DETERMINANTS OF IMPLEMENTATION OF TOTAL QUALITY MANAGEMENT IN KTDA AS A PROCESSING INDUSTRY IN KENYA: A CASE OF KTDA FACTORIES IN NYERI COUNTY, KENYA

BY

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DECLARATION

This research report is my original work and has not been submitted to any other institution of higher learning for the award of any degree.

Signature_____ _____

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L50/70524/2013

This research report has been submitted with my approval as the University Supervisor.

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DEDICATION

I dedicate this project research report to my beloved wife Nancy Wangari for her unconditional love, my lovely daughter Julie for her everyday smiles, my lovely mum Juliah & Dad Johnson for their encouragement and my siblings Asaph, Joe and Amos for moral support during my research.

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ABBREVIATIONS AND ACRONYMS

COYA – Company of the Year Award

EU – European Union

GDP – Gross Domestic Product

ISO - International Organization for Standardization

KEBS - Kenya Bureau of Standards

KTDA – Kenya Tea Development Agency

MBNQA - Malcolm Baldrige National Quality Award

MOA - Ministry of Agriculture

QC - Quality Control

QC's – Quality Circles

QM - Quality Management

QMS - Quality Management System

SPC - Statistical Process Control

SPSS - Statistical Package for Social Sciences

SQC - Statistical Quality Control

TQC - Total Quality Control

TQM - Total Quality Management

ABSTRACT

The agriculture sector is getting competitive every day. In order to be successful, Total Quality Management (TQM) implementation ought to be the integral part of any organization's strategic management. Total Quality Management (TQM) is considered as one of the most important approaches to achieve quality in processing industries not only in Kenya but the world over. The purpose of this study was to assess the determinants of implementation of Total Quality Management (TQM) in KTDA as a processing industry in Kenya with a case study of KTDA factories in Nyeri County. Nyeri County was chosen because it had well established KTDA factories that were already implementing TQM. The study sought to establish the extent to which top management commitment, employees' training, continuous improvement of products and services and communication influence implementation of TQM in processing industries in Kenya. A descriptive research design was utilized in this study. A pilot test was conducted on 5 quality team members at Kanyenyaini Tea Factory in Murang'a to test reliability. The target population for the study were members of staff of the five KTDA factories in Nyeri County. The study adopted census sampling method since all quality team members were identified as the respondents. The sample size for this study was 75 persons. Structured questionnaire were administered through drop and pick method to the respondents in the five KTDA factories in Nyeri County. Responses from 58 respondents were obtained representing 77.3% response rate. Data were then analysed using SPSS program (version 20). The data were presented in form of tables to show frequencies, percentages and correlations. The study found out that top management commitment, employees' training, continuous improvement of products and services and communication were all critical since they had positive influence in the implementation of TQM. The study concluded that the success of the implementation process depends on how well the company understands the process and the strategies adopted. The study recommends that top management be in front line to provide leadership and critical resources needed for successful implementation of TQM; that employees at all levels are trained on TQM; that continuous improvement of goods and services be a key objective in every company to gain competitive edge. Finally the study further recommends that companies develop appropriate communication system that allows free flow of quality information at all levels. Further studies have been suggested on variables like customer satisfaction and organizational performance and how they influence TQM implementation in other sectors.

CHAPTER ONE
INTRODUCTION

1.1 Background of the study

Globalization of market economies has urged corporations in all sectors to concentrate on maintaining a sustainable competitive edge, which is directly, related to the upkeep of quality both in terms of services as well productivity. An effective model of such a vision of success is Total Quality Management (TQM), which is a management approach for an organization, centred on quality, based on the participation of all its members and aiming at long-term success through customer satisfaction, and benefits to all members of the organization and to society (ISO). It is the coordination of efforts directed at improving customer satisfaction, increasing employee participation, strengthening supplier partnerships, and facilitating an organisational atmosphere of continuous quality improvement (Ramasamy 2012).

According to Oakland (1995), TQM is an approach to improving the competitiveness, effectiveness and flexibility of the whole organisation. It is essentially a way of planning, organising and understanding each activity, and depends on each individual at each level. TQM requires that the company maintain this quality standard in all aspects of its business. This requires ensuring that things are done right the first time and that defects and waste are eliminated from operations. According to Dale (2003), changing the life-long behaviour, customs, practices and prejudices of an organization is not easy.

Organisations committed to quality will strive continually to improve the quality of their goods or services, and they are committed to change, but in many cases they were intended to be stable and un-changing. Good reasons must exist either inside or outside the organisation to precipitate the process of change and get managers to recognise that they need to improve their business. Business competition on a national and global scale is becoming fierce and excellence is the value required by the company to survive and grow in this competitive arena.

According to Omachonu & Ross (1994), quality becomes an important solution to the objectives of business firms in achieving competitive advantage since all the strategies targeting the fulfilment of competitive advantage involve quality considerations in a manufacturing environment. It has also shown the same attributes in administrative and service industries.

The roots of Total Quality Management (TQM) can be traced back to early 1920s when statistical theory was first applied to product quality control. This concept was further developed in Japan in the 40s led by Americans, such as Deming, Juran and Feigenbaum. The focus widened from quality of products to quality of all issues within an organisation hence the start of TQM.

TQM is firmly established today thanks in large part to the pioneering work of W. Deming. Deming's influence that is clearly evident in this list: Do it right the first time to eliminate cost rework; Listen to, and learn from, customers and employees; Make continuous improvement an everyday matter; Build teamwork, trust and mutual respect. (Juran, 1989).

1.1.1 Kenya Tea Development Agency

The history of KTDA is as rich as the tea it produces. It dates back to 1957, when the first small-holder tea factory was set up at the foothills of Mt. Kenya in Ragati, Nyeri County. The factory was managed through a management agreement with multinational tea companies. On June 30, 2000 KTDA (the Authority) was transformed into a private company, KTDA (the Agency) Ltd and registered under the Companies Act. Smallholder farmers produce and sell their tea through the Kenya Tea Development Agency, which is the largest single tea agency in the globe with sixty five tea factories. The rest of tea is produced by large-scale tea plantations that operate thirty nine factories. A few of these large-scale tea firms include Unilever Tea, James Finlay, Kakuzi and George Williamson (Elias et al., 2010).

Small-scale tea farmers are generally price takers and sell their green leaf to collectors, plantations or processors (Chan et al., 2010). The main challenges in the small-scale tea sub sector include: low farm gate prices; poor extension services; limited marketing channels; poor access to credit and low level of farmers' organization (Chan et al., 2010).

The KTDA as a management agency is faced by various challenges which include: administrative challenges (they include poor coordination of KTDA's operations, unreliable and inconsistent leaf collection and processing leading to significant losses and wastage in the supply chain and lack of transparency and accountability in the procurement system of inputs); factory inefficiencies (according to KTDA (2011), the challenges in the management of out-growers business including the ever-escalating labour costs, energy costs and operational overheads); limited product line. (KTDA managed factories produce only black

tea as opposed to in demand green tea developed in industrial nations); local market related challenges that include lack of value addition; regulatory challenges (according to Tea Board of Kenya (2011), in Kenya tea producers are supposed to comply with various legislations and standards. In addition, the Tea Board of Kenya encourages the tea factories to acquire the ISO certification standards in: ISO 9001: 2008 in Quality Management Systems, ISO 22000 in Food Safety Management Systems and ISO 14000 in Environmental Management System).

It is through compliance with these legislations that the small holder tea sector can be sustainable. Internationally, some of these standards especially those on environment are considered as criteria for market entry. Thus, KTDA factories should comply with these standards so that Kenyan tea can be able to access markets in developed industrial nations. international market related challenges that include fluctuation of tea prices, international certifications (Tea exports require international certifications to access international markets and to fetch high prices as one of the ways of sustaining the tea sector that continues to rely on export markets) and regional integration with trading partners (Elias et al., 2010).

1.2 Statement of the problem

Everyone has had experiences of poor quality when dealing with business organizations. Trade being a crucial driver of growth (Stern, 2003), Kenya aspires to achieve the double-digit economic growth as envisaged in Vision 2030 hence it must be able to respond to local and global market demands. Kenya, just like many African countries, is confronted by challenges in improving its capacity to meet production and quality standards which are obligatory to access foreign markets, especially the European Union which is one of Kenya's biggest trading partners.

Cognizant of the importance of system certification in growth and development (especially ISO 9001:2008), the Government of Kenya issued a directive in 2010 that all public agencies should begin the process of ISO 9001:2008 certification and ensure that they are fully certified by 2012. To respond to these failures, most organizations have resorted to adopt and implement operations management strategies that have been seen to work elsewhere in as much as quality management is concerned. However, this has not been successful (Salaheldin, 2009).

A number of studies that have been done on TQM have identified two focus areas: the factors within TQM and the critical factors for implementation of TQM (Yusof & Aspinwall, 2000). While many studies have looked at these factors, it is important to note that most of these studies have been done in manufacturing and service industry. In Kenya, very limited research if any has been done in processing industry with none having been conducted in Nyeri County.

This study aimed to bridge this gap by looking at the determinants of implementation of TQM in processing industries in Kenya based on KTDA factories in Nyeri County. The Tea Board of Kenya that regulates the tea industry ensures that all KTDA factories comply with various legislations and standards. They have also been encouraged to acquire international certificates as a way of accessing international markets.

Nyeri County has been chosen because it has well established KTDA factories which are already implementing TQM. All KTDA managed tea factories have been ISO: 9001:2008 certified for efficient management systems while more than 90% of the factories have attained the more comprehensive ISO 22000:2005 for Food Safety Management System.

1.3 Purpose of the study

The purpose of this study was to assess the determinants of implementation of Total Quality Management in KTDA as a processing industry in Kenya with a case study of KTDA factories in Nyeri County, Kenya.

1.4 Objectives of the study

This study was based on the following objectives:-

i. To establish how top management commitment influences implementation of TQM in processing industries in Kenya;
ii. To examine the extent to which employees' training influences implementation of TQM in processing industries in Kenya;
iii. To assess the extent to which continuous improvement of product and services influence the implementation of TQM in processing industries in Kenya;
iv. To determine the influence of communication on implementation of TQM in processing industries in Kenya and

1.5 Research Questions

This study sought to answer the following research questions:

i. How does top management commitment influence implementation of TQM in processing industries in Kenya?
ii. To what extent does employees' training influence implementation of TQM in processing industries in Kenya?
iii. To what extent does continuous improvement of product and services influence the implementation of TQM in processing industries in Kenya?
iv. How does communication influence implementation of TQM in processing industries in Kenya?

1.6 Significance of the study

The research findings and recommendation are important in enriching literature and stimulating further research on TQM. They will contribute to implementation of Total Quality Management in KTDA and other processing industries. In addition, the findings and recommendations will be useful to the beneficiary, in this case being KTDA in understanding the determinants of implementation of TQM as well as researchers and policy makers who may want to further their research on TQM in the processing industries.

The staff in charge of quality management system in the selected industries will use the research findings as lessons learnt to influence future undertakings especially in understanding their roles and coming up with better strategies in the implementation of TQM. This study will make a significant contribution to the growing body of research on implementation of TQM. The findings may also be used as a source of reference by other researchers. In addition, academic researchers may need the study findings to stimulate further research in this area and as such form a basis of good background for further research.

1.7 Delimitations of the study

The study was carried out on members of staff of the 5 KTDA factories in Nyeri County. The focus was on 75 quality team members tasked with the implementation of quality management programs in all the five factories.

1.8 Limitations of the study

This study was conducted in all the five KTDA factories which are far apart. The challenges of data collection were overcome by obtaining letter of introduction from the university and

getting required approvals from the head of KTDA. This enabled the researcher to access the 5 factories and the identified respondents who gave positive response through filling the questionnaire. Data were obtained from 58 respondents representing 77.3% response rate as tabulated in Table 4.1. This made the analysis possible. Due to the scope of this study, the factor of time and resources posed challenges to reach all the respondents during data collection. The available time and resources has been used objectively and efficiently to enable completion of the study

1.9 Basic assumptions of the study

This study was based on the assumptions that the researcher would get access to all the identified respondents in the selected processing industries. This was made possible through an introduction letter from the university that assured confidentiality and a further approval of access by the KTDA Head of Human Resources and Administration. The assurance of voluntary participation and confidentiality to the respondents enabled them to cooperate and give the required information.

1.10 Definitions of significant terms used in the study

The following are the definitions of the significant terms used in the study:-

Implementation of Total Quality Management: management philosophy used to improve their efficiency and competitiveness in the business market place through employee involvement and empowerment, culture change and customer focus.

Top management commitment: senior management's involvement in implementation of TQM through leadership and provision of critical resources.

Employees training: equipping employees with relevant skills and knowledge on implementation of TQM measured by the relevance, frequency of trainings and timeliness of the trainings.

Continuous improvement of goods and services: pursuit of never-ending improvement process in meeting needs of internal and external customer through quality improvement programs or policies, research focus and performance review.

Communication: the processes, systems and structures used to share information in an industry either internally or externally.

1.11 Organization of the study

This research study has been organized in five chapters.

Chapter One covers the background of the study, statement of the problem, purpose of the study, objectives and research questions. It also covers the significance of the study, delimitation, limitations of the study, assumptions of the study, definitions of the significant terms as well as the organization of the study.

Chapter Two covers literature review explaining the determinants of implementation of Total Quality Management, theoretical framework and the relationship between the determinants on the conceptual framework.

Chapter Three outlines the research methodology which includes research design, target population, sample size, sampling technique, research instruments reliability and validity and procedures for data collection and analysis techniques.

Chapter Four provides data analysis, presentation and interpretation of the research findings.

Chapter Five outlines the summary of research findings, discussion, conclusion, recommendations and suggestion for further studies.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter provides theoretical and empirical information from literature on topics related to the research problem. It examined what various scholars and authors have studied/ written about Total Quality Management and determinants of implementation of Total Quality Management from global, African and local perspectives. It also presents a conceptual framework on which this study was based.

2.1.1 Historical perspective of Total Quality Management

Everyone has had experiences of poor quality when dealing with business organizations. These experiences might involve an airline that has lost a passenger's luggage, a dry cleaner that has left clothes wrinkled or stained, poor course offerings and scheduling at your college, a purchased product that is damaged or broken, or a pizza delivery service that is often late or delivers the wrong order. The experience of poor quality is exacerbated when employees of the company either are not empowered to correct quality inadequacies or do not seem willing to do so. We have all encountered service employees who do not seem to care. The consequences of such an attitude are lost customers and opportunities for competitors to take advantage of the market need.

Successful companies understand the powerful impact customer defined quality can have on business. For this reason many competitive firms continually increase their quality standards. For example, both the Ford Motor Company and the Honda Motor Company announced that they would make customer satisfaction their number one priority.

The slow economy of 2003 impacted sales in the auto industry. Both firms believed that the way to rebound is through improvements in quality, and each outlined specific changes to their operations. Ford focused on tightening already strict standards in their production process and implementing a quality program called Six-Sigma. Honda, on the other hand, focused on improving customer-driven product design. Although both firms had been leaders in implementing high quality standards, they still believed that customer satisfaction mattered most.

The existing literature globally has shown that research has been done on TQM practices in the manufacturing and service sector. Having its roots partly in the USA and partly in Japan, it was primarily adopted by some Japanese companies in the decades immediately after World War II. With the greater successes of Japanese companies during the 1980s, companies all over the world found that it was necessary to have good quality management practices in order to stay competitive (Lagrosen, 2002).

Total quality management is an enhancement to the traditional way of doing business. It is a proven technique to guarantee survival in world class competition. Only by changing the actions of management will the culture and actions of an entire organization be transformed. In addition, literature has shown that research has been done on TQM practices in service sector; Kenya higher education, Factors affecting TQM processes in State Corporation for Customer Satisfaction, and TQM practices in Kenyan secondary schools. Little or no empirical research has been conducted dealing with the determinants influencing implementation of TQM in processing industries in Kenya.

Kenya's economy is largely agriculture based. The sector directly supports about 80% of the population and contributes 26% of the GDP, and 60% of the export earnings there is need to enhance factors affecting quality management practices within the sector who in the recent past largely adopted quality management systems. Agriculture sector in Kenya has to achieve the quality standards in order to be competitive in future open markets (while aiming to enter in the EU countries).

A large number of organizations both large and small in the Agriculture sector suffer for lack of information in the field of quality management and they need theoretical and practical training in this field (MOA, 2004). Based on the fact that agriculture and food industry sector is the largest contributor in the Kenyan GDP, 26% of GDP in 2008 (MOA 2009), Governmental policies in Kenya aim further development of this sector.

A major boost to the growth of TQM is the promotion of quality award models in many countries and the success of quality programs such as Six Sigma, quality function deployment, and quality circle. Of the widely accepted international quality initiatives are ISO 9000 certification standards, ISO 14000 certification standards, Six Sigma, Malcolm Baldrige National Quality Award (MBNQA) - an award given annually to companies that

demonstrate quality excellence and establish best practice standards in industry and locally, Company of the Year Awards (COYA).

This study focuses on the ISO 9000 certification standards because it has had the most outstanding impact and its award criteria have been widely accepted by Kenyan private and public organizations. In addition, ISO 9000 has been adopted widely both by manufacturing, education and service sectors in Kenya (Kenya Bureau of Standards 2008).

2.2 Total Quality Management in processing industries

The overall objective of TQM is to ensure continuous improvement in the organization's people, systems, processes and environment so as to achieve improved customer service and increased profits through efficiency and effectiveness in the entire organization (Bahri et al., 2012). Since implementation of TQM is associated with benefits to both the organization and its clients, it is regarded a double sided competitiveness tool.

As most writers trace the quality movement origins to W. Edward Deming, Joseph M. Juran and Philip B. Crosby, the roots of quality can be traced even further back, to Frederick Taylor in the 1920s. Taylor is the "father of scientific management." As manufacturing left the single craftsman's workshop, companies needed to develop a quality control department. As manufacturing moved into big plants, between the 1920s and the 1950s, the terms and processes of quality engineering and reliability engineering developed. During this time productivity was emphasized and quality was checked at the end of the line.

As industrial plants became larger, post production checks became more difficult and statistical methods began to be used to control quality. This was called reliability engineering because it moved quality control toward building quality into the design and production of the product. Taylor was the pioneer of these methods. Although some writers consider Taylor's methods part of classical management in opposition to the quality management system, both Deming and Juran both used statistical methods for quality assurance at Bell Telephone laboratories.

In the decades that followed World War II, the U.S. had no trouble selling everything made. This demand had the effect in the U.S. of driving industry to increase production, which resulted in less quality control. U.S. manufacturers became complacent, thinking that they could sell any product and that the consumer did not want or demand quality. The post-

World War II situation in Japan was just the opposite. The war had left the country devastated, and it needed to rebuild its means of production. In addition, Japanese manufacturers needed to counteract the shoddy reputation they had that products "made in Japan" were of low quality.

Japan began focusing on serious quality efforts. Japanese teams went abroad to visit foreign countries to learn how other countries managed quality, and they invited foreign experts to lecture in Japan on quality management. Two of these foreign experts were Americans W. Edward Deming and Joseph Juran. They each had a profound influence on Japanese quality processes, encouraging quality and design, built in, and zero defect programs. It took twenty years of concerted effort to revamp Japan's industrial system.

The strategies used involved high-level managers as leaders, all levels and functions were trained in managing for quality, continuous progress was undertaken, quality circles were used, and the entire workforce was enlisted. By the early 1980s, Japanese products particularly automobiles and electronic products were superior in quality to U.S. products. U.S. companies lost markets in the U.S. and in the western world to the Japanese and went in search of the Japanese secret. They found W. Edward Deming.

TQM evolution has been analysed in depth by different authors; they have described how the method has developed from one stage to the other. Most writers have described the development of TQM in four stages. Amanda. A. S (2004) and Kanji G. (1996) have discussed the four stages of TQM evolution, which are: - quality inspection, quality control, quality assurance and TQM.

Implementation of TQM is an elaborate process that takes time and resources. It is a process that must be initiated and managed by the top management. The top management must make available all critical resources required as well as the organizational structure and culture required. The process must focus on finding out, meeting and exceeding customer needs and expectations through total involvement of everyone in the organization and through continuous improvement. This process requires exceptional skills and team work that call for continuous employees training and development (Oluwatoyin, 2008)

Malcolm Baldrige National Quality Award (MBNQA) as discussed by Wali and Boujelbene (2011) developed six criteria practices that can be used to measure TQM. These are leadership, strategy and planning, customer focus, information and analysis, people management, and process management.

It is important to note that any organization can implement TQM irrespective of the size or operations. However, the success of the implementation process depends on how well the organization understands the process and the strategies adopted. One guiding principle in implementation of TQM is that the process must be organization wide; everyone and every function in the organization must be involved in the process with the management taking a leading role (Schuurman, 1997).

The commitment to TQM originates at the chief executive level in a business and is promoted in all human activities. The accomplishment of quality is thus achieved by personal involvement and accountability, devoted to a continuous improvement process, with measurable levels of performance by all concerned. It involves every department, function and process in a business and the active commitment of all employees to meeting customer needs. In this regard the customers' of each employee are separately and individually identified (Pike & Barnes, 1996). With TQM, the whole organization works together to guarantee, and systematically improve, product quality. The aim is to make product of perfect quality with zero defects (Ngware, 2006).

Quality management is not derived from a single idea or person. It is a collection of ideas, and has been called by various names and acronyms: TQM, total quality management; CQI, continuous quality improvement; SQC, statistical quality control; TQC, total quality control, etc. However each of these ideas encompasses the underlying idea of productivity initiatives that increase profit by improving the product.

It is important to note that there are factors that may inhibit successful implementation of TQM. Arshida & Agil (2012) refer to them as barriers of TQM implementation. These factors include; lack of top management commitment which is associated with lack of critical resources and poor leadership leading to poor employee empowerment and motivation, poor or weak organizational vision and plan statement that dilutes employee's efforts in quality programs. Another important factor is Government influence that is associated with

bureaucracy and slow systems. Lack of favourable quality policy or low Government support of quality programs makes it a challenge to adopt and implement quality initiatives.

2.2.1 Employee involvement and empowerment

Employees are the strength of the organisation (Nyaoga et al., 2010). They are the prime contributors to its success. When an organisation wants to expand its business or increase its profits, only the employees can make it happen. The only expandable resources in the organisation are the employees. Any improvement will happen only because of the employees. Therefore, employee involvement is essential for TQM.

"I rate enthusiasm even above professional skill". Sir Edward Appleton

There must be a commitment and structure to the development of employees, with recognition that they are an asset which appreciates over time. Part of the approach to TQM is to ensure that everyone has a clear understanding of what is required of them, how their processes relate to the business as a whole and understand the business and what is going on around them, the greater the role they can play in the improvement process. People have got to be encouraged to control, manage and improve the processes which are within their sphere of responsibility.

Oakland (1995) states that quality management is concerned with moving the focus from outside the individual to within; the objective being to make everyone accountable for their own performance, and to get them committed to attaining quality in a highly motivated fashion. The assumptions a director or manager must make in order to move in this direction are simply that people do not need to be coerced to perform well, and that people want to achieve, accomplish, influence activity and challenge their abilities.

Recognition of employees' achievements is one of the most important factors to motivate employees. Bartol and Martin (2005) in a study on encouraging knowledge sharing i.e. "the role of organizational reward systems", elude the key to success in any business to the ability to attract, develop and retain a quality work force. They go on to say that to ensure that customers are treated like kings; employees ought to be treated like royalty. As much attention should be paid to the employees' level of satisfaction as that paid to the customers'.

Dissatisfied employees lead to increased employee turnover, limited employee continuity with the customer, limited opportunity for customer service training and lower service quality. Quality is rest assured if any organizations management style is characterized and built on the importance of "empowering" employees by making them partners in the business. Successful companies make improvements by flipping the hierarchy upside down and giving power to employees.

Employees must see quality as a crucial issue for their organisations or as very important and they should be able to feel that they have a "great deal" or a "fair amount" of influence over quality, and own involvement in problem-solving. Acceptance of TQM is greater where several conditions prevail. A strong sense of job security is a key element in encouraging acceptance of quality initiatives. Training is important; it is not the overall amount which matters, but the extent to which programmes are specifically linked to quality or teamwork. Cooperative relationships with employee representatives are also an important element in easing the acceptance of TQM.

Firms which maintain working relationships with their unions are most likely to maintain their quality programmes effectively. Short-term pressures tend to undermine TQM initiatives. They are of two kinds: production pressures, which make it hard for quality activities to be maintained; and financial pressures, which are likely to reduce the resources for and commitment to TQM (Bartol & Martin, 2005). The abilities of employees should be improved and harnessed only through training (Nyaoga et al., 2010). Almost all the scholars of quality, like Crosby, Deming, and Harrington have highlighted that training is not a one-time activity.

Since the workforce is constantly changing, these education programs must be continued for as long as an organization exists. Education and personnel appointment programs must be linked and each person’s education history should be included in his or her personal record. This educational history should be taken into account when considering the organization and its staffing. Team work is vital for successful TQM implementation in an organization (Bartol and Martin, 2005). This ensures employee involvement and the importance for making better decisions. It helps employees in making best use of their skills and extracting more joy from their work. Working with each other is better than working against each other.

2.2.2 Culture change

Trice & Beyer (1993) described culture change to refer to planned, more encompassing, and more substantial kinds of changes than those which arise spontaneously within cultures or as a part of conscious efforts to keep an existing culture vital. It involves a break with the past and disrupts the cultural continuity. From Hofstede (2001), he mentions that cultures are extremely stable over time. It is not easy to change a culture of an organization, especially the national one. There are always some factors from the outside which leads to a culture change, may be in a form of forces of nature or human beings such as trade, conquest, economic and technological breakthroughs.

Culture is dynamic and leaders are the one who help culture transforming successfully. Leaders should pay attention on what is the objective of the organization and implement different strategies for their followers in order to have a continuing success. Just like implementing TQM, change of culture should be carried out by different means so that TQM could actually be matched with the culture where all individuals have the same underlying values and beliefs for implementing TQM.

2.2.3 Customer focus

The field of customer orientation and customer focus is viewed as the most important TQM value (Bowen & Headley, 1993). It thus forms part of all major studies that have analyzed important TQM constructs (Ahire et al., 1996 and Black & Porter, 1996). Central to this dimension is the belief that customer orientation is the prime factor for an organization's long-term success in the market place.

In this line, Rao, Solis, and Raghunathan et al., (1997) argue that customer orientation sustains a competitive advantage. Bowen & Headley (1993) have defined customer orientation as an organization's commitment to design and deliver products that fulfil the needs of its customers. It requires an organization wide focus on customers and encompasses an organization's knowledge of its customers, an overall customer service system, responsiveness to customers, and the ability to meet customers' needs and requirements (Ahire et al., 1996). Therefore, customer driven organizations will look to its customers first. They will try to know who their customers are by measuring their internal and external customers' needs.

2.3 Top management commitment and implementation of TQM

Juran, (1989) notes that TQM based leadership puts companies far ahead of their competitors in terms of sales, profits and employee morale. Effective leadership for TQM involves everyone in the organisation in value adding activities. He also adds that the most important prerequisite to practicing TQM is that the senior management should firmly believe that TQM is the only way to do business and manage the organisation.

To be successful in promoting business efficiency and effectiveness, TQM must be truly organisation-wide, and it must start at the top with the chief executive or equivalent. The most senior directors and management must all demonstrate that they are serious about quality (Oakland, 2004). Deming urges that the senior employees must conduct themselves as leaders rather than managers.

According to an empirical investigation done on leadership and TQM of ISO Certified Companies in Sri Lanka, senior leaders should serve as role models in planning, communication, coaching, reviewing of organizational performance, and employee recognition. As role models, they can reinforce values and expectations while building leadership, commitment, and initiative throughout the organization. TQM is very people oriented and so good leadership results in effective TQM implementation (Juran 1989).

Leadership cannot be delegated (Juran, 1989). Those firms that have succeeded in making total quality work for them have been able to do so because of strong leadership. The middle management has a particularly important role to play, since they must not only grasp the principles of TQM, but they must also go on to explain them to the people for whom they are responsible, and ensure that their own commitment is communicated. Only then will TQM spread throughout the organisation (Oakland, 2004).

According to Dale (2003), middle management will only be effective, if they are committed to it as a concept. The middle manager's role typically involves: Developing specific improvement plans for the department and processes for which they are responsible; ensuring that the objectives, values, policies and improvement initiatives of their departments are aligned with the company's business goals, TQM strategy, and quality management system; Communicating the company's approach to TQM in common sense and jargon free language to first line managers and other employees; Acting as TQM coach and counsellor to the

employees for whom they are responsible; Ensuring that first line managers are individually trained in the use of tools and techniques and that they are used effectively; Acting as a "guardian, or sponsor or mentor" to improvement teams and securing the means to reward employees; Providing top management with considered views on how to manage the continuing implementation and development of TQM, taking into account feedback from first line managers and employees on potential difficulties or obstacles.

Top Management plays a critical role in any key business decision. Consequently, the success of any critical decision made in an organization is highly dependent on top management support and commitment (Zakuan et al., 2012). Quality issue has become of great importance to every organization and no management can afford to let nature take its course when it comes to quality.

Baidoun, (2003) conducted an empirical study on critical factors of TQM in Palestinian organizations and found out that top management commitment and involvement demonstrated by: development of clear organization mission, development of quality policy and values, setting of realistic quality goals, proper planning on quality management and creating quality management structure creates quality awareness and improve implementation of quality management systems. In addition, quality management philosophy makes it easy to implement quality programs (Murphey, 2009).

As cited by Zakuan et al (2012), Deming (1986) urges that managers must institute leadership to usher the quality transformation process. Parameshwar and Srikantia (2000) discussed two types of leadership: transformational leadership and transactional leadership. Transformational leadership is leadership that is based on an ideologically anchored vision while transactional leadership is based on reward control mechanisms and emphasizes on clarification of followers roles and goals and the way the desired outcome will follow after achievement of the set goals. Champions of innovation tend to exhibit transformational leadership behaviour; they try to initiate influence through calculated tactics in their work environment.

The top management must play a leading role by making available the critical resources, establishing an organization wide quality policy that is well communicated to all stakeholders, establishing a quality management structure and managing the entire process

through close monitoring and evaluation. This must be supported by an organization culture and climate of open cooperation and team work among stakeholders in quality management (Sharp et al., 2000).

Arshida & Agil (2012) points out top management commitment as an essential element for ensuring successful TQM implementation. The top management must be on the fore front of the quality management process starting from the initial stages. According to Omware (2012), adoption of TQM for the first time is associated with development of new organizational policy, new procedures and new tools that must be learned.

TQM is an organizational change process that is often associated with instability, confusion, and employees' resistance and must be carefully initiated through consistent management involvement. This was consistent with Samir (2003) that top management must develop clear quality mission and goals and identify quality values and communicate them to all employees. They must put in place a proper quality planning process, and a good quality management structure to ensure successful implementation.

2.4 Employee training and implementation of TQM

Findings of Jamali et al., (2010) in their study titled: TQM Implementation: An investigation of critical success factors identified training as one of the most critical factors in successful implementation of TQM. Implementation of TQM requires adequate relevant employee's skills and knowledge on quality which can only be achieved through continuous training. Training empowers employees to take part in continuous improvement initiatives that are essential in TQM implementation (Oluwatoyin & Oluseun, 2008).

Employees at all levels must accept quality education and training as it helps employees at their levels to understand quality management initiatives and their roles in implementing TQM (Arshida & Agil 2012). An empirical study conducted by Samir (2003) on critical factors of TQM in Palestinian organizations showed a positive relationship between employees training and education and successful implementation of TQM. It associated employee training and education with employee empowerment and improved performance of their roles in quality management.

Zakuan et al., (2012) considered training as an important factor that boosts employees' efforts towards improvement. To him, quality training includes educating and training of employees at all levels in the organization with an intention of broadening their knowledge on quality issues and programs and providing them with information about the organization's quality mission, vision and general desired direction.

According to Jamali et al., (2010), employee training is one of the most important requirements in a successful TQM implementation. Management personnel, supervisors and other employees require skills and knowledge on quality dimensions and management as well as their roles in TQM implementation. Owing to the fact that market quality needs are very dynamic, organization must ensure continuous employee development and training on quality management.

As Baidoun (2003) points out, employee training that is focused on quality management determines how effective an organization's quality management initiatives will be. While to Zhang et al., (2000), investment in employee training and development is a critical component to successful TQM implementation. Omware, (2012) identified two elements which must be considered before training employees on quality. These are: Knowledge and understanding of the quality management process and an understanding on quality management tools. A TQM training program must equip employees with an understanding on the TQM program and their role in it.

Another study by Wang & Yu Chu (2001) on critical factors affecting the implementation decisions and processes of ISO quality management systems in Taiwan's public sectors revealed that team leaders involvement, employees training and development, employee awareness among other factors are critical in implementation of quality initiatives. Employees feel involved in quality management initiatives when given timely training on quality programs and therefore give it a positive approach reducing employee resistance.

2.5 Continuous improvement of goods and services and implementation of TQM

The idea of continuous improvement is a cornerstone of the Deming philosophy as practiced in Japanese companies for many years. Quality should not be portrayed as a programme with a definite end-point, but as a process. Kaizen is a way of thinking, working and behaving, embedded in the philosophy and values of the organization. It should be lived rather than imposed or tolerated, at all levels.

Continual improvement of the organization's overall performance should be a permanent objective of the organization: Key benefits include performance advantage through improved organizational capabilities, alignment of improvement activities at all levels to an organization's strategic intent, flexibility to react quickly to opportunities, applying the principle of continual improvement typically leads to employing a consistent organization-wide approach to continual improvement of the organization's performance and providing people with training in the methods and tools to continual improvement. It also helps an organization in making continual improvement of products, processes and systems on objectives for individual in the organization, establishing goals to guide, and measures to track continual improvement while recognizing and acknowledging improvements.

Continuous improvement of service and products involves processes planning, product design, process design, production & service, assessment & action, and resource procurement. Action is the feedback mechanism for evaluation of compliance for external and internal satisfaction. Resource procurement supports all of the processes by obtaining the resources (materials, suppliers, equipment, personnel, outside services, etc.) required for achieving the planned results of the processes.

Total quality means making sure everything and everyone in the organization is subject to improvement (Bartol & Martin, 2005). The improvement process has to be done on a daily basis. It's a never ending journey. The improvement process needs to be integrated with other organizational improvement initiatives and business strategies. A multi-disciplinary TQM steering committee chaired by the chief executive must be established and appropriate infrastructure established to support the improvement process. It is important that this infrastructure is integrated into the existing structure.

A sound Quality policy, together with the organisation and facilities to put it into effect, is a fundamental requirement, if an organisation is to fully implement TQM. Every organisation should develop and state its policy on quality, together with arrangements for its implementation. (Oakland, 2004)

Quality is a mind-set; a fixed mental attitude or disposition that predetermines a person's responses to and interpretations of situations. It is an inclination or a habit that must be shared by everyone in the organization. Improvement in quality and productivity is a continuous

cycle in TQM, and this can be done by measuring success and keeping on improving. According to Dr Deming, only those companies with consistency of purpose towards continuous improvement of quality, productivity and services will be the ones to survive.

Continuous improvement sets TQM apart from other attempts to improve productivity through the use of quantitative methods and employee involvement. Statistical process control (SPC) is the term used to describe the use of statistics to monitor processes. SPC applies statistical tools to processes for continuous improvement in quality of products and services.

2.6 Communication and implementation of TQM

Moono & Kasongo (2010) described communication as the exchanging ideas, messages, or information between people through speech, signals, or writing. According to him, success of an organization depends on communication such that when the process is hampered, the entire organization suffers. Every organization must therefore put into place proper communication systems that facilitate horizontal, vertical, upward and downward exchange of information.

According to Murphey (2009), both internal and external communication is critical in implementation of quality programs. It enables stakeholders both within and outside the organization to have an in depth understanding of quality and its management. Top management must translate quality information in understandable form that all stakeholders can understand put in place feedback channel to allow a two way communication process (Murphey 2009).

A study conducted by Sharp et al., (2000) on factors affecting successful implementation of ISO 9001:2000 found out that an organization with clear communication and quality awareness supported by active top management are likely to succeed in the implementation of ISO 9001:2000. Similarly, a study conducted by Baidoun (2003) on critical factors of TQM in Palestinian organizations revealed that clear and consistent communication at all levels and functions of the organization on quality programs, quality mission and quality objectives defining quality values is key in successful implementation of TQM.

Prigent (1992), notes that organizations are totally reliant on communication which is defined as the exchange of ideas, messages, or information by speech, signals, or writing. Without communication, organizations would not function. If communication is diminished or hampered, the entire organization suffers. When communication is thorough, accurate, and timely, the organization tends to be vibrant and effective.

All available means, from suggestion schemes to various forms of teamwork, must be considered for achieving broad employee interest, participation and contribution in the improvement process, management must be prepared to share information and some of their powers and responsibilities and loosen the reins. This also involves seeking and listening carefully to the views of employees and acting upon their suggestions. The issue here is the way in which communication is practiced, both up and down and across the organization. An increase in communication activity and favourable team briefing, followed by informal communication with individual managers has a great impact on ensuring that quality is maintained. It is direct, face-to-face, communication which employees most value. Policies and strategies need to be communicated too.

2.7 Theoretical framework

Total Quality Management theories are a set of guiding principles aimed at bringing out the best in an organization and its employees. Rather than focusing on traditional benchmarks, such as low prices and numerical goals, TQM emphasizes an ongoing collective learning process geared toward ongoing improvement and pursuit of a broad company vision. TQM emphasizes genuine quality and heartfelt work rather than mechanical, stagnant operations, spurring employees and managers to create a better company through teamwork, trust and communication.

Deming's theory of profound knowledge is a management philosophy grounded in systems theory. It is based on the principle that each organization is composed of a system of interrelated processes and people which make up system's components. The success of all workers within the system is dependent on management's capability to orchestrate the delicate balance of each component for optimization of the entire system (Bowen & Headley 1993).

The system of profound knowledge is based on system appreciation to understand the company's processes and systems, variation knowledge to understand the occurrence of variation and their causes, knowledge theory to understand quality programs and psychology

knowledge to understand human nature. In his fourteen points, he proposed that among other points, management commitment, positive corporate culture, employee's education and training and proper communication system is paramount in implementation of TQM.

The Quality Circles (QC) concept is an extension of participative management. The essence of QC is that a small group of employees study and discuss work problems, and then plan and implement solutions to the problems. The guiding premise is that the real expertise of an organization is in its employees and that QC can help focus this expertise on real problems. The first objective of QC is to focus initially on improving the quality levels of products and services. This concept relies on a long-term approach to improve productivity with a focus on the quality of the organization‟s work effort (Patchin, 1983).

The second objective of QC is that all QC members supposedly function as equals. An organization‟s leadership provides the opportunity for participation (Follett, 1940). Decision making is by consensus. The QC chooses its own agenda, analyzes and studies the problems; suggests solutions; then implements them. Lack of this function can be a major deterrent to the accomplishment of objectives. Productivity enhancement is an effort for an organization to produce viable, optimal results with a minimum of outside interference. QC is not a high tech approach to productivity enhancement. In the essence of Follett‟s concept of "circular response" in which integration is achieved, the major idea of QC is to constantly evaluate what works and how well it works within the organization and its environment.

2.8 Conceptual framework

Figure 1 shows the conceptual frame work on which the study was based

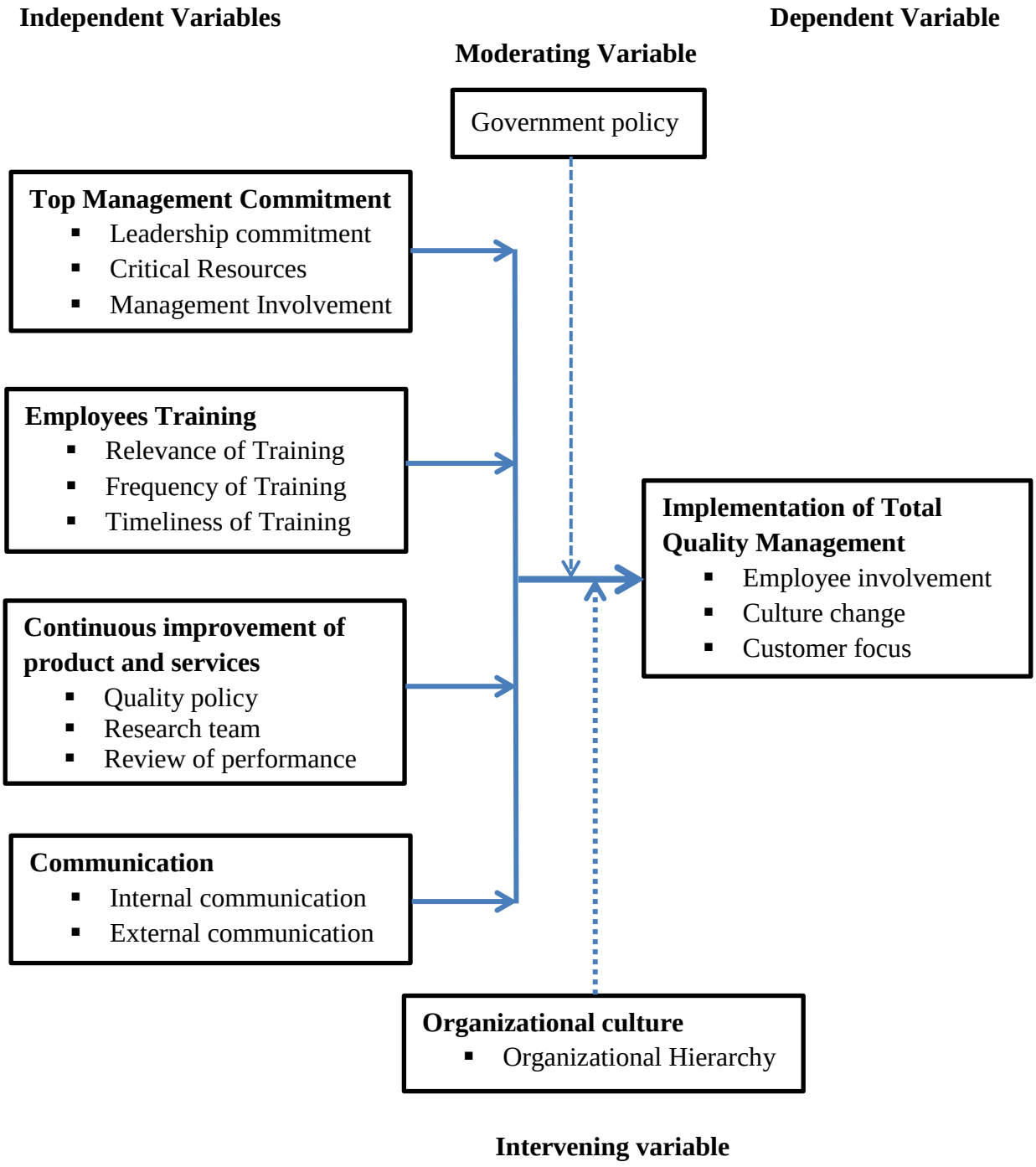

Figure 1 Conceptual framework

2.9 Research Gap and Chapter Summary

Chapter two covered the literature reviewed on determinants of implementation of TQM and how they influence implementation of TQM. Detailed literature on Total Quality Management, top management commitment and TQM implementation, employees training and TQM implementation, continuous improvement of goods and services and TQM implementation, communication and TQM implementation as well organizational culture and TQM implementation have been discussed objectively.

Everyone has had experiences of poor quality when dealing with business organizations. While trade is a crucial driver of growth, Kenya, just like many African countries, is confronted with myriad of challenges in improving its capacity to meet production and quality standards which are obligatory to access foreign markets, especially the European Union which is one of Kenya's biggest trading partners. Kenya must be able to respond to local and global market demands. While most studies have been done in manufacturing and service sectors, very little has been done in processing industries. It is in this context that the researcher found a gap and thereby sought to assess the determinants of implementation of TQM in processing industries in Kenya.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the methodology that was adopted in the study. It contains the research design, target population, sample size and sampling procedure, methods of data collection, validity and reliability analysis, operation definition of variables as well as the data analysis methods.

3.2 Research design

This study adopted descriptive research design. A descriptive study is a study concerned with describing the characteristics of a particular individual, or of a group (Kothari, 2004). The study sought to assess the determinants of implementation of TQM. It also adopted a case study survey. A case study involves careful and complete observation and analysis of a unit in its relationship to any other unit in the group (Kothari, 2004). Correlation research design was also employed to measure the degree of association between variables.

3.3 Target population

The target population for this study were 75 members of staff from the five KTDA processing factories in Nyeri County. The target population should have some observable characteristics, to which the researcher intends to generalize the results of the study (Mugenda and Mugenda, 2003).

3.4 Sample size and sampling procedure

This study adopted the census sampling method to collect statistical data where the respondents in this case were all the quality team members of the five KTDA processing factories in Nyeri County. The respondents identified represented different sections or departments in the factories and were responsible for implementation of quality management programs in the respective factories. The sample for this study was 75.

3.5 Validity of the research instruments

Validity has to do with how accurate the data obtained in the study represents the variables of the study and is a true reflection of the variables and only then can inferences based in such data be accurate and meaningful, Mugenda and Mugenda (2003). Discussion of the questionnaire with my supervisor and other experts in the field enhanced validity of the research instrument.

3.6 Reliability of the research instruments

Reliability ensures that there is precision with which data is collected. If the same results are gained time after time, no matter how many times you conduct a piece of research, then the data collected is said to be reliable (Mugenda & Mugenda, 2003). A pre-test was done on the questionnaire with a test group outside the target population and the results compared. Cronbach alpha coefficient was computed using SPSS and produced a value of 0.746 as shown in Table 3.1. Reliability coefficient of 0.7 or higher is considered acceptable in most social science research situations (Toke et al., 2012). Adjustments on framing of the questions were made on questions and those found not applicable were removed.

Table 3.1 Statistics on reliability

Cronbach's Alpha	N of items
0.746	5

3.7 Data collection procedures

Primary data were collected using structured questionnaires. The questionnaires were self-administered by the researcher to quality team members. Permission to collect data was sought from the KTDA Head of Human Resources and Administration and approved through Mt. Kenya region II regional manager after an introductory conversation and sharing of the questionnaire. An introduction letter from the university also assisted in getting the approval since it had a brief description of the research proposal and assurance about confidentiality of the information obtained from the respondents.

3.8 Methods of data analysis

Data analysis was based on the research questions designed at the beginning of the research. The data were analysed by employing descriptive statistics such as percentages, frequencies and tables. Statistical Package for Social Sciences (SPSS) was used to aid in analysis. The researcher preferred SPSS because of its ability to cover a wide range of the most common statistical and graphical data analysis and is very systematic. The information is presented and discussed as per the objectives and research questions of the study. Data were presented in the form of tables to show frequencies, percentages and correlation of the variables hence facilitating logical interpretation and discussion of the study findings. The results of the study were then compared with the reviewed literature to assess the extent to which the identified

determinants influenced implementation of total quality management in KTDA as a processing industry in Kenya.

3.9 Ethical considerations

Authorization from the management of KTDA was sought before carrying out the research. An introduction letter from the University of Nairobi accompanied the questionnaire before permission was granted to collect data. The respondents were informed of voluntary participation and also assured of confidentiality that the responses they gave were only for academic analysis.

3.10 Operational definition of variables

The table 3.2 represents the operational definition of variables

Table 3.2 Operationalization of variables

Activity	Variable	Indicators	Measurement	Measurement scale	Research Instrument	Data Analysis Method
To establish how top management commitment influence implementation of TQM	Top Management Commitment	• Leadership commitment • Critical resources • Management involvement	level of commitment Resources allocation level of participation	Ordinal	Questionnaire	Frequency, Percentages & correlation
To investigate the extent to which employee's training influence implementation of TQM	Employee training	• Relevance of training • Frequency of training • Timeliness of training	Type of training Frequency Number of trainings	Ordinal	Questionnaire	Frequency, Percentages & correlation
To assess the extent to which continuous improvement of product and services influence the implementation of TQM	Continuous improvement of product and services	• Existence of quality policy • Existence of Research team • Review of performance on products & services	Sound quality policy Quality products and services Performance reviews	Ordinal	Questionnaire	Frequency, Percentages & correlation
To determine the influence of Communication on implementation of TQM	Communication	• Internal communication • External communication	Internal communication systems External communication systems	Ordinal	Questionnaire	Frequency, Percentages & correlation
	Implementation of Total Quality Management	• Employee involvement • Culture change • Customer focus	level of employee involvement New changes Customer needs	Ordinal	Questionnaire	Frequency, Percentages

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSION

4.1 Introduction

This chapter presents the findings as captured from the respondents in the field and arranged as per the variables. The data has been analysed and then presented in the form of tables showing frequencies, percentages correlation and then interpreted. Discussion on the key findings against relevant literature is also provided.

4.2 Questionnaire Return Rate

Table 4.1 shows the response rate of the questionnaires.

Table 4.1 Questionnaire return rate

	Frequency	**Percent**
Completed	58	77.3%
Uncompleted	17	22.7%
Total	**75**	**100.0%**

According to Table 4.1, a total of 75 questionnaires were distributed to the identified respondents in the five (5) selected KTDA factories. Of these, 58 questionnaires were successfully completed and returned to the researcher. This was a response of 77.3% which the researcher considered adequate for analysis. The high response rate could be attributed to the personal efforts of the researcher, who made a follow up of every questionnaire sent out. This response level is considered efficient and therefore can be analysed (Kothari, 2008). According to Mugenda and Mugenda (1999), a 50% response is adequate, 60% good and above 70% rated very good.

4.3 Demographic Information

Demographic information of the respondents was based on gender, position held by the respondents, years served in the company and the highest level of education achieved by the respondents.

4.3.1 Gender of the Respondents

The study sought to establish gender distribution of the 58 respondents and their responses are as shown in Table 4.2.

Table 4.2 Gender of Respondents

	Frequency	Percent
Male	38	65.5
Female	20	34.5
Total	**58**	**100**

From Table 4.2, 65.5% of the respondents were male while 34.5% were female. This shows that majority of the respondents who participated in the study were male. In addition, the results also show a good representation of either gender.

4.3.2 Position held by Respondents

Table 4.3 shows the position held by the respondents.

Table 4.3 Position held by Respondents

	Frequency	Percent
Top management	9	15.5
Section head	29	50
Support staff	20	34.5
Total	**58**	**100**

According to Table 4.3, 15.5% of the respondents were at top management level, 50% were middle level management while 34.5% were support staff. This implies that a majority of over 65% of the respondents were from middle level management and top management hence indicating familiarity with the environment and a better understanding of the company processes. This shows the importance of inclusiveness in quality management.

4.3.3 Years served by the respondents in the company

Table 4.4 shows the number of years the respondents had worked in the company.

Table 4.4 Years served in the company

	Frequency	Percent
0-5years	14	24.1
5-10years	17	29.3
10-15years	11	19
>15years	16	27.6
Total	**58**	**100**

As shown on Table 4.4, 24.1% of the respondents had worked in the company for less than 5years, 29.3% had worked between 5 and 10 years, 19% between 10 and 15 years while 27.6% had worked over 15 years. Since over 75% had worked in the company over five years, it therefore indicates that they had adequate work experience and understanding of the company. These results may also imply that the company has been stable and the employees are highly valued.

4.3.4 Education level

Table 4.5 shows education level of the respondents.

Table 4.5 Education level

	Frequency	Percent
Secondary	13	22.4
Tertiary	25	43.1
University	20	34.5
Total	**58**	**100**

From Table 4.5, 22.4% of the respondents had attained secondary education, 43.1% had tertiary education while 34.5% had attained university education. This indicates that staff members responsible for implementation of TQM are well educated with over 77% having tertiary education qualification. Further, this also implies that the process of implementing TQM requires exceptional skills.

4.4 Determinants of implementation of TQM in processing industries

Determinants of implementation of TQM were studied in five aspects; top management commitment, employees' training, continuous improvement of goods and services, communication and organizational culture.

4.4.1 Top management commitment

The researcher sought to establish the respondents opinion on top management commitment in TQM implementation based on research statements using the key (Where: 1 - Strongly disagree; 2 – Disagree; 3 – Indifferent; 4 – Agree; 5 – Strongly agree).

Table 4.6 shows the level of leadership provision by the top management

Table 4.6 Leadership commitment to quality management

	Frequency	Percent
Strongly Disagree	1	1.7
Indifferent	2	3.4
Agree	29	50
Strongly Agree	26	44.8
Total	**58**	**100**

Table 4.6 reveals that 1.7% of the respondents strongly disagreed that the leadership are committed to total quality management. The table also reveals that a majority of 98.8% either agreed or strongly agreed that the leadership is committed to quality management. This implies that virtually all the respondents agreed that top management provides leadership and is committed in quality management indicating that their guidance is very essential in quality management. The small percentage that disagreed and felt indifferent can be attributed to

either failure to understand the questions or other underlying issues hence can be ignored compared to the ones that agreed.

Table 4.7 shows the level of commitment of critical resources by top management.

Table 4.7 Critical resources are availed in quality management

	Frequency	Percent
Strongly Disagree	2	3.4
Indifferent	2	3.4
Agree	30	51.7
Strongly Agree	24	41.4
Total	**58**	**100**

Again as Table 4.7 reveals, 3.4% of the respondents disagreed strongly that critical resources are availed in quality management. The table also reveals that a majority of 93.1% either agreed or strongly agreed that critical resources are provided in the implementation of quality management programs. This implies that virtually all the respondents (over 93%) agreed that top management provides critical resources towards quality initiatives therefore showing that they understand the importance of allocating critical resources for the implementation of quality initiatives. The small percentage that disagreed and felt indifferent can be attributed to either failure to understand the questions or other underlying issues hence can be ignored compared to the ones that agreed.

Table 4.8 illustrates the level of management involvement in implementation process.

Table 4.8 Management involvement in quality management initiatives

	Frequency	Percent
Strongly Disagree	2	3.4
Agree	22	38
Strongly Agree	34	58.6
Total	**58**	**100**

From Table 4.8, 3.4% of the respondents disagreed strongly that management is involved in quality management initiatives. A majority of 96.6% either agreed or strongly agreed that management is involved in quality management initiatives. From the results, it can be seen that majority of the respondents (i.e. over 96.6%) indicated that top management is involved in the implementation of quality management programs hence showing the importance of team spirit in quality management.

Table 4.9 Correlation analysis on top management commitment in TQM implementation

			Implementation of TQM
Spearman's rho	Leadership commitment in quality management	Correlation Coefficient	0.326
		Sig. (2-tailed)	0.012
		N	58
	Critical resources provision in quality management initiatives	Correlation Coefficient	0.399
		Sig. (2-tailed)	0.002
		N	58
	Management involvement in quality management programs	Correlation Coefficient	0.262
		Sig. (2-tailed)	0.047
		N	58

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

Correlation is a statistical technique that can show whether and how strongly pairs of variables are related. In this case, the study seeks to establish the relationships between the independent and dependent variables. The correlation is the r value. It can have a value between -1 and 1. The correlation helped to determine what level of confidence could be obtained. The closer to 1 that r is, the greater confidence you have. Correlation is likely to work well with quantifiable data in which numbers are meaningful, usually quantities of some sort. The main result is the correlation coefficient (or "r"). It ranges from -1.0 to +1.0. The closer r is to +1 or -1, the more closely the two variables are related. If r is close to 0, it means there is no relationship between the variables. If r is positive, it means that as one variable gets larger the other gets larger. If r is negative, it means that as one gets larger, the other gets smaller (often called an "inverse" correlation). Table 4.9 illustrates the correlation of top management commitment in TQM implementation. To quantify the strength of the relationship between the variables, the researcher used Spearman's coefficient of correlation (rho) to study the correlation between the study variables.

From Table 4.9, there is significant positive relationship of 0.326 between leadership commitment in quality management and implementation of TQM, 0.399 between critical resources provided in quality management initiatives and 0.262 between management involvement in quality management programs and the implementation of TQM. When correlation coefficient indicates a positive figure, it shows that the relationship between the

dependent and independent variables does not happen by chance but that it really exists no matter weak or strong.

The study established that top management commitment plays a very important role in the implementation of TQM by ensuring that they provide good leadership, allocate critical resources and also involve themselves in the implementation process. This implies that top management must be on the fore front of the quality management process starting from the initial stages by ensuring they put in place a proper quality planning process, and a good quality management structure for monitoring and evaluation of the implementation of TQM.

These results therefore imply that top management commitment positively influences implementation of TQM. This is in agreement with the findings of Arshida & Agil (2012) who pointed out that top management commitment as an essential element for ensuring successful TQM implementation. This therefore means that top management must be on the fore front of the quality management process starting from the initial stages.

4.4.2 Employee Training

The researcher sought to establish the respondents opinion on employee training in TQM implementation based on research statements using the key (Where: 1 - Strongly disagree; 2 – Disagree; 3 – Indifferent; 4 – Agree; 5 – Strongly agree).

Table 4.10 illustrates the respondents trained on TQM

Table 4.10 Respondents trained on total quality management

	Frequency	**Percent**
Yes	40	69
No	18	31
Total	**58**	**100**

As can be seen in Table 4.10, 69% of the respondents had been trained on TQM while 31% of the respondents had not been trained. This implies that majority had been trained on TQM. However about one third of the respondents had not been trained implying that successful implementation of TQM may be hampered or slowed down by non-trained staff.

Table 4.11 illustrates the respondents trained on ISO standards

Table 4.11 Respondents trained on ISO standards

	Frequency	Percent
Yes	57	98.3
No	1	1.7
Total	**58**	**100**

From Table 4.11, 98.3% of the respondents had been trained on ISO standards while 1.7% had not been trained implying that virtually all the respondents had been trained on ISO standards. This indicates that the company had empowered their employees with the required skills and knowledge.

Table 4.12 illustrates the respondent's opinion on relevance of training in TQM implementation

Table 4.12 Relevance of the training

	Frequency	Percent
Indifferent	3	5.2
Agree	29	50
Strongly Agree	26	44.8
Total	**58**	**100**

From Table 4.12, a majority of 94.8% of the respondents either agreed or strongly agreed that the trainings administered to them had been relevant in quality management while a minority of 5.2% felt indifferent indicating that the respondents possessed the required education level skills to be trained on TQM.

Table 4.13 illustrates the respondent's opinion on frequency of training in TQM implementation

Table 4.13 Frequency of training

	Frequency	Percent
Strongly Disagree	1	1.7
Indifferent	8	13.8
Agree	37	63.8
Strongly Agree	12	20.7
Total	**58**	**100**

As can be seen from Table 4.13, 1.7% of the respondents disagreed that they receive trainings frequently. A majority of 84.5% of the respondents either agreed or strongly agreed that they are frequently trained on quality management indicating that quality improvements in the company can be attributed to these trainings.

Table 4.14 illustrates the respondent's opinion on timeliness of the training in TQM implementation

Table 4.14 Timeliness of training

	Frequency	Percent
Strongly Disagree	1	1.7
Disagree	2	3.4
Indifferent	14	24.1
Agree	32	55.2
Strongly Agree	9	15.5
Total	**58**	**100**

From Table 4.14, 5.1% of the respondents either disagreed or strongly disagreed that the trainings had been timely. However a majority of 70.7% of the respondents either agreed or strongly agreed that the trainings had been administered on time indicating the importance of planning the trainings ahead of time and also providing adequate time to implementing staff to understand the quality standards.

Table 4.15 illustrates the correlation of employee training in TQM implementation. To quantify the strength of the relationship between the variables, the researcher used Spearman's coefficient of correlation (rho) to study the correlation between the study variables as analysed in Table 4.15.

Table 4.15 Correlation analysis on employee training in TQM implementation

			Implementation of TQM
Spearman's rho	Relevance of training	Correlation Coefficient	0.406
		Sig. (2-tailed)	0.002
		N	58
	Frequency of training	Correlation Coefficient	0.236
		Sig. (2-tailed)	0.074
		N	58
	Timeliness of training	Correlation Coefficient	0.404
		Sig. (2-tailed)	0.002
		N	58

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

From Table 4.15, the study found out that there is positive relationship of 0.406 between relevance of training and implementation of TQM, 0.236 between frequency of trainings and implementation of TQM and 0.404 between timeliness of training and implementation of

TQM. The results also imply that administering relevant trainings have a stronger positive relationship in the implementation process hence showing the need to invest in proper trainings which the employees will appreciate and apply. Employees feel involved in quality management initiatives when given timely and relevant training on quality programs and therefore give it a positive approach reducing employee resistance.

From the analysis, majority of the respondents agreed that critical resources had been committed towards training and education of employees, employees were frequently trained on quality management, and they also got timely training on quality management. Majority of the respondents also agreed that the trainings had helped in the improvement of quality in their respective departments and the company as a whole. However on whether employees were trained on TQM, 31% said they had not been trained. This implies that the company may struggle to implement TQM when a substantial number of employees have not been trained. Training empowers employees to take part in continuous improvement initiatives that are essential in TQM implementation. Management personnel, supervisors and other employees require skills and knowledge on quality dimensions and management as well as their roles in TQM implementation. Owing to the fact that market quality needs are very dynamic, companies must ensure continuous employee development and training on quality management.

These results are in agreement with the findings of Samir (2003) on critical factors of TQM in Palestinian organizations which showed a positive relationship between employees training and education and successful implementation of TQM. The results are also in line with Wang & Yu Chu (2001) on critical factors affecting the implementation decisions and processes of ISO quality management systems in Taiwan's public sectors that revealed that team leaders involvement, employees training and development, employee awareness among other factors are critical in implementation of quality initiatives.

4.4.3 Continuous improvement of products and services

The researcher sought to establish the respondents opinion on continuous improvement of products and services in TQM implementation based on research statements using the key (Where: 1 - Strongly disagree; 2 – Disagree; 3 – Indifferent; 4 – Agree; 5 – Strongly agree).

Table 4.16 illustrates respondent's view on company quality policy

Table 4.16 Existence of a sound quality policy

	Frequency	Percent
Indifferent	3	5.2
Agree	23	39.7
Strongly Agree	32	55.2
Total	**58**	**100**

From Table 4.16, a majority of 94.9% of the respondents either agreed or strongly agreed that there was an existing company quality policy. This is an indication of the understanding of the respondents on the company quality policy.

Table 4.17 illustrates the respondent's awareness of a research team

Table 4.17 Existence of research team for market surveys

	Frequency	Percent
Strongly Disagree	3	5.2
Disagree	7	12.1
Indifferent	13	22.4
Agree	24	41.4
Strongly Agree	11	19
Total	**58**	**100**

From Table 4.17, 17.3% of the respondents either disagreed or strongly disagreed that there was an existing sound quality policy in the company. A majority of 60.4% of the respondents either agreed or strongly disagreed that there was a research team involved in the design of new products and services. This implies the need to study the market and identify the needs of the customers.

Table 4.18 illustrates the respondent's awareness of performance review

Table 4.18 Performance review of products & services

	Frequency	Percent
Indifferent	10	17.2
Agree	31	53.4
Strongly Agree	17	29.3
Total	**58**	**100**

As can be seen from Table 4.18, a majority of 82.7% of the respondents agreed that performance reviews are done regularly on products and services implying an understanding of the importance of continuous improvement in a competitive market.

Table 4.19 illustrates the correlation of continuous improvement of goods and services in TQM implementation. To quantify the strength of the relationship between the variables, the researcher used Spearman's coefficient of correlation (rho) to study the correlation between the study variables as analysed in Table 4.19.

Table 4.19 Correlational analysis on continuous improvement of goods and services in TQM implementation

			Implementation of TQM
Spearman's rho	Existence of a sound quality policy	Correlation Coefficient	0.400
		Sig. (2-tailed)	0.002
		N	58
	Existence of Research team for market surveys	Correlation Coefficient	0.364
		Sig. (2-tailed)	0.005
		N	58
	Performance review of products and services	Correlation Coefficient	0.321
		Sig. (2-tailed)	0.014
		N	58

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

As can be seen from Table 4.19, there is positive relationship of 0.4 between existence of sound quality policy and implementation of TQM, 0.364 between existence of research team and implementation of TQM and 0.321 between performance review of products and services and TQM implementation. Sound quality policy has a stronger positive relationship with TQM implementation compared to the rest.

The study established that majority of the respondents agreed that continuous improvement of goods and services is very essential in companies through establishment of sound quality policy, dedicated research team and continuous reviews on performance if it aims to gain competitive edge in a very dynamic market. This shows that every organisation should develop and state its policy and how it will be implemented. Improvement in quality and productivity is a continuous cycle in TQM, and this can be done by measuring success and keeping on improving.

These results are in agreement with the findings of Bartol & Martin, (2005) that concluded that total quality means making sure everything and everyone in the organization is subject to

improvement and that the improvement process has to be done on a daily basis since it's a never ending journey. The study also concluded that a sound quality policy, together with the organisation and facilities to put it into effect, is a fundamental requirement, if an organisation is to fully implement TQM.

The results are also in agreement with the findings of Oakland (2004) that revealed that every organisation should develop and state its policy on quality, together with arrangements for its implementation. This therefore means that continual improvement of the organization's overall performance should be a permanent objective of every organization.

4.4.4 Communication

The researcher sought to establish the respondents opinion on communication in TQM implementation based on research statements using the key (Where: 1 - Strongly disagree; 2 – Disagree; 3 – Indifferent; 4 – Agree; 5 – Strongly agree).

Table 4.20 shows the respondents opinion on internal communication

Table 4.20 Internal communication system

	Frequency	Percent
Indifferent	8	13.8
Agree	28	48.3
Strongly Agree	22	37.9
Total	**58**	**100**

As can be seen in Table 4.20, a majority of 86.2% of the respondents agreed the company had a well-established internal communication system implying quality information flow at all levels.

Table 4.21 illustrates respondent's opinion on external communication

Table 4.21 External communication system

	Frequency	Percent
Disagree	1	1.7
Indifferent	8	13.8
Agree	32	55.2
Strongly Agree	17	29.3
Total	**58**	**100**

From Table 4.21, a majority of 84.5% of the respondents either agreed or strongly agreed that the company had a well-established external communication implying the value of customers

to the company and the need to obtain as much information as possible on customer quality needs.

Table 4.22 shows the correlation of communication in TQM implementation. To quantify the strength of the relationship between the variables, the researcher used Spearman's coefficient of correlation (rho) to study the correlation between the study variables as analysed in Table 4.22

Table 4.22 Correlational analysis on communication in TQM implementation

			Implementation of TQM
Spearman's rho	Internal communication	Correlation Coefficient	0.611
		Sig. (2-tailed)	0.000
		N	58
	External communication	Correlation Coefficient	0.45
		Sig. (2-tailed)	0.000
		N	58

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

From Table 4.22, there is positive relationship of 0.611 between internal communication and implementation of TQM and 0.45 between external communication and TQM implementation. This highlights the importance of establishing good communication structures internally to be able to reach out to the external customer.

The study also established that majority of the respondents agreed well established internal and external communication system as very essential for the implementation of TQM. It enables stakeholders both within and outside the organization to have an in depth understanding of quality and its management. This therefore is an indication that companies with clear communication and quality awareness supported by active top management are likely to succeed in the implementation of TQM. When communication is thorough, accurate, and timely, the company tends to be vibrant and effective.

The results of this study are in agreement with the study conducted by Sharp et al., (2000) on factors affecting successful implementation of ISO 9001:2000 that found out that an organization with clear communication and quality awareness supported by active top management are likely to succeed in the implementation of ISO 9001:2000. The study also

agrees with the findings of a similar study conducted by Baidoun (2003) on critical factors of TQM in Palestinian organizations that revealed that clear and consistent communication at all levels and functions of the organization on quality programs, quality mission and quality objectives defining quality values is key in successful implementation of TQM.

4.5 Total Quality Management

The study sought to establish TQM practices in processing industries. The practices were studied in terms of employee involvement, culture change and customers focus. The responses have been analysed in this section.

Responses on Total Quality Management

In the study, respondents' opinions were also sought on communication. They were asked to express their feelings on the following statements using the key (Where: 1-Strongly disagree; 2 – Disagree; 3 – Indifferent; 4 – Agree; 5 – Strongly agree). Their responses have then been summarized.

Table 4.23 illustrates the respondent's views on employee involvement

Table 4.23 Employee involvement in implementation of TQM

	Frequency	Percent
Strongly Disagree	1	1.7
Indifferent	1	1.7
Agree	34	58.6
Strongly Agree	22	37.9
Total	**58**	**100**

From Table 4.23, a majority of 96.5% of the respondents agreed that employees are involved in total quality management implying that it is everyone's responsibility to ensure a successful implementation process.

Table 4.24 illustrates the respondent's opinion on culture change

Table 4.24 Culture change in implementation of TQM

	Frequency	Percent
Disagree	1	1.7
Indifferent	6	10.3
Agree	33	56.9
Strongly Agree	18	31
Total	**58**	**100**

From Table 4.24, a majority of 87.9% of the respondents agreed that the culture change in the company ensures continuity. This implies that new changes in the company do not affect the implementation of TQM.

Table 4.25 illustrates the respondent's opinion on customer focus

Table 4.25 Customer focus in implementation of TQM

	Frequency	Percent
Indifferent	4	6.9
Agree	25	43.1
Strongly Agree	29	50
Total	**58**	**100**

From Table 4.25, a majority of 93.1% of the respondents agreed that the company focuses on the customer. This implies that the customer is regarded as the most important person in the industry and hence the company will strive to meet the customer needs and also maintain a close link with them. With the customer in mind, implementation of TQM is likely to be successful. Though the company leads in implementing high quality standards, it still believed that customer focus still mattered most.

CHAPTER FIVE
SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1. Introduction
This chapter presents the summary of findings, makes a conclusion on the whole study, offers recommendations based on the study and finally gives suggestions for further study.

5.2 Summary of findings
The summary of findings is presented per objective of the study.

5.2.1 Top management commitment
The study summarizes that top management commitment plays a very important role in the implementation of TQM by ensuring that they provide good leadership, allocate critical resources and also involve themselves in the implementation process. This implies that top management must be on the fore front of the quality management process starting from the initial stages by ensuring they put in place a proper quality planning process, and a good quality management structure to ensure successful implementation of TQM.

5.2.2 Employee training
The study also summarizes that majority of the respondents had accessed TQM training whose content was relevant to their job, were frequently trained and that the trainings were timely. This implies that proper employee training broadens the knowledge base of the employees on quality issues hence TQM implementation becoming easy. This is due to the fact that training empowers employees to take part in continuous improvement initiatives that are essential in TQM implementation.

5.2.3 Continuous improvement of products and services
The study further summarizes that majority of the respondents agreed that continuous improvement of goods and services is very essential in companies through establishment of sound quality policy, dedicated research team and continuous reviews on performance if it aims to gain competitive edge in a very dynamic market. This shows that every organisation should develop and state its policy on quality together with arrangements for its implementation.

5.2.4 Communication

The study also summarizes that majority of the respondents agreed well established internal and external communication system as very essential for the implementation of TQM. It enables stakeholders both within and outside the organization to have an in depth understanding of quality and its management. This therefore is an indication that companies with clear communication and quality awareness supported by active top management are likely to succeed in the implementation of TQM.

5.3 Conclusion

The study concludes that top management commitment, employee training, continuous improvement of goods and services, communication and organizational culture were all critical since they have a positive influence in the implementation of TQM. The success of the implementation process depends on how well the organizational understands the process and strategies adopted. Implementation of TQM becomes successful when top management are in the front line right from the initial stages to provide direction. Companies that have employees with tertiary level qualification are likely to succeed in successful TQM implementation. Since continuous improvement is a never ending journey, it has to be done on daily basis. The success of companies is very much dependent on communication such that when the process is hampered, the entire organization suffers. Therefore quality information must be translated in an understandable form to all employees. Finally companies must come up with quality culture that must be integrated with other dimensions of culture if it has to succeed in TQM implementation.

5.4 Recommendations

a) This study recommends that processing industries as well as other organizations who are implementing TQM take strategic measures in ensuring top management participation and commitment to quality initiatives. This study further recommends to the top management that they commit themselves in providing leadership and key resources needed in quality management.

b) The study also recommends that companies put a lot of emphasis in training their employees on total quality management. The study recommends that the trainings should be relevant, timely and be conducted frequently at all levels in the company.

c) The study further recommends that companies embark on continuous improvement of goods and services to gain competitive edge in a very dynamic market since it

enhances implementation of TQM. Companies using a TQM system must engage in incremental improvements continuously to affect the quality of the business processes and products. A continuous improvement approach will require employees to strive for zero defects and efficiency in all processes in a proactive manner. TQM means all members of an organization participate in improving processes, products, services, and the culture they work in.

d) The study also recommends that managers and management develop appropriate, effective and flexible communication systems that allow free flow of information at all levels in the industry.

5.5 Suggestions for further studies

The study has looked at determinants of implementation of total quality management in processing industries in Kenya the case of KTDA factories in Nyeri County, Kenya and has identified top management commitment, employee training, continuous improvement of goods and services, communication and organizational culture as having a positive influence in the implementation of TQM.

a) This study suggests further studies be done to explore other determinants like organizational performance and customer satisfaction and how they will influence implementation of TQM.

b) The study further suggests that similar studies be done in other sectors especially the public sector.

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APPENDICES

Appendix 1 List of KTDA factories in Nyeri County

	KTDA FACTORIES	LOCATION
1	GATHUTHI TEA FACTORY	TETU SUB-COUNTY
2	GITUGI TEA FACTORY	OTHAYA SUB-COUNTY
3	IRIA-INI TEA FACTORY	OTHAYA SUB-COUNTY
4	CHINGA TEA FACTORY	OTHAYA SUB-COUNTY
5	RAGATI TEA FACTORY	MATHIRA SUB-COUNTY

Source: website (www.ktdateas.com)

Appendix 2 Letter of Introduction

UNIVERSITY OF NAIROBI
COLLEGE OF EDUCATION AND EXTERNAL STUDIES
SCHOOL OF CONTINUING AND DISTANCE EDUCATION
DEPARTMENT OF EXTRA MURAL STUDIES
P O Box 598 - NYERI : Tel : 061-2030460

20 May 2015

TO WHOM IT MAY CONCERN

SUBJECT : INTRODUCTION LETTER
MWANGI DANIEL WAMATHAI - REG.NO. L50/70524/2013

This is to confirm that the above named is a bona fide student of University of Nairobi pursuing a **Master of Arts Degree in Project Planning and Management -** in the **School of Continuing and Distance Education – Department of Extra Mural Studies.**

He completed course work and is currently writing the **Research Project** which is a requirement for the award of the **Masters Degree.**

His topic is "***Determinants of Implementation of Total Quality Management in Processing Industries in Kenya: A case of KTDA Factories in Nyeri County, Kenya.***"

Any assistance accorded to him will be highly appreciated.

UNIVERSITY OF NAIROBI
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Dr. L. Otieno - Omutoko
RESIDENT LECTURER
NYERI & MT. KENYA REGION

Appendix 3 Letter of Transmittal

Daniel Wamathai Mwangi
University of Nairobi
P.O Box 30197
Nairobi
6th March 2015
The Human Resource Manager
KTDA
Ragati Factory

Dear Sir/Madam

RE: REQUEST FOR ACADEMIC SURVEY RESEARCH.

I am a student at the University of Nairobi undertaking a Master of Arts degree in Project Planning and Management. I have completed my coursework and currently conducting a project research as part of fulfilment of the course.

I am conducting a research on Determinants of implementation of Total Quality Management in Processing Industries in Kenya: A case study of KTDA factories in Nyeri County. I am kindly seeking an opportunity to conduct the research in your industry as one of my case industries. All the data collected for this study will be treated with utmost confidentiality and will solely be used for the academic purposes.

Any assistant you offer is highly appreciated.

Thank you

Yours Sincerely
Daniel Wamathai Mwangi

Appendix 4 Research Questionnaire

Dear respondent,

This questionnaire is meant to collect data for a research paper on determinants of implementation of Total Quality Management. You have been identified as one of the respondents for this research. You are kindly requested to be honest and exhaustive in filling the questionnaire.

Note: The information given is purely for research purposes.

Instruction: Please fill in the spaces provided or tick inside the boxes as appropriate

SECTION A: BACKGROUND INFORMATION

1. Gender
    a) Male ☐
    b) Female ☐
2. Position held
    a) Top management ☐
    b) Section Head ☐
    c) Support staff ☐
3. Department……
4. Years served; 0-5yrs ☐ 5-10yrs ☐ 10-15yrs ☐ over 15yrs ☐
5. Highest level of education
    a) Primary ☐
    b) Secondary ☐
    c) College ☐
    d) university ☐

SECTION B: DETERMINANTS OF IMPLEMENTATION OF TOTAL QUALITY MANAGEMENT

PART 1: TOP MANAGEMENT COMMITMENT

Kindly fill in the blank spaces or tick appropriately the following questions and statements related to top management commitment. Using the key (Where: 1-Strongly disagree; 2-Disagree; 3-Indifferent; 4-Agree; 5-Strongly agree, please rate according to the extent to which you agree or disagree with the statements.

S/no	Statements on top management commitment	Rating				
		1	2	3	4	5
a.	Top management create and sustain clear vision and goals concerning total quality management					
b.	Top management provides leadership implementation of total quality management					
c.	The top management in your industry commits critical resources required for implementation of total quality management					
d.	Top management in your industry is involved in all stages of total quality management implementation					
e.	Top management in your industry has good experience in handling quality problems and issues					

PART II: EMPLOYEES TRAINING

Kindly fill in the blank spaces or tick appropriately the following questions and statements relating to employees training

1. Have you been trained on any quality management programs?
   a) Yes ☐
   b) No ☐
2. If yes, where were you trained on the quality programs?
   a) In the current company ☐
   b) Elsewhere ☐
3. From whom have you received the training on quality management?
   a) Consultant ☐
   b) Member from within the industry ☐
4. Have you been trained on total quality management?
   a) Yes ☐
   b) No ☐
5. How many trainings have you received on total quality management in the past one year?

   _____
6. Have you been trained on ISO quality standards?
   a) Yes ☐
   b) No ☐
7. Have you been trained on any other quality management program apart from the one mentioned above?
   a) Yes ☐
   b) No ☐
8. If Yes, kindly specify

   ……

   ……

   ……

Kindly fill in the blank spaces or tick appropriately the following questions and statements related to employees training. Using the key (Where: 1-Strongly disagree; 2-Disagree; 3-Indifferent; 4-Agree; 5-Strongly agree, please rate according to the extent to which you agree or disagree with the statements.

S/no	Statements on employee training	Rating				
		1	2	3	4	5
a.	All employees in your industry have been trained on total quality management					
b.	Top management has committed adequate resources for employee training and education					
c.	Trainings on total quality management to the employees has been relevant to their work					
d.	Trainings on total quality management to the employees has helped to improve on quality of work					
e.	Employees in your industry are frequently trained on total quality management					
f.	Employees in your industry get timely training on total quality management					

PART III: CONTINUOUS IMPROVEMENT OF PRODUCTS AND SERVICES

Kindly fill in the blank spaces or tick appropriately the following questions and statements related to continuous improvement of products and services. Using the key (Where: 1-Strongly disagree; 2-Disagree; 3-Indifferent; 4-Agree; 5-Strongly agree. Please rate according to the extent to which you agree or disagree with the statements.

S/no	Statements on Continuous Improvement of Products and Services	Rating				
		1	2	3	4	5
a.	Your industry has a sound quality policy					
b.	The existing policy is sensitive to competition					
c.	Your industry has a research team involved in the development and design of new products and services					
d.	Your industry conducts performance review for its products and services regularly					
e.	Continuous improvement processes has helped in implementation					

	of total quality management					
f.	Your industry conducts regular quality audits on all the systems, processes and functions					

PART IV: COMMUNICATION

Kindly fill in the blank spaces or tick appropriately the following questions and statements related to communication. Using the key (Where: 1-Strongly disagree; 2-Disagree; 3-Indifferent; 4-Agree; 5-Strongly agree. Please rate according to the extent to which you agree or disagree with the statements.

S/no	**Statements on Communication**	**Rating**				
		1	2	3	4	5
	Internal Communication					
a.	There exists a well-developed internal communication system in your industry that helps in the implementation of total quality management					
b.	There is free flow of information on quality management across the departments in your industry					
c.	There is free flow of information on quality management from management to employees in your industry					
d.	There is free flow of information on quality management from employees to management in your industry					
e.	There is free flow of information on quality management among employees in your industry					
	External Communication					
a.	Your industry has a well-established external communication system that helps in the implementation of total quality management					
b.	Your industry gets timely information about customer quality needs					
c.	Quality related customer complaints are treated with priority					
d.	There is a well-developed feedback mechanism in your industry					

PART VI: TOTAL QUALITY MANAGEMENT

Kindly fill in the blank spaces or tick appropriately the following questions and statements related to total quality management. Using the key (Where: 1-Strongly disagree; 2-Disagree; 3-Indifferent; 4-Agree; 5-Strongly agree, please rate according to the extent to which you agree or disagree with the statements.

S/no	Statements on implementation of Total Quality Management	Rating				
		1	2	3	4	5
	Employee involvement					
a.	All employees are involved in the implementation of total quality management initiatives					
b.	Employees are committed to the success of the industry					
	Culture Change					
a.	All employees in your industry have the same underlying values and beliefs towards total quality management implementation					
b.	New changes in your industry supports and encourages continuity of the existing quality culture					
	Customer Focus					
a.	Your industry strives to meet and exceed customer needs and expectations					
b.	Your industry maintains a close link with its customers and conducts regular customer satisfaction surveys					