ADOPTION OF TOTAL QUALITY MANAGEMENT PRACTICES AND PERFORMANCE OF MANUFACTURING FIRMS IN NYERI COUNTY, KENYA

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APRIL, 2019
DECLARATION

This project is my own original work and has not been presented for award of any degree in any university. No part of this project should be reproduced without the authority of the author and/or Kenyatta University.

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D53F/OL/CTY/26797/15

I confirm that the work presented in this research project was carried out by the candidate under my supervision

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DEDICATION

I dedicate this research project to my family. They have had a profound influence towards my intellectual, professional and personal development. They inspired me to strive for excellence. Whereas I struggled to maintain balance at every step of my life, their unconditional love and support made me handle life’s challenges with a greater resilience. Thank you for being there for me.
ACKNOWLEDGEMENT

First and foremost, I say thank you to God for His grace and guidance during the period of the study. I wish to also express my gratitude to my supervisor Mr. Shadrack Bett who tirelessly through his effort, constructive criticism, feedback, experience, expertise and initiative guided me through the research project writing. The respondents who participated by filling in the questionnaires are equally highly appreciated. Special thanks to my MBA comrades for their encouragement throughout the entire period of my academic endeavor.
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OPERATIONAL DEFINITION OF TERMS

**Continuous improvement:** This is the incremental and ongoing improvement on the quality and state of a firm’s products and services.

**Customer focus:** The commitment of an organization towards meeting customer needs and expectations.

**Employee training:** The process of equipping staff with new skills, knowledge, tools and resources necessary to make confident decisions in the workplace without supervision.

**Manufacturing Firms** Organizations or enterprises involved in the production of process.

**Quality management systems:** These are mechanisms to direct and control an organization in order to continually improve the effectiveness and efficiency of its performance.

**Top Management commitment:** This is the level of dedication and hard work by the senior management of a firm to ensure quality, efficiency and results.

**Top management** Refers to a person or group of people who direct and control an organization.

**Total Quality Management Practices:** These are measures adopted by managers to ensure the products, services and processes they produce and offer are of high quality and meet customer expectations.
# LIST OF ABBREVIATION AND ACRONYMS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Explanation</th>
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<tr>
<td>CI</td>
<td>Continuous improvement</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>ISO</td>
<td>International Organization for Standardization</td>
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<td>KAM</td>
<td>Kenya Association of Manufacturers</td>
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<td>QMP</td>
<td>Quality Management Program</td>
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<tr>
<td>ROA</td>
<td>Return on Assets</td>
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<td>ROE</td>
<td>Return on Equity</td>
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<td>ROI</td>
<td>Return on Investment</td>
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<td>ROS</td>
<td>Return on Sales</td>
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<tr>
<td>SPSS</td>
<td>Statistical Package for the Social Sciences</td>
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<tr>
<td>TQM</td>
<td>Total Quality management</td>
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<td>US</td>
<td>United States</td>
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ABSTRACT

Expanding the manufacturing sector is a major part of the government’s Vision 2030 economic development plan to transform Kenya into a middle-income country by growing the manufacturing to account for 20% of GDP by 2030 which is nearly twice today’s level, at 10.6%. Addressing some outstanding constraints in the manufacturing sector is the panacea of achieving the goals. The main objective of this study is to evaluate the effects of TQM practices on performance of manufacturing firms in Nyeri County. The specific objectives of this study are to assess how top management commitment, customer focus, continuous improvement and employee training affect the performance of the manufacturing firms in Nyeri County. The literature review identifies what other researchers have done in the area of TQM practices on performance of firms globally and locally. The study sought to determine the relationship between the dependent and independent variables. The study was based on the Deming’s theory, resource-based theory and the institutional theory. The manufacturing firms under study were twelve in Nyeri County and emphasis was placed on the top management. The staff comprises of managers in finance, marketing, production, procurement, research and development, quality assurance, human resource with a total of 75 persons considered. The study adopted a census owing to the small number of respondents involved. Questionnaires were used for data collection. Data analysis entails descriptive statistics which encompass frequencies and percentages. Inferential statistics by use of the SPSS program entailing the chi-square to test causal relations and regression was done. The study found out that continuous improvement had a positive influence on performance of manufacturing firms in Nyeri County. Employee training had a positive influence on performance. Top management commitment had a positive influence on performance. Customer focus positively influenced performance. The study concludes that manufacturing organizations were kept neat and clean at all times. Production equipment was maintained well according to maintenance plans. Manufacturing organization used Statistical Process Control (SPC) programs for process control. Selection and recruitment process in their organization was effective (in terms of the objectivity and ‘right man for the right job’). Communication was open and continues in three directions: up, down and across. Senior executive insisted on accuracy and reliability of all information and communications within the organization. Senior executives anticipated change and made plans to accommodate it. Complaints process and guidelines were established; complaints were properly recorded. Manufacturing companies product/service design, development and delivery were based on meeting the needs of the customer. The study recommends that manufacturing organizations ought to be kept neat and clean at all times. Production equipment ought to be maintained well according to maintenance plans. Manufacturing organization ought to Statistical Process Control (SPC) programs for process control. Senior executive ought to insist on accuracy and reliability of all information and communications within the organization. Top management ought to have faith, trust and confidence in their managers and juniors ought to follow them as role models. Complaints process and guidelines ought to be established and complaints ought to be properly recorded. Customer forecast strategies and approaches ought to be continuously reviewed for further improvement.
CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Quality aspects have become one of the most important factors in global competition today. Increasing demand by customers for better quality of product in market place has encouraged many companies to provide quality product and services in order to compete in the marketplace successfully. To meet the challenge of this global competition, many businesses have invested substantial resources in adapting and implementing quality management practices in their operations. Quality management is viewed as a strategy to meet or exceed customer’s requirements and expectations. Quality management seeks excellence in all aspects of business through organization-wide continuous improvement, commitment by all, and customer focus.

It is a firm-wide management philosophy of continuously improving the quality of the products, services and processes by focusing on the customers’ needs and expectations to enhance customer satisfaction and firm performance (Anderson, Rungtusanatham and Schroeder, 2004). Zairi and Youssef (2005), management awareness of the importance of quality management, alongside business process reengineering and other continuous improvement techniques was stimulated by the benchmarking movement to implement and improve on best practices. The commitment to continuous improvement historically originated in manufacturing firms then it spread quickly to the service sector.
Economic globalization brings both challenges and opportunities for most industrial companies globally, especially manufacturing companies who are confronted with a challenging and increasing competitive environment. Therefore, they should be able to create conditions that support them both in the domestic and international markets. Quality Management practices can be implemented in any sector of the economy for example manufacturing and service, the resulting outcome is reduced costs, increased productivity, and improved financial performance among others (Gaspersz, 2005). In Kenya most manufacturing firms are adopting and implementing a set of operations management practices in order to win the intense competition in the marketplace. The benefits of TQM can be achieved through identifying the sets of common TQM principles and practices as applicable to the manufacturing and service industries.

In today’s business world, many manufacturing companies have found themselves in great competition for survival; this has driven companies to constantly desire to improve the quality of their products and reduce costs. Many of these companies are ready to make drastic changes according to the demands of the market in order to be ahead of their competitions, but there is a constant need for maintenance of continuous improvement of quality management practices. The Industrial development and strength of any country depends primarily on the proper application of quality management systems in all productive stages of industrial products. Many companies promote quality as the central customer value and consider it to be a critical success factor for achieving competitiveness (Schiffauerova & Thomson 2006). Total Quality management (TQM) is a management philosophy, diffused all over the world, with the objective of improving the operative and business performance of the organizations, offering a systemic approach to continually improve the operative activities to continually fulfill customers’ requirements (Agus
The Philosophy is particularly attractive because of the focus on quality, which offers the promise of improvement of an organization’s performance. To implement one or more of the TQM principles, companies use a series of management practices and TQM tools associated with the principles given that the principles are the beliefs, and practices are the actions the companies take according to the principles (Boaden, 1997. The objective of the practices as management commitment and training of workers is to produce improvement in operative and business performance (Powell, 1995). Operative performance refers to customer satisfaction or product quality, while business performance relates to financial results. TQM practices became a means to improve business performance of the companies.

To provide a basis for the survival and success today and in the future, firms have to pay more attention to the needs of customers as competition intensifies, and offer them quality products to satisfy their increasing expectations. Total Quality Management (TQM) as a potential source to achieve this objective produces value, through improved understanding of customers’ needs, improved customer satisfaction, improved internal communication, better problem solving, greater employee commitment and motivation, stronger relationships with suppliers, fewer errors, and reduce waste (Juran, 1988; Feigenbaum, 1991).

1.1.1 Total Quality Management

Total Quality Management is defined as holistic management philosophy that empowers every member of the organization to strive for continuous improvement in all the functions of an organization to provide superior customer value and meet customer needs in terms of quality and innovation (Prajogo, 2005). Many researchers have stated that the TQM strategy is a potential
useful tool for fostering learning and increasing company’s competitive advantage (Martínez-Lorente and Martínez-Costa, 2008)

TQM practices are Leadership, effective communication, customer focus, supplier’s relations, employee’s empowerment, training and education, continuous improvement and process improvement. If all the practices are well implemented, organization would achieve customer satisfaction, cost effectiveness and defect free work (Peter, 1994).

According to Ehigie and McAndrew, (2005) no consensus on the date and origin source for TQM but most researchers reported the founders include; Feigenbaum (1951, 1956, 1961) TQM emerged in place of total quality control (TQC) and TQC as an effective system for integrating the quality development, quality maintenance, and quality-improvement efforts of the various groups in an organization so as to enable production and service at the most economical levels that allow for full customer satisfaction. Feigenbaum believed that all departments in organization have responsibilities for the achievement of quality, but his conceptualization of TQC did not include other management ideologies like people empowerment, teamwork, and supplier development relationships (Price, 1989). These management ideologies are now incorporated into the new management concept, TQM. Thus, TQM is an alternative to management by control (Price, 1989). Hence, Paton (1994) considered Feigenbaum as the originator of the Total Quality Management.

Quality management system is defined as a set of coordinated activities to direct and control an organization in order to continually improve the effectiveness and efficiency of its performance. According to Oakland (2013) and organization should make strategic decision to adopt a quality
management system based on the organization’s strategy, objectives, structure, size, products and services offered. This is also true in the airline sector. In general, Total Quality Management (TQM) is a management philosophy which is used by organizations who strive to improve their efficiency and competitiveness in the business marketplace. TQM quality factors include top management commitment and involvement, employee empowerment and culture. These factors are known by some writers as the soft aspects of management, while the hard aspects include factors such as improvement tools, techniques and systems (Oakland, 1993, 2010). Various quality factors are identified by various scholars based on their experiences in working as consultants, managers or researchers (Thiagarajan et al., 2011).

The core ideas of total quality management (TQM) were introduced in the mid-1980s by, most notably, W. Edwards Deming, Joseph Juran and Kaoru Ishikawa (Hackman and Wageman, 1995). Whilst it is acknowledged that TQM is not a clear-cut concept (Hackman and Wageman, 1995), TQM is generally understood as an integrated organization strategy for improving product and service quality (Waldman, 1994). Since the mid-eighties TQM has been (over) sold as a near-universal remedy for a range of organizational problems, including improved organizational performance.

In manufacturing, quality is best described in terms of conformance, performance, reliability, features, durability and serviceability of a product. Conformance is the degree at which a product’s characteristics meet set standards, while performance shows how the product functions efficiently. Reliability is the probability that a device would perform its required functions under stated conditions for a specific period of time. It is also important that the products produced
have features that would enable their efficient usage and to have durability and be easily repaired.

TQM has been presented by many descriptions over the years. TQM is a way of thinking that becomes a Centre piece of an organization. It can be described as a management tool, philosophy and a set of principles which guides every member of organization who is involved in continuous improvement process to meet customer satisfaction (Choi & Eboch, 2008). The TQM concept requires an effective involvement of all members of organization in decision making because their participation are considered as critical role in all business activities for providing services to customers with high quality products (Dhillon, 2005). However, there is no standard method as to how TQM should be implemented. The organization committed to customer satisfaction through continuous improvement varies from organization to organization but it has common principles that can be applied to secure market share, increase profits and reduce costs (Kanji, 1996). TQM can be said to be the management of quality throughout all members of organization. The organization must satisfy internal and external customer needs and then use strategic planning including all functional areas to achieve strategic goals (Eldridge, Balubaid& Barber, 2006).

The key idea of TQM is that quality control must be an integral part of the production process. It includes continuous improvement to remove waste, doing things right the first time (removing the need for inspection), and quantitative measurement to analyze deviations from quality. The purpose is to reduce costs by preventing unnecessary rework jobs and to confirm customer needs by satisfying expectations of the high quality.
1.1.2 Organizational performance

According to Lakhal, Pasin, and Liman (2006) organizational performance refers to how well an organization achieves its market-oriented goals as well as its financial goals. Performance can also be defined as the process of quantifying the efficiency and effectiveness of action (Kathaari, 2014).

Organizational performance (OP) can be measured by indicators of efficiency, effectiveness, relevance to stakeholders and financial viability (Mitchell, 2002). Organizational performance is affected by employee’s motivation and continuous improvement to achieve performance objective (Rampersad, 2001). Organizational performance is influenced by external environment and the organizational capacity to achieve the desired performance (Mitchell, 2002).

There is a continuous need for the organization to plan on the capacity empowerment which has changed over time due to change in technology and more increasingly on the need for more innovations. The success of TQM would result in improved employees’ involvement and performance, superior quality, reduction of production cost, customer satisfaction and gain of organizational competitive advantage (Arumugam & Mojtabahedzadeh, 2011). Organizations have also integrated their systems with their suppliers to ensure they play a big role in achievement of their goals. This integration measures the effectiveness and efficiency of the organization quality management (Kaynak, 2003).
Performance measurement is very important for the effective management in organization. According to Deming without measuring something, it is impossible to improve it. Organizational performance refers to how well an organization achieves its market-oriented goals as well as its financial goals (Li, 2006). Corporate performance is not often described in detail by academics. The traditional approach to performance measurement using solely financial performance measure was found to be flawed. A number of prior studies have measured organizational performance using both financial and market criteria, including return on investment (ROI), market share, profit margin on sales, the growth of ROI, the growth of sales, and the growth of market share. In line with the above literature, the same items would be adopted to measure organizational performance in this study.

The recommended measures for financial analysis that determine a firm’s financial performance are grouped into five broad categories: liquidity, solvency, profitability, repayment capacity and financial efficiency. The common financial indicators of financial performance include: sales growth, return on investment (ROI), return on equity (ROE), and earnings per share. The popular ratios that measure organizational performance can be summarized as profitability and growth: return on asset (ROA), return on investment (ROI), return on equity (ROE), return on sale (ROS), revenue growth, market shares, stock price, sales growth, liquidity and operational efficiency (Oye, 2006).

Non-financial measures are: market share and growth in market share, on-time delivery, customer satisfaction, brand recognition, position in favorable markets, internal business processes, high product quality, manufacturing innovation, high manufacturing productivity, cycle time, yield and reduction in waste, learning and innovation competence and integrity of
managers and morale of employees (Choi & Eboch, 2008). As compared to financial measures, nonfinancial measures are seen by the manufacturing managers as providing the greatest encouragement for risk taking and innovation and also are more effective at curtailing short-termism and gamesmanship (Bricknell, 2006). These differences are in line with popular belief. Compared to both financial and nonfinancial measures, subjective measures are seen as being the most effective at curtailing short-termism and gamesmanship (Anderson & Sohal, 2009).

Choosing performance measures is a challenge. Performance measurement systems play a key role in developing strategy, evaluating the achievement of organizational objectives and compensating managers (Kathaara, 2014). Yet many managers feel traditional financially oriented systems no longer work adequately. A recent survey of U.S. financial services companies found most were not satisfied with their measurement systems (Adam, Corbett, Flores and Harrison, 2007). They believed there was too much emphasis on financial measures such as earnings and accounting returns and little emphasis on drivers of value such as customer and employee satisfaction, innovation and quality.

1.1.3 Manufacturing firms in Nyeri County

Nyeri County is situated in Central Kenya in the country's densely populated and fertile Central Highlands. It is about 150 kilometers north of Nairobi and covers an area of 3,337 square kilometers. According to the County government of Nyeri there are several manufacturing firms mainly engaged in agro processing i.e. coffee, tea, milk, flour mills and farm feeds. There are also various factories dealing with tea and coffee namely; Gathuthi, Gitugi, Iriaini, Chinga, Ndima and Ragati tea factories and Othaya Farmers Coffee Society. The most notable
manufacturing firms are Mt. Kenya Bottlers, Highlands Mineral Water company, Maisha Mills, Mukurweini Wakulima Dairy, Kiganjo KCC among others. These manufacturing firms are either small or medium size firms. Some sell their products within the country while others like coffee and tea firms sell their products both locally and internationally.

1.2 Statement of the Problem

Despite the fact that quality management practices have been recognized by many organizations as capable of transforming the quality culture and producing substantial financial results for large size companies, some concerns have been raised about validity of quality management practices to generate real economic gains and or improve financial performance of firms. A number of empirical studies have been conducted since the 1980’s in order to explore the variance between quality management practices and financial performance. The work of Hendricks and Singhal (2007) has provided evidence of an existing relationship between quality management practices and financial performance of manufacturing firms and the effectiveness of the implementation of quality management practices. A study by Adam et al. (2007) has shown that there is a positive impact of quality management practices on financial performance of a firm. In addition, Choi and Eboch (2008) found a significant direct link between quality management practices and performance of a firm.

Expanding the manufacturing sector is a major part of the government’s Vision 2030 economic development plan to transform Kenya into a middle-income country by growing the manufacturing to account for 20% of GDP by 2030 which is nearly twice today’s level, at 10.6%. Addressing some outstanding constraints in the manufacturing sector is the panacea of
achieving the goals. Small manufacturing companies lag behind larger firms when as pertains to adoption of quality management (McMahon, 2001; Elmati and Kathawala1999). Measuring success of businesses in relation to mass production has been over played with financial measures like costs, profit, sales and return on investment being the key indicators. Useof non-financial measures like customer satisfaction levels and operational efficiencies have also been done (Chittenden, Poutziouris, &Mukhtar, 1998). Evidence of strategic benefits of quality programs and better quality has been proved to contribute to greater market share and return on investment (Cole, 1992; Phillips, Chang &Buzzell, 1983), lower manufacturing costs; improve productivity (Garvin, 1988) and improve the area of strategic performance (Zhang, 2000).

Despite the benefits, small and medium manufacturing firms have had a low uptake of quality initiatives associated with excessive managerial involvement focusing on sales strategies and market growth and apathy of procedural requirements for ISO 9000 series registration, (Yusof&Aspinwall, 1999; McTeer& Dale, 1994). This creates dearth of research information on organizational factors affecting adoption of quality management by small businesses (Tatoglu&Zaim, 2006). The need to explain inconsistencies in adoption of quality management is thus an imperative (Forker, 1997). Relating the underlying inconsistencies with other constructs to confirm the relationship is thus of importance (Macaes, Farhangmehr & Pinho, 2007). Current best practices demand quality management systems as a measure of strong commitment to quality, productivity, cost competitiveness, and customer satisfaction.
Weakening of trade-barriers coupled with globalization and the spread of international quality standards such as ISO 9000 to developing countries has forced firms’ achievement of competitive advantage by provision of quality products and services (Agus, 2000). There has been extensive research on quality management practices and organization’s quality performance, but there is still little known about the effect of quality management practices on manufacturing firms in Nyeri County. This study was a follow up on previous research by (Kimani 2012), which focused on the service industry in Nyeri County and concentrated on practices like innovation, organizational culture, documentation and traceability. The study suggested further research to be carried out in the manufacturing sector. In order to bridge the gap and provide the firms with practical assistance in dealing with this issue, the study used manufacturing firms in Nyeri County to find out the extent implementation of TQM practices contributed towards good performance of the firms.

1.3 Objectives of the Study

1.3.1 General Objectives of the Study

The general objective of the study was to evaluate the influence of total quality management practices on performance of manufacturing firms in Nyeri County

1.3.2 Specific Objectives

The specific objectives of the study were:

i. To investigate the effect of continuous improvement on performance of manufacturing firms in Nyeri.
ii. To assess the effect of employee training on performance of manufacturing firms in Nyeri County.

iii. To evaluate the effect of top management commitment on performance of manufacturing firms in Nyeri County

iv. To assess the effect of customer focus on performance of manufacturing firms in Nyeri County

1.4 Hypothesis

$H_{01}$: Continuous improvement does not affect performance of manufacturing firms in Nyeri County

$H_{02}$: Employee training does not affect performance of manufacturing firms in Nyeri County

$H_{03}$: Top management commitment does not affect performance of manufacturing firms in Nyeri County

$H_{04}$: Customer focus does not affect performance of manufacturing firms in Nyeri County

1.5 Significance of the study

The findings of this study would be useful to manufacturing firms since it would provide insights on the importance of practicing quality management practices in manufacturing firms to achieve financial performance of firms.

Kenya Association of manufacturers and other policy makers would also benefit from this study as the findings would inform the setting up policies that ensure that manufacturing firms comply with quality practices to provide quality services and improve their financial performances. In theory, this study would be resourceful in provide more information on the various quality management practices
adopted by firms. The study would also serve as a point of reference to academicians interested in this area and other related topics.

The county and national government’s bodies like the Ministry of Industrialization may use the study findings to formulate and implement policies that would help in regulating and improving the manufacturing industry considering the pivotal role it plays to create jobs and improve the economy.

This research would have important implications for managers. It would motivate top managers to invest in the time and resources to implement TQM programs. The implementation of TQM practices would be associated with enhanced enterprise performance. The study may signal the importance of ensuring a supportive organizational environment for the effective implementation of TQM.

1.6 Scope of the Study

This study assessed the total quality management practices employed by manufacturing firms in Nyeri County and how they affect performance. The research was carried out in Nyeri County. The study was also limited to four TQM practices which are top management commitment, customer focus, continuous improvement and employee training. This was because it was not possible to include all the TQM practices in one study. The study assessed the performance of the firms for the last 5 years (2013-2017).
1.7 Limitations of the Study

The study was limited to only four total quality management practices that influenced performance of a firm. This was because these were the key practices that enhance quality. The study was limited to manufacturing firms in Nyeri County. This was because Nyeri County had been a dominant manufacturing sector among the devolved units in Kenya.

Most of the respondents did not understand the essence of the study thus may fail to freely divulge information requisite to ensure the fruition of the data collection exercise. This is an aspect which may impend the study. The researcher overcame the challenge by way of imploring on the respondents to participate in the data collection exercise willingly.

The challenge of accessing the respondents in their places of work was immense. This was occasioned by the fact that they might be busy thus contributing to the challenge of delay in the administration of the questionnaires. The researcher overcame the challenge by way of patiently seeking prior appointments with the respondents in the wake of realizing the success of the exercise.

The researcher encountered respondents who were hesitant to reveal information which was classified as confidential and to minimize this; the researcher informed the respondents that the information offered would be treated with utmost confidentiality. The researcher also obtained an introductory letter from the university that helped in assuring the respondents that the information was treated with utmost confidentiality and was used for academic purposes only.
1.8 Organization of the Study

The study was presented in five chapters. Chapter one presented the background of the study, context of the study, statement of the problem, objectives of the study and research questions. It also covered the significance of the study, limitations of the study and scope of the study. Chapter two covered literature review, theoretical review and empirical review. It also covered the conceptual framework, summary of literature review as well as gaps in the literature review.

Chapter three outlined the research methodology which included research design, target population, sample size and sampling techniques, data instruments, pilot test, validity, reliability, data collection procedure and data analysis procedure. Chapter four presented demographic information, descriptive and inferential statistics, this chapter also presents the discussions of the key findings. Chapter five presents summary of the findings as presented in chapter four, conclusion and recommendations are drawn as per the findings of the study, suggestions for further studies are also presented.
CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter entails the literature review as guided by the objectives of the study. Theoretical review analyses the theories that support the study, empirical review reviews related literature by other authors and researchers on the selected variables to enable establish the gap while the conceptual framework illustrates the relationship between the dependent and independent variables.

2.2 Theoretical Review

The following section has the theoretical review which draws on the theories guiding the study. The study was guided by the quality improvement theory, Resource Based View Theory and the Deming’s Theory.

2.2.1 Quality Improvement Theory

This theory was postulated by Deming in 1986. The theory states that the management is responsible for the systems, and that it is the system that generates 80 percent of the problems in firms (Hill, 1995). Deming (1986) noted that no quality management system could succeed without top management commitment; it is the management that invests in the processes, creates corporate culture, selects suppliers and develops long-term relationships.
Deming’s Quality Improvement Theory provides business with a plan to eliminate poor quality control issues through effective managerial techniques. It’s a fact that management’s behavior shapes the corporate attitude and defines what is important for the success and survival of the firm. Hubert (2010) has detailed the theoretical approach of Deming (1986) in respect to the quality management system, and it envisages the creation of an organizational system that fosters cooperation and learning to facilitate the implementation of process management practices. This, in turn, leads to the continual improvement of the processes, products, and services and helps to instill employee satisfaction. These are critical to promoting customer focus and ultimately, helping in the survival of any organization.

Deming (1986) believed in a systematic approach to problem-solving and promoted the widely known Plan-Do-Check-Act cycle. The Plan-Do-Check-Act (PDCA) cycle of continuous improvement is a universal quality improvement concept whose aim is to constantly improve performance, thereby reducing the difference between customer requirements and the performance of the manufacturing firms (Goetsch & Davis, 2006). The theoretical essence of the Quality Improvement Theory focused on quality concerns in the creation of an organizational system that fosters cooperation and learning for facilitating the implementation of process management practices, which, in turn, leads to performance (Anderson et al., 1994). Oakland (2014) stressed that the responsibilities of top management should take the lead in changing processes and systems. Leadership plays a crucial role in ensuring the success of quality management because it is the top management’s responsibility to create and communicate the vision to move the firm toward performance improvement.
Top management is responsible for most quality problems; Kamanda (2010) asserts that it should give employees clear directions on what is considered acceptable work, and provide the methods to achieve it. These methods include an appropriate working environment and climate for work that is free of fault finding, blame or fear and instead provide clarity of issues, communicate effectively and provide appropriate environment for work to enhance performance (Lamport et al., 2010).

The top management should be committed to applying the principles and practices of System of Profound Knowledge (SOPK), where a business can simultaneously reduce costs through reducing waste, rework, staff attrition and litigation while increasing quality, customer loyalty, worker satisfaction and ultimately, profitability (Deming, 1986). Deming’s Quality Improvement Theory is relevant to study in that it supports the variable of system automation enhance quality of products and services through continuous improvement, employee training and which organizations can use to realize performance. This theory is applicable to the study because total quality management is a comprehensive and structured approach to organizational management that seeks to improve the quality of products and services through ongoing refinements in response to continuous feedback.

2.2.2 Resource-Based View

Total quality management is seen as a competitive resource to most organizations; a number of studies have proposed this argument for example Reed &Lemak (2000). This is consistent with the Resource-Based View (RBV) which suggests that attaining and maintaining a sustained competitive advantage requires the availability of strategic resources that are heterogeneous in
nature, not perfectly mobile, not imitable, and non-substitutable without great effort (Barney, 1991). Rare and non-imitable resources are the appropriate use and allocation of core competences (Lopez, 2005). It also includes the reconfiguration of organizational routines so as to respond better to the dynamic and rapid changes of the market (Eisenhardt & Martin, 2000).

Total quality management entails practices, such as empowering employees, investing in customer relations, and building effective communication channels (Muli, 2014). This contributes to improved value of goods and services; which is achieved through influencing the strategic choice process, strategic development and deployment of the firm's inimitable, rare, and un-substitutable resources embodied in effective leadership, employees' capabilities, customer relations, and enhanced operations, among others (Eisenhardt, 2000). Reed and Lenal, (2000) argued that the two components of total quality management process and content interact with each other, and it is this interaction that generates the desired performance level in the organization. The authors contended that the content component contributes to competitive advantage; the process component generates sustainable advantage. This conforms to the resource-based value of the firm, and considers TQM elements as either a source of differentiation, cost leadership advantage, or a generator of barriers to imitation given their inherent complexity and tacitness (Corbett & Claridge, 2002).

Continuous Improvement (CI) shares common standpoints with RBV theory. The commonality is embedded in the belief that resources and capabilities of the organization are limited, thus, surviving organizations tend to use their resources in a cost-effective way. Functioning at optimum levels can lead organizations to create competitive advantage. Sustaining competitive advantage, however, may require continual improvements to differentiate themselves from
competitors (Attaran & Attaran, 2004). Sustained competitive advantage is achieved when capabilities are able to produce value, are rare, are imperfectly imitable, and are exploited by the organization. Therefore, the theory is applicable to the study since TQM can generate a sustained competitive advantage which would enable an organization achieve high performance.

2.2.3 Deming’s Theory

Deming’s theory of profound knowledge is a management philosophy grounded in systems theory. It is based on the principle that each organization is composed of a system of interrelated processes and people which make up system’s components. The success of all workers within the system is dependent on management’s capability to orchestrate the delicate balance of each component for optimization of the entire system (Bowen, 2010). The system of profound knowledge is based on system appreciation to understand the company's processes and systems, variation knowledge to understand the occurrence of variation and their causes, knowledge theory to understand quality programs and psychology knowledge to understand human nature. Coupled with the 14 points in the Deming Management Model are seven deadly diseases that inhibit firm’s performance and many obstacles that impede realization of quality objectives of organization.

The 14 points in Deming Management Model are essential statements, which lay down the foundation and action plan for intra-organizational and inter-organizational behaviour. Adoption of these 14 points offer organizations with requisite strength and energy and provide cure for the seven deadly diseases and facilitate organizations to overcome obstacles in achieving performance excellence. The framework of Deming Management Method expresses
effectiveness of the model through concerted leadership efforts toward establishment of cooperative and learning organization systems that facilitates achievement of efficient process management. The realization of process management practices enables organizations to achieve customer satisfaction through continuous improvement and employee fulfillment. In a subsequent study, Anderson, Rungtusanatham & Scroeder, (1995) empirically validated Deming Management Method. Subsequently this was used in empirical studies (Rungtusanatham, 1998; Fisher, 2005; Douglas & Frendendall, 2004; Singh, 2007).

The results illustrated strong support for all hypotheses of Deming Management Method. Anderson et al., (1994) emphasized the need to undertake vigorous testing of the theory to confirm its generalizability, and applicability across sectors, countries, firms, employee groups and time periods. Other researchers also argued that refinement efforts through testing of this theory would contribute toward better understanding, and assist in knowledge consolidation (Sousa and Voss 2002). Other researchers also argued for further testing the theoretical model in different contexts (Rungtusanatham et al., 1998; Fisher et al., 2005).

2.3 Empirical Review

The following section has the empirical review which draws on works carried out by other researchers. The studies enabled the establishment of the knowledge gap in the study.
2.3.1 Continuous Improvement on Adoption of Quality Management

Gustafsson (2003) on the relationship between TQM practices and performance of small size firms, it was established that the relationship between total quality management practices performance is dependent on the firm size. This is after studying a small firm of few employees and found that the fewer the employees the better since they would be managed easily and the process implementation would be easy to adapt to (Charan, 2008). These findings made Antony et al., (2002) to describe TQM practices as a role of the quality department, since they are entrusted in implementing and controlling quality the findings were that a single department cannot handle quality if the other stakeholders in the organization are not involved thus the need to involve everyone.

Zeha (2011) carried out an empirical study in Iran on implementation of TQM based of soft factors in small and medium size manufacturing firms and found out that in order to fully implement TQM effectively and also gain its benefits in form of organizational performance, organizations should pay more attention to the soft dimensions. Process improvement is a key aspect in TQM programs (Sinclair &Zairi, 1995). Process analysis has its primary objective, i.e., the reduction or elimination of variance, which Deming (1986) saw as the source of problems in providing quality products and services. A reduction in process variation leads to benefits such as increasing output uniformity, continual reduction of waste of staffing, machine time, and materials.

This factor emphasizes adding value to processes, increasing quality levels, and raising productivity per employee and contains improving work center methods and installing operator-
controlled processes that lead to a lower unit cost, embracing kaizen (continuous improvement) philosophies, reducing the operator material handling duties, promoting a design for a manufacturing program, and achieving a compact process flow. The study also held that Continuous improvement can be efficiently achieved in organizations only if a structured continuous improvement process is in place to guide managers.

Muhammed (2010) carried out an empirical study on Evaluating the Deming Management Model of Total Quality in Telecommunication Industry in Pakistan and established that continuous improvement is one of the essential factors in TQM success. The study concluded that rapid changes in technology and customers’ requirements require a flexible approach toward aligning organizational products, processes and services to meet and exceed ever changing customers’ needs. The results highlight positive and statistically significant relationship with customer satisfaction and concluded that the approach leads to creativity and competitive excellence and those TQM objectives can be accomplished by constantly pursuing continuous improvement. An empirical study by Awoku (2012) on quality management practices, organization performance and supplier selection in Southern Minnesota Manufacturing firms established that Continuous improvement have a positive significance relationship with business performance. It concluded the practice can be adopted in order to achieve high quality products and thereby improve business performance.

**2.3.2 Employee Training on Adoption of Quality Management**

Mohanty and Lakhe (2012) argues that the people who know the most about what is right and wrong with processes are those who do it. If trained well and given the responsibility to inspect
quality of their work it would eliminate inspection. Chandler and Mc Evoy (2012) pointed out that employees are the prime source of human resources, their education, skills and experience need to be assessed and matched with the job requirements for maximum performance. Employee involvement was conceived to mean a feeling of psychological ownership among organizational members Koopman (2006). Unlike total quality management ideology, the traditional employee involvement is narrow minded; it is job centered rather than process-centered. The total quality management approach involves achieving broad employee interest, participation and contribution in the process of quality management.

Training helps in preparing employees towards managing the total quality management ideology in the process of production. Training equips people with the necessary skills and techniques of quality improvement. It is argued to be a powerful building block of business in the achievement of its aims and objectives Zhang, (2010). Through training, employees can identify improvement opportunities as it is directed at providing necessary skills and knowledge for all employees to be able to contribute to ongoing quality improvement process of production. Training and development programs should not be seen as a onetime event but a lifelong process Dale et al, (2010).

Jamali (2010) in his study on TQM Implementation: An Investigation of Critical Success Factors, identified training as one of the most critical factors in successful implementation of TQM. Implementation of TQM requires adequate relevant employee’s skills and knowledge on quality which can only be achieved through continuous training. Training empowers employees to take part in continuous improvement initiatives that are essential in TQM implementation (Oluwatoyin & Oluseun, 2008). Employees at all levels must accept quality education and
training as it helps employees at their levels to understand quality management initiatives and their roles in implementing TQM (Arshida & Agil 2012). An empirical study conducted by Samir (2003) on critical factors of TQM in Palestinian organizations showed a positive relationship between employees training and education and successful implementation of TQM. It associated employee training and education with employee empowerment and improved performance of their roles in quality management.

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, employees training and development, employee awareness among other factors are critical in implementation of quality initiatives. Employees feel involved in quality management initiatives when given timely on quality programs and therefore give it a positive approach reducing employee resistance. Consistent with the findings of Aljalahma (2011) 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.

An empirical study done by Centrum which focused on TQM Practices in Manufacturing firms in Peru reveled that employee training show a significant difference in performance for the manufacturing firms which offered training to their employees as a method of reducing defects in their work. The study concluded that training of employees is crucial for building the 'human capital' of the organization. Training and education are essential to provide employees with new techniques and practices necessary to implement TQM successfully. Training and education are also necessary for teaching the TQM philosophy that requires permanent change in individual
behaviors and attitudes and leads to strengthening the organization’s culture (Shenawy, 2007). Training and education are primary levers for change, and they have significant influence on the change process (Buch&Talentino, 2006). Training should focus on building quality skills with equal attention paid to behavioral skills and quality tools needed for change in performance management and recognition (Palo &Padhi, 2005). Training includes explanation of overall company operations and product quality specifications. Specific measures for evaluating training include the time and money spent by organizations in training employees and management in quality principles, problem solving skills, and teamwork (Black & Porter, 1996).

An empirical study done by Arash (2011) on employee training and empowerment in implementation of TQM practices in manufacturing firms in Iran revealed that training of employee is a way of empowerment which is an integral part of any successful quality improvement process which helps them to make decisions about their own work and environment. This also encourages them to apply the most appropriate tools and techniques. The study concluded that in general, empowerment is a core concept in a humanistic management movement that is distinguishable from the more mechanistic 'scientific management' traditions. According to the conceptual logic, people are the principle resource of organizations. Empowerment is a central concept in TQM that has been credited with making a major contribution to the Japanese revival and has been adopted with enthusiasm in other parts of the world. The study concluded that specific measures of employee empowerment include the degree to which cross-departmental and work teams are used; the extent of employee autonomy in decision making; the extent of employee interaction with customers; and the extent to which employee suggestion systems are being used.
Muhammed (2010) carried out an empirical study on Evaluating the Deming Management Model of Total Quality in Telecommunication Industry in Pakistan and established that Institution of quality focused training philosophy improves individual confidence and self-esteem, enhances pride of work, inculcates team spirit, focuses on continuous improvement, and aligns organizational processes to changing customers’ needs. The study finds positive and statistically significant relationship with process management.

According to the study, training is vital for generating awareness and commitment to quality policy and strategy promoting a caring culture and building quality related competence and facilitate building teams to achieve quality management goals. The study also established that employee fulfillment manifest in individual’s job satisfaction, job commitment and the pride of accomplishment of products, services quality, and possession of knowledge for initiating improvement in processes. This is also exemplified in successful engagement in learning and application of this knowledge to enhance personal and organizational development. The study found positive and statistically significant relationship with customer satisfaction and found evidence of strong relationships between employee perception of employee well-being and customer perception of service quality and satisfaction. The study concluded that satisfied employees produce satisfied customers.
2.3.3 Management Commitment on Adoption of Quality Management

Pheny and Teo (2013) observed that top management must communicate TQM to the entire organization to create awareness, interest, desire and action. They should provide the quality vision and create a cultural change within the organization. They should organize for trainings, empower others by allowing them to grow, delegate authority and recognize them for quality achievements. Top management must allocate resources and partner with suppliers for sharing of information in terms of new innovations and technology in the market for quality materials.

Top management commitment and leadership requires effective change in organizational culture and this can only be made possible with the deep involvement of top management to the organization’s strategy of continuous improvement, open communication and cooperation throughout the organization. Total quality management implementation improves the organizational performance by influencing other total quality management dimensions.

According to Garvin (2014) most problems associated with quality are attributed to management. This indicated that successful quality management is highly dependent on the level of top management commitment. It requires that top management commitment to quality must convey the philosophy that quality would receive a higher priority over cost and that in the long run would achieve operational performance as well as reduced operational cost. Several studies have been done on the concepts of quality improvement practices and organization performance. For example, Miller and Hartwick (2012) found that training and top management commitment play very important roles in TQM implementations in public listed manufacturing companies.
Baidoun (2003) conducted an empirical study on critical factors of TQM in Palestinian organizations and found out that top management commitment and involvement demonstrated by: development of clear organization mission, development of quality policy and values, setting of realistic quality goals, proper planning on quality management and creating quality management structure creates quality awareness and improve implementation of quality management systems. In addition, quality management philosophy makes it easy to implement quality programs (Murphey, 2009).

A review conducted by Zakuan, (2012) on critical success factors of TQM implementation in Higher Education Institutions shows that the success of an institution depends on its quality management strategy on how it identifies, classifies, analyzes, and reacts to the changes in quality requirements. This is consistent with the findings of Sharp, (2000) on their study on factors affecting successful implementation of ISO 9001: 2000 and Kasongo & Moono (2010)’s study on factors that lead to successful implementation of TQM that identified management strategy as one of the critical factors in implementing quality systems.

Zeha (2011) carried out an empirical study in Iran on implementation of TQM based of soft factors in small and medium size manufacturing firms and established 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 and therefore affecting a positive performance of a firm. Top management is completely involved in implementing and stimulating the TQM approach. The study also established that leadership is responsible for the products and service which are offered. Successful implementation of TQM requires effective
changes in an organization’s culture and it is somehow impossible without management leadership. The study established that in a TQM process, effective leadership should develop a clear mission statement and then build up suitable strategies in order to support the mission. The top management needs to identify the critical success factors and to review the management structure. Leadership must ensure that the principles of quality management are implemented continually (Yusuf, 2007). The four distinctive ways that top management can support TQM implementation include allocating budgets and resources; control through visibility; monitoring progress; and planning for change (Motwani J., 2001).

Muhammed (2010) carried out an empirical study on Evaluating the Deming Management Model of Total Quality in Telecommunication Industry in Pakistan and established that visionary Leadership pursues a partnership with employees, customers, and other stakeholders. The study indicated positive and statistically significant relationship with internal customers, external customers, and learning. The study acknowledged that outstanding leaders can contribute heavily to total quality by creating inspiring innovative environment and identified strengths of senior management in areas of unwavering commitment to quality. The study concluded that visionary leadership is the driver of planning, implementing and sustaining total quality management practices in organizations.

2.3.4 Customer Focus on Adoption of Quality Management

According to Deming (2006), customers see quality as the capacity to satisfy their needs and wants. This also agrees with the concept by Gilmore (2011) who considers quality to mean the degree to which a specific product satisfies the wants of a specific consumer. Historically, the
philosophy of Total Quality Management (TQM) and customer focus can be traced back to the period just after the 2nd world war, led by Edward Deming. Per historical records, Americans did not take the concept seriously until the Japanese who adopted it in 1950 to resurrect their post-war business and industry used it to dominate world markets by 1980. It's a philosophy that focuses relentlessly on the needs of the customer, both internal and external, realigns the organization from detection to prevention and aims to improve continuously using statistical monitoring.

An empirical study done by Tufan (2011) on the relationship between TQM and performance of small manufacturing enterprises in Ghana found that customer focus has a significant and negative impact on internal failure. In line with this finding, Hackman & Wageman (1995) also find that implementation of TQM elevates on customer satisfaction and that provide defect preventions. In order to increase customer satisfaction, the customers’ current and future requirements should be known by the organization. This information help firms prepare themselves to produce products and services that precisely fit to customer requirements. In addition, uncertainty is reduced and that help production system prepare itself for future conditions resulting in lower internal failure.

Sampled firms also state that using the customer complaints as a method to initiate improvements in current processes is also critical to reduce possible failures in production. Collecting information from customers by the organization helps measuring customer satisfaction and shows direction for necessary corrective actions. Especially when the employees are provided with this information, they can respond to customer requirements more effectively.
Supporting this finding Fuentes, (2004) also claim that firms emphasizing activities that seek to understand customer needs and satisfy those needs produce products with lower defects.

In Sri Lanka a study by Sakunthala & Samanthie (2011) on the Impact of TQM Practices on Work Outcomes and Customer Satisfaction in Sri Lankan Manufacturing Organizations concluded that implementation of TQM has a positive relationship with work outcomes such as job satisfaction, work involvement, organizational commitment as well as customer satisfaction and a negative relationship with turnover intentions. Muhammed (2010) carried out an empirical study on Evaluating the Deming Management Model of Total Quality in Telecommunication Industry in Pakistan and established that customer satisfaction is at the heart of TQM philosophy. A proactive approach to responding to changing customer’ needs are vital to attract and retain customers. By close interaction with customers, organizations can determine customers’ changing requirements, trends and use them as a yardstick with their competitors. The study clearly established that customer satisfaction is exemplified by customer driven focus.

Rust R. et al., (1995), in a study on effects of TQM Practices in performance of Service companies, a case study of Chine Mobile, found that “perceived expectations, perceived quality, perceived value, perceived usefulness, and perceived ease of use were critical factors for customer satisfaction with mobile services.” The study acknowledged that customer promise charter is the cornerstone of its strategy and challenge employees to provide the best services to the customers to make them happier and loyal. The study concluded that customer satisfaction is the foundation of the growth of the organization and they should therefore ensure that customer satisfaction must be top priority through setting high standards of services and maintaining the
trust in the brand. The study also emphasized the need to create value for each customer through customization and transforming customer related information into actions.

2.4 Summary of Research Gaps

Table 2.1: Summary of the Literature Review and Research Gaps

<table>
<thead>
<tr>
<th>Author</th>
<th>Topic/Area</th>
<th>Findings</th>
<th>Knowledge gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gustafsson, (2003)</td>
<td>The relationship between TQM practices and performance of small size firms</td>
<td>The relationship between total quality management practices performance is dependent on the firm size.</td>
<td>The study focused on small sized firms while the current is on manufacturing firms in Kenya</td>
</tr>
<tr>
<td>Zeha(2011)</td>
<td>An empirical study in Iran on implementation of TQM based of soft factors in small and medium size manufacturing</td>
<td>in order to fully implement TQM effectively and also gain its benefits in form of organizational performance, organizations should pay more attention to the soft dimensions</td>
<td>The study was an empirical one and was done in Iran while the current is experimental and is done in Nyeri County Kenya</td>
</tr>
<tr>
<td>Baidoun (2003)</td>
<td>An empirical study on critical factors of TQM in Palestinian organizations</td>
<td>top management commitment and involvement creates quality awareness and improve implementation of quality management systems.</td>
<td>Study only focused on one critical factor of TQM (top management commitment)</td>
</tr>
<tr>
<td>Sakunthala &amp; Samanthie (2011)</td>
<td>Impact of TQM Practices on Work Outcomes and Customer Satisfaction in Sri Lankan Manufacturing Organizations</td>
<td>Implementation of TQM has a positive relationship with work outcomes such as job satisfaction, work involvement, organizational commitment as well as customer satisfaction and a negative relationship with turnover intentions</td>
<td>The study only focused on influence of TQM on customer satisfaction and work outcome only</td>
</tr>
<tr>
<td>Muhammed (2010)</td>
<td>An empirical study on Evaluating the Deming Management Model of Total Quality in Telecommunication Industry in Pakistan</td>
<td>Visionary Leadership pursues a partnership with employees, customers, and other stakeholders</td>
<td>The study did not focus on other TQM aspects but only leadership</td>
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<td>----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Tufan (2011)</td>
<td>The relationship between TQM and performance of small manufacturing enterprises in Ghana.</td>
<td>Customer focus has a significant and negative impact on internal failure</td>
<td>The study only focused on customer focus and was done in Ghana</td>
</tr>
</tbody>
</table>

*Source: Author (2018)*

### 2.5 Conceptual Framework

A conceptual framework is a basic structure that consists of certain abstract blocks which represent the observational, the experiential and the analytical aspects of a process or system being conceived. It is a set of broad ideas and principles taken from relevant fields of enquiry and used to structure a subsequent presentation. The interconnection of independent and dependent variables completes the framework for certain expected outcomes. Top management commitment, customer focus, continuous improvement and employee training. The dependent variable is performance of manufacturing firms. Thus, the study sought to interrogate them as illustrated in the figure 2.1 below.
Independent Variables

- Continuous improvement
  - Six sigma
  - Benchmarking
  - Innovation

- Employee Training
  - Relevance of training
  - Frequency of training
  - Timeliness of training

- Top Management Commitment
  - Leadership
  - Critical resources
  - Management involvement

- Customer Focus
  - Customer needs
  - Customer feedback
  - Relationship building
  - Price sensitivity

Dependent Variable

- Performance of manufacturing firms
  - Profitability
  - Growth in market share
  - Customer Satisfaction

Figure 2.1 Conceptual Framework

Source: Researcher (2018)
CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research design, type and source of data used in the study, the target population and sampling methods and the techniques that was used to select the sample size. It also describes how data was collected, analyzed and presented.

3.2 Research Design

The study used a descriptive research design. Descriptive research design defines a subject, often by creating a profile of a group of problems, people or events through collection of data and tabulation of frequencies on research variables or their interaction (Cooper and Schindler, 2003). The design was used because it allowed analysis of qualitative data which cannot be quantified on figures. The design involved systematic collection of data from members of a given population through questionnaires.

3.3 Target population

In this study, the target population was drawn from the top management staff of the organizations under study. The staff comprised of managers in the following departments: finance, marketing, production, procurement, research and development, quality assurance, human resource among others capable of exercising authority.
Table 3.1: Target Population

<table>
<thead>
<tr>
<th>Firm</th>
<th>Members of Top Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highlands Mineral Water Co. Ltd.</td>
<td>7</td>
</tr>
<tr>
<td>Maisha Flour Mills Limited</td>
<td>5</td>
</tr>
<tr>
<td>Mukurweini Wakulima Dairy Limited</td>
<td>7</td>
</tr>
<tr>
<td>Kiganjo KCC</td>
<td>8</td>
</tr>
<tr>
<td>Gathuthi tea factory Co. Ltd</td>
<td>5</td>
</tr>
<tr>
<td>Gitugi tea factory Co. Ltd</td>
<td>6</td>
</tr>
<tr>
<td>Iriaini tea factory Co. Ltd</td>
<td>6</td>
</tr>
<tr>
<td>Chingatea factory Co. Ltd</td>
<td>6</td>
</tr>
<tr>
<td>Ndima tea factory Co. Ltd</td>
<td>7</td>
</tr>
<tr>
<td>Ragati tea factory Co. Ltd</td>
<td>7</td>
</tr>
<tr>
<td>Bradegate Holding Ltd</td>
<td>6</td>
</tr>
<tr>
<td>Othaya Farmers Co-op. Society Ltd</td>
<td>5</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>75</strong></td>
</tr>
</tbody>
</table>

*Source: Nyeri County (2018)*

3.4 Sampling Design

The study adopted a census owing to the small number of respondents involved. According to Kothari (2004), sample size refers to the number of items to be selected from the universe to constitute a sample. The size of sample should neither be excessively large, nor too small. It should be optimum. An optimum sample is one which fulfills the requirements of efficiency, representativeness, reliability and flexibility.

3.5 Data Collection Instruments

The study employed questionnaires as the instruments for the study. The questionnaires were used to collect data from top management personnel. The questionnaires were deemed suitable in that they can served a large group of respondents; they have the benefit of self administerbility, anonymity and the standardization of questions for the purpose of easing the data analysis procedures (Orodho, 2005). The questionnaire encompassed the social demographics section and
questions derived from the research objectives. The questionnaires had both closed and open-ended questions.

3.6 Validity and Reliability of the Research instrument

3.6.1 Validity of Research Instruments

Validity is the degree to which a test measures what it purports to be measuring. Validity can also be said to be the degree to which results obtained from analysis of data actually represent the phenomenon under investigation (Orodho, 2005). The researcher tested the face, content and constructs validity of the questionnaire. Face validity is in relation to the misunderstanding or misinterpretation of the question. This was checked by way of employing the pre-testing method. Prior to embarking on data collection, the researcher pre-tested the questionnaires using two manufacturing firms in Nyeri County. This was done to improve the validity of the instruments. Changes were made on the questions deemed appropriate after the pre-test. Content and construct validity were tested by way of seeking expert opinion from the supervisor and specialists in total quality management.

3.6.2 Reliability of Research Instruments

Reliability is a measure of the extent to which an instrument would consistently yield similar results after being administered several times to the same respondents (Orodho, 2005). To establish the reliability of the research instruments, the test retest method whereby the pre-test respondents were issued with questionnaires for them to fill and the same questionnaires were subjected to a re-test to see how the response was. The reliability coefficient was computed using
the Cronbach Alpha method. A coefficient of 0.7 or more is considered adequate (Tavakol, 2011).

### 3.8 Data Collection Procedure

Permission to conduct the research was sought from the National Council of Science, Research and Innovation. The researcher hand delivered the questionnaires to the target respondents and collected them to deter collusion and enhance the response rate. The researcher made prior arrangements suitable to the schedules of the respondents. The study administered the questionnaire individually to all respondents of the study. The study exercised care and control to ensure all questionnaires issued to the respondents are received and achieve this, the study maintained a register of questionnaires, which was sent, and the ones that were received. The questionnaires were administered using a drop and pick later method.

### 3.9 Data analysis and Presentation

After all the data had been collected, data cleaning was followed for the purposes of identifying any incomplete, inaccurate or unreasonable data. Data analysis involved quantitative procedures. Quantitative data analysis required the use of computer spreadsheets and the Statistical Package for Social Sciences (SPSS) was used. The study employed descriptive and inferential statistics. The background information was subjected to descriptive statistical analysis in the form of; frequencies and percentages. The inferential statistics employed included; regression analysis to test causal relationship between the variables as postulated in the research hypothesis and a One-Way Analysis of Variance (ANOVA) to determine the existence of a significant difference on firm performance on the employment of total quality management practices. Data analysis
helped to summarize the essential features and relationships of data in order to generalize and
determine patterns of behavior and particular outcomes. This process was important as it made
data sensible.

3.10 Ethical consideration

The researcher obtained a letter from Kenyatta University before data collection after satisfying
the requirements of the ethics committee. The researcher sought to get the consent of the
respondents before administering the research instruments to them. The researcher further
restricted himself only to the willing respondents who participated in the study based on their
own volition. The researcher also assured the respondents of utmost confidentiality as regards
their identities. An assurance that the information provided would be used for research purposes
only was also proffered to the respondents.
4.1 Introduction

This chapter presents the findings of the data analysis on collected data that was coded into SPSS Version 23.0 for analysis and presentation. The study relied on primary data that was collected by use of structured questionnaires. The finding of the analyzed data was presented inform of figures and tables.

4.1.1 Response Rate

The researcher distributed 75 questionnaires to the top management levels on 12 manufacturing companies in Nyeri. The study established that 56 questionnaires were filled and returned to the researcher. This gave a response rate of 75% which is sufficient for the study. This is in agreement with Mugenda and Mugenda (2003) who established that a response rate of 50% and above is deemed okay for the study. The finding is as presented in Figure 4.1.

Figure 4.1: Response Rate
4.1.2 Reliability Test

The researcher carried a reliability test to establish whether the research instruments were reliable for the study. The Cronbach alpha was computed to establish the consistency of the results. The findings are as shown in Table 4.1.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number of Items</th>
<th>Cronbach Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuous improvement</td>
<td>10</td>
<td>0.700</td>
</tr>
<tr>
<td>Employee Training</td>
<td>10</td>
<td>0.712</td>
</tr>
<tr>
<td>Top Management Commitment</td>
<td>10</td>
<td>0.736</td>
</tr>
<tr>
<td>Customer Focus</td>
<td>10</td>
<td>0.789</td>
</tr>
</tbody>
</table>

The findings in Table 4.1 established that customer focus had the highest influence on performance as shown by the Cronbach alpha of 0.789, followed by top management commitment with a Cronbach alpha of 0.736, employee training had a Cronbach coefficient of 0.712 and continuous improvement had a Cronbach alpha coefficient of 0.700. This shows that all of the Cronbach alpha coefficient were above 0.7 an indication that the research instruments was sufficient. This is in support of Tavakol (2011) who established that a coefficient of 0.7 or more is considered adequate for the study.

4.2 Demographic Information

The researcher carried out demographic information regarding the respondents to indicate how efficient they were on the study. The findings are as shown in subsequent sections.

4.2.1 Highest Level of Education

Respondents were asked to indicate their highest level of education; the findings are as shown in Figure 4.2.
Figure 4.2: Highest Level of Education

The finding in Figure 4.2 found out that majority of the respondent’s 62% highest level of education was bachelor’s degree followed by 23% who had master's degree, 12% had diploma certificates and 3% had PhD degree. The show that majority of the top management in manufacturing company in Nyeri had a degree and above. This shows that respondents were educated and would understand the questionnaire and give reliable data.

4.2.2 Education Background

Respondents were asked to indicate their education background; the findings are as shown in Figure 4.3.
The study established that majority of the respondents 62% educational background was business followed by 26% who were from hospitality and lastly 12% who came from engineering background. The findings therefore show that majority of the top management had business education background an indication that they were well aware of the firm’s performance. This shows that relevant information was sought.

4.2.3 Length of Service

Respondents were asked to indicate their length of service in their respective firms, the findings are as shown in Figure 4.4.
Figure 4.4: Length of Service

The findings in Figure 4.4 shows that 43% of the respondents came had served their organization from 5-10 years, 29% of the respondents indicated less than 5 years and 28% indicated more than 10 years. The findings show that majority of the respondent’s length of service in their form was more than 5 years an indication that they were well conversant with their organizational performance an indication that reliable data was sought.

4.2.4 Organization Certified to Quality Systems

Respondents were asked to indicate whether their organization was certified to any of the following quality systems. The study established that all of the tea factories were ISO certified. The findings also established that Highlands Mineral Water Co. Ltd, Maisha Flour Mills Limited, Mukurweini Wakulima Dairy Limited and were not ISO Certified.
4.2.5 Certificate of International Quality Assurance System (ISO)

Respondents were asked to indicate whether their organization was planning to obtain a certificate of International Quality Assurance System (ISO) in the short term. The study established that all of the respondents agreed that, Highlands Mineral Water Co. Ltd, Maisha Flour Mills Limited, Mukurweini Wakulima Dairy Limited were planning to obtain a certificate of International Quality Assurance System (ISO). This would enhance better and quality productions from the specified firms.

4.2.6 Local or International Quality Award

Respondents were asked to indicate whether their organization obtained a local or International Quality Award. The findings are as shown in Figure 4.5.

![Figure 4.5: Local or International Quality Award](image)

The findings established that majority of the respondents 74% indicated that their firms had received local or International Quality Award while 26% indicated no. This shows that this firms
performance was recognized their quality products. The findings established that majority of the award obtained were local award.

4.3 Continuous Improvement

4.3.1 Use of Standardized and Documented Operating Procedures

Respondents were asked to indicate whether their organization used standardized and documented operating procedures. The findings are as shown in Figure 4.6.

![Figure 4.6: Use of Standardized and Documented Operating Procedures](image)

The study established that majority of the respondents 77% indicated that their organization used standardized and documented operating procedures to a higher degree followed by 23% who indicted fair degree. The findings therefore show that majority of the manufacturing firms used standardized and documented operating procedures hence improving their performance. Awoku (2012) established that Continuous improvement have a positive significance relationship with business performance. It concluded the practice can be adopted in order to achieve high quality products and thereby improve business performance.
4.3.2 Provisions Adopted

Respondents were asked to indicate whether there were provisions to ensure that the members understood all the business processes in place within the organization. The findings are as shown in Table 4.2.

**Table 4.2: Provisions Adopted**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>To a great extent</td>
<td>13</td>
<td>23</td>
</tr>
<tr>
<td>To a fair extent</td>
<td>29</td>
<td>52</td>
</tr>
<tr>
<td>To a low extent</td>
<td>14</td>
<td>25</td>
</tr>
<tr>
<td>Total</td>
<td>56</td>
<td>100</td>
</tr>
</tbody>
</table>

The findings show that majority of the respondents 52% indicated agreed to a fair extent that there were provisions to ensure that the members understood all the business processes in place within the organization, 25% indicated to a low extent and 23% indicated to a great extent. The findings show that majority of the respondents 42 (75%) agreed that their organization adopted provisions that allowed their members to understand their business processes. Zeha (2011) found out that in order to fully implement TQM effectively and also gain its benefits in form of organizational performance, organizations should pay more attention to the soft dimensions.

4.3.3 Rating of Continuous Improvement

Respondents were asked to confirm their level of agreement with the attributes on continuous improvement on a Likert Scale of 1-5. The findings are as shown in Table 4.3.
Table 4.3: Rating of Continuous Improvement

<table>
<thead>
<tr>
<th>Statement</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our organization is kept neat and clean at all times</td>
<td>4.231</td>
<td>0.596</td>
</tr>
<tr>
<td>Production equipment is maintained well according to maintenance plans</td>
<td>3.952</td>
<td>0.535</td>
</tr>
<tr>
<td>Our organization uses Statistical Process Control (SPC) programs for process control and improvement</td>
<td>3.589</td>
<td>1.023</td>
</tr>
<tr>
<td>Our processes are designed to be ‘fool proof’ in order to minimize the chance of employee errors</td>
<td>3.725</td>
<td>0.985</td>
</tr>
<tr>
<td>We systematically conduct extensive benchmarking of other organizations’ business processes</td>
<td>3.235</td>
<td>0.895</td>
</tr>
</tbody>
</table>

The study pointed out that majority of the respondents agreed that their organization was kept neat and clean at all times as supported by a mean of 4.231 with standard deviation of 0.596. Majority of the respondents agreed that production equipment was maintained well according to maintenance plans as supported by a mean of 3.952 with standard deviation of 0.535. Majority of the respondents indicated that their organization used Statistical Process Control (SPC) programs for process control and improvement as supported by a mean of 3.589 with standard deviation of 1.023. This is supported by Gustafsson (2003) who established that the relationship between total quality management practices performance is dependent on the firm size.

The study further established that majority of the respondents agreed that processes were designed to be ‘fool proof’ in order to minimize the chance of employee errors as supported by a mean of 3.725 with standard deviation of 0.985. Majority of the respondents indicated their moderate agreement that they systematically conducted extensive benchmarking of other organizations’ business processes as supported by a mean of 3.235 with standard deviation of 0.895. Charan (2008) found that the fewer the employees the better since they would be managed easily and the process implementation would be easy to adapt to.
4.3.4 Influence of Improvement on Organizational Performance

Respondents were asked to indicate whether continuous improvement affected organizational performance. The findings are as shown in Figure 4.7.

![Pie chart showing the influence of improvement on organizational performance.]

**Figure 4.7: Influence of Improvement on Organizational Performance**

The study found out that majority of the respondents agreed that continuous improvement had a significant role and influenced organizational performance positively while 16% indicated no. The findings therefore show that organization ought to adopt continuous improvement for better performance in their firm. This agrees with Muhammed (2010) who established a positive and statistically significant relationship with customer satisfaction and concluded that the approach leads to creativity and competitive excellence and those TQM objectives can be accomplished by constantly pursuing continuous improvement.
4.4 Employee Training

4.4.1 Modalities on Assess Training Needs

Respondents were asked to indicate whether their organization had modalities to assess training needs periodically with a view of ensuring sustainable organizational performance. The findings are as shown in Table 4.4.

<table>
<thead>
<tr>
<th>Statements</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>To a high degree</td>
<td>21</td>
<td>38</td>
</tr>
<tr>
<td>To a fair degree</td>
<td>26</td>
<td>46</td>
</tr>
<tr>
<td>To a low degree</td>
<td>9</td>
<td>16</td>
</tr>
</tbody>
</table>

The findings established that 46% of the respondents agreed that their company had modalities to assess training needs periodically to a fair degree, 38% indicated to a higher degree and 16% indicated to a lower degree. The findings show that majority of the respondents 47 (84%) agreed that their organization had modalities to assess training needs periodically with a view of ensuring sustainable organizational performance. This is supported by Dale et al,(2010) who states that training and development programs should not be seen as a onetime event but a lifelong process.

4.4.2 Implementation of Quality Management Systems

Respondents were asked to indicate whether their organization implemented quality management systems to ensure continuous employee improvement. The findings are as shown in Table 4.5.
The study found out that 43% of the respondents agreed to a great extent that their organization implemented quality management systems followed by 34% to a fair extent and lastly 23% to a low extent. The findings show that majority of the respondents 43 (77%) agreed that their organization implemented quality management systems to ensure continuous employee improvement. Yu Chu & Wang (2001) revealed that team leaders’ involvement, employees training and development, employee awareness among other factors are critical in implementation of quality initiatives.

4.4.3 Rating of Employee Training

Respondents were asked to indicate how employee training influenced organization performance on a scale of 1-5. The findings are as shown in Table 4.6.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>The selection and recruitment process in our organization is effective (in terms of the objectivity and ‘right man for the right job’)</td>
<td>3.875</td>
<td>0.895</td>
</tr>
<tr>
<td>Promotion and career development programmers emphasize quality management in the organization.</td>
<td>3.999</td>
<td>1.002</td>
</tr>
<tr>
<td>The concept of the ‘internal customer’, i.e. the next person or process down the line and including all employees, is well understood in this organization.</td>
<td>3.426</td>
<td>1.000</td>
</tr>
<tr>
<td>Communication is open and continues in three directions: up, down and across</td>
<td>3.652</td>
<td>0.598</td>
</tr>
<tr>
<td>The organization concentrates on ongoing development of personnel by establishing extensive training programs that cover all aspects of TQM</td>
<td>3.203</td>
<td>0.859</td>
</tr>
</tbody>
</table>
The study found out that majority of the respondents agreed that the selection and recruitment process in their organization was effective (in terms of the objectivity and ‘right man for the right job’) as supported by a mean of 3.875 with standard deviation of 0.895. Majority of the respondents agreed that promotion and career development programmers emphasized quality management in the organization as supported by a mean of 3.999 with standard deviation of 1.002. Majority of the respondents moderately agreed that the concept of the ‘internal customer’, i.e. the next person or process down the line and including all employees, was well understood in this organization as supported by a mean of 3.426 with standard deviation of 1.000. This is in agreement with Mohanty and Lakhe (2012) who argues that the people who know the most about what is right and wrong with processes are those who do it. If trained well and given the responsibility to inspect quality of their work it would eliminate inspection.

The study further established that majority of the respondents agreed that communication was open and continues in three directions: up, down and across as supported by a mean of 3.652 with standard deviation of 0.598. Majority of the respondents moderately agreed that the organization concentrated on ongoing development of personnel by establishing extensive training programs that cover all aspects of TQM as supported by a mean of 3.203 with standard deviation of 0.859. This is supported by Chandler and Mc Evoy (2012) who pointed out that employees are the prime source of human resources, their education, skills and experience need to be assessed and matched with the job requirements for maximum performance. Employees at all levels must accept quality education and training as it helps employees at their levels to understand quality management initiatives and their roles in implementing TQM (Arshida & Agil, 2012).
4.4.4 Influence of Employee Training on Organization Performance

Respondents were asked to indicate the influence whether employee training affected organizational performance. The findings are as shown in Figure 4.8.

![Pie chart showing influence of employee training on organization performance]

Figure 4.8: Influence of Employee Training on Organization Performance

The study established that majority of the respondents 87% agreed that employee training affected organizational performance while 13% indicated no. Training helps in preparing employees towards managing the total quality management ideology in the process of production. Training equips people with the necessary skills and techniques of quality improvement. It is argued to be a powerful building block of business in the achievement of its aims and objectives (Zhang, 2010).

4.4.5 How to Improve Total Quality Management Practices

Respondents were asked to indicate how total quality management practices can be improved on within their organization to enhance performance. The findings indicated that top management ought to learns about and decides to commit to TQM. The organization assesses current culture,
customer satisfaction, and quality management systems. The organization identifies and prioritizes customer demands and aligns products and services to meet those demands. Management maps the critical processes through which the organization meets its customers’ needs. Management oversees the formation of teams for process improvement efforts. The momentum of the TQM effort is managed by the steering committee. Managers contribute individually to the effort through hoshin planning, training, coaching, or other methods. Daily process management and standardization take place. Progress is evaluated and the plan is revised as needed. Constant employee awareness and feedback on status are provided and a reward/recognition process is established.

4.5 Top Management Commitment

4.5.1 Evaluation of Top Management

Respondents were asked to indicate whether top management was evaluated on quality performance. The findings are as shown in Table 4.7.

Table 4.7: Evaluation of Top Management

<table>
<thead>
<tr>
<th>Statements</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>To a high degree</td>
<td>43</td>
<td>77</td>
</tr>
<tr>
<td>To a fair degree</td>
<td>13</td>
<td>23</td>
</tr>
</tbody>
</table>

The findings established that majority of the respondents 77% agreed to a high degree that top management was evaluated on quality performance followed by 23% who agreed to a fair degree. The findings show that all of the respondents agreed that top management was evaluated on quality performance. Miller and Hartwick (2012) found that training and top management commitment play very important roles in TQM implementations in public listed manufacturing companies.
4.5.2 Heads of Department are Tasked to Accept their Responsibility

Respondents were asked to indicate whether all heads of department within their organization were tasked to accept their responsibility for quality. The finding is as shown in Table 4.8.

<table>
<thead>
<tr>
<th>Statements</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>To a high degree</td>
<td>25</td>
<td>44</td>
</tr>
<tr>
<td>To a fair degree</td>
<td>16</td>
<td>29</td>
</tr>
<tr>
<td>To a low extent</td>
<td>15</td>
<td>27</td>
</tr>
</tbody>
</table>

The study found out that 44% of the respondents agreed to a high degree that all heads of department within their organization were tasked to accept their responsibility for quality followed by 29% who agreed to a fair degree and 27% who indicated to a low extent. The findings show that majority of the respondents 41(73%) agreed that all heads of department within their organization were tasked to accept their responsibility for quality. Zeha(2011) established that management leadership is an important factor in TQM implementation because it improves performance through influencing other TQM practices.

4.5.3 Rating of Top Management Commitment

Respondents were asked to indicate their rate of agreement on effect of top management commitment on organizational performance on a scale of 1-5. The findings are as shown in Table 4.9.
Table 4.9: Rating of Top Management Commitment

<table>
<thead>
<tr>
<th>Statement</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top executives are actively involved in establishing and communicating</td>
<td>4.213</td>
<td>0.895</td>
</tr>
<tr>
<td>the organization’s vision, goals, plans, and value for quality programs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior executives anticipate change and make plans to accommodate it.</td>
<td>3.758</td>
<td>1.002</td>
</tr>
<tr>
<td>Senior executives insist on accuracy and reliability of all information</td>
<td>3.958</td>
<td>0.879</td>
</tr>
<tr>
<td>and communications within the organization.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Top management views quality as being more important than meeting</td>
<td>3.512</td>
<td>0.859</td>
</tr>
<tr>
<td>production schedules.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>We have faith, trust and confidence in our managers and juniors would</td>
<td>3.425</td>
<td>1.025</td>
</tr>
<tr>
<td>like to follow them as role models.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The study established that majority of the respondents agreed that top executives were actively involved in establishing and communicating the organization’s vision, goals, plans, and value for quality programs as supported by a mean of 4.213 with standard deviation of 0.895. Respondents agreed that senior executives anticipated change and made plans to accommodate it as supported by a mean of 3.758 with standard deviation of 1.002. Senior executive insisted on accuracy and reliability of all information and communications within the organization by a mean of 3.958 with standard deviation of 0.879. This is supported by Garvin (2014) who states that successful quality management is highly dependent on the level of top management commitment.

Majority of the respondents agreed that top management viewed quality as being more important than meeting production schedules as supported by a mean of 3.512 with standard deviation of 0.859. Majority of the respondents moderately agreed that top management had faith, trust and confidence in their managers and juniors liked to follow them as role models as supported by a mean of 3.425 with standard deviation of 1.025. This agrees with Zakuan (2012) who states that the success of an institution depends on its quality management strategy on how it identifies, classifies, analyzes, and reacts to the changes in quality requirements.
4.5.4 Influence of Top Management Commitment on Organizational Performance

Respondents were asked to indicate the influence whether top management commitment influenced organizational performance. The findings are as shown in Figure 4.9.

![Pie chart showing influence of top management commitment on organizational performance.](chart)

Figure 4.9: Influence of Top Management Commitment on Organizational Performance

The findings in Figure 4.9 show that majority of the respondents 82% agreed that top management commitment influenced organizational performance while 16% indicated no. This is supported by Muhammed (2010) who found out that outstanding leaders can contribute heavily to total quality by creating inspiring innovative environment and identified strengths of senior management in areas of unwavering commitment to quality.

4.6 Customer Focus

4.6.1 Communication and Training Processes

Respondents were asked to indicate whether their organization emphasizes on communication and training processes with a view on customer focus. The findings are as shown in Table 4.10.
Table 4.10: Communication and Training Processes

<table>
<thead>
<tr>
<th>Statements</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>To a high degree</td>
<td>20</td>
<td>36</td>
</tr>
<tr>
<td>To a fair degree</td>
<td>25</td>
<td>45</td>
</tr>
<tr>
<td>To a low extent</td>
<td>11</td>
<td>20</td>
</tr>
</tbody>
</table>

The study established that 45% of the respondents agreed to a high degree that their organization emphasizes on communication and training processes with a view on customer focus followed by 36% who indicated to a higher degree and lastly 20% who indicated to a lower degree. The findings show that majority of the respondents agreed 45(81%) that their organization emphasizes on communication and training processes with a view on customer focus. This is supported by Hackman & Wageman (1995) who established that TQM elevates on customer satisfaction and positively influences performance.

4.6.2 After Sales Programmes

The researcher asked the respondents to indicate whether their organization emphasized on after sales programmes as important parts of the business strategy. The findings are as shown in Table 4.11.

Table 4.11: After Sales Programmes

<table>
<thead>
<tr>
<th>Statements</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>To a high degree</td>
<td>14</td>
<td>25</td>
</tr>
<tr>
<td>To a fair degree</td>
<td>23</td>
<td>41</td>
</tr>
<tr>
<td>To a low extent</td>
<td>19</td>
<td>34</td>
</tr>
</tbody>
</table>

The study established that 41% of the respondents agreed to a high degree that their organization emphasized on after sales programmes followed by 34% who indicated to a low extent and 25% indicate to a high extent. The findings show that majority of the respondents 37(66%) agreed that their organization emphasized on after sales programmes as important parts of the business strategy.
strategy. Sakunthala & Samanthie (2011) states that implementation of TQM has a positive relationship with work outcomes such as job satisfaction, work involvement, organizational commitment as well as customer satisfaction and a positive relationship with turnover intentions.

4.6.3 Rating of Customer Focus

Respondents were asked to indicate on a Likert scale their level of agreement on influence of customer focus on organizational performance. The findings are as shown in Table 4.12.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product/ service design, development and delivery are based on meeting the needs of the customer</td>
<td>3.754</td>
<td>1.056</td>
</tr>
<tr>
<td>A wide variety of mechanisms for customers to contact the organization easily and effectively are available</td>
<td>4.025</td>
<td>0.895</td>
</tr>
<tr>
<td>A wide variety of mechanisms for seeking and learning customers’ needs and expectations (e.g. focus groups, customer surveys, customer visits and reviews) are in place.</td>
<td>3.687</td>
<td>1.032</td>
</tr>
<tr>
<td>A complaints process and guidelines are established; complaints are properly recorded.</td>
<td>4.005</td>
<td>0.796</td>
</tr>
<tr>
<td>Customer forecast strategies and approaches are continuously reviewed for further improvement.</td>
<td>3.684</td>
<td>0.547</td>
</tr>
</tbody>
</table>

The study found out that majority of the respondents agreed that their product/ service design, development and delivery were based on meeting the needs of the customer as supported by a mean of 3.754 with standard deviation of 1.056. Majority of the respondents agreed that a wide variety of mechanisms for customers to contact the organization easily and effectively were available as shown by a mean of 4.025 with standard deviation of 0.895. A wide variety of mechanisms for seeking and learning customers’ needs and expectations (e.g. focus groups, customer surveys, customer visits and reviews) were in place as shown by a mean of 3.687 with
standard deviation of 1.032. This is supported by Tufan (2011) who found out that customer focus had a significant organizational performance.

Majority of the respondents agreed that a complaints process and guidelines were established; complaints were properly recorded as supported by a mean of 4.005 with standard deviation of 0.796. Majority of the respondents agreed that customer forecast strategies and approaches were continuously reviewed for further improvement as shown by a mean of 3.684 with standard deviation of 0.547. Hackman & Wageman (1995) established that TQM elevates on customer satisfaction and positively influences performance.

4.6.4 Influence of Customer Focus on Organizational Performance

The researcher asked the respondents to indicate whether customer focus influenced organizational performance. The study established that all of the respondents indicated that customer focus influenced organization in retaining customers hence led to improved organizational performance. Muhammed (2010) established that customer satisfaction is at the heart of TQM philosophy.

4.7 Organizational Performance

Respondents were asked to indicate their level of agreement on organizational performance on a Likert scale of 1-5. The findings are as shown in Table 4.13.

<table>
<thead>
<tr>
<th>Table 4.13: Organizational Performance</th>
<th>Statement</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Profit margin of our Company has been increasing</td>
<td>3.801</td>
<td>1.329</td>
</tr>
<tr>
<td></td>
<td>Growth in market share for our Company has been increasing</td>
<td>4.524</td>
<td>.511</td>
</tr>
<tr>
<td></td>
<td>There is increased level of customer satisfaction in our company</td>
<td>4.145</td>
<td>1.384</td>
</tr>
</tbody>
</table>
Table 4.7 indicates that profit margin of the manufacturing companies has been increasing by a mean of 3.801 with standard deviation of 1.329. Respondents were in agreement to a great extent that growth in market share for their company have been increasing as supported by a mean of 4.524 with standard deviation of 0.511. The study further established that the organization had recorded increased level of customer satisfaction as supported by a mean of 4.14 with standard deviation of 1.38.

4.8 Regression Analysis

The study used regression analysis to establish the influence of total quality management practices on performance of manufacturing firms in Nyeri County. The findings of Model Summary, ANOVA and Regression coefficient are indicated in the subsequent sections.

4.9.1 Model Summary

The coefficient of correlation R and coefficient of determination $R^2$ is indicate in Table 4.14.

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.939a</td>
<td>.881</td>
<td>.852</td>
<td>1.04459</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Continuous improvement, Employee Training, Top Management Committement, Customer Focus

Table 4.14 found out that coefficient of correlation $R$ was 0.939 an indication of strong positive relationship between the variables. Coefficient of adjusted determination $R^2$ was 0.852 which translates to 85.2% an indication that 85.2% variations in organizational performance can be explained by continuous improvement, employee training, top management commitment and customer focus. The residual of 14.8% can be attributed to the other factors beyond the scope of the current study.

63
4.9.2 ANOVA

An ANOVA was carried out at 5% level of significance. A comparison between $F_{\text{Calculated}}$ and $F_{\text{Critical}}$ was carried out. The findings are as indicated in Table 4.15.

Table 4.15: ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>129.779</td>
<td>4</td>
<td>32.445</td>
<td>94.868</td>
<td>.000(^b)</td>
</tr>
<tr>
<td>Residual</td>
<td>17.459</td>
<td>51</td>
<td>0.342</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>147.238</td>
<td>55</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Organizational Performance  
b. Predictors: (Constant), Continuous improvement, Employee Training, Top Management Commitment, Customer Focus

Table 4.15 indicates $F_{\text{Calculated}}$ was 94.868 and $F_{\text{Critical}}$ was 3.0069. Therefore, $F_{\text{Calculated}} > F_{\text{Critical}}$ an indication that the overall regression model was significant in establishing the influence of total quality management practices on performance of manufacturing firms in Nyeri County. The p value was 0.00 < 0.05 an indication that at least one variable influenced the organizational performance.

4.9.3 Regression Coefficient

To determine the individual influencing performance of manufacturing firms in Nyeri County, the following coefficient of regression were generated. The findings are indicated in Table 4.16.

Table 4.16: Regression Coefficient

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>5.944</td>
<td>3.419</td>
<td></td>
<td>1.739</td>
</tr>
<tr>
<td>Continuous improvement</td>
<td>.330</td>
<td>.078</td>
<td>.567</td>
<td>4.251</td>
</tr>
<tr>
<td>Employee Training</td>
<td>.719</td>
<td>.233</td>
<td>.221</td>
<td>3.084</td>
</tr>
<tr>
<td>Top Management Commitment</td>
<td>.733</td>
<td>.304</td>
<td>.483</td>
<td>2.410</td>
</tr>
<tr>
<td>Customer Focus</td>
<td>.939</td>
<td>.294</td>
<td>.835</td>
<td>3.197</td>
</tr>
</tbody>
</table>

a. Dependent Variable: performance
The resultant equation becomes:

\[ Y = 5.944 + 0.330X_1 + 0.020X_2 + 0.733X_3 + 0.939X_4 \]

Where: Y = Financial Performance  
\( X_1 = \) Continous Improvement  
\( X_2 = \) Employee Training  
\( X_3 = \) Top Management Committement  
\( X_4 = \) Customer Focus  

From the findings, when all the variables were held constant, financial performance of Agricultural companies listed at the NSE would be at 5.944. A unit increase in continous improvement when all the other factors were held constant would be at 0.330. A unit increase in employee training when all the other factors were held constant would be at 0.020. A unit increase in top management committement would be at 0.733. A unit increase in customer focus would be at 0.939 when all the other factors were held constant.

In view to p and t values the study established that continous improvement (p=0.000<0.05 and t=4.251>1.96), employee training had (p= 0.004<0.05 and t=3.084 >1.96), top management committement had (p=0.028<0.05 and t= 2.410>1.96) and customer focus had a (p= 0.006<0.05 and t=3.197>1.96) an indication that the variables significantly and positively influenced organizational performance.

4.9 Hypothesis Testing  
The first null hypothesis stated that continuous improvement does not affect performance of manufacturing firms in Nyeri County. The study found out that continuous improvement had a positive influence on performance of manufacturing firms in Nyeri County. We therefore reject
the null hypothesis and fail to reject the alternative hypothesis that states; continuous improvement affect performance of manufacturing firms in Nyeri County. This is supported by Awoku (2012) who established that Continuous improvement have a positive significance relationship with business performance. Similarly, Gustafsson (2003) established that the relationship between total quality management practices performance is dependent on the firm size.

The second null hypothesis states that employee training does not affect performance of manufacturing firms in Nyeri County. The study findings show that employee training had a positive influence on performance. We therefore reject the null hypothesis and fail to reject the alternative hypothesis that states that employee training affect performance of manufacturing firms in Nyeri County. This is supported by Chandler and Mc Evoy (2012) who pointed out that employees are the prime source of human resources, their education, skills and experience need to be assessed and matched with the job requirements for maximum performance. Employees at all levels must accept quality education and training as it helps employees at their levels to understand quality management initiatives and their roles in implementing TQM (Arshida & Agil, 2012).

Their null hypothesis indicated that top management commitment does not affect performance of manufacturing firms in Nyeri County. The study found out that top management commitment had a positive influence on performance. This show that we reject the null hypothesis and fail to reject the alternative hypothesis that states that top management commitment affects performance of manufacturing firms in Nyeri County. This is supported by Baidoun (2003) who found out that top management commitment and involvement demonstrated by: development of
clear organization mission, development of quality policy and values, setting of realistic quality goals, proper planning on quality management and creating quality management structure creates quality awareness and improve implementation of quality management systems.

The last hypothesis of the study states that customer focus does not affect performance of manufacturing firms in Nyeri County. The study established that customer focus positively influenced performance. Therefore, we reject the null hypothesis and fail to reject alternative hypothesis that states that customer focus does not affect performance of manufacturing firms in Nyeri County. This is supported by Tufan (2011) who found out that customer focus had a significant organizational performance. Similarly, Hackman & Wageman (1995) established that TQM elevates on customer satisfaction and positively influences performance.
CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction
This chapter presents the summary of the findings of the study as presented in chapter four. Conclusion and recommendations are drawn from the summary of the findings. Suggestions for further studies as also drawn.

5.2 Summary of the Findings
The main purpose of the study was to evaluate the influence of total quality management practices on performance of manufacturing firms in Nyeri County. The study was guided by the following hypothesis:

$H_01$: Continuous improvement does not affect performance of manufacturing firms in Nyeri County.

$H_02$: Employee training does not affect performance of manufacturing firms in Nyeri County.

$H_03$: Top management commitment does not affect performance of manufacturing firms in Nyeri County.

$H_04$: Customer focus does not affect performance of manufacturing firms in Nyeri County.

5.2.1 Continuous Improvement
The established that majority of the respondents agreed that their organization was kept neat and clean at all times. Majority of the respondents agreed that production equipment was maintained well according to maintenance plans. Majority of the respondents agreed that their organization used Statistical Process Control (SPC) programs for process control. Majority of the respondents agreed that processes were designed to be ‘fool proof’ in order to minimize the chance of employee errors. Majority of the respondents indicated their moderate agreement that they
systematically conducted extensive benchmarking of other organizations’ business processes. The finding of regression analysis further established that continuous improvement positively influenced organizational performance.

5.2.2 Employee Training

The study pointed out that majority of the respondents agreed that promotion and career development programmers emphasized quality management in the organization. Majority of the respondents agreed that the selection and recruitment process in their organization was effective (in terms of the objectivity and ‘right man for the right job’). Majority of the respondents agreed that communication was open and continues in three directions: up, down and across. Majority of the respondents moderately agreed that the organization concentrated on ongoing development of personnel by establishing extensive training programs that cover all aspects of TQM. Majority of the respondents moderately agreed that the concept of the ‘internal customer’, i.e. the next person or process down the line and including all employees, was well understood in this organization. The findings of regression analysis established that employee training positively influenced organizational performance.

5.2.3 Top Management Commitment

The study pointed out that majority of the respondents agreed that top executives were actively involved in establishing and communicating the organization’s vision, goals, plans, and value for quality programs. Senior executive insisted on accuracy and reliability of all information and communications within the organization. Respondents agreed that senior executives anticipated change and made plans to accommodate it. Majority of the respondents agreed that top
management viewed quality as being more important than meeting production schedules. Majority of the respondents moderately agreed that top management had faith, trust and confidence in their managers and juniors liked to follow them as role models. The findings of regression analysis established that top management commitment positively influenced organizational performance.

5.2.4 Customer Focus

The study found out that majority of the respondents agreed that a wide variety of mechanisms for customers to contact the organization easily and effectively were available. Majority of the respondents agreed that a complaints process and guidelines were established; complaints were properly recorded. Majority of the respondents agreed that their product/service design, development and delivery were based on meeting the needs of the customer. A wide variety of mechanisms for seeking and learning customers’ needs and expectations (e.g. focus groups, customer surveys, customer visits and reviews) were in place. Majority of the respondents agreed that customer forecast strategies and approaches were continuously reviewed for further improvement. The findings of regression analysis established that customer focus positively influenced organizational performance.
5.3 Conclusion

The study concludes that manufacturing organizations were kept neat and clean at all times. Production equipment was maintained well according to maintenance plans. Manufacturing organization used Statistical Process Control (SPC) programs for process control. Processes were designed to be ‘fool proof’ in order to minimize the chance of employee errors. Top management systematically conducted extensive benchmarking of other organizations’ business processes.

The study concludes that promotion and career development programmers emphasized quality management in the organization. Selection and recruitment process in their organization was effective (in terms of the objectivity and ‘right man for the right job’). Communication was open and continues in three directions: up, down and across. Organization concentrated on ongoing development of personnel by establishing extensive training programs that cover all aspects of TQM. The concept of the ‘internal customer’, i.e. the next person or process down the line and including all employees, was well understood in this organization.

The study concludes that top executives were actively involved in establishing and communicating the organization’s vision, goals, plans, and value for quality programs. Senior executive insisted on accuracy and reliability of all information and communications within the organization. Senior executives anticipated change and made plans to accommodate it. Majority of the respondents agreed that top management viewed quality as being more important than meeting production schedules. Top management had faith, trust and confidence in their managers and juniors liked to follow them as role models.
The study further concludes that a wide variety of mechanisms for customers to contact the organization easily and effectively were available. Complaints process and guidelines were established; complaints were properly recorded. Manufacturing companies product/service design, development and delivery were based on meeting the needs of the customer. A wide variety of mechanisms for seeking and learning customers’ needs and expectations (e.g. focus groups, customer surveys, customer visits and reviews) were in place. Customer forecast strategies and approaches were continuously reviewed for further improvement.

5.4 Recommendations

The study recommends that manufacturing organizations ought to be kept neat and clean at all times. Production equipment ought to be maintained well according to maintenance plans. Manufacturing organization ought to Statistical Process Control (SPC) programs for process control. Processes ought to be designed to be ‘fool proof’ in order to minimize the chance of employee errors. Top management ought to systematically conduct extensive benchmarking of other organizations’ business processes.

The study recommends that promotion and career development programmers ought to emphasize quality management in the organization. Selection and recruitment process in the organization ought to be effective (in terms of the objectivity and ‘right man for the right job’). Communication ought to be open and to continues in three directions: up, down and across. Organization ought to concentrate on ongoing development of personnel by establishing extensive training programs that cover all aspects of TQM. The concept of the ‘internal customer’ ought to be well understood in this organization.
The study recommends that top executives ought to be actively involved in establishing and communicating the organization’s vision, goals, plans, and value for quality programs. Senior executive ought to insist on accuracy and reliability of all information and communications within the organization. Senior executives ought to anticipate change and make plans to accommodate it. Top management ought to viewed quality as being more important than meeting production schedules. Top management ought to have faith, trust and confidence in their managers and juniors ought to follow them as role models.

The study further recommends that a wide variety of mechanisms for customers to contact the organization ought to be easily and effectively available. Complaints process and guidelines ought to be established and complaints ought to be properly recorded. Manufacturing companies product/service design, development and delivery ought to be based on meeting the needs of the customer. A wide variety of mechanisms for seeking and learning customers’ needs and expectations (e.g. focus groups, customer surveys, customer visits and reviews) ought to be in place. Customer forecast strategies and approaches ought to be continuously reviewed for further improvement.

5.5 Suggestions for Further Studies

The current study relied on primary data that was collected by use of structured questionnaires, future scholars ought to carry out similar studies by use of both primary and secondary data for preciseness of the study. The study had a coefficient of adjusted determination $R^2$ of 0.852 which translates to 85.2%, the remaining 14.8% can be attributed to the other factors beyond the scope of the current study that future scholar ought to focus on.
The current study focused on the influence of total quality management practices on performance of manufacturing firms in Nyeri County, future scholars ought to focus on each manufacturing firm to establish the individual influence of total quality management practices on performance. The current study focused on manufacturing firms in Nyeri, future scholars ought to carry out similar studies on different counties.
REFERENCES


Dhillon, B. S. (2005), Reliability, quality, and safety for engineers, CRC Press, Florida, USA;


Duffy and Shih (1999) An empirical analysis of effective TQM implementation in the HongKong electronics manufacturing industry” Human Factors & ergonomics in Manufacturing, 9(1-25, 1999


Muli, E. N. (2014). *Quality improvement practices and business performance among commercial state corporations in the Ministry of Health, Kenya*, Unpublished MBA Project, University of Nairobi


Ogada, A. (2012). *Quality management practices adopted by sugar manufacturing companies in Western Kenya*, Unpublished MBA Project, University of Nairobi


Reed, R., &Lemak, D. J. (2000). Total quality management and sustainable


APPENDICES

APPENDIX I: QUESTIONNAIRE

Instructions

Please answer by either ticking in the boxes or filling the blank spaces provided.

Section one: General information

1. Your position in the firm ...................................................

2. Your highest education level

   □ Secondary education

   □ Diploma

   □ Bachelors degree

   □ Masters degree

   □ PhD degree

3. Your Education Backgrounds

   □ Engineering

   □ Business

   □ Hospitality

   □ Other, Please specify ..................................................

4. How long have you been in this organization?

   85
☐ Less than 5 years

☐ 5 – 10 years

☐ More than 10 years

5. Is your organization certified to any of the following quality systems?

☐ ISO 9001

☐ ISO 9002

☐ ISO 9003

☐ ISO 9001:2000

☐ Others, please specify:……………………………………

☐ None

6. Is your organization planning to obtain a certificate of International Quality Assurance System (ISO) in the short term?

☐ Yes ☐ No

7. Has your organization obtained a local or International Quality Award?

☐ Yes ☐ No

If yes, please specify………………………………………………………

Continuous improvement

8. Does your organization use standardized and documented operating procedures?
To a high degree ☐
To a fair degree ☐
To a low degree ☐

9. Are there provisions to ensure that the membership understands all the business processes in place within the organization?

To a great extent ☐
To a fair extent ☐
To a low extent ☐

10. Kindly confirm your level of agreement with the following attributes on continuous improvement

SA – Strongly Agree          A – Agree          I – Indifferent
DA – Disagree               SDA – Strongly Disagree

<table>
<thead>
<tr>
<th>No.</th>
<th>Statement</th>
<th>SA</th>
<th>A</th>
<th>I</th>
<th>DA</th>
<th>SDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Our organization is kept neat and clean at all times</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Production equipment is maintained well according to maintenance plans</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Our organization uses Statistical Process Control (SPC) programs for process control and improvement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Our processes are designed to be ‘fool proof’ in order to minimize the chance of employee errors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5. We systematically conduct extensive benchmarking of other organizations’ business processes

11. Does the continuous improvement affect organizational performance?
   Yes ☐
   No ☐

Employee training

12. Does your organization have modalities to assess training needs periodically with a view of ensuring sustainable organizational performance?
   To a high degree ☐
   To a fair degree ☐
   To a low degree ☐

13. Does your organization implement quality management systems to ensure continuous employee improvement?
   To a great extent ☐
   To a fair extent ☐
   To a low extent ☐

14. Kindly confirm your level of agreement with the following attributes on employee training
   SA – Strongly Agree   A – Agree   I – Indifferent
   DA – Disagree   SDA – Strongly Disagree
<table>
<thead>
<tr>
<th>No.</th>
<th>Statement</th>
<th>SA</th>
<th>A</th>
<th>I</th>
<th>DA</th>
<th>SDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>The selection and recruitment process in our organization is effective (in terms of the objectivity and ‘right man for the right job’)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Promotion and career development programmers emphasize quality management in the organization.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>The concept of the ‘internal customer’, i.e. the next person or process down the line and including all employees, is well understood in this organization.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Communication is open and continues in three directions: up, down and across</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>The organization concentrates on ongoing development of personnel by establishing extensive training programs that cover all aspects of TQM</td>
<td></td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>

15. Does employee training affect organizational performance?

   Yes [ ]
   No [ ]

16. How can total quality management practices be improved on within your organization to enhance performance?

   **Top Management Commitment**

17. Kindly confirm whether top management is evaluated on quality performance
To a high degree ☐
To a fair degree ☐
To a low degree ☐

18. Are all heads of department within your organization tasked to accept their responsibility for quality?

To a great extent ☐
To a fair extent ☐
To a low extent ☐

19. Kindly confirm your level of agreement with the following attributes on top management commitment

SA – Strongly Agree       A – Agree       I – Indifferent
DA – Disagree             SDA – Strongly Disagree

<table>
<thead>
<tr>
<th>No.</th>
<th>Statement</th>
<th>SA</th>
<th>A</th>
<th>I</th>
<th>DA</th>
<th>SDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Top executives are actively involved in establishing and communicating the organization’s vision, goals, plans, and value for quality programs.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Senior executives anticipate change and make plans to accommodate it.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Senior executives insist on accuracy and reliability of all information and communications within the organization.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4. Top management views quality as being more important than meeting production schedules.

5. We have faith, trust and confidence in our managers and juniors would like to follow them as role models.

20. Does top management commitment affect organizational performance?
   - Yes [ ]
   - No [ ]

**Customer Focus**

21. Kindly confirm if your organization emphasizes on communication and training processes with a view on customer focus
   - To a high degree [ ]
   - To a fair degree [ ]
   - To a low degree [ ]

22. Does your organization emphasize on after sales programmes as important parts of the business strategy?
   - To a great extent [ ]
   - To a fair extent [ ]
   - To a low extent [ ]
23. Kindly confirm your level of agreement with the following attributes on customer focus

<table>
<thead>
<tr>
<th>No.</th>
<th>Statement</th>
<th>SA</th>
<th>A</th>
<th>I</th>
<th>DA</th>
<th>SDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Product/service design, development and delivery are based on meeting the needs of the customer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>A wide variety of mechanisms for customers to contact the organization easily and effectively are available</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>A wide variety of mechanisms for seeking and learning customers’ needs and expectations (e.g. focus groups, customer surveys, customer visits and reviews) are in place.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>A complaints process and guidelines are established; complaints are properly recorded.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Customer forecast strategies and approaches are continuously reviewed for further improvement.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

24. Does the customer focus programme in place affect organizational performance?

Yes ☐

No ☐