: Focus on the customer affects profitability

Concerning the relationship between supplier relationship and profitability the following hypotheses guided the study:

H₀: Supplier relationship does not affect profitability

H_i: Supplier relationship affects profitability

1.5 Significance of the Study

The study will be benefit the following people:

Scholars and researchers will find the study useful since it will fill up the research gap of the need for providing an explanation of how application of TQM is benefitting ISO certified companies and further, the nature of the relationship between them.

The companies who have implemented the TQM management systems and are ISO certified will have an opportunity to have an assessment of the benefits they have reaped from the TQM and ISO management policy. Further, by assessing the relationship between the use of TQM and profitability, the companies will be able to get results that will help them project future expectation concerning TQM and bottom line. This will then stimulate relevant and tailored policy actions to control bottom line safeguarding.

Companies that have not implemented TQM and are not ISO certified would also benefit from this research. The findings will provide answers toward their possible skepticism concerning TQM and ISO certification. The benefits and the relationship deduced will be an answer that will not only allay their fears, but will further explain why the finding are as found. A firm implementing TQM will then implement it in a wiser and informed manner or have objective reason as to why not to implement it in their company under the prevailing circumstances.

This study will further benefit the stakeholders in the companies bearing in mind that a business is a loose nexus of different people with varied interests. The main unifying interest among the stakeholders is the continued survival of the business in a profitable manner at the least. This study will highlight the benefits of using TQM philosophy in management and how the TQM philosophy relates to financial performance. This will

then be used to make further management decisions based on well researched information.

1.6 Scope of the Study

In this study the researcher used the relationship between management environment, quality control tools and techniques, focus on customer and focus on supplier relationship and financial performance in ISO certified companies. According to Kenya Bureau of Standard (2012) there are 38 ISO certified companies in Kenya.

1.7 Justification of the Study

This study was justified based on one factor. Scholars of TQM predict that implementation of TQM among Companies enhances profitability and value creation through simultaneous cost reduction and quality improvement at all levels of production. However empirical research shows the relationship between TQM and profitability is not as universal as suggested it may vary according to the firm in question. A research gap existed when it came to establishing the nature of the relationship in companies that apply TQM in Kenya.

1.8 Limitations of the Study

The findings were limited in generalization both across time and across companies because it is focusing on ISO certified companies in Kenya only. ISO certified companies not in Kenya were not part of the study. Further, others like those owned by the government and small businesses apply TQM in all its aspects were not studied. Secondly, due to the qualitative and dynamic nature of TQM, the study was limited to qualitative data that is applicable to the time it is applied. The findings were, therefore, highly dependent upon the opinions of the respondents at the time of completing the

questionnaires presented to them. To control the effect of these limitations, the study included all ISO certified companies.

The fact that the nature of the data was qualitative; this limitation was controlled by the use of the Likert ranging from 1 to 5 to measure the responses of those participating in the study. The quality of the findings depended on how true and accurate the respondents gave their information on an item. To ensure the responses were as accurate as possible, the questions were structured using simple language and the use of mainly the closed ended questions. Further, only the person involved in quality management in the ISO certified companies responded to the questionnaires.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Theories behind TQM have been grouped into three, that is, Analytical Approach, Systems Approach and Actors Approach. The discussion of these theories in this paper has taken this approach of categorization. Other than the theories TQM has been discussed focusing on the pillars, benefits and the challenges facing its implementation among organizations. The other theory contributing to this study is the balanced score card appraisal model. Also discussed are past findings concerning the relationship between TQM and profitability among organizations that use it.

2.2 Theoretical Framework

In the discussion of the various approaches to TQM, the various theories have been grouped into Analytical Approach, Systems Approach and Actors Approach. One extreme of the three paradigmatic perspectives used in the study of TQM perceives reality as concrete, easy to understand, and within a concise set of laws which are independent of the observer (Arbnor and Bjerke, 1997). Arbnor and Bjerke (1997) called this perspective the analytical approach and they state that its goal is to explain objective reality as fully as possible and explanations of this reality through casual relation.

Management theory has its roots in the analytical-rational framework created and enhanced by works of theorists like Weber, Hawthorn, Taylor, Fayol, and Simon (Beck, 2006). This traditional management paradigm is still practiced today as exemplified by the Management by Objectives model (MBO) developed by Drucker (Bennis, 2006). Deming (1986) a statistics professor listed 14 points to guide companies to improve

quality. Deming stressed on the role of top management rather than assembly line workers on improving quality. He built on Shewhart's Plan-Do-Check-Act (PDCA) cycle. The PDCA and its variant Plan-Do-Study Act (PDSA) is a cyclical process that involves, first, determining the nature of problem, identifying the possible changes and the methodology to implement change. Secondly, it involves, implementing the change. Thirdly, it involves assessing the impact of change by establishing functional or causal relationships between changes in processes concerning behaviors and capabilities, and outcomes. Finally, it involves making the necessary modifications, before starting over again.

The second approach, called the systems approach, was best explained by Arbnor and Bjerke (1997) when they stated that systems reality is assumed to consist of components that are often mutually dependent on each other- meaning they cannot be summed up and the constitution of these components brings about synergistic effects. This have been developed and enhanced by theorist Galbraith, Lawrence, Lorsch, Weick, Boulding Buckley (Scott, 2003). However, the foundation for systems theory can be traced to Ludwig von Bertalanffy and Talcott Parsons (Lewis, 2005).

Arbnor and Bjerke (1997) explain the actors approach, and they state that, knowledge developed by means of the actors approach is dependent on the individuals in the sense that it refers to how different actors or groups of actors perceive, interpret, and act in reality they themselves have helped to create. This paradigm stresses that what we believe, see, and understand is based upon our own individual perceptions. TQM theorists like Crosby and Peters, adhere to this paradigm and stress the importance of developing a strong organizational cultural which embraces shared meaning, shared

values, and shared purpose instilled throughout the workforce (Crosby, 1999; Lakshman, 2006; Peters and Waterman, 1982).

The conventional wisdom at the time of Crosby was that each level of quality has some price. Crosby advocates a goal of zero defects through continuous improvement (Crosby, 1979).

2.2.1 the Pillars of TQM

TQM should be implemented into a company as a 'Kaizen' initiative, Kaizen is a strategy developed by the Japanese meaning 'continuous improvement'. Therefore, with TQM, it should be at the core of an organization and employed every working day, to achieve the best quality attainable. According to (Janpen, Palaprom, and Horadal, 2005) Total Quality Management (TQM) is a continuous set of mindset that keeps on improvement processes for individuals, groups and whole organizations by understanding and discovering better process.

Dash (2008) posits that Total quality management is an approach that an organization takes for improving its performance on systematic and continuous basis. This is achieved by involving all employees throughout the organization in satisfying all requirements of every customer, whoever the customer may be either external or internal. Quality Management is the basis for management in general. Such principles of TQM as meeting the Customer needs, exact assessment, continuous improvement, team work and enthusiasm of the leaders are typically ingredients of effective management.

TQM is based on eight pillars according to Islam and Haque (2012) these are: Creation of quality management environment; Development of Teamwork; Practice of quality control

tools and techniques; focus on customer; focus on supplier relationship; Benchmarking; continuous improvement of processes; and involvement of employees. This study, however, focuses on four pillars as shown in the conceptual framework. The creation of quality management environment should be the starting part of the TQM philosophy so that all employees seek out quality problems and correct them and the environment must exist throughout the implementation period. Companies should have a clear vision and mission. This must be circulated to all employees in the organization.

TQM in an organization should be everyone's challenge. An organization will not begin the transformation of TQM until it is aware and accepts that the quality of its products or services must be improved. An awareness program for TQM implementation is, therefore, necessary to create the organization-wide positive environment. At the beginning, this can be done through seminar, symposium or workshops and later delivered through formal training and education programs to the key employees of the TQM implementation teams (Besterfield et al, 2009).

The second pillar of TQM is development of teamwork. Establishing and valuing the input of teams is the important integral component of TQM. The essence of teamwork is the high value which is attached to collaboration (Keng-Boon, Weng-Choong, Binshan, and Pei-Lee, 2010).

The third Pillar of TQM is the practice of quality control tools and techniques. TQM places a great deal of responsibility on all employees. If employees are to identify correct quality problems, they need to apply appropriate tools and techniques. For improving product and service quality, Statistical Process Control (SPC) which comprises of Pareto

diagram, Process flow diagram, Cause-and-effect diagram, Check sheets, Histogram, Control charts and Scatter diagram provides technology to monitor and control quality (Shahin. and Dabestani, 2011).

The fourth pillar of TQM is focus on the customer. TQM recognizes that that quality is customer driven. This means that the goal of customer satisfaction must be incorporated in the planning processes and then maintained constantly. Employee motivation should be done focusing on customer satisfaction (Islam, 1998).

The fifth Pillar of TQM focuses on supplier relationship. The management of an organization needs to allow sufficient time for the purchasing department to identify several low cost, high quality suppliers and to analyze the information they submit. (Lee, 2002).

The sixth pillar of TQM is benchmarking. Benchmarking is a systematic method by which an organization measures its performance vis-à-vis the best practice in an industry. Benchmarking is a tool for continuous improvement and is a process of borrowing ideas and adapting them to gain competitive advantage. (Besterfield et al, 2009).

Improvement of processes makes the seventh pillar of the TQM philosophy. Process improvement can be done by the training of production employees and adapting to new technologies, if required. Process improvement can be the beginning of a quality program. Much literature supports a “zero defect” and a “do it right the first time” attitude towards the quality program, which require zero defect mentality of the Employees. (Yusuf et al., 2007).

The eighth and the final pillar of TQM stresses on the total involvement of employees, empowering them and bringing them into the decision-making processes to provide the opportunity for continuous process improvement (Kim et al., 2012).

All the pillars identified support each other, leading to creating an organizational culture for continuous improvement which is what TQM implementation aims for (Islam and Haque, 2012).

2.2.2 Benefits of TQM

TQM is a highly beneficial philosophy of management if well implemented. The key identified benefits include cost reduction, customer satisfaction, defect reduction and builds the morale of all those involved in it. Due to the resulting low costs and high quality of products, the company makes better products and services, and its interactions with customers are relatively error-free resulting in to fewer customer complaints (Nagaprasad and Yogesha, 2009).

The strong emphasis on improvement of quality within a process, rather than inspecting quality into a process, not only reduces the time needed to fix errors, but makes it less necessary to employ a team of quality assurance personnel. The ongoing and proven success of TQM, and in particular the participation of employees in that success can lead to a noticeable improvement in employee morale, which in turn reduces employee turnover (Islam and Haque, 2012).

However, there are some weaknesses of TQM. TQM detractors have noted that long-range plans advocated by TQM may limit an organization's flexibility and agility. TQM also calls for the elimination of performance assessments that rate employees in relation

to each other. This means managers would have too much power over employees and may be use it capriciously affecting performance (Shenawy, Baker and Lemak, 2007).

2.2.3 Challenges facing TQM implementation

According to Bajaria (2012) there are various challenges that face the implementation of TQM among organizations. The critical issues include: whether to listen to a single or many quality experts; whether to focus on method or to focus on problem given that different situations may call for focus on problems while others may call for focus on methods; another challenge is whether to focusing on productivity or o focus on quality improvement. Other challenges include: whether to focus on Japanese strengths as relate to TQM or focus on the unique internal strengths of an organization; whether to focus on administration-based supplier quality model or technology-based supplier quality model; whether to focus on automating human tasks or automating human tendencies; whether to focus on the system or to focus on quality; whether to chose use of SPC as an on-line control or use of SPC for process improvement.

There are challenges concerning how and when to use horizontal thinking versus vertical thinking; whether to apply process teaching or content teaching; determination of management commitment beyond lip service; whether and when to use soft progress or hard progress. TQM face challenge concerning improvement of manufacturing systems alone versus all other systems that relate to manufacturing; application of Mathematical models as compared to reality and matching of Mathematical efficiency of experimentation versus execution difficulty of the experimentation (Bajaria, 2012).

2.3 Empirical Framework

Walley (2000) studied the effect of TQM in SMEs in the UK farming sector. Respondents were asked to rate the impact of TQM on a range of criteria. Basing on the responses of 25 farmers who had implemented TQM (15.2% of the sample), it was concluded that despite some farmers indicating that TQM had resulted in slight decreases in cost efficiency and profitability, TQM appeared to have a small positive effect on overall performance.

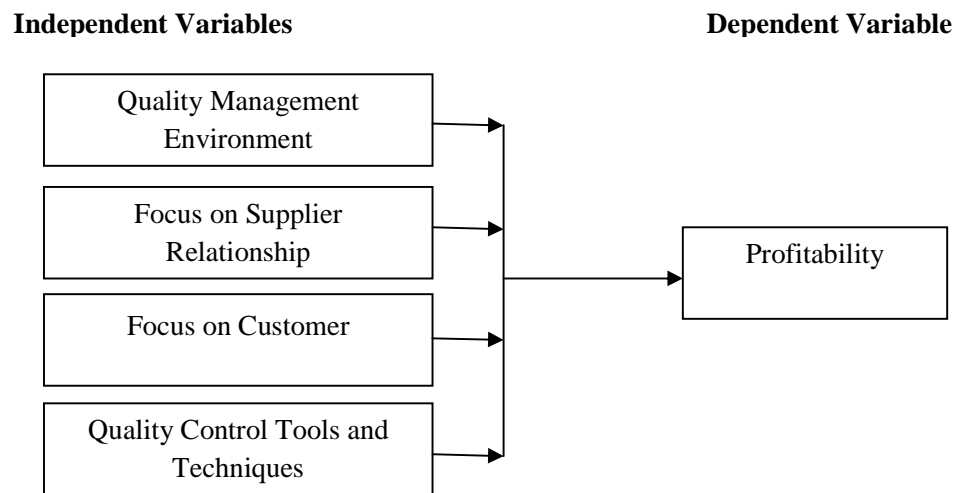
Hendricks and Singhal (2001) investigated the relationship between TQM practices with innovation and employee performance. The research found a positive effect of TQM on financial performance. Other researchers like Chapman et al (1997) had found a negative incidence of TQM. Other researchers like York and Miree (2004) also found a neutral result.

Witjaksono (2012) conducted a study whose general objective was to examine and to analyze the differences of TQM practice between TQM Companies and non TQM Companies. Additionally, it also analyzed whether the organizational performance among Companies with above average level of TQM practices had better organizational performance than companies with below average levels of TQM practices. The findings of this study indicated that: first, the level of TQM practices in the above average TQM Companies was higher than in non TQM Companies; secondly, the organizational performance with above average was better than the organizational performance of companies with below average TQM practices. Based on the findings of the study, it was concluded that TQM practice provided a powerful approach for the organization which desired to accomplish excellent performance.

2.4 Conceptual Framework

This research has two main variables: TQM and Financial Performance. TQM is the independent variable while Financial Performance is the dependent variable. Four pillars of TQM will provide the operationalization of the TQM variable. These pillars include quality management environment; use of quality control tools and techniques; focus on customer; and focus on supplier relationship. Fig.2-1 below shows that the four pillars of TQM are connected into one unit that brings quality into the organization. The effect of the quality is indicated by the effect each of the pillars has on the financial performance of the business. In this study profitability will be used to measure financial performance. Average return on assets will capture the dependent variable of financial performance.

Fig. 2-1: The Conceptual Framework

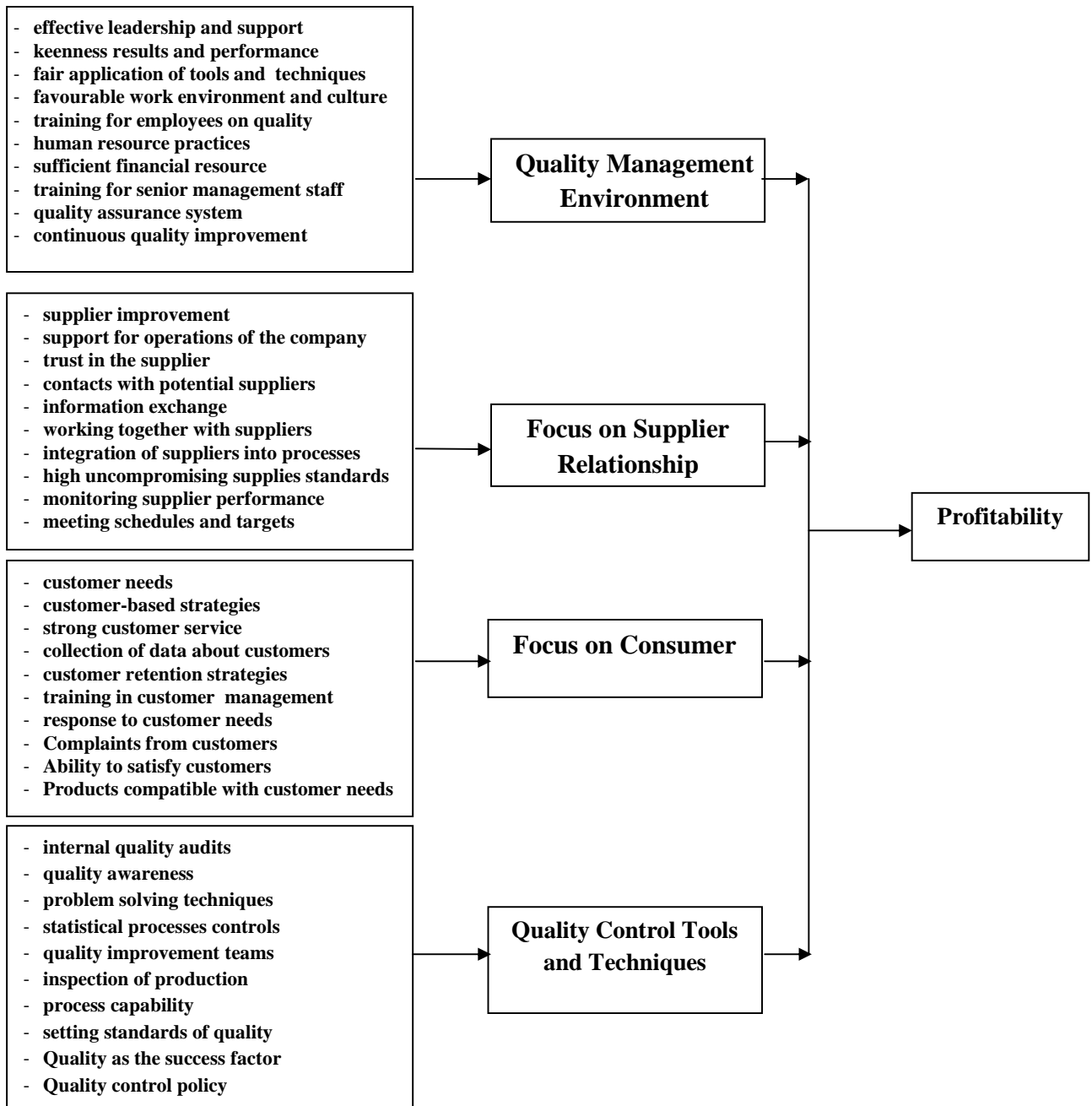


(Source: Researcher, 2013)

2.5 Operational Framework

Fig 2-2 shows how the various variables will be operationalized using the questionnaire in Appendix II.

Fig. 2-2: Operational Framework



(Source: Researcher 2013)

2.6 Knowledge Gap

The literature review reveals that a lot of research has been conducted on the effect of TQM on various aspects of Companies' performance across time, across countries and across industries. TQM theory suggests that profitability can be enhanced through reduction of defects and improvement of quality of products. Some studies concluded that TQM had strong positive influence on profitability; others concluded negative influence while others recorded a neutral relationship. There seems to be a revelation that the relationship between TQM and financial performance of Companies using the philosophy is not generalizable, but case dependent. The literature has clearly demonstrated that there is no study done to establish TQM affects the financial performance measured by ROA among ISO certified companies in Kenya. This study was conducted to fill this gap.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter discusses the research design used to conduct the study. It specifies the target population, method used to collect data and how analysis of the data was done.

3.2 Research Design

This study was exploratory and descriptive in nature and the researcher used census survey method. According to Sekaran (2003) exploratory study is undertaken when not much is known about the situation at hand, or no information is available on how similar problems or research issues have been solved in the past. Cooper (1995) explains that descriptive study describes data and characteristics about the population or phenomenon being studied. Explanatory studies are those that establish casual relationships between variables (Cooper, 1995).

The primary data collected from respondents is reliable and current regarding the responses on the benefits of TQM and how it affects financial performance and hence the choice of this method.

3.3 Target Population

This survey was carried on ISO certified companies in Kenya. According to the Kenya Bureau of Standards there were 38 ISO certified companies in Kenya by 31st December 2012. Each of the ISO certified companies formed the unit upon which the analysis was

based the study was therefore, a census The data collected was, therefore, at company level.

3.4 Sampling Design and Sample Size

All the 38 ISO certified companies listed in the Appendix I were studied. The sample for this study was, therefore, equal to the population. In effect, this made this study a census. The OECD (2005) defines a census as “the complete enumeration of a population or groups at a point in time with respect to well defined characteristics.” A census is a survey conducted on the full set of observation objects belonging to a given population or universe. According to Australian Bureau of Statistics (1999) a census can be used if the population is small and manageable in cost and data management in the view of the researcher. Further, censuses usually avoid sampling errors. In this study the number of companies studied is 38 which is a manageable number in terms of cost and data collection and analysis.

The data was collected at company level since each ISO certified company makes the unit of study. Only one respondent from each of the company responded to the questionnaire. Members of the top management responded to the questionnaires for they have the wider picture of the companies. The Managing Director of each company responded to the questionnaire or delegated it to someone else in the company who provided same information accurately. This led to 38 expected participants in the study.

3.5 Data Collection

This research used both primary and secondary data from ISO certified companies. The research required both quantitative and qualitative data to provide complete analysis and

give plausible findings. This is because financial performance is quantitative in nature and the study will need annual returns on assets (ROA) for the period 2008 to 2012.

The primary data involved response to a questionnaire that delivered to the respondents and picked later after being completed. The questionnaire was structured to contain two sections. The first section captured general descriptive data concerning the respondent company. The second part focused on determining the benefits of TQM to the company. Given that the assessment of the benefits of TQM is highly qualitative, the Likert scale was used. The items to be responded upon were classified according to the four pillars of TQM identified in the literature review.

3.5.1 Validity of the questionnaire

Bechtold (1959) defined validity as the extent to which the instrument measures what it purports to measure. Content validity is the key type of validity for this study. Content validity pertains to the degree to which the instrument fully assesses or measures the construct of interest. To measure validity, each of the pretest respondents rated the questionnaire on a scale of 1 to 10 where 10 showed that the questionnaire was measuring what it purports to measure.

3.5.2 Reliability of the questionnaire

Reliability refers the extent to which a questionnaire, test, observation or any measurement procedure produces the same results on repeated trials. In short, it is the stability or consistency of scores over time or across raters (Cronbach, 1951).The reliability of the questionnaire was measured by use of the Cronbach's alpha.

The Cronbach's alpha reliability coefficient ranges between 0 and 1. The closer Cronbach's alpha coefficient is to 1.0 the greater the internal consistency of the items in the scale. Gliem and Gliem (2003) provide the following rules of thumb as shown in Table 3.1 for reliability though an alpha of 0.8 is a reasonable goal:

Table 3.1: Cronbach's Alpha Measures

Cronbach's alpha	Level of Internal consistency
$\alpha \geq 0.9$	Excellent
$0.8 \leq \alpha < 0.9$	Good
$0.7 \leq \alpha < 0.8$	Acceptable
$0.6 \leq \alpha < 0.7$	Questionable
$0.5 \leq \alpha < 0.6$	Poor

Source: Gliem and Gliem (2003)

3.6 Pretesting of the Research Questionnaire

The questionnaire was administered to five companies sampled according to the convenience of the researcher. The respondents were free to make comments on the questionnaire concerning difficult wording, or limited option, missing options.

3.7 Data Analysis

A qualitative analysis of the Likert responses from the questionnaire was done using the mean and standard deviation to determine the extent to which each of the identified benefits attributes to the responding company and tabulated. The primary data collected was classified in accordance with the four pillars of TQM. For each of the company the equally weighted grand mean of the Likert response for each of the pillar of TQM was found. The regression model for the analyzing the relationship between TQM and ROA took the form:

$$Y = C + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

Where:

Y = Average return on Assets (ROA)

C = Constant of regression

β_i = Sensitivity of Y to variable $X_i, i = 1, 2, 3, 4,$

X_1 = Management environment variable

X_2 = Quality control variable

X_3 = Focus on Customer variable

X_4 = Focus on supplier relationship variable

e = error term

The T-test at 95% confidence level was used to test the statistical significance of the regression constants C and β_i . The F-test at 95% confidence level was used to determine whether the regression relationship between the dependent and the independent variables is statistically significant. This test helped to test whether there was a strong relationship between TQM and financial performance. The coefficient of determination R^2 and the adjusted R^2 were used to determine the level of strength at which the variation in the independent variables explains the variation in the dependent variable. MS EXCEL 07 spreadsheet and SPSS tools were utilized in analyzing the data.

3.8 Ethical Considerations

The capture of information required was done in a legally accepted way. No respondent was coerced into giving out information either by force or by reward. The participation was at the discretion of the participants. The information got was specifically for research purposes and such information will not be used in any manner detrimental to the well-

being of the responding ISO certified companies in addition to holding utmost confidentiality.

CHAPTER FOUR

FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter is organized as follows: the first section provides a detailed analysis of the quality management environment variable, quality control variable, focus on customer variable and focus on supplier relationship. Analysis ends with investigating, present and interprets the findings of the study.

4.2 Response Rate

The study sought to gather information from production managers or any individual responsible for quality management among ISO certified companies. The research was designed to gather information from 38 ISO certified Companies. However, of the total 38 only 28 responded which constituted 73.68 % response rate.

4.3 Quality Management Environment

The respondents were asked to indicate their level of agreement that the factors listed in Table 4.1 affected the financial performance of their company. A five point Likert scale was used in which 1 = not at all, 2 = very small extent, 3 = small extent, 4 = large extent and 5 = very large extent. The Cronbach's alpha for responses under quality management environment was 0.91 which shows the responses are reliable. The responses under quality management environment (and all other variables) are analyzed according to number of years a company has been operational, the number of years a company been ISO certified, the sector in which the company operates, the region covered by customers served and the ownership structure.

Table 4.1 analyzes the response of the companies together. As shown in the table, the findings show that companies most strongly felt that their financial performance was affected by effective continuous quality improvement (M = 4.68), putting in place a favorable work environment (M = 4.61) and ensuring sufficient financial resource (M = 4.57). It was least strongly felt that financial performance was affected by provision of relevant training for senior management staff (M = 4.32), and for the employees (M = 4.32). However, the findings show that it was generally felt that quality management environment affected financial performance (Grand M = 4.46).

Table 4.1: Quality Management Environment based on All Companies Together

Quality Management Environment (All Companies)	M	SD
There is effective leadership from top management	4.36	0.81
Top leadership is keen on Measuring performance	4.50	0.68
A favorable work environment have been put in place	4.61	0.56
There is appropriate training for employees on quality	4.32	0.89
There are desirable human resource practices	4.50	0.63
The management ensures sufficient financial resource	4.57	0.56
There is provision of relevant training for senior management staff	4.32	0.80
There is an effective quality assurance system adopted	4.36	0.72
Effective continuous quality improvement is conducted	4.68	0.66
GRAND MEAN	4.46	

(Source: Researcher, 2013)

Analysis of the quality management environment was done according to the time a company had been in operation. The Companies were categorized into those that had been operational for less than 20 years and those that had been operational for over 20 years. As shown in Table 4.2, the findings show that companies that had been operational for less than 20 years indicated that financial performance was most affected by the management adopting an effective quality assurance system (M = 5.00) and the management conducting effective continuous quality improvement (M = 5.00). It

indicated that financial performance was least affected by leadership from top management (M = 4.60), effective training for employees on quality (M = 4.80), human resource practices (M = 4.60) and provision of relevant training for senior management staff (M = 4.60).

Table 4.2: Quality Management Environment based on Age of Firm

Quality Management Environment (less than 20 yrs)	Below 20		Over 20	
	M	SD	M	SD
There is effective leadership from top management	4.60	0.55	4.36	0.88
Top leadership is keen on Measuring performance	4.80	0.45	4.50	0.73
A favorable work environment have been put in place	4.80	0.45	4.61	0.59
There is appropriate training for employees on quality	4.80	0.45	4.39	0.82
There are desirable human resource practices	4.60	0.55	4.50	0.67
The management ensures sufficient financial resource	4.80	0.45	4.57	0.59
There is provision of relevant training for senior management staff	4.60	0.55	4.32	0.86
There is an effective quality assurance system adopted	5.00	0.00	4.36	0.74
Effective continuous quality improvement is conducted	5.00	0.00	4.68	0.72
GRAND MEAN	4.76		4.46	

(Source: Researcher, 2013)

From the findings companies that had been operational for over 20 year indicated that their financial performance was most strongly affected by continuous quality improvement (M = 4.68) and by putting in place a favorable work environment (M = 4.61). The companies also indicated that financial performance was least strongly affected by relevant training of senior management staff (M = 4.32).

The findings shown in Table 4.3 provide the analysis of quality management environment based on the length of time since a company received its ISO certification. From the findings companies that had be certified in less than five years ago indicated that their financial performance was most strongly affected by effective continuous quality improvement (M = 4.81) and by provision of appropriate training for employees

on quality (M = 4.81). However, financial performance was least affected by provision of training for senior management staff (M = 4.50) and the adoption an effective quality assurance system (M = 4.50).

Table 4.3: Quality Management Environment based on Time since ISO Certification

Quality Management Environment (3-5 yrs in ISO)	Less 5		More 5	
	M	SD	M	SD
There is effective leadership from top management	4.63	0.50	4.00	1.04
Top leadership is keen on Measuring performance	4.69	0.48	4.25	0.87
A favorable work environment have been put in place	4.75	0.45	4.42	0.67
There is appropriate training for employees on quality	4.81	0.40	3.83	0.83
There are desirable human resource practices	4.69	0.48	4.25	0.75
The management ensures sufficient financial resource	4.75	0.45	4.33	0.65
There is provision of relevant training for senior management staff	4.50	0.63	4.08	1.00
There is an effective quality assurance system adopted	4.50	0.63	4.17	0.83
Effective continuous quality improvement is conducted	4.81	0.40	4.50	0.90
GRAND MEAN	4.68		4.18	

(Source: Researcher, 2013)

The findings show that companies that had received ISO certification for over five years ago indicated that their financial performance was most affected by effective continuous quality improvement (M = 4.50) and putting in place a favorable work environment (M = 4.42). They, however, indicated that their financial performance was least affected by provision of effective training for employees on quality (M = 3.83) and by leadership from top management (M = 4.00).

Table 4.4 analyzes the quality management environment based on the sector in which the company operates in. These findings shows that among the companies in the agricultural sector, financial performance was most affected by provision of appropriate training for employees on quality (M = 5.00), sufficient financial resources (M = 5.00) and effective continuous quality improvement (M = 5.00).

Among companies in the industrial sector, the analysis shows that financial performance was most affected by putting in place a favorable work environment (M = 4.50) and effective continuous quality improvement (M = 4.40). Financial performance was least affected by the leadership from top management (M = 3.80) and provision of training for senior management staff (M = 3.80).

Table 4.4: Quality Management Environment based on Sector

Quality Management Environment (Sector)	Agriculture		Industry	
	M	SD	M	SD
There is effective leadership from top management	4.67	0.52	3.80	1.51
Top leadership is keen on Measuring performance	4.67	0.52	4.20	1.54
A favorable work environment have been put in place	4.67	0.52	4.50	1.51
There is appropriate training for employees on quality	5.00	0.00	4.00	1.57
There are desirable human resource practices	4.67	0.52	4.30	1.51
The management ensures sufficient financial resource	5.00	0.00	4.30	1.45
There is provision of relevant training for senior management staff	4.83	0.41	3.80	1.44
There is an effective quality assurance system adopted	4.67	0.52	4.00	1.50
Effective continuous quality improvement is conducted	5.00	0.00	4.40	1.61
GRAND MEAN	4.77		4.12	

(Source: Researcher, 2013)

Table 4.5 focuses on companies in the services and tourism sectors. As shown in the table, the findings show that companies in the services sector indicated that their financial performance was most strongly affected by the leadership from top management (M = 4.73), performance measurement (M = 4.73) and continuous quality improvement (M = 4.73). The financial performance was, however, least affected by provision of training for employees on quality (M = 4.36), provision of training for senior management staff (M = 4.45) and the adoption of an effective quality assurance system (M = 4.45). The findings show that companies in the tourism industry indicated that their financial performance

was least strongly affected by leadership from top management (M = 4.00) and performance measurement (M = 4.00).

Table 4.5: Quality Management Environment based on Sector

Quality Management Environment (Sector)	Services		Tourism	
	M	SD	M	SD
There is effective leadership from top management	4.73	0.47	4.00	0.00
Top leadership is keen on Measuring performance	4.73	0.47	4.00	0.00
A favorable work environment have been put in place	4.64	0.50	5.00	0.00
There is appropriate training for employees on quality	4.36	0.50	5.00	0.00
There are desirable human resource practices	4.55	0.52	5.00	0.00
The management ensures sufficient financial resource	4.55	0.52	5.00	0.00
There is provision of relevant training for senior management staff	4.45	0.69	5.00	0.00
There is an effective quality assurance system adopted	4.45	0.52	5.00	0.00
Effective continuous quality improvement is conducted	4.73	0.47	5.00	0.00
GRAND MEAN	4.58		4.70	

(Source: Researcher, 2013)

Table 4.6 analyzes quality management environment based on whether the company serves customers on a national or international scale. The analysis shows that companies that operated on an international scale indicated that their financial performance was most strongly affected by putting in place a favorable work environment (M = 4.71) and conducting effective and continuous quality improvement (M = 4.79). Their financial performance was least strongly affected by the leadership from top management (M = 4.36) and the provision of appropriate training for employees on quality (M = 4.36).

Among companies with strong national clientele, the analysis shows that their financial performance was most strongly affected by performance measurement (M = 4.57) and effective continuous quality improvement (M = 4.57). However, their financial performance was least affected by adoption of an effective quality assurance system (M = 4.29) and the training of senior management staff (M = 4.21).

Table 4.6: Quality Management Environment based on Locality of Customers

Quality Management Environment (Locality)	International		National	
	M	SD	M	SD
There is effective leadership from top management	4.36	0.84	4.36	0.84
Top leadership is keen on Measuring performance	4.43	0.51	4.57	0.85
A favorable work environment have been put in place	4.71	0.47	4.50	0.65
There is appropriate training for employees on quality	4.36	0.74	4.43	0.85
There are desirable human resource practices	4.50	0.65	4.50	0.65
The management ensures sufficient financial resource	4.64	0.50	4.50	0.65
There is provision of relevant training for senior management staff	4.43	0.65	4.21	0.97
There is an effective quality assurance system adopted	4.43	0.51	4.29	0.91
Effective continuous quality improvement is conducted	4.79	0.43	4.57	0.85
GRAND MEAN	4.51		4.41	

(Source: Researcher, 2013)

Table 4.7 and Table 4.8 analyze quality management environment based on the ownership structure of companies. The analysis shows that companies owned by few private shareholders indicated that their financial performance was most strongly affected by continuous quality improvement ($M = 4.75$) and the leadership from top management ($M = 4.75$). Their financial performance was least strongly affected by provision of appropriate training for employees on quality ($M = 4.50$). Companies that were fully publicly owned indicated that their financial performance was most strongly affected by effective continuous quality improvement ($M = 4.67$), putting in place a favorable work environment ($M = 4.67$), and sufficient financial resource ($M = 4.50$). However, the Companies had their financial performance least affected by provision of training for employees on quality ($M = 3.83$) and by the leadership from top management ($M = 3.67$).

Table 4.7: Quality Management Environment based on Ownership Structure

Quality Management Environment (ownership)	Few Private		Fully Public	
	M	SD	M	SD
There is effective leadership from top management	4.75	0.46	3.67	0.82
Top leadership is keen on Measuring performance	4.63	0.52	4.17	0.41
A favorable work environment have been put in place	4.63	0.52	4.67	0.52
There is appropriate training for employees on quality	4.50	0.53	3.83	0.75
There are desirable human resource practices	4.63	0.52	4.17	0.75
The management ensures sufficient financial resource	4.63	0.52	4.50	0.55
There is provision of relevant training for senior management staff	4.63	0.52	4.00	0.63
There is an effective quality assurance system adopted	4.63	0.52	4.00	0.00
Effective continuous quality improvement is conducted	4.75	0.46	4.67	0.52
GRAND MEAN	4.63		4.20	

(Source: Researcher, 2013)

Table 4.8 analyses the quality management environment by ownership structure focusing on whether the companies are majority government owned or minority government owned.

Table 4.8: Quality Management Environment by Ownership Structure

Quality Management Environment (Ownership)	Maj. Gov		Min. Gov	
	M	SD	M	SD
There is effective leadership from top management	4.27	0.90	5.00	0.00
Top leadership is keen on Measuring performance	4.55	0.93	4.67	0.58
A favorable work environment have been put in place	4.55	0.69	4.67	0.58
There is appropriate training for employees on quality	4.55	0.93	4.67	0.58
There are desirable human resource practices	4.55	0.69	4.67	0.58
The management ensures sufficient financial resource	4.64	0.67	4.33	0.58
There is provision of relevant training for senior management staff	4.27	1.10	4.33	0.58
There is an effective quality assurance system adopted	4.27	1.01	4.67	0.58
Effective continuous quality improvement is conducted	4.64	0.92	4.67	0.58
GRAND MEAN	4.44		4.63	

(Source: Researcher, 2013)

As shown in Table 4.8, the finding show that businesses that had majority government ownership indicated that their financial performance was most strongly affected by effective continuous quality improvement (M = 4.64) and sufficient financial resources

(M = 4.64). Their financial performance was least strongly affected by their quality assurance systems (M = 4.27), the effective leadership from top management (M = 4.27) and the provision of training to senior management staff (M = 4.27). The companies that were minority government ownerships indicated that their financial performance was most strongly affected by the effective leadership from top management (M = 5.00) but, were least strongly affected by the provision of training for senior management staff (M = 4.33) and sufficient financial resources (M = 4.33).

The findings from the analysis in this section seem to indicate that quality management environment is a key driver of quality among the ISO certified companies despite differences in the specific aspects of the quality management environment. The findings support the work of Hendricks and Singhal (2001) who also found a strong relationship between total quality environment in a firm and its financial performance. The findings, however, differ with those of Keating, Oliva, Repenning, Rockart and Sterman (1999) who found no strong relationship between quality management environment and the financial performance of companies.

4.4 Focus on Customers

This subsection analyzes the focus on customer variable of TQM. The Cronbach's alpha for the responses on this variable was 0.90 which meant the data is reliable. Table 4.9 shows the analysis of the focus on customers basing on all the companies together. The findings show that generally, all the companies indicated that focus on the customer strongly affected their financial performance (GM = 4.50). From deeper analysis, the companies indicated that their financial performance was most strongly affected by immediate response to changes in customer needs (M = 4.64) and the strong adherence to

satisfying the customer (M = 4.61). Their financial performance was least strongly affected by their strictly customer-based marketing strategies (M = 4.43) and the strong customer service function in place (M = 4.43).

Table 4.9: Focus on Customers based on All Companies Together

Focus on Consumer (All Companies)	M	SD
There are in place effective methods to determine customer needs	4.46	0.64
The marketing strategies in place are strictly customer-based	4.43	0.69
There is a strong customer service function put in place	4.43	0.88
Continuous collection of data about customers or groups of customers is done	4.46	0.69
There are mechanisms put in place to retain the continued business with loyal clients	4.50	0.58
There are training programs put in place to train workers on how to manage customer	4.46	0.69
The response to changes in customer needs is immediate	4.64	0.56
There are few complaints about the company's Products or Services from customers	4.50	0.69
All the departments adhere to and are capable satisfying the customer	4.61	0.57
Provision of service or product is compatible with customer need.	4.46	0.64
GRAND MEAN	4.50	

(Source: Researcher, 2013)

Table 4.10 shows the analysis of the focus on customers' variable based on the length of time the respondent company had been operational. The findings show that companies that had been operational for less than 20 years indicated that their financial performance was most strongly affected by their effective methods to determine customer needs (M = 5.00); strictly customer-based marketing strategies (M = 5.00), strong customer service function (M = 5.00) and product provision that is compatible with customer needs (M = 5.00). From the analysis companies that had been operational for over 20 years indicated that their financial performance was most strongly affected by their immediate response to changes in customer needs (M = 4.61) and the strong adherence to satisfying the customer by all departments (M = 4.57). According to these Companies, their financial

performance was least affected by their strictly customer-based marketing strategies (M = 4.30) and the strong customer service function (M = 4.30).

Table 4.10: Focus on Customer basing on Length of Time in Operation

Focus on Consumer (by years in operation)	Below 20		Above 20	
	M	SD	M	SD
There are in place effective methods to determine customer needs	5.00	0.00	4.35	0.65
The marketing strategies in place are strictly customer-based	5.00	0.00	4.30	0.70
There is a strong customer service function put in place	5.00	0.00	4.30	0.93
Continuous collection of data about customers or groups of customers is done	4.80	0.45	4.39	0.72
There are mechanisms put in place to retain the continued business with loyal clients	4.80	0.45	4.43	0.59
There are training programs put in place to train workers on how to manage customer	4.80	0.45	4.39	0.72
The response to changes in customer needs is immediate	4.80	0.45	4.61	0.58
There are few complaints about the company's Products or Services from customers	4.80	0.45	4.43	0.73
All the departments adhere to and are capable satisfying the customer	4.80	0.45	4.57	0.59
Provision of service or product is compatible with customer need.	5.00	0.00	4.35	0.65
GRAND MEAN	4.88		4.41	

(Source: Researcher, 2013)

Table 4.11 analyzes the focus on consumer variable on the basis of the length of time a firm had been under the ISO certification. The analysis shows that companies that had been less than five years under ISO certifications indicated that their financial performance was most strongly affected by immediate response to changes in customer needs (M = 4.81) and strong adherence customer satisfaction by all departments (M = 4.75). From the findings the financial performance was, on the contrary, least affected by continuous collection of data about customers or groups of customers (M = 4.56), compatibility of products with customer need (M = 4.56) and the training of workers on customer management (M = 4.56).

Table 4. 11: Focusing on Consumers basing on Years under ISO Certification

Focus on Consumer (by Years Under ISO)	Below 5		Over 5	
	M	SD	M	SD
There are in place effective methods to determine customer needs	4.63	0.50	4.25	0.75
The marketing strategies in place are strictly customer-based	4.63	0.50	4.17	0.83
There is a strong customer service function put in place	4.63	0.50	4.17	1.19
Continuous collection of data about customers or groups of customers is done	4.56	0.51	4.33	0.89
There are mechanisms put in place to retain the continued business with loyal clients	4.69	0.48	4.25	0.62
There are training programs put in place to train workers on how to manage customer	4.56	0.51	4.33	0.89
The response to changes in customer needs is immediate	4.81	0.40	4.42	0.67
There are few complaints about the company's Products or Services from customers	4.69	0.48	4.25	0.87
All the departments adhere to and are capable satisfying the customer	4.75	0.45	4.42	0.67
Provision of service or product is compatible with customer need.	4.56	0.51	4.33	0.78
GRAND MEAN	4.65		4.29	

(Source: Researcher, 2013)

The findings show that companies that had been ISO certified for over five years indicated that their financial performance was most affected by the immediate response to changes in customer needs (M = 4.42) and the strong adherence to customer satisfaction by all departments (M = 4.42). The companies indicated that their financial performance was least affected by the strictly customer-based marketing strategies put in place (M = 4.17) and the strong customer service function in place (M = 4.17).

From the analysis shown in Table 4.12 companies in the agricultural sector had their financial performance affected by the immediate response to changes in customer needs (M = 4.83), the low number of complaints against the company's products or services from consumers (M = 4.83) and the strong adherence to customer satisfaction (M = 5.00).

Table 4.12: Focus on Customers basing on Sector

Focus on Consumer (by sector)	Agriculture		Industry	
	M	SD	M	SD
There are in place effective methods to determine customer needs	4.50	0.55	4.20	0.79
The marketing strategies in place are strictly customer-based	4.50	0.55	4.10	0.88
There is a strong customer service function put in place	4.50	0.55	4.50	0.71
Continuous collection of data about customers or groups of customers is done	4.67	0.52	4.20	0.92
There are mechanisms put in place to retain the continued business with loyal clients	4.67	0.52	4.20	0.63
There are training programs put in place to train workers on how to manage customer	4.50	0.55	4.20	0.92
The response to changes in customer needs is immediate	4.83	0.41	4.50	0.71
There are few complaints about the company's Products or Services from customers	4.83	0.41	4.10	0.88
All the departments adhere to and are capable satisfying the customer	5.00	0.00	4.40	0.70
Provision of service or product is compatible with customer need.	4.50	0.55	4.30	0.82
Grand Mean	4.65		4.27	

(Source: Researcher, 2013)

As shown in Table 4.12 companies in the industrial sector indicated that their financial performance was most affected by the immediate response to changes in customer needs (M = 4.50) and the strong customer service function in place (M = 4.50). Their financial performance was least strongly affected by the strictly customer-based marketing strategies (M = 4.10) and the low complaints against the company's products from consumers (M = 4.10).

Companies in the services sector, analyzed in table 4.13, indicates that financial performance is most strongly affected by the effective methods to determine customer needs (M = 4.64), the strictly customer-based marketing strategies (M = 4.64), the mechanisms put in place to retain the continued business with loyal clients (M = 4.64), the low number of complaints against the company's products or services from

consumers (M = 4.64), the immediate response to changes in customer needs (M = 4.64), and the training programs for workers on customer management (M = 4.64).

Table 4.13: Focus on Consumer basing on Industry

Focus on Consumer (by Sector)	Services		Tourism	
	M	SD	M	SD
There are in place effective methods to determine customer needs	4.64	0.50	5.00	0.00
The marketing strategies in place are strictly customer-based	4.64	0.50	5.00	0.00
There is a strong customer service function put in place	4.27	1.19	5.00	0.00
Continuous collection of data about customers or groups of customers is done	4.55	0.52	5.00	0.00
There are mechanisms put in place to retain the continued business with loyal clients	4.64	0.50	5.00	0.00
There are training programs put in place to train workers on how to manage customer	4.64	0.50	5.00	0.00
The response to changes in customer needs is immediate	4.64	0.50	5.00	0.00
There are few complaints about the company's Products or Services from customers	4.64	0.50	5.00	0.00
All the departments adhere to and are capable satisfying the customer	4.55	0.52	5.00	0.00
Provision of service or product is compatible with customer need.	4.55	0.52	5.00	0.00
GRAND MEAN	4.57		5.00	

(Source: Researcher, 2013)

From the findings shown in Table 4.14 it was ascertained that ISO certified companies that serve the international market had their financial performance most strongly affected by compatibility of product provision with customer needs (M = 4.71), training programs for workers on customer management (M = 4.71) and the immediate response to changes in customer needs (M = 4.71). Their financial performance was least strongly affected by the strictly customer-based marketing strategies put in place (M = 4.50) and the strong customer service function in place (M = 4.36).

The findings show that companies operating at the national level indicated that their financial performance was most strongly affected by all departments adhering to

satisfaction of the customer (M =4.64), strong customer service function in place (M = 4.50) and the immediate response to changes in customer needs (M = 4.57).

Table 4.14: Focus on Customers basing on Locality

Focus on Consumer (by Locality)	International		National	
	M	SD	M	SD
There are in place effective methods to determine customer needs	4.64	0.50	4.29	0.73
The marketing strategies in place are strictly customer-based	4.50	0.52	4.36	0.84
There is a strong customer service function put in place	4.36	1.08	4.50	0.65
Continuous collection of data about customers or groups of customers is done	4.57	0.51	4.36	0.84
There are mechanisms put in place to retain the continued business with loyal clients	4.64	0.50	4.36	0.63
There are training programs put in place to train workers on how to manage customer	4.71	0.47	4.21	0.80
The response to changes in customer needs is immediate	4.71	0.47	4.57	0.65
There are few complaints about the company's Products or Services from customers	4.57	0.51	4.43	0.85
All the departments adhere to and are capable satisfying the customer	4.57	0.51	4.64	0.63
Provision of service or product is compatible with customer need.	4.71	0.47	4.21	0.70
GRAND MEAN	4.60		4.39	

(Source: Researcher, 2013)

Tables 4.15 and 4.16 present analysis of the focus on customer variable of TQM. As shown in Table 4.12a the analysis reveals that companies that are owned by few private shareholders had their financial performance most strongly affected by the presence of effective methods to determine customer needs (M = 4.88) and the compatibility of product provision with customer needs (M = 4.88). However, the financial performance was least affected by the training programs in place for workers on customer management (M = 4.50).

From the findings, it was found that he fully public owned companies indicated that their financial performance was most strongly affected by the presence of training programs for workers on customer management (M = 4.67), provision of services or products

compatible with customer needs ($M = 4.50$), continuous collection of data about customers ($M = 4.50$) and immediate response to changes in customer needs ($M = 4.50$).

Table 4.15: Focus on Customer basing on Ownership Structure

Focus on Consumer (by Ownership)	Few Private		Fully Public	
	M	SD	M	SD
There are in place effective methods to determine customer needs	4.88	0.35	4.33	0.52
The marketing strategies in place are strictly customer-based	4.63	0.52	4.33	0.52
There is a strong customer service function put in place	4.75	0.46	4.17	1.60
Continuous collection of data about customers or groups of customers is done	4.75	0.46	4.50	0.55
There are mechanisms put in place to retain the continued business with loyal clients	4.75	0.46	4.17	0.41
There are training programs put in place to train workers on how to manage customer	4.50	0.53	4.67	0.52
The response to changes in customer needs is immediate	4.75	0.46	4.50	0.55
There are few complaints about the company's Products or Services from customers	4.63	0.52	4.33	0.52
All the departments adhere to and are capable satisfying the customer	4.63	0.52	4.33	0.52
Provision of service or product is compatible with customer need.	4.88	0.35	4.50	0.55
GRAND MEAN	4.71		4.38	

(Source: Researcher, 2013)

Findings presented in Table 4.16 show that companies in which the government was majority shareholder indicated that their financial performance was most strongly affected by all departments strongly adhering to satisfaction of the customer ($M = 4.73$), the immediate response to changes in customer needs ($M = 4.64$), the presence of mechanisms to retain the continued business with loyal clients ($M = 4.45$) and the low number of complaints against the company's products from consumers ($M = 4.45$). Companies that were minority owned by the government indicated that their financial performance was least strongly affected by methods to determine customer needs ($M = 4.33$), the continuous collection of data about customers ($M = 4.33$) and the compatibility of product provision with customer needs ($M = 4.00$).

Table 4.16: Focus on Customer basing on Ownership

Focus on Consumer (by Ownership)	Min. Gov.		Maj. Gov	
	M	SD	M	SD
There are in place effective methods to determine customer needs	4.27	0.65	4.33	1.15
The marketing strategies in place are strictly customer-based	4.27	0.90	4.67	0.58
There is a strong customer service function put in place	4.27	0.65	4.67	0.58
Continuous collection of data about customers or groups of customers is done	4.27	0.90	4.33	0.58
There are mechanisms put in place to retain the continued business with loyal clients	4.45	0.69	4.67	0.58
There are training programs put in place to train workers on how to manage customer	4.27	0.90	4.67	0.58
The response to changes in customer needs is immediate	4.64	0.67	4.67	0.58
There are few complaints about the company's Products or Services from customers	4.45	0.93	4.67	0.58
All the departments adhere to and are capable satisfying the customer	4.73	0.65	4.67	0.58
Provision of service or product is compatible with customer need.	4.27	0.65	4.00	1.00
GRAND MEAN	4.39		4.53	

(Source: Researcher, 2013)

The analysis of the focus on customer variable of TQM has revealed that focus on the customer strongly affects the financial performance of the ISO certified Companies. These findings agree with those of Gupta and Zeithaml (2006). The study by Gupta and Zeithaml (2006) investigated the impact of customer metrics on Companies' financial performance focusing on perceptual customer metrics (like customer satisfaction) and observable or behavioral metrics (like customer retention and lifetime value). The study found a close relationship between customer metrics and financial performance. This study, however, does not agree with the findings of Steven, Dong, Dresner and Smith (2012) who found weak relationship between customer metrics and profitability in the U.S. airline industry due to intensity in competition.

4.5 Quality Control Tools and Techniques

This subsection analyzes the quality control tools and techniques variable basing on all companies, time in business, time since ISO certification, locality of their customers, sector of operation and ownership structure. The Cronbach's alpha for the responses on this variable was 0.89 making the data reliable. Table 4.17 analyzes the quality control tools and techniques basing on all companies together. From the findings it was revealed that the companies generally indicated that quality control tools and techniques affected their financial performance (Grand M =4.43).

Table 4.17: Quality Control Tools and Techniques basing on All Companies Together

Quality Control Tools and Techniques (All)	M	SD
There are strong internal quality audits in place	4.57	0.88
A strong quality awareness program exists	4.32	0.67
The company has strong problem solving techniques	4.54	0.64
There are effective statistical processes controls put in place	4.36	0.62
There are strong quality improvement teams in place	4.43	0.88
Frequent inspection is done at every point of production	4.64	0.56
All the processes have undergone rigorous process capability studies to ensure high quality production	4.39	0.69
The Inspection report are always used when setting standards of quality	4.39	0.83
Quality is the main success factor in your company	4.36	0.73
Control policies are clear to all personnel	4.25	0.75
The Control policies are effectively implemented	4.50	0.64
GRAND MEAN	4.43	

(Source: Researcher, 2013)

A deeper analysis revealed that financial performance was most strongly affected by frequent inspection at every point of production (M = 4.64), strong internal quality audits (M = 4.57) and strong problem solving techniques (M = 4.54). Financial performance among the companies was least affected by clarity of control policy to all personnel (M = 4.25), strong quality awareness program (M = 4.32) and statistical controls (M = 4.36).

From the results shown in Table 4.18 below, it was found that companies that had been operational for less than 20 years indicated that their financial performance was most strongly affected by control policy (M = 4.60), quality being the main success factor (M = 4.60), strong internal quality audits (M = 4.60), strong quality awareness programs (M = 4.60) and strong problem solving techniques (M = 4.60). The findings show that companies that had been operational for over 20 years indicated that their financial performance was most strongly affected by frequent inspection at every point of production (M = 4.70) and strong internal quality audits (M = 4.57). Their financial performance was least strongly affected by clarity of control policy to all personnel (M = 4.22) and strong quality awareness programs (M = 4.26).

Table 4.18: Quality Control Tools and Techniques by Years in Operation

Quality Control Tools and Techniques (By year in operation)	Below 20		Over 20	
	M	SD	M	SD
There are strong internal quality audits in place	4.60	0.55	4.57	0.95
A strong quality awareness program exists	4.60	0.55	4.26	0.69
The company has strong problem solving techniques	4.60	0.55	4.52	0.67
There are effective statistical processes controls put in place	4.20	0.45	4.39	0.66
There are strong quality improvement teams in place	4.40	0.55	4.43	0.95
Frequent inspection is done at every point of production	4.40	0.55	4.70	0.56
All the processes have undergone rigorous process capability studies to ensure high quality production	4.40	0.55	4.39	0.72
The Inspection report are always used when setting standards of quality	4.40	0.55	4.39	0.89
Quality is the main success factor in your company	4.60	0.89	4.30	0.70
Control policies are clear to all personnel	4.40	0.89	4.22	0.74
The Control policies are effectively implemented	4.60	0.89	4.48	0.59
GRAND MEAN	4.47		4.42	

(Source: Researcher, 2013)

Findings in Table 4.19 reveal that companies that have been ISO certified for less than five years ago indicated that their financial performance was most strongly affected by

strong internal quality audits (M = 4.81), frequent inspection every point of production (M = 4.69) and the presence of strong problem solving techniques (M = 4.63). Among these companies financial performance was least strongly affected by rigorous process capability studies to ensure high quality production (M = 4.38) and clarity of control policy to all personnel (M = 4.38).

From the findings it was revealed that companies that had been ISO certified for over five years indicated that their financial performance was most strongly affected by frequent inspection at every point of production (M = 4.58) and implementation of an effective control policy (M = 4.58). Financial performance was least affected by quality awareness programs (M = 4.00).

Table 4.19: Quality Control Tools by Time since ISO Certification

Quality Control Tools and Techniques (By time since ISO)	Below 5		Over 5	
	M	SD	M	SD
There are strong internal quality audits in place	4.81	0.40	4.25	1.22
A strong quality awareness program exists	4.56	0.63	4.00	0.60
The company has strong problem solving techniques	4.63	0.62	4.42	0.67
There are effective statistical processes controls put in place	4.50	0.52	4.17	0.72
There are strong quality improvement teams in place	4.50	0.63	4.33	1.15
Frequent inspection is done at every point of production	4.69	0.48	4.58	0.67
All the processes have undergone rigorous process capability studies to ensure high quality production	4.38	0.50	4.42	0.90
The Inspection report are always used when setting standards of quality	4.50	0.52	4.25	1.14
Quality is the main success factor in your company	4.44	0.63	4.25	0.87
Control policies are clear to all personnel	4.38	0.72	4.08	0.79
The Control policies are effectively implemented	4.44	0.63	4.58	0.67
GRAND MEAN	4.53		4.30	

(Source: Researcher, 2013)

Table 4.20 and Table 4.21 present the analysis of the quality control tools and techniques by sector of operation. From the analysis, companies in the agricultural sector indicated

that their financial performance was most strongly affected by strong internal quality audits (M = 5.00), strong problem solving techniques (M = 4.83), strong quality improvement teams (M = 4.83) and the frequent inspection done at every point of production (M = 4.83). Their financial performance was least strongly affected by the use of inspection reports when setting quality standards (M = 4.50).

The findings show that companies in the industrial sector indicated that their financial performance was most strongly affected by implementation of control policies (M = 4.40) and frequent inspection at every point of production (M = 4.00). Their financial performance was least strongly affected by clarity of control policy to all personnel (M = 3.70) and quality awareness programs (M = 3.90).

Table 4.20: Quality Control Tools and Techniques based on Sector

Quality Control Tools and Techniques (By Industry)	Agriculture		Industry	
	M	SD	M	SD
There are strong internal quality audits in place	5.00	0.00	4.10	1.29
A strong quality awareness program exists	4.67	0.52	3.90	0.57
The company has strong problem solving techniques	4.83	0.41	4.20	0.79
There are effective statistical processes controls put in place	4.67	0.52	4.00	0.47
There are strong quality improvement teams in place	4.83	0.41	4.00	1.25
Frequent inspection is done at every point of production	4.83	0.41	4.40	0.70
All the processes have undergone rigorous process capability studies to ensure high quality production	4.67	0.52	4.10	0.88
The Inspection report are always used when setting standards of quality	4.50	0.55	4.20	1.23
Quality is the main success factor in your company	4.67	0.52	4.00	0.82
Control policies are clear to all personnel	4.67	0.52	3.70	0.82
The Control policies are effectively implemented	4.67	0.52	4.40	0.84
GRAND MEAN	4.73		4.09	

(Source: Researcher, 2013)

Companies in the services sector, as analyzed in Table 4.21 indicates that financial performance was most strongly affected by the strong internal quality audits (M = 4.82),

the strong problem solving techniques (M = 4.73) and the frequent inspection done at every point of production (M = 4.73). The findings show that those in the tourism sector indicated that their financial performance was least strongly affected by strong internal quality audits (M = 4.00), the strong quality awareness programs (M = 4.00), the strong problem solving techniques (M = 4.00) and the statistical processes controls (M = 4.00).

Table 4.21: Quality Control Tools and Techniques based on Sector

Quality Control Tools and Techniques	Services		Tourism	
	M	SD	M	SD
There are strong internal quality audits in place	4.82	0.40	4.00	0.00
A strong quality awareness program exists	4.55	0.69	4.00	0.00
The company has strong problem solving techniques	4.73	0.47	4.00	0.00
There are effective statistical processes controls put in place	4.55	0.69	4.00	0.00
There are strong quality improvement teams in place	4.55	0.52	5.00	0.00
Frequent inspection is done at every point of production	4.73	0.47	5.00	0.00
All the processes have undergone rigorous process capability studies to ensure high quality production	4.45	0.52	5.00	0.00
The Inspection report are always used when setting standards of quality	4.45	0.52	5.00	0.00
Quality is the main success factor in your company	4.45	0.69	5.00	0.00
Control policies are clear to all personnel	4.45	0.52	5.00	0.00
The Control policies are effectively implemented	4.45	0.52	5.00	0.00
GRAND MEAN	4.56		4.64	

(Source: Researcher, 2013)

From the analysis in Table 4.22 it was revealed that companies that serve the international market indicated that their financial performance was most strongly affected by strong internal quality audits (M = 4.86) and the frequent inspection done at every point of production (M = 4.79). Their financial performance was least affected by clarity of control policy to all personnel (M = 4.36) and the statistical processes controls (M = 4.29).

From the analysis, companies with national clientele indicated that their financial performance was most strongly affected by the strong problem solving techniques (M = 4.50), effective control policy (M = 4.43) and effective statistical processes controls (M = 4.43). Their financial performance was least affected by their quality awareness programs (M = 4.21), clarity of policy to all personnel (M = 4.14) and the rigorous process capability studies to ensure high quality production (M = 4.21).

Table 4.22: Quality Control Tools and Techniques based on Locality

Quality Control Tools and Techniques (By Locality)	International		National	
	M	SD	M	SD
There are strong internal quality audits in place	4.86	0.36	4.29	1.14
A strong quality awareness program exists	4.43	0.51	4.21	0.80
The company has strong problem solving techniques	4.57	0.51	4.50	0.76
There are effective statistical processes controls put in place	4.29	0.61	4.43	0.65
There are strong quality improvement teams in place	4.50	0.52	4.36	1.15
Frequent inspection is done at every point of production	4.79	0.43	4.50	0.65
All the processes have undergone rigorous process capability studies to ensure high quality production	4.57	0.51	4.21	0.80
The Inspection report are always used when setting standards of quality	4.50	0.52	4.29	1.07
Quality is the main success factor in your company	4.43	0.76	4.29	0.73
Control policies are clear to all personnel	4.36	0.63	4.14	0.86
The Control policies are effectively implemented	4.57	0.65	4.43	0.65
GRAND MEAN	4.53		4.33	

(Source: Researcher, 2013)

The analysis in Table 4.22 reveals that companies owned by few private owners indicated that their financial performance was most strongly affected by strong internal quality audits (M = 4.88). Their financial performance was, however, least affected by the clarity of control policy to all personnel (M = 4.25). Companies that are fully public owned indicated that their financial performance was most greatly affected by effective implementation of control policy (M = 4.67), strong internal quality audits (M = 4.67),

use of inspection reports when setting standards of quality (M = 4.67) and frequent inspection done at every point of production (M = 4.83). From the analysis it was found that the financial performance was least strongly affected by the strong quality awareness programs (M = 4.00), clarity of control policy to all personnel (M = 4.17) and the statistical processes controls (M = 4.17).

Table 4.23: Quality Control Tools and Techniques basing on Ownership

Quality Control Tools and Techniques (By Ownership)	Few Private		Full Public	
	M	SD	M	SD
There are strong internal quality audits in place	4.88	0.35	4.67	0.52
A strong quality awareness program exists	4.63	0.52	4.00	0.00
The company has strong problem solving techniques	4.63	0.52	4.33	0.52
There are effective statistical processes controls put in place	4.63	0.52	4.17	0.75
There are strong quality improvement teams in place	4.63	0.52	4.50	0.55
Frequent inspection is done at every point of production	4.50	0.53	4.83	0.41
All the processes have undergone rigorous process capability studies to ensure high quality production	4.38	0.52	4.50	0.55
The Inspection report are always used when setting standards of quality	4.38	0.52	4.67	0.52
Quality is the main success factor in your company	4.38	0.74	4.50	0.84
Control policies are clear to all personnel	4.25	0.71	4.17	0.41
The Control policies are effectively implemented	4.38	0.74	4.67	0.52
GRAND MEAN	4.51		4.45	

(Source: Researcher, 2013)

The results shown in table 4.23 show that companies that were majority owned by the government indicated that their financial performance was most strongly affected by implementation of control policy (M = 4.55) and frequent inspection at every point of production (M = 4.64). Their financial performance was least strongly affected by strong quality improvement teams in place (M = 4.18), a strong quality awareness program (M = 4.18) and the inspection report always used when setting standards of quality (M = 4.18). From the findings companies that are minority owned by the government indicated that

their financial performance was most strongly affected by their strong problem solving techniques (M = 5.00).

Table 4.24: Quality Control Tools and Techniques basing on Ownership

Quality Control Tools and Techniques (By Ownership)	Majority Gov.		Minority Gov.	
	M	SD	M	SD
There are strong internal quality audits in place	4.36	1.21	4.33	1.15
A strong quality awareness program exists	4.18	0.87	4.67	0.58
The company has strong problem solving techniques	4.45	0.82	5.00	0.00
There are effective statistical processes controls put in place	4.27	0.65	4.33	0.58
There are strong quality improvement teams in place	4.18	1.25	4.67	0.58
Frequent inspection is done at every point of production	4.64	0.67	4.67	0.58
All the processes have undergone rigorous process capability studies to ensure high quality production	4.27	0.90	4.67	0.58
The Inspection report are always used when setting standards of quality	4.18	1.17	4.67	0.58
Quality is the main success factor in your company	4.27	0.79	4.33	0.58
Control policies are clear to all personnel	4.27	1.01	4.33	0.58
The Control policies are effectively implemented	4.55	0.69	4.33	0.58
GRAND MEAN	4.33		4.55	

(Source: Researcher, 2013)

The analysis of quality control tools and techniques shows that the quality control tools and techniques used by a firm affect the financial performance of that firm. The findings support those of Brkica, Durđević, Omic, Klarin and Dondur (2012) who found that quality control tools affected the financial performance of companies in the industry sector Serbia. The findings of this study do not agree with those of York and Miree (2004) who found no strong relationship between quality and superior financial performance of companies' performance in the USA.

4.6 Focus on Supplier Relationship

This subsection discusses the findings on the focus on supplier variable of TQM. The Cronbach's alpha for the responses was 0.91 which was excellently reliable. Table 4.25

shows that the companies generally indicated that their financial performance was strongly affected by focus on supplier relationship (Grand M = 4.49). The findings reveal that the companies indicated that their financial performance was most strongly affected by effective supplier improvement activities (M = 4.64), high levels of trust in suppliers (M = 4.57) and the analytical tools that monitor suppliers performance (M = 4.57). From the analysis, their financial performance was least strongly affected by the relationship with suppliers on the basis of working together to achieve price reductions (M = 4.39) and the full integration of suppliers into the company's internal processes (M = 4.39).

Table 4.25: Focus on Supplier Relation basing on All Companies Together

Focus on Supplier Relation (All)	M	SD
There are effective suppliers improvement activities	4.64	0.67
Suppliers product strictly support operations of the company	4.43	0.82
Buyers have high levels of trust in the suppliers	4.57	0.68
There are close contacts with potential suppliers	4.50	0.82
There are mechanisms that enable information exchange with suppliers	4.50	0.68
Relationship with suppliers is based on working together to achieve price reductions	4.39	0.67
Suppliers are fully integrated into the company's internal processes	4.39	0.72
There is a strong procurement process that has set high uncompromising suppliers standards	4.43	0.78
There are analytical tools that identify the areas of supply opportunity.	4.50	0.57
There are analytical tools that monitor suppliers performance	4.57	0.68
Suppliers always meet targets	4.50	0.57
GRAND MEAN	4.49	

(Source: Researcher, 2013)

As shown in Table 4.26, the findings reveal that companies that had been operational for less than 20 years indicated that their financial performance was most strongly affected by buyers having high levels of trust in the suppliers (M = 5.00), effective supplier improvement activities (M = 4.80) and strong procurement processes that have set high uncompromising supplier standards (M = 4.80). Their financial performance was least

strongly affected by suppliers' product strict support for operations of the company (M = 4.40) and basing relationship with suppliers on working together to achieve price reductions (M = 4.40).

The analysis shows that companies that had been operational for over 20 years indicated that their financial performance was most strongly affected by having effective supplier improvement activities (M = 4.61) and use of analytical tools that monitor suppliers performance (M = 4.57). The companies had their performance least strongly affected by the full integration of suppliers into the company's internal processes (M = 4.35) and the procurement process that have set high uncompromising suppliers standards (M = 4.35).

Table 4.26: Focus on Supplier Relation basing on Years in Operation

Focus on Supplier Relation (By Years in Operation)	Below 20		Over 20	
	M	SD	M	SD
There are effective suppliers improvement activities	4.80	0.45	4.61	0.72
Suppliers product strictly support operations of the company	4.40	0.55	4.43	0.90
Buyers have high levels of trust in the suppliers	5.00	0.00	4.48	0.73
There are close contacts with potential suppliers	4.60	0.55	4.48	0.90
There are mechanisms that enable information exchange with suppliers	4.60	0.55	4.48	0.73
Relationship with suppliers is based on working together to achieve price reductions	4.40	0.55	4.39	0.72
Suppliers are fully integrated into the company's internal processes	4.60	0.55	4.35	0.78
There is a strong procurement process that has set high uncompromising suppliers standards	4.80	0.45	4.35	0.83
There are analytical tools that identify the areas of supply opportunity.	4.80	0.45	4.43	0.59
There are analytical tools that monitor suppliers performance	4.60	0.55	4.57	0.73
Suppliers always meet targets	4.60	0.55	4.48	0.59
GRAND MEAN	4.65		4.46	

(Source: Researcher, 2013)

The analysis results in Table 4.27 indicate that companies that had been ISO certified less than five years ago had their financial performance most strongly affected by use of effective supplier improvement activities (M = 4.88), buyers having high levels of trust in

suppliers (M = 4.81) and close contact with potential suppliers (M = 4.75). Their financial performance was, least strongly affected by the use of procurement process that set high supplier standards (M = 4.50) and the relationship with suppliers to achieve price reductions (M = 4.44).

From the findings, companies that had been ISO certified in over five years ago indicated that their financial performance was most strongly affected by use of analytical tools that monitor suppliers performance (M = 4.42). Their financial performance was least strongly affected by full integration of suppliers into the companies' internal processes (M= 4.08), support of suppliers product to operations of the company (M = 4.17) and the close contact with potential suppliers (M = 4.17).

Table 4.27: Focus on Supplier Relation basing on Years since ISO Certification

Focus on Supplier Relation (By yrs in ISO)	Below 5		Over 5	
	M	SD	M	SD
There are effective suppliers improvement activities	4.88	0.34	4.33	0.89
Suppliers product strictly support operations of the company	4.63	0.50	4.17	1.11
Buyers have high levels of trust in the suppliers	4.81	0.40	4.25	0.87
There are close contacts with potential suppliers	4.75	0.45	4.17	1.11
There are mechanisms that enable information exchange with suppliers	4.69	0.48	4.25	0.87
Relationship with suppliers is based on working together to achieve price reductions	4.44	0.63	4.33	0.78
Suppliers are fully integrated into the company's internal processes	4.63	0.50	4.08	0.90
There is a strong procurement process that has set high uncompromising suppliers standards	4.50	0.73	4.33	0.89
There are analytical tools that identify the areas of supply opportunity.	4.63	0.50	4.33	0.65
There are analytical tools that monitor suppliers performance	4.69	0.48	4.42	0.90
Suppliers always meet targets	4.63	0.50	4.33	0.65
GRAND MEAN	4.66		4.27	

(Source: Researcher, 2013)

Companies that operated in the agricultural sector, shown in Table 4.28 revealed that their financial performance was most strongly affected by effective suppliers improvement activities (M = 5.00), strict support of supplier products to operations of the

company (M = 5.00) and high levels of buyers' trust in the suppliers (M = 5.00). Their financial performance was least affected by relationship with suppliers meant to achieve price reductions (M = 4.67), mechanisms that enable information exchange with suppliers (M = 4.67) and suppliers meeting targets (M = 4.67). The findings also reveal that the financial performance of companies in the industrial sector was least strongly affected by suppliers' products strictly supporting operations of the companies (M = 3.90).

Table 4.28: Focus on Supplier Relation basing on Sector of Operation

Focus on Supplier Relation (By Industry)	Agriculture		Industry	
	M	SD	M	SD
There are effective suppliers improvement activities	5.00	0.00	4.30	0.95
Suppliers product strictly support operations of the company	5.00	0.00	3.90	1.10
Buyers have high levels of trust in the suppliers	5.00	0.00	4.30	0.95
There are close contacts with potential suppliers	4.83	0.41	4.30	1.25
There are mechanisms that enable information exchange with suppliers	4.67	0.52	4.30	0.95
Relationship with suppliers is based on working together to achieve price reductions	4.67	0.52	4.30	0.82
Suppliers are fully integrated into the company's internal processes	4.83	0.41	4.30	0.95
There is a strong procurement process that has set high uncompromising suppliers standards	4.83	0.41	4.20	1.03
There are analytical tools that identify the areas of supply opportunity.	4.83	0.41	4.30	0.67
There are analytical tools that monitor suppliers performance	4.83	0.41	4.30	0.95
Suppliers always meet targets	4.67	0.52	4.30	0.67
GRAND MEAN	4.83		4.25	

(Source: Researcher, 2013)

As shown in Table 4.29 the analysis reveals that companies in the services sector had their financial performance most strongly affected by supplier improvement activities (M = 4.73), strict support of supplier product to operations of the company (M = 4.64) and the use of analytical tools that monitor suppliers performance (M = 4.64). Their financial performance was least strongly affected by working together with suppliers to achieve price reductions (M = 4.36), integration of suppliers into the companies' internal

processes (M = 4.27) and procurement process that have set high uncompromising supplier standards (M = 4.36).

The findings also show that companies in the tourism sector indicated that their financial performance was least strongly affected by close contacts with potential suppliers (M = 4.00), working together with suppliers to achieve price reductions (M = 4.00) and integration of suppliers into the company's internal processes (M = 4.00).

Table 4.29: Focus on Supplier Relation basing on Sector of Operation

Focus on Supplier Relation	Services		Tourism	
	M	SD	M	SD
There are effective suppliers improvement activities	4.73	0.47	5.00	0.00
Suppliers product strictly support operations of the company	4.64	0.50	4.00	0.00
Buyers have high levels of trust in the suppliers	4.55	0.52	5.00	0.00
There are close contacts with potential suppliers	4.55	0.52	4.00	0.00
There are mechanisms that enable information exchange with suppliers	4.55	0.52	5.00	0.00
Relationship with suppliers is based on working together to achieve price reductions	4.36	0.67	4.00	0.00
Suppliers are fully integrated into the company's internal processes	4.27	0.65	4.00	0.00
There is a strong procurement process that has set high uncompromising suppliers standards	4.36	0.67	5.00	0.00
There are analytical tools that identify the areas of supply opportunity.	4.45	0.52	5.00	0.00
There are analytical tools that monitor suppliers performance	4.64	0.50	5.00	0.00
Suppliers always meet targets	4.55	0.52	5.00	0.00
GRAND MEAN	4.51		4.64	

(Source: Researcher, 2013)

According to Table 4.30, companies that serve international customer base indicated that their financial performance was most strongly affected by suppliers improvement activities (M = 4.64), analytical tools that monitor suppliers performance (M = 4.64) and procurement process that set high supplier standards (M = 4.64). From the findings, the financial performance was least strongly affected by product support for operations of the company (M = 4.36) and the integration of suppliers into companies' internal processes (M = 4.36).

The findings reveal that companies serving clients on a national scale indicated that their financial performance was most strongly affected by supplier improvement activities (M = 4.64) and high levels of trust buyers have in suppliers (M = 4.57). The financial performance of the companies was least strongly affected by working together with suppliers to achieve price reductions (M = 4.36) and use of procurement process that set high suppliers standards (M = 4.21).

Table 4.30: Focus on Supplier Relation basing on Locality

Focus on Supplier Relation (By Locality)	International		National	
	M	SD	M	SD
There are effective suppliers improvement activities	4.64	0.50	4.64	0.84
Suppliers product strictly support operations of the company	4.36	0.50	4.50	1.09
Buyers have high levels of trust in the suppliers	4.57	0.51	4.57	0.85
There are close contacts with potential suppliers	4.50	0.52	4.50	1.09
There are mechanisms that enable information exchange with suppliers	4.57	0.51	4.43	0.85
Relationship with suppliers is based on working together to achieve price reductions	4.43	0.51	4.36	0.84
Suppliers are fully integrated into the company's internal processes	4.36	0.50	4.43	0.94
There is a strong procurement process that has set high uncompromising suppliers standards	4.64	0.50	4.21	0.97
There are analytical tools that identify the areas of supply opportunity.	4.57	0.51	4.43	0.65
There are analytical tools that monitor suppliers performance	4.64	0.50	4.50	0.85
Suppliers always meet targets	4.57	0.51	4.43	0.65
GRAND MEAN	4.53		4.45	

(Source: Researcher, 2013)

Findings shown in Table 4.31 reveal that companies owned by few private shareholders had their financial performance most strongly affected by close contacts with potential suppliers (M = 4.88), strong procurement process that set high supplier standards (M = 4.88) and analytical tools that monitor suppliers' performance (M = 4.75). Their financial performance was least strongly affected by suppliers' products that strictly support operations of the companies (M = 4.38) and target meeting by suppliers (M = 4.38).

Among the fully publicly owned companies, the findings show that financial performance was most strongly affected by effective supplier improvement activities ($M = 4.67$) and working together with suppliers to achieve price reductions ($M = 4.67$). Their financial performance was least strongly affected by strictly support operations of the company ($M = 4.17$), high levels of trust buyers have in suppliers ($M = 4.33$) and integrated into the company's internal processes ($M = 4.33$).

Table 4.31: Focus on Supplier Relation basing on Ownership

Focus on Supplier Relation (By Ownership)	Few Private		Fully Public	
	M	SD	M	SD
There are effective suppliers improvement activities	4.63	0.52	4.67	0.52
Suppliers product strictly support operations of the company	4.38	0.52	4.17	0.41
Buyers have high levels of trust in the suppliers	4.63	0.52	4.33	0.52
There are close contacts with potential suppliers	4.88	0.35	4.50	0.55
There are mechanisms that enable information exchange with suppliers	4.63	0.52	4.50	0.55
Relationship with suppliers is based on working together to achieve price reductions	4.63	0.52	4.67	0.52
Suppliers are fully integrated into the company's internal processes	4.63	0.52	4.33	0.52
There is a strong procurement process that has set high uncompromising suppliers standards	4.88	0.35	4.50	0.55
There are analytical tools that identify the areas of supply opportunity.	4.50	0.53	4.50	0.55
There are analytical tools that monitor suppliers performance	4.75	0.46	4.50	0.55
Suppliers always meet targets	4.38	0.52	4.50	0.55
GRAND MEAN	4.63		4.47	

(Source: Researcher, 2013)

Results shown in Table 4.32 reveal that companies that were majority owned by government indicated that their financial performance was most strongly affected by the high levels of trust buyers have in suppliers ($M = 4.64$) and suppliers meeting targets ($M = 4.64$). From the findings, their financial performance was least strongly affected by working together with suppliers to achieve price reduction ($M = 4.09$) and the procurement process that set high suppliers standards ($M = 4.09$).

From the findings, companies with minority government ownership indicated that their financial performance was most strongly affected by effective suppliers improvement activities (M = 5.00) and strict support of company operations by supplied products (M = 5.00). Their financial performance was least strongly affected by integration of suppliers into the companies' internal processes (M = 4.00).

Table 4.32: Focus on Supplier Relation basing on Ownership

Focus on Supplier Relation (By Ownership)	Maj. Gov.		Min. Gov.	
	M	SD	M	SD
There are effective suppliers improvement activities	4.55	0.93	5.00	0.00
Suppliers product strictly support operations of the company	4.45	1.21	5.00	0.00
Buyers have high levels of trust in the suppliers	4.64	0.92	4.67	0.58
There are close contacts with potential suppliers	4.27	1.19	4.33	0.58
There are mechanisms that enable information exchange with suppliers	4.36	0.92	4.67	0.58
Relationship with suppliers is based on working together to achieve price reductions	4.09	0.83	4.33	0.58
Suppliers are fully integrated into the company's internal processes	4.36	1.03	4.00	0.00
There is a strong procurement process that has set high uncompromising suppliers standards	4.09	1.04	4.33	0.58
There are analytical tools that identify the areas of supply opportunity.	4.55	0.69	4.33	0.58
There are analytical tools that monitor suppliers performance	4.55	0.93	4.33	0.58
Suppliers always meet targets	4.64	0.67	4.33	0.58
GRAND MEAN	4.41		4.48	

(Source: Researcher, 2013)

The findings in this subsection have indicated that focus on supplier relation is a key determinant of financial performance of ISO certified companies. The findings support those of Wagner, Grosse-Ruyken and Erhun (2012) who found that better management of suppliers led higher values of the Return on Assets (ROA) of the firm in a survey of 259 U.S. and European manufacturing companies. The findings, however, are different from the position of Hines (2004) who indicated that supplier management did not automatically lead to improvement in financial performance.

4.7 Regression Analysis

Table 4.33 shows the correlation among the regression variables. The results show that ROA had a weak negative correlation with the quality management environment, $r(28) = -0.13$ while it had a weak positive correlation with focus on customers, $r(28) = 0.06$. ROA also had a weak positive correlation with quality control tools and techniques, $r(28) = 0.07$ with no correlation with focus on customer relations $r(28) = 0.00$.

Table 4.33: Correlation Matrix

	ROA	QME	FOC	QCTT	FOSR
ROA	1.00				
QME	-0.13	1.00			
FOC	0.06	0.85	1.00		
QCTT	0.07	0.80	0.76	1.00	
FOSR	0.00	0.91	0.85	0.85	1.00

(Source: Researcher, 2013)

The findings also show that there was a strong positive correlation between focus on customers and quality management environment $r(28) = 0.85$. There was also strong positive correlation between quality control tools and techniques and quality management environment, $r(28) = 0.80$, between focus on supplier relations and quality management environment $r(28) = 0.91$, between quality control tools and focus on customers $r(28) = 0.76$, between focus on supplier relation and focus on customers $r(28) = 0.85$ and between focus on supplier relation and quality control tools and techniques.

Table 4.34: Correlation Analysis

ROA	Coefficient	Std. Err.	t	P>t	95% Conf.	Interval
QMENVI	-24.27	12.38	-1.96	0.062	-49.89	1.33
FOC	12.27	10.89	1.13	0.272	-10.27	34.80
QCTT	7.06	9.74	0.73	0.476	-13.09	27.21
FOSR	7.37	14.50	0.51	0.616	-22.62	37.36
Constant	6.68	25.22	0.26	0.794	-45.50	58.85
F(4, 23)	1.15					
P-value (F)				0.359		
R-squared	0.1664					
Adjusted R-squared	0.0214					

(Source: Researcher, 2013)

In Table 4.26 the analysis shows that constant term was 6.68 which was not statistically significant, $t_{(23)} = 0.26, p > 0.05$. The coefficient of quality management environment was -24.28 which was not statistically significant, $t_{(23)} = -1.96, p > 0.05$. The coefficient of focus on customers was 12.27 which was not statistically significant, $t_{(23)} = 1.13, p > 0.05$. The coefficient of quality control tools and techniques was 7.06 which was not statistically significant, $t_{(23)} = 0.73, p > 0.05$. The coefficient of focus on supplier relations was 7.38 which was not statistically significant, $t_{(23)} = 0.51, p > 0.05$. The results show that the regression was not statistically significant and variation in the independent variables did provide strong explanation of the variation in ROA, $F_{(4,23)} = 1.15, p > 0.05, R^2 = 0.1664$. All the estimated coefficients in the models are individually not statistically significant, all the p values being greater than the 0.05 level.

The regressed model is therefore:

$$ROA = 6.68 - 24.28(QME) + 12.27(FOC) + 7.06(QCTT) + 7.38(FOSR)$$

The R^2 is = 0.1664 and the closer R^2 to one the better the fit hence our model does fit average.

The adjusted $R^2 = 0.0214$ model with higher adjusted R^2 value would be preferred. The regression results show weak relationship between quality management environment, focus on customers, quality control tools and techniques and focus on supplier relations and ROA. This indicates that total quality is not a key driver of profitability among the ISO certified companies in Kenya. The findings seem to support those of Hendricks and Singhal (2001) who showed that the benefits of the use of TQM in management came long after its implementation.

The findings are not in agreement with those of Shahin (2011) who investigated the influence of TQM on financial performance in Boutan Industrial Corporation using current ratio, quick ratio, return of assets ratio, return on equity ratio, debt to total assets ratio, and total assets turnover ratio. The findings of the study showed that TQM can have strong and positive influence on financial performance of an organization.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

Theory predicts that financial performance of a firm is closely connected to the quality management policies of the firm. Total quality management is, therefore, an approach that impacts on profitability and general financial performance through reduction of costs and stimulation of sales due to the higher expected value for money by customers.

The findings show that quality management environment, focus on consumer and quality control tools and techniques in the ISO certified companies in Kenya did not have strong influence on the return on assets of the firm as indicated by the regression analysis. However, qualitative responses to the questionnaires indicated that the companies appreciated the importance of the various aspects of TQM on their profitability.

5.2 Conclusions

From this study it is concluded that quality management environment, focus on consumer, quality control tools and techniques and focus on supplier relationship are perceived as key drivers of financial performance among ISO certified companies in Kenya. However, the relation among these variables and ROA seems not to have become strong. This is drawn from the fact that the F-statistic in regression analysis indicated that the regression was not significant. The variables were therefore not significantly connected.

From the findings of this research it was concluded that management environment affects profitability. The respondents indicated that putting in place a favorable work

environment and ensuring sufficient financial resource were the main factors in the quality management environment that affected financial performance.

Focus on the customer strongly affected financial performance. The factors under focus on the customer that affected financial performance were the immediate response to changes in customer needs and the strong adherence to satisfying the customer.

Quality control tool and techniques also affect profitability. The profitability was most strongly affected by frequent inspection at every point of production, strong internal quality audits and strong problem solving techniques.

Profitability was also found to be affected by supplier relationship. Factors to do with supplier relationship that most affected profitability were: the effective supplier improvement activities; high levels of trust in suppliers and the analytical tools that monitor suppliers' performance.

5.3 Policy Recommendations

Based on the findings of this research it's recommended that ISO certified organizations should put in place strong management environment policies. The policies should focus on putting in place a favorable work environment and ensuring sufficient financial resources that will enable achievement of organizational objectives and boost profitability.

Focus on the customer should also be strengthened. The focus should be at based towards immediate and almost real time response to changes in customer needs and strong adherence to customer satisfaction.

The companies should put in place more effective mechanisms for quality control. These should include those that enable effective and frequent inspection at every point of production, those that ensure strong internal quality audits and a strong problem solving techniques.

Supplier relationship should also be strongly managed. Factors to do with supplier relationship that most affected profitability were: the effective supplier improvement activities; high levels of trust in suppliers and the analytical tools that monitor suppliers' performance should be addressed to improve profitability.

5.4 Limitations of the Study

The data covers a few ISO certified firms in Kenya. The findings may not be applicable to all the quality driven organizations. Further, the findings may not be applicable universally because the sampling was limited to Kenyan companies.

The strength of the findings of this research is weakened by the nature of the data. The independent variables were operationalized by use of the non-quantitative Likert scale. The findings are therefore highly dependent upon the views, attitudes and the expertise of the opinions of the respondents.

The research has not provided an indication as to why the independent variables are not strongly explaining the dependent variable. The best it has done is to show that the explanation is weak, but the source of the weakness has not been explained. This is because the study has fallen short of determining whether or not there is a causal relationship between the dependent variable and the independent variables.

5.5 Suggestions for Further Research

The findings of this study can be improved if the study is expanded to cover as many quality driven organizations as possible. Also given that Kenya is a key player in the East African community the study can be expanded to cover other ISO certified organizations within the East African community in order to provide result that will be useful in that context.

A future research can be carried out on the same topic, but using quantitative data. This is with the assumption that the quantitative data will provide results that are better than those provided by the qualitative data used in this study. The possible objectivity issues that arise may be settled by using quantitative data.

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APPENDICES
Appendix I
LIST OF ISO CERTIFIED COMPANIES IN KENYA
(Source: Kenya Bureau of Standards, 2013)

<u>Company</u>	<u>Certification Date of Expiry</u>
1) Kenya Breweries Ltd	27 th January 2013
2) GlaxoSmithKline	7 th December 2012
3) African Marine & General Eng	25 th July 2013
4) General Motors Ltd	29 th July 2015
5) Kenya Malting Ltd	23 rd January 2013
6) Central Glass Industries Ltd	11 th November 2015
7) Southern Engineering Ltd	28 th April 2013
8) ASP Company	18 th May 2014
9) Intertek Testing Services	3 rd October 2014
10) Kenya Ordnance factories Corporation	29 th September 2012
11) Beverage Services Kenya Limited	16 th May 2014
12) Mumias Sugar Company Ltd	7 th November 2014
13) Agricultural Development Corporation	12 th December 2014
14) Mbaraki Port Warehouse	30 th November 2014
15) Polucon Services Ltd	3 rd April 2015
16) Sondhi Trading Company	15 th October 2015
17) Nyayo Tea Zones Development Corporation	15 th June 2012
18) Bomas of Kenya Limited	28 th June 2015
19) Continental Products Ltd	14 th May 2013
20) Nakumatt Holdings Ltd	16 th March 2013
21) Kenya Seed Company	25 th July 2013
22) IDB Capital Limited	12 th June 2014
23) Muhoroni Sugar Company Ltd	3 rd August 2014
24) Geothermal Development Company	25 th June 2015
25) Zenith Steel Fabricators Ltd	28 th February 2015
26) Nzoia Sugar Co.	29 th June 202015
27) SGS Kenya Limited	23 rd June 2014
28) Tanzania Steel Pipes	28 th May 2015
29) East African Portland Cement Co. Ltd	28 th June 2015
30) National Housing Corporation	19 th September 2013
31) Kisumu Water and Sewerage Company	12 th December 2014
32) Lake Basin Development Company	27 th June 2014
33) South Nyanza Sugar Company	16 th August 2015
34) UNES Ltd	13 th May 2013
35) International Supply Chain Solutions ltd	6 th February 2016
36) Kenya United Steel Company	26 th May 2013
37) Vermont Flowers	26 th September 2014
38) Kenya Railways	19 th August 2013

Appendix II
Research Questionnaire

Please answer all questions honestly according to the given instructions

SECTION A: DEMOGRAPHIC DATA

Complete this section by filling in the spaces or ticking appropriately

1. For how many years has your company been operational

Less than 5years	
Between 5 and 10 years	
Between 10 and 20 years	
More than 20 years	

2. For how many years has your business been ISO certified? Tick one (✓)

Less than 1 year	
Between 1 and 3 years	
Between 3 and 5 years	
More than 5 years	

3. In which sector does your company belong? Tick one (✓)

Agriculture	
Industrial	
Tourism	
Services	

Other (Specify) _____

4. Which of the following best describes the locality of your customers in Kenya

Specific town(s)	
Specific Region	
National	
International	

5. Indicate the structure that best describes the ownership of your company

Ownership	Tick One
1) Few Private owners	
2) Fully Public Owned	
3) Government is Minority Shareholder	
4) Government is Majority Shareholder	

6. Indicate your annual Return on Assets (Net profit as percentage of Assets)

Year 2008	Year 2009	Year 2010	Year 2011	Year 2012

SECTION B

To what extent do you agree that the following affects the financial performance of your business? Tick the option that best explains your view.

(1= Not at all, 2= Little extent, 3=Moderate extent, 4=Great extent, 5=Very great extent)

I. Quality Management Environment	1	2	3	4	5
1. There is effective leadership from top management					
2. Top Leadership is keen on Measuring performance					
3. Top management has put in place a favorable work environment					
4. The management provides effective training for employees on quality					
5. The management provides appropriate training for employees on quality					
6. There are desirable human resource practices					
7. The management ensures sufficient financial resource					
8. There is provision of relevant training for senior management staff					
9. There is an effective quality assurance system adopted					
10. Effective continuous quality improvement is conducted					

To what extent do you agree that the following affects the financial performance of your business? Tick the option that best explains your view.

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

II. Focus on Consumer	1	2	3	4	5
1. There are in place effective methods to determine customer needs					
2. The marketing strategies of products or services put in place are strictly customer-based					
3. There is a strong customer service function put in place					
4. There is continuous collection of data about customers or groups of customers					
5. There are mechanisms in place to retain the continued business with loyal clients					
6. There are training programs in place to train workers on customer management					
7. The response to changes in customer needs is immediate					
8. There are low complaints against the company's products or services from consumers					
9. All departments strongly adhere to and are capable satisfying the customer					
10. Provision of service or product is compatible with customer need.					

To what extent do you agree that the following affect the financial performance of your business? Tick the option that best explains your view.

(1= strongly disagree, 2= disagree, 3=neutral, 4=agree, 5=strongly agree)

III. Quality Control Tools and Techniques	1	2	3	4	5
1. The company has strong internal quality audits					
2. The company has a strong quality awareness program					
3. The company has strong problem solving techniques					
4. There are effective statistical processes controls					
5. There are strong quality improvement teams in place					
6. Frequent inspection is done at every point of production					
7. All the processes have undergone rigorous process capability studies to ensure high quality production					
8. The Inspection report are used when setting standards of quality					
9. Quality is the main success factor in your company					
10. Control policies are clear to all personnel					
11. The control policies are effectively implemented					

To what extent do you agree that the following affects the financial performance of your business? Tick the option that best explains your view.

(1= Not at all, 2= Little extent, 3=Moderate extent, 4=Great extent, 5=Very great extent)

IV. Focus on Supplier Relation	1	2	3	4	5
1. There are effective suppliers improvement activities					
2. The suppliers product or services strictly support operations of the company					
3. The Buyers have high levels of trust in the suppliers					
4. There are close contacts with potential suppliers					
5. There are mechanisms that enable information exchange with suppliers					
6. Relationship with suppliers is based on working together to achieve price reductions					
7. Suppliers are fully integrated into the company's internal processes					
8. There is a strong procurement process that has set high uncompromising suppliers standards					
9. There are analytical tools that identify the areas of supply opportunity.					
10. There are in place analytical tools that monitor suppliers performance					
11. Suppliers always meet the set targets					

Other factors that contribute to your profitability (specify)

- a) _____
- b) _____
- c) _____

**Appendix III
Regression Data**

RETURN	QM ENVI	FOC	QCTT	FOSR
12.59	5.00	4.50	5.00	5.00
9.65	4.80	4.30	5.00	5.00
13.10	5.00	5.00	4.27	5.00
23.32	4.70	5.00	4.64	4.64
10.37	5.00	5.00	4.73	4.64
4.07	4.70	4.50	4.73	4.55
12.59	4.80	4.80	4.45	5.00
8.66	4.40	4.40	4.45	4.55
7.83	2.20	2.60	2.27	2.09
10.68	4.40	4.10	4.27	4.36
22.17	4.50	5.00	4.27	4.91
34.29	3.90	4.10	4.09	4.09
8.27	4.30	4.30	4.36	4.55
17.93	4.50	4.40	4.45	4.36
-8.97	4.40	4.40	4.45	4.45
22.87	4.60	4.60	4.73	4.55
7.394	5.00	4.60	4.55	4.73
7.631	4.60	4.90	4.91	4.55
51.57	4.30	4.00	4.18	4.27
47.58	4.60	4.80	4.82	4.64
21.67	4.60	4.80	4.73	4.36
31.95	4.00	4.40	4.55	4.45
17.08	4.90	4.90	4.00	4.55
4.564	4.40	4.10	3.82	4.27
35.1	4.00	4.60	4.36	4.45
12.2	4.80	4.90	4.82	4.82
22.17	4.20	4.40	4.64	4.55
34.29	4.30	4.50	4.55	4.45

