FACTORS INFLUENCING IMPLEMENTATION OF TOTAL QUALITY MANAGEMENT IN MANUFACTURING FIRMS: A CASE OF BIDCO OIL REFINERIES LIMITED, THIKA 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 any award.

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This research work is dedicated to my loving friend and future husband, Kiptui Kandie, and my siblings Nancy Chelangat, Ben Kipkurui and Geoffrey Mutai for your prayers, encouragement and support throughout the study.

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ABBREVIATIONS AND ACRONYMS

ANOVA - Analysis of Variance

SPSS - Statistical Package for Social Scientists

TQM - Total Quality Management

BORL - Bidco Oil Refineries Limited

QC - Quality Circles

QWL - Quality of work life

CEO - Chief Executive Officer

SMEs - Small and medium-sized enterprises

CSFs - Critical Success Factors

DEMATEL - Decision-making trial and evaluation laboratory

PDCA - Plan, Do, Check, Act

KEBS - Kenya Bureau of Standards

NACOSTI - National Commission for Science, Technology and Innovation

ABSTRACT

This report outlines the factors influencing implementation of Total Quality Management in manufacturing firms in Kenya. Total Quality Management is defined as a corporate business management philosophy which recognises that customer needs and business goals are inseparable and is applicable within both industry and commerce. The objectives of the study were: influence of Top management leadership commitment implementation of Total Quality Management in manufacturing firms, to establish the influence of employee empowerment on the implementation of Total Quality Management in manufacturing firms, to establish the influence of organisation culture on the implementation of Total Quality Management in manufacturing firms and to determine the influence of communication on the implementation of Total Quality Management in manufacturing firms. The study adopted a descriptive research design to assess factors influencing implementation of Total Quality Management in Manufacturing firms.The target population in this study was 2900 employees consisting of top level managers, middle level managers, supervisors and operative staff. Stratified random sampling was employed to select 384 employees to participate in the study. Primary data for the study was collected using questionnaires that were administered to the respondents and interview guide used to interview top management. Pilot test was conducted in Kapa to check on validity and reliability. The data collected was analyzed with the help of SPSS program. The findings of this study revealed that Top Management Commitment is an important factor in implementation of TQM and that Top Management Commitment positively influences implementation of TQM. The study also established that Organizational Culture is a factor in implementation of TQM and that appropriate organizational culture positively influences implementation of TQM. The study revealed that Employee Training positively influences implementation of TQM. In addition, the study found that Communication is an important factor with positive influence in implementation of TQM. The study recommends quality managers should take measures in ensuring top management participation and commitment to quality initiatives, organizations should introduce and develop employee involvement practices in their organization by delegating authority and empowering employees, that organizations develop group, hierarchical, developmental and rational culture so as to enhance total quality management and quality managers develop information policy and regulations, general ICT infrastructure of the organisations, and information culture of the organisations. The study suggested further studies to be carried out of the areas is Top management's role in supplier's selection and evaluation in TQM. Also use of information systems and technologies to support TQM and finally, to investigate the behavioural and cultural issues that can influence the implementation of TQM.

CHAPTER ONE

INTRODUCTION

1.1   Background of the Study

Most companies are trying to satisfy their customer's needs and expectations. This can only be achieved through, improvement in product quality, increased customer satisfaction, and continuous improvement towards world class organizations. These challenges prevailed upon companies around the globe to change their old traditional quality systems, and implement new quality approaches to deliver high quality goods and services. Companies that can deliver quality are the ones that were able to compete on the globalization era (Nkechi Eugenia, 2009).

Quality improvement has become a considerable force throughout the world. Although methods to improve and manage quality are numerous, it can be said that TQM is a critical determinant in the success of manufacturing organizations. In most highly industrialized countries of the world, The United States, Japan, and the European Union, the implementation of total quality management has become a common practice and a preferred approach for improving quality (Krasachol, Willey, & Tannock, 1998).

Different authors have defined quality in different ways. For instance, Juran defined quality as "fitness for use", Crosby defined it as "conformance to requirement" while Taguchi defined it as "variation from target" (Kenya Institute of Management, 2009). Quality Management generally is the process of ensuring that a product (good or service) continuously meets and even exceeds customer expectations. TQM can generally be looked at as a business management approach that attempts to maximize organizational competitiveness through continuous improvement of products, services, work force, processes and environment. It is an approach aimed at continuously improving the competitiveness, effectiveness and flexibility of the entire organization through total involvement of everyone in the organization led by the management (Kasongo & Moono, 2010).

The concept of TQM came into existence in 1970s when evolution of quality took a strategic shift from quality control to a strategic approach of quality to take care of the growing concern for quality. Quality management has evolved through Quality Inspection, to Quality Control, to Quality Assurance then to the current Total Quality Management (Kenya Institute of Management, 2009).

Globally, a number of organizations have adopted quality initiatives. Toyota company for instance developed the philosophies of 'customer first' and 'quality first'. They set up quality assurance systems across various divisions and departments (Omware, 2013). They introduced statistical quality control (SQC) in 1949 followed by Total Quality Management (TQM) initiatives based on the unchanging principles of 'customer first' and 'total participation'. Through their quality initiatives, Toyota won the Deming Application Prize in 1965 and the Japan Quality Medal Award in 1970 (union of Japanese Scientists and Engineers, 2006). Sony Company set out to respect their customers viewpoints and remain committed to deliver quality products and customer service that exceed their customers' expectations. To achieve this, Sony implemented continuous, decisive efforts in enhancing product quality and continuously improve its quality management system (Sony Company, 2012). The Coca-Cola Company focused on developing consistency and reliability in their products. They for instance developed a new management system, Coca-Cola Operating Requirements (KORE) in place of the initial Coca-Cola Management System (TCCMS) in January 2010. The company created an integrated quality management program which is used in all operations of the organization to ensure they deliver quality to customers (Coca-Cola Company, 2012).

The manufacturing industry in Kenya, have been encouraged to adopt Total Quality Management (TQM) to ensure ability to meet customer demands as well as provide quality services in a manner that addresses their range of financial, environmental and social concerns (Oruma, 2014). TQM ensures maximum effectiveness and efficiency within a business and secures commercial leadership by putting in place processes and systems which will promote excellence, prevent errors and ensure that every aspect of the business is aligned to customer needs and the advancement of business goals without duplication or waste of effort (Salaheldin, 2008).

Private investors are largely credited with the Edible Oil Manufacturing sub-sector's growth, with the government largely playing an advisory role. The public sector players include the Ministry of Agriculture, Ministry of Trade and Industry, Ministry of Finance and other government agencies such as HCDA and KARI. Bidco Oil Refineries Ltd. was founded in 1970 by Bhimji Depar Shah to manufacture garments. The company ventured into soap production in 1985 and launched edible oil manufacturing in 1991. Currently, they market and distribute the largest and widest range of product categories in the East and Central African regions such as: Edible Oils, Cooking Fats, Margarine, Baking Products, Hygiene Products, Detergents, Laundry Bars and Animal Feeds.

1.2 Statement of the Problem

The manufacturing industry in Kenya has experienced redundancies, cost cutting, closure of operations and challenges to the quality of products. In Malaysia, Zakuan *et al.* (2012) found that the success of TQM depends on a firm's quality management strategy and how it identifies, classifies, analyses and reacts to changes in quality requirements. Bidco Oil Refineries Limited has experienced poor communication leading to agitation from employees, low employee morale, wastages from overproduction, customer complaints due to poor quality products, poor packaging and poor delivery systems leading to product recalls. Salaheldin (2009) found that employee empowerment and training; quality suppliers; employee involvement influences operational performance and thus, the higher the likelihood of the success of TQM implementation. Wali and Boujelbene (2011) concluded that the studies on the CSFs to TQM implementation elicit different results in different settings. They therefore recommend that further studies be carried under different settings to obtain conclusive conceptualizations on the CSFs under such settings. While many studies have looked at these factors, it is important to note that most of these studies have been undertaken in the service industry. In Kenya, very limited research have been carried out in the edible oil industry with none having been conducted at Bidco Oil Refineries Limited. Thus, this study aims to bridge this gap by looking at the factors influencing implementation of TQM at Bidco Oil Refineries Limited.

1.3 Purpose of the Study

The purpose of this study was to establish the factors influencing implementation of TQM in manufacturing firms in Kenya. The study will specifically focus on Bidco Oil Refineries Limited (BORL).

1.4 Objectives of the Study

The objectives of the study are:

1. To determine the influence of Top management leadership commitment the implementation of TQM in BORL
2. To establish the influence of employee empowerment on the implementation of TQM in BORL
3. To establish the influence of organisation culture on the implementation of TQM in BORL
4. To determine the influence of communication on the implementation of TQM in BORL

1.5 Research Questions

This study was guided by the following research questions:

1. How does top management leadership commitment influence implementation of TQM in BORL?
2. To what extent does employee empowerment influence implementation of TQM in BORL?
3. To what extent does organisation culture influence implementation of TQM in BORL?
4. How does communication influence implementation of TQM in BORL?

1.6 Significance of the Study

Just like other manufacturing industries, edible oil manufacturing firms carry out operations in competitive environments. TQM is one of the methods employed by manufacturing firms to gain competitive advantage. Information from this study will therefore inform managers of edible oil manufacturing firms on best strategies to employ to enable them gain optimum returns from employing TQM measures.

Policy makers such as regulatory institutions in the manufacturing sector and the Ministry of Industrialization and Development will gain insight from this study regarding challenges facing implementation of TQM in edible oil manufacturing firms. This will help inform the standards and quality assurance department in both edible oil manufacturing firms and the management planning and policy making sectors of the Industry.

The management of edible oil manufacturing firms may use the information from this study in understanding the challenges they face in the implementation of TQM to further inform their measures to counteract challenges and ensure successful implementation of TQM in their firms.

Information from this study will provide information to the consumers on TQM in edible oil manufacturing firms in Kenya to enable them understand and appreciate measures taken by these organisations in line with TQM and organisational performance.

To the researcher and academicians; information from this study may help them appreciate the contribution of various factors in successful implementation of TQM in edible oil manufacturing

firms in Kenya. This may create interest to students who would wish to carry further research on TQM and its implementation. The information from this study may also form literature for other researchers in Kenya who are willing to carry out studies in the same area.

1.7   Limitations of the Study

Limitations are potential weaknesses or problems with the study identified by the researcher. The study may have been affected by communication barriers like stereotypes. The researcher gave guide the respondents to carefully answer the questions without prejudice. Some respondents were found to be unwilling to give accurate information for fear that the information may be sensitive or confidential bearing in mind the level of importance attached to quality. Finally, in regard to the timing of distribution of the research instrument the researcher made adequate pre-arrangements in relation to the respondents' not to interrupt the working schedules of the respondents.

1.8   Delimitations of the Study

The study was carried out at Bidco Oil Refineries Limited (BORL) Headquarters in Thika Town. The study focused on assessing the perceptions of BORL employees on the factors affecting the implementation of TQM in their organisation.

1.9   Assumptions of the Study

This study was based on the assumptions that: the researcher will get access to the sampled respondents from Bidco Oil Refineries Limited (BORL) Headquarters in Thika Town and that the respondents were corporative and will freely give the required information.

1.10   Definition of Significant Terms Used in the Study

Communication: The processes, systems and structures used to share information in an organization. This involves two-way communication and direct(face to face) communication(face to face)

Employee empowerment involves access to support, opportunities and involvement in decision making of employees in the organization. Employee empowerment includes allowing employees to get involved in the TQM implementation process by providing them with both structural and psychological support they need to understand and appreciate the implementation of TQM.

Implementation of Total Quality Management: Adoption of corporate business management philosophy; Commitment to quality, total involvement of people in quality management, management taking a leading role in quality management, among other practices.

Manufacturing Firms: These are organisations that create and assemble components and finished products for sale.

Organizational Culture: Organizational values, beliefs and practices that guide the operations of employees in an organization. Customer focus (serving clients' needs; ensuring all aspects of the company put customer satisfaction first and maintaining effective customer relations), systems approach, teamwork, involved management and continuous improvement are the aspects that facilitate improved organisational success, growth, and competitiveness.

Productivity improvement – is a process to achieve higher levels of output while consuming same or lesser amounts of input resources. If the same output level is reached in a shorter time period, it indicates improved productivity. It is in this respect, that projects designed to improve productivity must also consider time as a key resource.

Top Management Commitment: Senior Management's obligation in implementation of TQM through participation, monitoring and resource allocation.

Total Quality Management - Total Quality Management is defined as a corporate business management philosophy which recognises that customer needs and business goals are inseparable and is applicable within both industry and commerce.

1.11   Organization of the Study

This study is organized in five chapters as follows: 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, assumptions of the study, limitations and delimitations of the study, definition of the significant terms as well as the organization of the study. Chapter two covers literature review which explain the factors that influence implementation of Total Quality Management, empirical literature, theoretical framework and conceptual framework, the relationship between the factors on the conceptual framework and research gaps . 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 and chapter four discusses the data analysis, presentation, interpretation and discussion while chapter five presents the results and findings of the study, conclusion, recommendations and suggestion for future studies.

CHAPTER TWO

LITERATURE REVIEW

2.1   Introduction

In this chapter the researcher discussed theoretical orientation, conceptual orientation and operationalization and empirical review of the research topic. This chapter started by presenting the empirical review of the research topic, theories that underpin the study and the conceptual framework on the relationship between TQM factors and TQM implementation. The chapter then presented the research gap.

2.2   Total Quality Management

Total Quality Management is a management approach that originated in the 1950s and has steadily become more popular since the early 1980s (Ramesh, K.M. and Ravi, A, 2015). Total Quality is a description of the culture, attitude and organization of a company that strives to provide customers with products and services that satisfy their needs. TQM culture requires quality in all aspects of the company's operations, with processes being done right the first time and defects and waste eradicated from operations. TQM is a method by which management and employees can become involved in the continuous improvement of the production of goods and services. It is a combination of quality and management tools aimed at increasing business and reducing losses due to wasteful practices.

The general 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. 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).

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 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 employee 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 there are factors that may inhibit successful implementation of TQM. Arshida and 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.

2.3   Top Management and TQM Implementation

Tannenbaum et al. (2012) defined leadership as the interpersonal influence, exercised in a situation and directed, through the communication process, toward the attainment of a specified goal or goals. In line with this definition Baidoun (2000) postulate that leadership with the customer focus are the two major elements for the TQM where the customers provide the common focus or target for TQM. Leadership being the ability to inspire confidence and support amongst those needed to achieve organisational goals, ensure the successful implementation of TQM by establishing it as a practice and a long term vision for the organisation or firm driven by changing customer requirement.

It therefore follows that when there is direct involvement of top management, this will allow all decisions to be made quickly and facilitate TQM journey. Top management support is necessary to prove the availability of concrete actions.

According to Yusuf et al. (2007), the action can be taken to establish the quality policy, establish a quality management structure, attract a whole staff, disseminate information on quality, managing the change process and organize the day of quality.

Management of organisations are normally committed to ensuring that there are positive changes within their organisations. Among the commitments that need to be highlighted is to renew and update key elements of the organization, make structural changes in the organization, prepare for a new job specification, resolving conflicts to be faced, to ensure the involvement of members and create an effective plan to improve the administration of an organization. They are therefore pioneers to TQM that ushers in these changes in the organisations towards customer satisfaction and performance (Abdul Aziz, 2003).

Organizing requires top management leadership and commitment, promoting the participation of employees and providing company-wide education and training. Leadership associated with clear vision and directions can foster knowledge sharing and generate commitment (NIST, 2000). Deming (1986) urges managers to institute leadership to usher the quality transformation process. Additionally Yusuf et al. (2007) postulate that leadership must ensure the principles of quality management are implemented continually.

Idris and Ali (2008) stress management commitment as an essential element for safeguarding TQM implementation. In order to communicate quality strategy across the organization, top management should create an organizational environment that focuses on continuous improvement. Their commitment promotes the creation of clear and visible quality values, along with a management system to guide all activities of the company towards quality excellence (Yusuf et al., 2007).

There are several empirical literatures that have shown relationship between top management or leadership support and the successful implementation of TQM. Anderson et al. (1995), in developing the theory of quality management to extend the explanation provided by the Deming's Management Method, asserted that seven constructs that could capture the essence of the Deming method include visionary leadership, learning, internal and external cooperation, process management, employee fulfilment, continuous improvement and customer satisfaction.

Anderson et al. (1995) conducted an empirical study in Japanese-owned and American-owned plants and found that organizational leadership impacts the creation of organizational form and institutes organizational practices for the sake of organizational survival. The study concluded that innovation is essential for achieving quality improvements in product, processes and services. This leads to employee satisfaction, which enhances customer satisfaction and consequently the theoretical survival of the organization. TQM ushers in innovative measures towards customer satisfaction as well as employee satisfaction. The study therefore concluded that organizational leadership should always be responsible for this innovation to ensure not only the survival of the firm but the satisfaction of their employees and customers.

Pannirselvam and Ferguson (2001) studied the strength of the relationships among the various quality management constructs as well as between quality management and organizational performance. They found that leadership considerably—whether directly or indirectly—affected all system units. Moreover, authors have found that top management support is essential for quality improvement. Salaheldin (2009) concurred to this notion based on an exploratory study conducted on the specific problems that Qatar Steel Company faced in the implementation of the quality program. The study revealed that lack of support from top management was the biggest impediment to TQM implementation. When commitment and support from the top management was forthcoming, Quality Circles (QC) implementation led to an atmosphere of cooperation and brought in many positive results, like quality improvement, productivity increases and improved management style.

From the reviewed literature, it is evident that management leadership is an important factor in TQM implementation because it improves performance through influencing other TQM practices. The lack of commitment in the top management levels may lead to some problems in the process of implementing TQM. Top management is completely involved in implementing and stimulating the TQM approach. Leadership is also responsible for the product and service which is offered. The successful implementation of TQM requires effective changes in an organization's culture and it is somehow impossible without management leadership.

2.4 Employee Empowerment and TQM Implementation

Employee empowerment ensures employees are able to participate in managerial decision-making and improvement activities appropriate to their levels in the organization. Since McGregor's Theory Y first brought to managers the idea of a participative management style, employee empowerment has taken many forms, including the job design approaches and special activities such as quality of work life programs. Ultimately there is only one thing that differentiates one company from another: its people. It is not the product, the service establishments, the process, nor the secret ingredients; ultimately any of these can be duplicated. The manufacturing firms have always recognized this and it is one of the reasons for their success in world markets, they place tremendous value on the integration of people with organizational objectives, equipment and processes.

Employees in an organization may acquire new knowledge and skills by participating in TQM. As they participate, it leads to lasting changes in behaviour which results in quality improvement (Juran & Gryna, 1993). Some of the advantages of participation are that, it can alter some employees' negative attitudes, reduce conflict stemming from the working environment, instil in them a better understanding of the importance of product quality and on tribute to the establishment of an organization-wide quality culture. TQM will do little to improve the performance of an organization unless all employees embrace it, and this often requires a change in an organization's culture.

According to Chapman (2001), employee empowerment can increase the understanding of organizational policies. It involves processes such as lower levels of decision making, adopt the experience, knowledge and the ideas for the advancement of the organization. One of the prominent examples is the Your Idea Pays (YIP) program whereby employees are provided the opportunity to contribute their insightful ideas to the firm to be implemented and are rewarded for it (Harry & Kathy). It is a psychological process to develop confidence between the members of the organization and encourage them to make decisions and solve problems with each other.

Bahri et al. (2012) maintained that employee empowerment could be produced in the outer and inner self. Internal empowerment is influenced by its own commitment. It involves defining the duties of employees entrusted with any evaluated behaviour shown by the employee. Empowerment also enables management, employees share the resulting performance and member understanding of the employees will work goals. It is important because without employee empowerment, an organization

cannot function properly. It is able to provide satisfaction, especially on the quality of working life and increase employee commitment to continuous quality improvement process.

Employee empowerment is a necessary condition for the successful implementation of TQM within an organisation and it is a critical element because it galvanises employees to provide better job quality and participate more in the new business process. Moreover, it has been shown that employee empowerment results in increased productivity, customer satisfaction and increased employee satisfaction (Moono & Kasongo, 2010).

Successful implementation of a TQM environment or culture requires a committed and skilled workforce to fully participate in the activities carried out to improve the quality (Oruma, 2014). All the employees at all levels within the organisation should be encouraged to take responsibility and communicate effectively toward improving the quality at all production stages. Managers and supervisors must consider the employees as being intelligent and having effective ideas (Prakash & Smith 2004; Sayeh et al. 2005; Yang, 2004). All employees within the organisation are considered as internal customers and should be well satisfied if the organisation desires to achieve a full satisfaction for its external customers.

The preceding literature asserts that in a TQM setting, both delegation and empowerment are essential. People must share responsibility for the success or failure of their work. Employees are the strength of the organisation and are the prime contributors to its success (Subburaj, 2005). Employees can make a major contribution when an organisation wants to expand its business or increase profits. A major aspect of organisational improvement is by means of employee involvement in TQM.

2.5   Organizational Culture and TQM Implementation

Oruma (2014) defines organizational culture as a wider and deeper concept that refers to something that an organization 'is' rather than what it has. It comprises the attitudes, experiences, beliefs and values of an organization (Oruma, 2014). In support of this assertion, Salaheldin (2009) defines organisational culture as the specific collection of values and norms that are shared by people and groups in an organization and that control the way they interact with each other and with stakeholders outside the organization. Organizational values are beliefs and ideas about what kinds of goals

members of an organization should pursue and ideas about the appropriate kinds or standards of behaviour organizational members should use to achieve these goals (Salaheldin, 2009).

Once an organisation has defined its values, they beget the organizational norms, guidelines or expectations that prescribe appropriate kinds of behaviour by employees in particular situations and control the behaviour of organizational members towards one another (Black, 2003). Corporate culture in most cases is driven by the senior management of the firms. While every employee might need to subscribe to certain culture deeming appropriate for the firm, it is the senior management that may determine the corporate culture (Oruma, 2014). The senior management may wish to impose corporate values and standards of behaviour that specifically reflect the objectives of the organization (Bahri et al. 2012). However it is also important to note that an existing internal culture also exists within the workforce. Work-groups within the organization have their own behavioural quirks and interactions which, to an extent, affect the whole system (Salaheldin, 2009).

There are numerous research papers where organizational culture is seen to be one of the major causes of failure in a TQM program (Erkutlu, 2011). According to Wali and Boujelbene (2011) organisational culture defines the innovation orientation of the firm. With an orientation that is not supportive of innovations such as those proposed under TQM, there are challenges in implementation. Additionally other aspects of organisational culture such as stability orientation, results/outcome orientation, people orientation and communication orientation, will determine the adoption of TQM. Based on the expected outcomes of TQM, an organisational culture that is outcome oriented will easily adopt TQM measures (Wali & Boujelbene, 2011). It is based on this relationship that Oruma (2014) suggests that an organization must come up with quality culture that must be integrated with other dimensions of culture if it has to succeed in TQM management. Organizational quality culture influences TQM implementation process as it communicates quality practices and norms that employees are expected to engage in.

According to Jamali et al. (2010), organization quality culture affects the employee's beliefs in implementation of TQM. An organization needs to create organization culture where employees understand and are encouraged to participate in quality management programs. In support of this assertion, Sallys (2012), through his study on TQM in education in USA, found that TQM requires a change of culture which is notoriously difficult to bring about and takes time to implement. It requires

a change of attitudes and working methods. Staff needs to understand and live the message if TQM is to make an impact. Strong organizational culture is said to exist where staff respond to stimulus because of their alignment to organizational values (Moono & Kasongo, 2010). Conversely, there is weak culture where there is little alignment with organizational values and control must be exercised through extensive procedures and bureaucracy (Moono & Kasongo, 2010). Where culture is strong, people do things because they believe it is the right thing to do.

2.6   Communication and TQM implementation

Although communication is inextricably linked in the quality process, some executives still find it difficult to tell others about the plan in a way that was understood. Additionally, communication is affected by difficulty in filtering of information. As top management's vision of quality filters down through the ranks, the vision and the plan can lose both clarity and momentum. Thus, top management as well as managers and supervisors at all level serve as translators and executors of top management's directive. The ability to communicate is valuable skill at all levels from front-line supervisor to CEO.

According to Drucker (1974), a true guru of management thought and practice, "the communication gap within institutions and between groups in society has been widening steadily to a point where it threatens to become an unbridgeable gulf of total misunderstanding". Having said that, he provides an easily understood and simple approach to help communicate the strategy, vision and action plans related to TQM. Communication is defined as the exchange of information and understanding between two or more persons or groups. According to Schmidt Finnigan (1993), the factor of communication helps to give others confidence as well as provide encouragement and share the risks. Apart from that, what needs to be in communication is the willingness to listen and learn. According to Apgar (1999), a system able to compete is informative, voice operated, involving two-way communication between employees and management and between organizations with the consumer.

According to Chase (1993), good communication will result in reducing ones fear as this will allow TQM to be more approachable. According to Deming (1986) most management systems do not embrace TQM due to fear of its outcomes. Driving out fear will therefore enable the management to change towards supporting TQM implementation. Kanji et al. (1993), indicated that communication is a part of the cement that hold together the bricks of the total quality process. Good communication

and feedback systems are very important in conveying ideas to management and to incorporate the necessary change required (Sanders, 1994). According to Larkin and Larkin (1994) the best way to communicate is through: Direct Communication between employees and supervisors through face-to-face communication.

2.7   Government policies and TQM implementation

A policy is a principle or rule meant to guide decisions in order to achieve rational outcome(s) (Stone, 2008; Smith, 2002). The term policy may also refer to the process of making important organizational decisions including identification of different alternatives such as programs or spending priorities and choosing among them on the basis of the impact they will have (Smith, 2002).

Governments globally are policy making bodies. For that matter, the autonomy or decision making power of organizations is related to issues of policy (Christensen, 2001). Autonomy as a decision making power is also influenced to some extent by legal position, financial dependence and governance structures (Christensen, 2001; Verhoest, et al. 2004). The actions of organizations are also often strongly regulated by other governmental actors such as central government departments, funding, audit offices and public standards commissions (Christensen, 2001).

The study focuses on establishing the factors influencing implementation of TQM in BORL. Since the research was conducted in an organization that works within government policy frameworks, it was imperative to examine whether there is a moderating effect of the policies on the relationship between the factors affecting TQM implementation.

2.8   Empirical literature

In Malaysia, Zakuan et al. (2012) carried out a study on the critical success factors of TQM implementation in Higher Education Institutions. Basing their study on reviewing relevant literatures to success factors of TQM and its implementation in various fields and focussing on implementation, the impacts on the organization's performance and the encouraged indicators to the adoption of TQM in the organization, the study found that the success of TQM in an institution depends on its quality management strategy and on how it identifies, classifies, analyzes and reacts to the changes in quality requirements.

Salaheldin (2009) carried out a study to determine the critical success factors of TQM implementation and their effect on the organizational performance of small and medium-sized enterprises (SMEs) in the Qatari industrial sector using the structured equation modelling. The study found that the higher the degree of employee empowerment, employee training, quality suppliers, employee involvement displayed by SMEs, the greater their influences on operational performance and consequently, the higher the likelihood of the success of TQM implementation.

In Zambia, Kasongo and Moono (2010) carried out a study to identify factors that lead to successful TQM implementation on the operational and organizational performance of the Zambian tourism industry. Employing phone interviews and documentation as the data collection methods, they identified TQM factors to include the quality practices of the top management, employee involvement in the quality management system, customer focus, process and data quality management and quality tools and techniques implementation. Based on their findings, these factors significantly affected the companies' performance with respect to their internal procedures, customers, market share and the natural and social environment.

Baidoun (2003) also conducted an empirical study on the critical factors of TQM in Palestinian organizations and found 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 created quality awareness and improved implementation of quality management systems.
OPOo
In Iran, Jamali et al. (2010) carried out a study to identify and analyse TQM Critical Success Factors (CSFs) in the Iranian context. Their study employed a DEMATEL method and found that there are four major CSFs that affect implementation in the Iranian context, including: top management commitment, strategic quality planning, process management and training.

Arshida and Agil (2012) carried out a study on the critical success factors for TQM implementation in Libyan Iron and steel company. Using questionnaire Survey and semi-structured interviews to collect data, the findings of the study revealed that CSFs for implementing total quality management in Libyan Iron and steel company were: Education and Training, Supplier quality management, Employee Empowerment, Vision and Plan statement, Recognition and Reward and Customer Focus.

An empirical study conducted by Yu Chu & Wang (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, training and development, employee awareness amongst other factors are critical in implementation of quality initiatives. The finding of Wali and Boujelbene, (2011) in their study on cultural influences on TQM implementation in Tunisian firms revealed a positive relationship between good organizational culture and implementation of TQM. They found that, organizations with a culture that is open to change and that embraces new ideas and ways of doing things are more likely to succeed in introducing and implementing TQM. This is because such an environment motivates employees and supports innovation.

This was consistent with the findings of AlJalahma, R.S. (2012) that revealed that group culture helps in reducing employee's barriers, information barriers and customer related barriers that are frequently faced in the implementation of TQM while rational culture reduces top management barriers which in turn promote implementation of TQM.

The reviewed literature indicates that Top Management Commitment, Organizational Culture, Employee empowerment and involvement are critical factors in implementation of TQM. There is therefore a need for every organization that is implementing TQM to take these factors into account.

2.9   Theoretical Framework

The theoretical framework use an organised and systematic set of interrelated statements and concepts that specify the nature of relationships between the study variables, with the purpose of understanding the nature of concepts as symbolic statements describing a phenomenon or a class of phenomena (Fain, 2004).

2.9.1   TQM Practice

From the principle of total quality management (TQM) and the management theories, it is evident that TQM practice is structured towards a philosophy of waste reduction and continuous improvement in order to achieve a common goal; customer satisfaction (Adair, 2004 and Emerald, 2005). The success of continuous improvement requires people to know what task to carry out at a given time and how to do it. This further echoed some four basic governing principles that should be

involved in TQM: people based management, meeting beyond customer satisfaction, continuous improvement and fact based management.

All these principles, if well implemented, will result to improved business process. Basically to achieve this, each of the principles is translated into practice using some core concepts. The effective use of the core concepts is determined by the efficiency of Top management leadership commitment towards their drive or enthusiasm towards business excellence (Hoffher et al, 1994). The core concepts include: customer satisfaction, team work, systematic working process, consistent measurement, accommodating internalized customers; that people make quality, prevention, continuous improvement system (Adair, 2004). According to Hill (1991), TQM is based on three fundamental principles: customer orientation, process orientation and continuous improvement. Looking at some of these fundamental principles, it is most important for every stakeholder to have a purposeful understanding of TQM, its importance and positive long term effect it will have in organizational structure.

A preliminary step in TQM practice is to assess the organization's current reality. Relevant preconditions have to do with the organization's history, its current needs, precipitating events leading to TQM and existing employee quality of working life. If the current reality does not include important preconditions, TQM implementation should be delayed until the organization is in a state in which TQM is likely to succeed (Kanter, 1993).

2.9.2   Theories of TQM

TQM is a quality improvement body of methodologies that are customer-based and service oriented. It was first developed in Japan, and then spread in popularity. However, while TQM may refer to a set of customer based practices that intend to improve quality and promote process improvement, there are several different theories at work guiding TQM practices.

Deming introduced the concept of variation into organizations and also approach to problem solving, which later became known as the Deming or PDCA cycle. Deming encouraged organizations to adopt a systematic approach to problem by PDCA cycle (Plan, Do, Check, Act). He also pushed top management to become actively involved in their organizations quality improvement programmes.

Deming produced his 14 points for management, in order for people to understand and implement the necessary transformation. Deming said that the adoption of and action on, the 14 points are a signal that management intend to stay in business. These points apply to small or large organizations. Deming's 14 points to management includes: constancy of purpose, the new philosophy, cease the mass inspection and lowest price purchasing. Constantly improve systems, train every one, institute leadership, drive out fear, break down barriers, eliminate exhortations, eliminate targets, permit pride of workmanship, encourage education and top management's commitment. Deming summarised his works into what is known as system of profound knowledge. It describes four interrelated parts; Appreciation for a System which emphasizes the need for manager to understand the relationship between functions and activities. Everyone should understand that the long term aim is for everybody to gain employees, shareholders, customers, suppliers and the environment. Failure to accomplish the aim causes loss to everybody in the system.

Theory of Knowledge which explain that plans require prediction based on past experience. An example of success cannot be successfully copied unless the theory is understood. Knowledge of Statistical Theory that includes knowledge about variation, process capacity, control charts, interactions and loss function. All these need to be understood to accomplish effective leadership and teamwork.

Knowledge of Psychology is necessary to understand human interactions. Differences between people must be used for optimization by leaders. People have intrinsic motivation to succeed in many areas. Extrinsic motivators in employment may smoother intrinsic motivation. These include pay rise and performance grading, although these are sometimes viewed as a way out for managers.

Joseph Juran has explained his model of quality improvement on the basis of three universal processes which have been popularly named Juran Trilogy. He focused on quality controls, quality planning and quality improvement. According to Juran quality control is the integral part of management control. He believes that quality does not happen by accident, it must be planned and that quality planning is part of the trilogy of planning, control and improvement.

Juran argues that the key elements in implementing an organization's wide strategic quality planning are intern seen as identifying customers and their needs, establishing optimal quality goals, creating

measurements of quality, planning processes capable of meeting quality goals under operating conditions and producing continuing results in improved market share, premium prices and a reduction of error rates in the office and factory.

Feigenbaum is the originator of total quality control. He sees quality control as a business method rather than technically and believes that quality has become the single most important force leading to organizational success and growth. He strove to move away from the then primary concern with technical methods of quality control, to quality control as a business method. He emphasized the administrative view point and considered human relations as a basic issue in quality control activities. He stressed that quality does not mean best but best for the customers and the selling price. The word control in quality represents a management tool with 4 steps namely: setting quality standards, appraising conformance to these standards, acting when standards are exceeded and planning for improvements in the standards.

This study is anchored on these three theories in that: it takes all the organizations' systems to have a successful implementation of TQM through systematic approach to problem solving, planning and customer focus.

2.10   Conceptual framework

A research conceptual framework is the basic structure on which a study is built and, inter alia, it provides the grounds for research (Bell, 2005). The framework also facilitates understanding of the study's findings for practitioners and researchers. In fact, the construct is the research study's frame of reference and it provides a satisfactory foundation on which the study stands. The framework supports the research problem, the questions arising from the problem and thus leads to the formation of hypotheses.

The objective of this study is to assess the CSFs to the implementation of TQM in edible oil manufacturing firms in Kenya. The study's conceptual framework therefore provides the means to demonstrate the aspects contributing to successful implementation of TQM. In the literature on TQM implementation, conceptually and in practice, four major factors are identified: top management leadership commitment, employee empowerment, communication and organisational culture, all of which may coexist in the same setting (Salaheldin, 2009). Top management leadership commitment

refers to the ability of the decision makers in the organisation to recognise and support the implementation of TQM in their organisations. This support is provided by the leaders when they participate, allocate resources, monitor and recognize TQM implementation.

Employee empowerment on the other hand includes allowing employees to get involved in the TQM implementation process by providing them with both structural and psychological support they need to understand and appreciate the implementation of TQM.

Organisational culture on the other hand refers to the set of principles, values, beliefs, common understanding or thinking or norms for behaviour that are shared by members of the firms or organisations.

Communication is logical, rational and persuasive and it is especially useful in industrial relations and organizational change. There is strong relationship between good communication and successful quality implementation. Although communication has always been a key requirement of good management, it's even more important in the implementation of Total Quality Management. TQM depends on communication that flows in all direction: up, down and external.

The study, based on the reviewed literature, hypothesizes that successful implementation of TQM is determined by the above mentioned top management leadership, employee empowerment, communication and organisational culture aspects.

Figure 1 presents the conceptual framework depicting the relationship between top management leadership, employee empowerment, communication and organisational culture (independent variables) government policies (moderating variable) and successful implementation of TQM (dependent variable).

Figure 1: Conceptual framework

Independent Variables	Moderating Variable	Dependent Variable

Top Management Leadership Commitment

- Participation
- Monitoring
- Resource allocation

Employee Empowerment

- Involvement in decision making
- Recognition
- Access to support
- Access to opportunities

Organisational Culture

- Group Culture
- Hierarchical Culture
- Developmental Culture
- Rational Culture

Communication

- Two-way communication (for example face-face communication)
- Direct Communication between employees and supervisors

Government Policy

- Labour Policy
- Accreditation (KEBS)

Implementation of TQM

- Customer satisfaction

- Customer focus

•Waste reduction

- Product and service quality

- Productivity

2.11 Research gaps

Although the reviewed literature conclusively identified the CSFs to TQM implementation, each study had distinct results. None of the studies exhaustively identified all the CSFs of TQM implementation. Wali and Boujelbene, (2011) concluded that the studies on the CSFs to TQM implementation elicit different results in different settings. They therefore recommend that further studies be carried under different settings to obtain conclusive conceptualizations on the CSFs under such settings. Carrying out this study in an edible oil manufacturing firm in Kenya will help identify the unique CSFs specific to this industry.

Finally, although studies revealed in the CSFs affecting TQM implementation in various settings, the general validity of these studies are uncertain. Further studies are therefore recommended to explore the general relevance of the findings in these studies in the context of manufacturing firms in Kenya.

RESEARCH METHODOLOGY

3.1   Introduction

This chapter presents the research methodology of the study. It highlights the research design, location of the study, target population, sampling procedure and sample size, the research instruments, validity and reliability of the research instruments, data collection, data analysis techniques, logistical and ethical considerations.

3.2   Research Design

The study used cross-sectional descriptive survey research design to assess the factors influencing implementation of TQM in edible oil manufacturing firms in Kenya. The design was suitable for the study because it attempted to determine the current status of the phenomenon. Orodho (2005) affirms that surveys are useful in describing opinions, beliefs and knowledge of certain phenomenon in society. This study therefore, seeks to find out and analyze the opinions, attitudes, beliefs and knowledge on the factors influencing implementation of TQM in BORL.

3.3   Target Population

The population for the study comprised of the employees of Bidco oil refinery limited. Information available from the firms' records indicates that BORL has a total of 2900 employees. The target population comprised top level managers, the middle level managers, supervisors and Operative staff.

3.4   Sample size and Sampling Procedure

The Fishers formula was used to determine the appropriate sample size of the study. This is because the target population consists of a large number of individuals participating in the study. Mugenda and Mugenda (2008) affirm that a research should take as big a sample as possible for good results. The researcher will assume 95% desired level of confidence, which is equivalent to standardized normal deviate value of 1.96 and an acceptable margin of error of 5% (standard value of 0.05). The sample size was derived as follows:

$n = Z^2pq/d^2$

Where:

n = the desired sample size (if target population is large)

z = the standard normal deviate at the required confidence level.

P = the proportion in the target population estimated to have characteristic being measured.

q = 1-p

d = the level of statistical significance set.

Assuming 50% of the population have the characteristics being measured, q=1-0.3

Assuming we desire accuracy at 0.05 level. The Z-statistic is 1.96 at this level

Therefore n= $(1.96)^2(.5)$ $(.5)/(.05)^2$ =**384**

The study will use stratified random sampling and purposive sampling techniques. Stratified random sampling technique was used to select a representative sample from the target population. The strata was the groups of the respondents within the target population (category of employees). A sample was drawn from each stratum as shown in table 1.

Table 3.1: Sample Size Determination

Stratum	Population	Sample
Top Level Managers	50	10
Middle Level Managers	406	60
Supervisors	860	104
Operative staff	1584	210
TOTAL	2900	384

The top level management was selected through purposive sampling. This sampling method will enable the researcher chose persons to provide in-depth information on factors influencing implementing TQM in BORL.

3.5   Data Collection Instruments

The study collected both primary and secondary data. Questionnaires and interview guide was used to collect primary data. Secondary data was collected through document reviews and analysis. Sources of secondary data include published books, e-journals and manufacturing industry magazines.

3.5.1   Questionnaire

The questionnaire was used to obtain specific information on the proposed area of study from the selected categories of employees. It was designed to contain both open and close-ended questions. The questionnaire was for the top level managers, middle level managers, supervisors and operative staff. Each questionnaire was divided into four sections. Section A will have questions that aim at colleting demographic information from respondent's such as age, gender and education/training level. Section B will focus on the top management leadership commitment. Section C will focus on the employee empowerment. Section D will focus on organizational culture while section E will focus on government policy. Section E and F will focus on communication and government policy respectively. The respondents were required to respond to items given on Likert scale of 1-5, where 1 is strongly disagree and 5 is strongly agree.

3.5.2   Interview Guide for Top level managers

The interview was carried out with preset open ended questions. The guide is a useful tool that offers flexibility during an interview. It allows for departure from the guide questions as long as the desired results are achieved (Silverman, 2013).

3.6   Pre-testing of the Instrument

A pilot test (pre-test) was carried out on small scale trial run of the research instrument to discover errors and also to act as a tool for extra training of the research team. A preliminary test was done on the data collection tools and procedures to identify likely problems. The researcher took necessary actions before the actual data collection exercise. This test was conducted at Kapa oil refineries, where thirty questionnaires were administered to the employees in the respective departments. The filled questionnaires were checked for comprehensiveness and consistency.

3.7   Validity of the Instrument

Validity is the extent to which an instrument measures what it is supposed to measure and performs as it is designed to perform. To test content validity (extent to which the sample is a representative of the population), experts opinion were sought. The research items or questions in the questionnaire were developed to represent dimensions of each variable in the research.

3.8   Reliability of the Instrument

Reliability refers to a measure of the degree to which research instruments yield consistent results (Mugenda & Mugenda, 2008). The research instruments was tested and re-tested in Kapa Oil Refineries limited. Results of the current study showed Cronbach's Alpha of over .7 for all the studied parameters hence the study instrument was reliable. Cronbach's Alpha value of .7 and above shows reliability of the study instrument (Kimberlin and Winterstein, 2008).

3.9   Data Collection Procedure

The researcher interacted with respondents to build rapport then personally administered the questionnaire. The researcher collected the questionnaires within a period of 5 days. The completed questionnaires was hand scored. Personal interviews was conducted face to face with top managers, tape recorded and transcribed verbatim. The interviews took one hour and, depending on availability of respondents, was conducted within a period of five days. The researcher sought authorization from University of Nairobi and then obtained a permit from the NACOSTI and Ministry of Industrialization before going to the field.

3.10   Data Analysis Techniques

Data analysis and presentation was qualitative and quantitative in nature. Qualitative data obtained from questionnaires and interviews was edited and classified into groups with common themes. The content within the themes was then analyzed guided by the research objectives. The SPSS was used to code and organize the data. Quantitative data was summarized into descriptive statistics of, percentages and frequencies. Computation of frequencies was used as a statistical method of organizing raw data into meaningful way to ease interpretation. The results was presented in the form of tables.

3.11   Operational Definition of Variables

Table 3.2: Operational Definition of Variables

Research Objective	Independent Variable	Indicators	Measurement	Measuring Scale	Tools of Analysis
To determine influence of Top	Top management/ leadership	− Participation − Resource allocation	Five point Likert scale where	− Nominal − Ordinal	− Descriptive

Research Objective	Independent Variable	Indicators	Measurement	Measuring Scale	Tools of Analysis
management leadership commitment on the implementation of TQM in BORL	commitment	– Monitoring	'1=Very small extent' to 5= 'To a very large extent'		
To identify the effect of employee empowerment on the implementation of TQM in BORL	Employee empowerment	– Access to support – Access to opportunities – Involvement in decision making – Recognition	Five point Likert scale where '1=Strongly disagree to 5= 'Strongly agree'	– Nominal – Ordinal	– Descriptive
To establish the influence of organization culture on the implementation of TQM in BORL	Organizational culture	– Group culture – Development culture – Rational culture – Hierarchical culture	Five point Likert scale where '1=Strongly disagree to 5= 'Strongly agree'	– Nominal – Ordinal	– Descriptive
To determine the influence of communication on the implementation of TQM in BORL	Communication	– Two-way communication (for example face-face communication) – Direct Communication between employees and supervisors	Five point Likert scale where '1=Strongly disagree to 5= 'Strongly agree'	– Nominal – Ordinal	– Descriptive
	Implementation of TQM	– Customer satisfaction – Product and quality service – Productivity improvement – Waste reduction	Five point Likert scale where '1=Strongly disagree to 5= 'Strongly agree'	– Nominal – Ordinal	– Descriptive

3.12 Ethical Considerations

Integrity of the research was ensured by informing respondents on the nature and purpose of the research. Confidentiality of data and respondents was maintained. The researcher ensured confidentiality by assuring the respondents that the study was intended for academic purposes and not public. Any clarifications was done prior to filling the questionnaire.

CHAPTER FOUR

DATA ANALYSIS,PRESENTATION, INTERPRETATION AND DISCUSSION

4.1 Introduction

This chapter covers data analysis presentation and interpretation of the findings. The main objective of this study was to establish the factors influencing implementation of TQM in manufacturing firms in Kenya a case of Bidco Oil Refineries Limited (BORL).

4.2 Reliability Test Results

Results of the current study showed Cronbach's Alpha of over .7 for all the studied parameters hence the study instrument was reliable. Cronbach's Alpha value of .7 and above shows reliability of the study instrument (Kimberlin and Winterstein, 2008).

Table 4.1: Reliability Test for the Study Instrument

Variable	No of items	Cronbach's Alpha
Top Management Commitment	9	.827
Employee Empowerment	10	.744
Organisational Culture	10	.840
Communication	8	.864
Implementation of TQM	5	.794

4.3 Response Rate

This section presents research results and interpretation. A total of 311 respondents completely filled the questionnaires making a response rate of 80.9%.

4.4 Demographic Presentations

The study sought to establish gender distribution of the 311respondents; the researcher asked the respondents to specify their gender and the response was summarized as shown in Table 4.2

Table 4.2: Distribution by Gender of the Respondent

Gender	Frequency	Percent
Male	127	40.8
Female	184	59.2
TOTAL	311	100

Table 4.2 presents the gender of the respondents who participated in the study. Majority of the respondent (59.2%) were females whereas 40.8% of the respondent were males, this is an indication that both genders were involved in this study and thus the finding of the study did not suffer from gender bias.

Table 4.3: Age of Respondents

The study sought to establish age of the 311 respondents.

Age	Frequency	Percent
16-24	28	9.2
25-34	101	32.7
35-44	126	40.8
45-54	31	10.2
55 and above	22	7.1
TOTAL	311	100

Most of the respondents (40.8%) were aged 35 to 44 years while the minority were above 50 years of age. Most of the study respondents were middle aged indicating that the office employs more young people than the old who are more energetic and can perform more than the old. These results show that the study sample was sensitive to the age of the respondents capturing opinions across all the age groups

Table 4.4: Years of Service

The study sought to establish the years of service to the firm by the 311 respondent.

Year	Frequency	Percent
Below 1	2	6.7
2-6	134	43.3
7-11	114	36.7
Above 11	21	13.3
TOTAL	311	100

Most of the study respondents (43.3%) had 2-6 years of experience in their current job while the minority (6.7%) had below 1 year of experience. The results show that the office had majority of staff with over six years of experience who could clearly understand the purpose of the study hence giving reliable information.

Table 4.5: Level of Management

The study sought to establish the level of management of the 311 respondents.

Position	Frequency	Percent
Top management	7	2.4
Middle level managers	49	15.9
Supervisors	79	25.5
Operative staff	174	56.2
TOTAL	311	100

More than half of the study participants (56.2%) were operative staffs while the minority were in top management (2.4%). These showed that the study sought opinions from employees across all levels of operation.

4.5 Implementation of TQM

This section intended to evaluate implementation of TQM. To measure implementation of TQM respondents were presented with five statements on Likert scale and asked to state how much they agreed with each statement. The responses ranged from 1-strongly disagree through 3-neutral to 5-strogly agree. The responses were averaged per statement and the results displayed in the Table 4.6.

Most of the respondents agreed that TQM has led to improved customer satisfaction (82%) while another 64% agreed that TQM implementation has led to improved customer focus. Additionally, most of the respondents (64%) agreed that TQM implementation has improved our products and services and another 69% agreed that TQM implementation has improved productivity. The view that TQM implementation has led to waste reduction was supported by 73% of the respondents.

Table 4.6: Implementation of TQM

	SD	D	N	A	SA	M	Std. Dev.
TQM has led to improved customer satisfaction	0%	0%	18%	34%	48%	4.30	.763
TQM implementation has led to improved customer focus	0%	13%	23%	27%	37%	3.87	1.061
TQM implementation has improved our products and services	0%	22%	14%	28%	36%	3.77	1.165
TQM implementation has improved our productivity	0%	20%	11%	31%	38%	3.86	1.140
TQM implementation has led to waste reduction	9%	0%	18%	27%	46%	4.00	1.218

The results of the current study agree with those of Bahri *et al*. (2012), who observed that the general 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.

4.6 Influence of Top Management Leadership Commitment on Implementation of TQM

To measure influence of Top management leadership commitment the implementation of TQM, respondents were presented with nine statements on Likert scale and asked to state how much they agreed with each statement. The responses ranged from 1- very small extent through 3-neutral to 5-very large extent. The responses were averaged per statement and the results displayed in Table 4.7.

Most of the respondents (64%) agreed that top management participates in ensuring quality delivery of services and products and another 60% agreed that top management do not just delegate duties on ensuring quality service delivery but also get involved as well. The view that top management of the organization takes part at all stages and levels in the quality management programs was agreed by 51% of the respondents. On the contrary, most of the respondents (67%) disagreed that resources required in implementing quality initiatives are always made available. Most of the respondents (81%) agreed that their organization has a formal quality management structure and another 73% agreed that there their organization has an organizational quality mission and policies.

Employee's ideas on ways to improve quality in the organization are welcomed by the top management was supported by 86% of the respondents while another 55% agreed that top management of their organization provides a leadership role in quality management initiatives. Top management monitors TQM activities in the organization was supported by 67% of the respondents.

Table 4.7: Influence of Top management leadership Commitment the Implementation of TQM

	SD	D	N	A	SA	M	Std. Dev.
Top management participates in ensuring quality delivery of services and products	7%	11%	19%	51%	13%	3.53	1.06
Top management do not just delegate duties on ensuring quality service delivery but also get involved as well.	7%	17%	16%	40%	20%	3.51	1.18
Top management of your organization takes part at all stages and levels in the quality management programs	13%	10%	27%	34%	17%	3.31	1.24
Resources required in implementing quality initiatives are always made available	20%	17%	30%	20%	13%	2.88	1.30

	SD	D	N	A	SA	M	Std. Dev.
Your organization has a formal quality management structure	7%	4%	9%	57%	24%	3.86	1.05
Your organization has an organizational quality mission and policies	4%	4%	20%	60%	13%	3.76	.86
Employee's ideas on ways to improve quality in the organization are welcomed by the top management	7%	4%	3%	40%	46%	4.17	1.10
Top management of your organization provides a leadership role in quality management initiatives	10%	18%	17%	42%	13%	3.32	1.19
Top management monitors TQM activities in your organization	7%	20%	6%	47%	20%	3.54	1.20

Findings of the current study agree with those of NIST (2000) that documented that leadership associated with clear vision and directions can foster knowledge sharing and generate commitment. Further the findings also support those of Deming (1986) who observed that managers through instituting leadership usher the quality transformation process. Additionally, the findings are in line with those of Yusuf *et al.* (2007) who postulated that leadership must ensure the principles of quality management are implemented continually. Furthermore, the findings support those of Idris and Ali (2008) who stressed that top management commitment as the essential element for safeguarding TQM implementation and their commitment promotes the creation of clear and visible quality values, along with a management system to guide all activities of the company towards quality excellence.

4.7 Influence of Employee Empowerment on the Implementation of TQM

To measure influence of employee empowerment on the implementation of TQM respondents were presented with ten statements on Likert scale and asked to state how much they agreed with each statement. The responses ranged from 1-strongly disagree through 3-neutral to 5-strogly agree. The responses were averaged per statement and the results displayed in Table 4.8.

Most of the respondents (70%) agreed that they receive feedback and guidance from superiors, peers and subordinates on TQM implementation. The view that work environment acknowledges employees achievements and success in TQM implementation was agreed by 77% of the respondents while 61% disagreed that co-workers value other employees' contribution in TQM implementation.

The view that through TQM implementation their job offers opportunity to participate in interesting projects, with satisfying degree of challenge and opportunities for increased responsibilities was disagreed by 71% of the respondents. Most of the respondents (57%) agreed that there are chances for training and career development in the organization during TQM implementation while another 57% agreed that through TQM implementation their job may offer chances to grow and be promoted within the organization. The view that employee's ideas on ways to improve quality in the organization are welcomed by the top management was agreed by 70% of the respondents while another 70% agreed that employees are allowed to make decisions on the issues affecting their workplace. Further, most of the respondents (76%) agreed that employees are delegated duties in TQM implementation to get their input and contribution and another 80% agreed that employees are recognized for the good work they have done.

Table 4.8: Influence of Employee Empowerment on the Implementation of TQM

	SD	D	N	A	SA	M	Std. Dev.
I receive feedback and guidance from superiors, peers and subordinates on TQM implementation	4%	4%	23%	57%	13%	3.72	3.72
The work environment acknowledges employees achievements and success in TQM implementation	7%	0%	16%	51%	26%	3.90	3.90
Co-workers value other employees' contribution in TQM implementation	20%	31%	10%	27%	12%	2.80	2.80
Through TQM implementation my job offers opportunity to participate in interesting projects, with satisfying degree of challenge and opportunities for increased responsibilities	34%	24%	14%	23%	6%	2.43	2.43
There are chances for training and career development in the organization during TQM Implementation	10%	4%	30%	47%	10%	3.44	3.44
Through TQM implementation my job may offer chances to grow and be promoted within the organization	7%	0%	31%	45%	17%	3.65	.99
Employee's ideas on ways to improve quality in the organization are welcomed by the top management	4%	3%	24%	50%	20%	3.79	.91
Employees are allowed to make decisions on the issues affecting their workplace.	4%	7%	20%	41%	29%	3.85	1.03
Employees are delegated duties in TQM implementation to get their input and contribution	4%	4%	17%	50%	26%	3.92	.94
Employees are recognized for the good work they have done	4%	3%	14%	61%	19%	3.89	.87

The results agree with those of Juran & Gryna (1993) who documented that employees in an organization may acquire new knowledge and skills by participating in TQM which leads to lasting changes in behaviour and thus resulting in quality improvement. The findings also support those of Chapman (2001), who observed that employee empowerment can increase the understanding of organizational policies. Moreover, the findings are in line with those of Moono & Kasongo (2010) who proofed that employee empowerment results in increased productivity, customer satisfaction and increased employee satisfaction. Further, the findings are in line with those of Oruma (2014), who documented that successful implementation of a TQM environment or culture requires a committed and skilled workforce to fully participate in the activities carried out to improve the quality.

4.8 Influence of Organisation Culture on the Implementation of TQM

To measure influence of organisation culture on the implementation of TQM, respondents were presented with ten statements on Likert scale and asked to state how much they agreed with each statement. The responses ranged from 1-strongly disagree through 3-neutral to 5-strogly agree. The responses were averaged per statement and the results displayed in Table 4.9.

Most of the respondents (80%) agreed that employees are empowered in their organization while 81% agreed that their organization has a flexible organizational culture. The view that there is cohesion among employees in the organizations was disagreed by 64% of the respondents while 72% agreed that employees are encouraged to participate in decision making in their organization. Most of the respondents (76%) agreed that there is in place an organizational culture that is flexible to internal changes in their organization while another 64% agreed that their organization has an organizational culture that accommodates external changes. Most of the respondents (59%) agreed that their organization has an organizational culture that focuses on control while another 66% agreed that their organization has an organizational culture that focuses on stability in the organization. Most of the respondents (66%) agreed that their organization has an organizational culture that encourages internal efficiency and another 52% agreed that their organization has an organizational culture that encourages adherence to company policy and the law.

Table 4.9: Influence of Organisation Culture on the Implementation of TQM

	SD	D	N	A	SA	M	Std. Dev.
Employees are empowered in your organization	4%	3%	14%	61%	19%	3.89	.87
Your organization has a flexible organizational culture.	7%	0%	13%	51%	30%	3.97	1.01
There is cohesion among employees in your organizations	10%	17%	37%	26%	10%	3.08	1.11
Employees are encouraged to participate in decision making in your organization	7%	14%	7%	46%	26%	3.71	1.20
There is in place an organizational culture that is flexible to internal changes in your organization.	4%	4%	17%	53%	23%	3.89	.92
Your organization has an organizational culture that accommodates external changes.	4%	7%	26%	47%	17%	3.67	.95
Your organization has an organizational culture that focuses on control.	4%	14%	24%	42%	17%	3.55	1.04
Your organization has an organizational culture that focuses on stability in the organization.	4%	7%	23%	60%	6%	3.58	.85
Your organization has an organizational culture that encourages internal efficiency.	4%	21%	32%	34%	10%	3.25	1.01
Your organization has an organizational culture that encourages adherence to company policy and the law.	4%	17%	27%	36%	16%	3.43	1.06

These findings support those of Wali & Boujelbene (2011) who observed that based on the expected outcomes of TQM, an organisational culture that is outcome oriented will easily adopt TQM measures. The findings further support those of Jamali *et al*. (2010), who documented that organization quality culture affects the employee's beliefs in implementation of TQM. Additionally, the findings support those of Sallys (2012), who through his study on TQM in education in USA, found that TQM requires a change of culture which is notoriously difficult to bring about and takes time to implement.

4.9 Influence of Communication on the Implementation of TQM

To measure influence of communication on the implementation of TQM implementation, respondents were presented with eight statements on Likert scale and asked to state how much they agreed with

each statement. The responses ranged from 1-strongly disagree through 3-neutral to 5-strogly agree. The responses were averaged per statement and the results displayed in Table 4.10.

Most of the respondents (88%) disagreed that there are well developed Communication system in their organization and another 75% disagreed that there is free flow of quality management information between departments in their organization. The view that there is free flow of quality management information from management to employees in the organization was disagreed by 91% of the respondents while 87% disagreed that there is free flow of quality management information from employees to management in their organization. The view that there is free flow of quality management information between employees in the organization was disagreed by 76% of the respondents while 68% disagreed that there is a well-developed feedback mechanism in their organization. Organization giving timely response to customer quality complaints was disagreed by 74% of the respondents while another 87% disagreed to there being a communication policy.

Table 4.10: Influence of Communication on the Implementation of TQM

	SD	D	N	A	SA	M	Std. Dev.
There are well developed Communication system in your organization	2%	38%	48%	12%	0%	2.71	.71
There is free flow of quality management information between departments in yours organization	6%	14%	55%	24%	1%	2.99	.82
There is free flow of quality management information from management to employees in your organization	2%	31%	58%	9%	0%	2.76	.66
There is free flow of quality management information from employees to management in your organization	1%	29%	56%	13%	0%	2.81	.68
There is free flow of quality management information between employees in your organization	5%	22%	48%	24%	0%	2.93	.83
There is a well-developed feedback mechanism in your organization	4%	23%	41%	31%	1%	3.02	.86
Your organization gives timely response to customer quality complaints.	3%	22%	49%	25%	1%	2.99	.79
Does your organization has a communication policy	1%	29%	56%	13%	0%	2.81	.68

Results of the current study showed element of poor communication in the organisation which could be a hindrance to implementation of TQM. These findings support those of Chase (1993), who documented that good communication will result in reducing ones fear as this will allow TQM to be more approachable. The findings are also in line with those of Deming (1986) who observed that most management systems do not embrace TQM due to fear of its outcomes and poor communication. The findings support those of Kanji et al. (1993), who indicated that communication is a part of the cement that hold together the bricks of the total quality process. Additionally, the study findings agree with those of Sanders (1994) who noted that good communication and feedback systems are very important in conveying ideas to management and to incorporate the necessary change required in implementation of TQM.

4.10 Inferential Statistics

Inferential statistics makes inferences and predictions about a population based on a sample of data taken from the population in question.

4.10.1 Correlation Analysis

Pearson product-moment correlation analysis was used to establish linear relationship between the independent variables and the dependent variable. The correlation coefficient ranges between -1 to +1. A coefficient of +1.0 means that there is perfect positive correlation between the variables indicating that increase in independent variable will result to an increase in dependent variable by the same measure. A coefficient of -1.0 means that there is perfect negative correlation between the variables indicating that increase in independent variable will result to decrease in dependent variable by the same measure. A coefficient of zero means there is no relationship between the two items and that a change in the independent item will have no effect in the dependent item.

Table 4.11: Correlations Matrix

		Top Management Commitment	Employee Empowerment	Organizational Culture	Communication	Implementation Of TQM
Top Management Commitment	Pearson Correlation	1	.450	.498	.656	.665
	Sig. (2-tailed)		.000	.000	.000	.000
	N	88	88	88	88	88
Employee Empowerment	Pearson Correlation	.450	1	.491	.580	.215
	Sig. (2-tailed)	.000		.000	.000	.034
	N	88	88	88	88	88
Organizational Culture	Pearson Correlation	.488	.491	1	.644	.375
	Sig. (2-tailed)	.000	.000		.000	.000
	N	88	88	88	88	88
Communication	Pearson Correlation	.656	.580	.644	1	.341
	Sig. (2-tailed)	.000	.000	.000		.001
	N	88	88	88	88	88
Implementation Of TQM	Pearson Correlation	.665	.215	.375	.341	1
	Sig. (2-tailed)	.665	.034	.000	.001	
	N	.000	88	88	88	88

Table 4.7 shows that there is a positive association between Implementation of TQM and Top Management Commitment as shown by a correlation coefficient of 0.665 and a p-value of less .001. The p-value is less than 0.05 and hence the association was significant. There is a positive relationship between Implementation of TQM and Employee Empowerment with a correlation coefficient of 0.215 and a p-value of .034 which is less than 5%. There is a positive relationship between Implementation of TQM and Organisational Culture with a correlation coefficient of 0.375 and a p-value less than .001 which is less than 5%. There is a positive relationship between Implementation of TQM and Communication with a correlation coefficient of 0.341 and a p-value of .001 which is less than 5%.

4.10.2 Regression Analysis

Multiple linear regression analysis was conducted to predict Implementation of TQM. The independent variables for this study included; Communication, Organizational Culture, Top Management Commitment and Employee Empowerment.

An R^2 value of .543 indicates that the model can explain 54.3% of the variation in Implementation of TQM. Hence Communication, Organisational Culture, Top Management Commitment and Employee Empowerment can explain 54.3% of the variation in Implementation of TQM while other factors not studied in this project can explain 45.7%.

Table 4.12: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.737[a]	.543	.521	.29162

b. Dependent Variable: Implementation of TQM

Table 4.13 displays ANOVA results that test the significance of the R^2 for the model. An F statistics of 4.259 with a p-value less than the conventional 5% indicates that the overall model was significant at 95% confidence level.

Table 4.13: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.322	4	.830	4.259	.002[a]
	Residual	16.402	84	.195		
	Total	19.723	88			

a. Predictors: (Constant), Communication , Employee Empowerment, Organisational Culture, Top Management Commitment

b. Dependent Variable: Implementation of TQM

Table 4.23 displays the coefficient of the regression model of implementation of TQM on Communication, Organisational Culture, Top Management Commitment and Employee Empowerment. From the results of the regression model the coefficients for Employee Empowerment, Organisational Culture, Top Management Commitment and Communication were significant at 5% level of significance. Therefore, Implementation of TQM can be predicted using Employee Empowerment, Organisational Culture, Top Management Commitment and Communication in the following equation:

$$Y = 1.22 + .425X_1 + .362X_2 + .211X_3 + .163X_4$$

Where;

Y is Implementation of TQM

X_1 is the Employee Empowerment

X_2 is the Organisational Culture

X_3 is the Top Management Commitment

X_4 is the Communication

Table 4.14: Coefficients

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	1.220	.261		4.682	.000
Employee Empowerment	.425	.067	.504	6.325	.000
Organisational Culture	.362	.057	.104	6.351	.000
Top Management Commitment	.211	.069	.124	3.058	.008
Communication	.163	.057	.105	2.859	.019

The above regression equation revealed that holding Organisational Culture, Top Management Commitment and Communication to a constant zero, a unit increase in Employee Empowerment would lead to .425 increase in Implementation of TQM. On the other hand, holding Organisational Culture, Top Management Commitment and Communication to a constant zero, a unit increase in Organisational Culture would lead to .362 increase in Implementation of TQM.

These findings support those of a study conducted by Kasongo and Moono (2010) that revealed that one crucial reason why organizations are unable to effectively implement TQM is because of a "lack of commitment of top leadership to sharing organizational knowledge or there are too few role models who exhibit the desired behaviour". The study also support that of Baidoun (2003) who conducted an empirical study on the critical factors of TQM in Palestinian organizations and found 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 created quality awareness and improved implementation of quality management systems.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of findings, conclusion, recommendations made and suggestion for future studies.

5.2 Summary

This study was aimed at studying factors influencing implementation of TQM. A questionnaire was developed and issued to respondents who filled them. The questionnaires were then collected for analysis. 384 questionnaires were given out and out of these, 311 were successfully filled and collected for analysis. Interviews were also carried out with the top management of BIDCO Oil Refineries Ltd. This showed a response rate of 80.9%. 184 respondents (59.2%) were female while the remaining 127 respondents (40.8%) were males. The majority of the respondents were females. The study sought to establish the age of the respondents where most of the respondents (40.8%) were aged 35 to 44 years while the minority were above 50 years of age. Most of the study respondents were middle aged indicating that the office employs more young people than the old who are more energetic and can perform more than the old. The study sought to study the years of service of the employee where most of the study respondents (43.3%) had 2-6 years of experience in their current job while the minority (6.7%) had below 1 year of experience. The results show that the office had majority of staff with over six years of experience who could clearly understand the purpose of the study hence giving reliable information. This study sought to establish the level of management where more than half of the study participants (56.2%) were operative staffs while the minority were in top management (2.4%). These showed that the study sought opinions from employees across all levels of operation.

The study sought respondents opinion on top management leadership commitment where most of the respondents agreed that top management participates in ensuring quality delivery of services and products and that top management do not just delegate duties on ensuring quality service delivery but also get involved as well. The view that top management of the organization takes part at all stages and levels in the quality management programs was agreed by more than half of the respondents. On

the contrary, most of the respondents disagreed that critical resources required in implementing quality initiatives are always made available. Most of the respondents agreed that their organization has a formal quality management structure and that there their organization has an organizational quality mission and policies. Employee's ideas on ways to improve quality in the organization are welcomed by the top management was supported by most of the respondents while more than half agreed that top management of their organization provides a leadership role in quality management initiatives. Top management monitors TQM activities in the organization was supported by most of the respondents. Results of correlation analysis showed that there was positive linear correlation between Top Management Commitment and Implementation of TQM. The results of regression analysis showed that Top Management Commitment coefficient was significant in the model and thus Top Management Commitment affects Implementation of TQM.

The second factor was employee empowerment where most of the respondents agreed that they receive feedback and guidance from superiors, peers and subordinates on TQM implementation. The view that work environment acknowledges employees achievements and success in TQM implementation was agreed by most of the respondents while majority disagreed that co-workers value other employees' contribution in TQM implementation. The view that through TQM implementation their job offers opportunity to participate in interesting projects, with satisfying degree of challenge and opportunities for increased responsibilities was disagreed by most of the respondents. Most of the respondents agreed that there are chances for training and career development in the organization during TQM implementation and that through TQM implementation their job may offer chances to grow and be promoted within the organization. The view that employee's ideas on ways to improve quality in the organization are welcomed by the top management was agreed by most of the respondents while majority agreed that employees are allowed to make decisions on the issues affecting their workplace. Further, most of the respondents agreed that employees are delegated duties in TQM implementation to get their input and contribution and that employees are recognized for the good work they have done.

Results of correlation analysis showed that there was positive linear correlation between Employee Empowerment and Implementation of TQM. The results of regression analysis showed that Employee Empowerment coefficient was significant in the model and thus Employee Empowerment affects Implementation of TQM.

The third factor in the study was organizational culture. Most of the respondents agreed that employees are empowered in their organization and that their organization has a flexible organizational culture. The view that there is cohesion among employees in the organizations was disagreed by most of the respondents while majority agreed that employees are encouraged to participate in decision making in their organization. Most of the respondents agreed that there is in place an organizational culture that is flexible to internal changes in their organization and that their organization has an organizational culture that accommodates external changes. Most of the respondents agreed that their organization has an organizational culture that focuses on control and that their organization has an organizational culture that focuses on stability in the organization. Most of the respondents agreed that their organization has an organizational culture that encourages internal efficiency and that their organization has an organizational culture that encourages adherence to company policy and the law. Results of correlation analysis showed that there was positive linear correlation between organisation culture and Implementation of TQM. The results of regression analysis showed that organisation culture coefficient was significant in the model and thus organisation culture affects Implementation of TQM.

The last factor looked at in the study was communication. Most of the respondents disagreed that there are well developed communication system in their organization and majority disagreed that there is free flow of quality management information between departments in their organization. The view that there is free flow of quality management information from management to employees in the organization was disagreed by most of the respondents while majority disagreed that there is free flow of quality management information from employees to management in their organization. The view that there is free flow of quality management information between employees in the organization was disagreed by most of the respondents while majority disagreed that there is a well-developed feedback mechanism in their organization. Organization giving timely response to customer quality complaints was disagreed by most of the respondents while majority disagreed to there being a communication policy.

Results of correlation analysis showed that there was positive linear correlation between Communication and Implementation of TQM. The results of regression analysis showed that Communication coefficient was significant in the model and thus Communication affects Implementation of TQM.

5.3 Conclusions

The study was aimed at establishing the factors influencing implementation of TQM in manufacturing firms in Kenya. It was guided by four specific objectives including; To determine the influence of Top management leadership commitment the implementation of TQM in BORL; To establish the influence of employee empowerment on the implementation of TQM in BORL; To establish the influence of organisation culture on the implementation of TQM in BORL; and To determine the influence of communication on the implementation of TQM in BORL.

5.3.1 Influence of Top Management Leadership Commitment on Implementation of TQM

Results of correlation analysis showed that there was positive linear correlation between Top Management Commitment and Implementation of TQM. The results of regression analysis showed that Top Management Commitment coefficient was significant in the model and thus Top Management Commitment affects Implementation of TQM.

5.3.2 Influence of Employee Empowerment on the Implementation of TQM

Results of correlation analysis showed that there was positive linear correlation between Employee Empowerment and Implementation of TQM. The results of regression analysis showed that Employee Empowerment coefficient was significant in the model and thus Employee Empowerment affects Implementation of TQM.

5.3.3 Influence of Oorganization Culture on the Implementation of TQM

Results of correlation analysis showed that there was positive linear correlation between organisation culture and Implementation of TQM. The results of regression analysis showed that organisation culture coefficient was significant in the model and thus organisation culture affects Implementation of TQM.

5.3.4 Influence of Communication on the Implementation of TQM

Results of correlation analysis showed that there was positive linear correlation between Communication and Implementation of TQM. The results of regression analysis showed that Communication coefficient was significant in the model and thus Communication affects Implementation of TQM.

5.4 Recommendations

From the study, it was evident that top management commitment is a factor in implementation of TQM. This study therefore recommends that manufacturing companies who are implementing TQM should take measures in ensuring top management participation and commitment to quality initiatives. This study further recommends that top managements commit themselves in providing leadership and key resources needed in quality management.

The study revealed that employees' empowerment is a factor in implementation of TQM and that employees' empowerment positively influences implementation of TQM. The study therefore recommends that organizations should introduce and develop employee involvement practices in their organization by delegating authority and empowering employees.

The findings of the study also revealed that organizational culture is a factor in implementation of TQM. The study further revealed that organizational culture positively influence implementation of TQM. It is therefore recommended that organizations develop group, hierarchical, developmental and rational culture so as to enhance total quality management.

Lastly, the study concluded that communication is a factor in implementation of TQM. The study in addition showed a positive influence of communication on implementation of TQM. The study therefore recommends that quality managers develop information policy and regulations, general ICT infrastructure of the organisations, and information culture of the organisations. Specific instances of the characteristics of the information environment hindering Implementation of TQM include the following: inadequate supportive information policies and regulations; inadequate skilled personnel/technical support and lack of best communication practices.

5.5 Suggestions for Further Study

A further case-based exploration approach should be carried out to better understand the applicability of TQM in manufacturing firms. One of the areas is Top management's role in supplier's selection and evaluation in TQM. Also use of information systems and technologies to support TQM and finally, to investigate the behavioural and cultural issues that can influence the implementation of TQM.

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Appendix I: Letter of Transmittal

Agnes Chepkoech
University of Nairobi
P.O Box 30197
Nairobi

The Human Resource Manager

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 Factors affecting Implementation of Total Quality Management in manufacturing firms: A case study of BIDCO Oil Refineries Limited, Thika Kenya. I am kindly seeking an opportunity to conduct the research in your organization as one of my case company. 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 will offer is highly appreciated.
Thank you
Yours Sincerely
Agnes Chepkoech.

Appendix II: Questionnaire for Employees.

My name is Agnes Chepkoech. I am a student pursuing a degree in Master of Arts in Project Planning and Management at the University of Nairobi. I am carrying out a study to assess Factors Influencing Implementation of Total Quality Management at Bidco Oil Refineries Ltd.

In order to facilitate this exercise, kindly respond to the following questions as honestly as possible. All the information collected in this study is purely for academic purposes and was treated with strict confidentiality. Please note that all questions are equally important and was grouped with responses of other people like you. Responses will not be linked to any individual and will not make any reference to your name. Thank you for your cooperation.

SECTION A: DEMOGRAPHIC INFORMATION (Tick where appropriate)

1. Please indicate your gender Male [   ]   Female   [   ]

2. What is your age bracket

16 – 24	[ ]	25 – 34	[ ]
35 – 44	[ ]	45 – 54	[ ]
55 and above	[ ]		

3. How long have you worked in the company (years)

   5 [   ] 10 [   ] 15 [   ]   20 and above [   ]

4. Indicate your Level of management

Top level management	[ ]
Middle level management	[ ]
Supervisor	[ ]
Operatives	[ ]

5. Which Department do you work in

    a) Human Resource Department   [   ]

    b) Production Department   [   ]

    c) Marketing and Corporate Services   [   ]

    d) Sales Department   [   ]

    e) Quality Assurance Department   [   ]

    f) Engineering Department   [   ]

SECTION B: ASSESSMENT OF THE TOP MANAGEMENT COMMITMENT

In a 5-point scale of 1-very small extent, 2-small extent, 3- Neutral, 4-to a larger extent and 5-to a very large extent, rate the following statements on the level of top management/ leadership support in your organization.

6. To what level can you rate the following statement on your top management/ leadership commitment to TQM implementation					
	1. Very small extent	2. Small extent	3. Neutral	4.To a larger extent	5. To a very large extent
a) Top management participates in ensuring quality delivery of services and products					
b) Top management do not just delegate duties on ensuring quality service delivery but also get involved as well.					
c) Top management of your organization takes part at all stages & levels in the quality management programs					
d) Critical resources required to implement quality initiatives are always made available					

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6. To what level can you rate the following statement on your top management/ leadership commitment to TQM implementation					
e) Your organization has a formal quality management structure					
f) Your organization has an organizational quality mission and policies					
g) Employee's ideas on ways to improve quality in the organization are welcomed by the top management					
h) Top management of your organization provides a leadership role in quality management initiatives					
i) Top management monitors TQM activities in your organization					

7. What is your opinion on the influence of top management commitment on the implementation of TQM

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SECTION C: ASSESSMENT OF EMPLOYEE EMPOWERMENT

In a 5-point scale of 1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree and 5-Strongly Agree, rate the following statements on the level of employee empowerment in your organization.

8. To what level can you rate the following statement on your employee empowerment towards TQM implementation					
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a) I receive feedback and guidance from superiors, peers and subordinates on TQM implementation					
b) The work environment acknowledges employees achievements and success in TQM implementation					
c) Co-workers value other employees' contribution in TQM implementation					
d) Through TQM implementation my job offers opportunity to participate in interesting projects, with satisfying degree of challenge and opportunities for increased responsibilities					
e) There are chances for training and career development in the organization during TQM Implementation					
f) Through TQM implementation my job may offer chances to grow and be promoted within the organization					
g) Employee's ideas on ways to improve quality in the organization are welcomed by the top management					
h) Employees are allowed to make decisions on the issues affecting their workplace.					
i) Employees are delegated duties in TQM implementation to get their input and contribution					

8. To what level can you rate the following statement on your employee empowerment towards TQM implementation					
j) Employees are recognized for the good work they have done					

9. What is your opinion on the influence of employees empowerment on the implementation of TQM in your organisation

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SECTION D: ASSESSMENT OF ORGANISATIONAL CULTURE

In a 5-point scale of 1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree and 5-Strongly Agree, rate the following statements on the level of organisational culture in your organization.

10. To what level can you rate the following statement on your organisational culture supporting TQM implementation					
Group Culture	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a) Employees are empowered in your organization					
b) Your organization has a flexible organizational culture.					
c) There is cohesion among employees in your organizations					
d) Employees are encouraged to participate in decision making in your organization					
Developmental Culture	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
e) There is in place an organizational culture that is flexible to internal changes in your organization.					

10. To what level can you rate the following statement on your organisational culture supporting TQM implementation					
f) Your organization has an organizational culture that accommodates external changes.					
Rational Culture	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
g) Your organization has an organizational culture that focuses on control.					
h) Your organization has an organizational culture that focuses on stability in the organization.					
Hierarchical culture	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
i) Your organization has an organizational culture that encourages internal efficiency.					
j) Your organization has an organizational culture that encourages adherence to company policy and the law.					

11. What is your opinion on the influence of organisational culture on the implementation of TQM in your organisation

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SECTION E: ASSESSMENT OF COMMUNICATION

In a 5-point scale of 1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree and 5-Strongly Agree, rate the following statements on the level of communication in your organization.

12. To what level can you rate the following statement on your communication towards TQM implementation					
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a) There are well developed Communication system in your organization					
b) There is free flow of quality management information between departments in yours organization					
c) There is free flow of quality management information from management to employees in your organization					
d) There is free flow of quality management information from employees to management in your organization					
e) There is free flow of quality management information between employees in your organization					
f) There is a well-developed feedback mechanism in your organization					
g) Your organization gives timely response to customer quality complaints.					
h) Does your organization has a communication policy					

13. What is your opinion on the influence of communication on the implementation of TQM in your organisation

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SECTION G: ASSESSMENT OF IMPLEMENTATION OF TQM

In a 5-point scale of 1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree and 5-Strongly Agree, rate the following statements on the contribution of TQM in your organisation.

13.To what level can you rate the following statement on the effect of successful implementation of TQM in your organisation					
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a) TQM has led to improved customer satisfaction					
b) TQM implementation has led to improved customer focus					
c) TQM implementation has improved our products and services					
d) TQM implementation has improved our productivity					
e) TQM implementation has led to waste reduction					

Appendix III: Interview Guide for Top Level Managers

1. What is the influence of Top management leadership commitment the implementation of TQM in BORL?

2. What is the influence of employee empowerment on the implementation of TQM in BORL?

3. What is the influence of organisation culture on the implementation of TQM in BORL?

4. What is the influence of communication on the implementation of TQM in BORL?

5. How has TQM implementation influenced BORL?

Appendix IV: Research Permit

THIS IS TO CERTIFY THAT:
MS. AGNES CHEPKOECH TOLE
of UNIVERSITY OF NAIROBI, 0-1000
THIKA, has been permitted to conduct
research in *Kiambu County*

on the topic: *FACTORS INFLUENCING
IMPLEMENTATION OF TOTAL QUALITY
MANAGEMENT IN MANUFACTURING
FIRMS A CASE OF BIDCO OIL REFINERIES
LIMITED THIKA KENYA*

for the period ending:
29th October, 2016

Permit No : NACOSTI/P/15/15746/8547
Date Of Issue : 29th October, 2015
Fee Recieved : Ksh 1,000

....
**Applicant's
Signature**

....
**Director General
National Commission for Science,
Technology & Innovation**

CONDITIONS

1. You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit
2. Government Officers will not be interviewed without prior appointment.
3. No questionnaire will be used unless it has been approved.
4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.
5. You are required to submit at least two(2) hard copies and one(1) soft copy of your final report.
6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice

REPUBLIC OF KENYA

NACOSTI

National Commission for Science,
Technology and Innovation

**RESEARCH CLEARANCE
PERMIT**

Serial No. A 7010

CONDITIONS: see back page