

**TOTAL QUALITY MANAGEMENT PRACTICES AND ORGANISATIONAL  
PERFORMANCE IN MANUFACTURING INDUSTRIES IN KENYA: A CASE  
OF MABATI ROLLING MILLS**

**BY**

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## **DECLARATION**

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

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### **Supervisor Declaration**

This research project has been submitted to the University with my approval as the University supervisor.

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## **DEDICATION**

This work is dedicated to my lovely wife Monica and our son Finley for their stable support and patience.

## **ACKNOWLEDGEMENT**

First and foremost, I owe all this opportunity to the almighty God who has given me the physical, psychological and spiritual strength to carry on with the work to this level.

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## OPERATIONAL DEFINITION OF TERMS

- Continuous improvement:** refers innovations that MRM adopts in its operations and to long-term approach to work that systematically seeks to achieve small, incremental changes in processes in order to improve efficiency and quality.
- Customer Focus:** refers to MRM's stance in which all aspects of a company's production and delivery of goods or services are directed by the best interests of the customers as they also get feedback and take appropriate action.
- Employee involvement** refers to the direct participation of staff to help an organization fulfill its mission and meet its objectives by applying their own ideas, expertise, and efforts towards solving problems and making decisions. MRM employees state of relations in terms of consultation in decision making and implementation of policies.
- Organisational Performance:** It refers to the actual output or results of MRM as measured against its intended outputs (or goals and objectives). This include revenue and market share.
- Top management commitment:** refers to the direct participation by the Chief Executive Officer and the Board of MRM in a specific and critically important decision of the organization in order to achieve its objectives towards quality of its products and services.
- Total Quality Management:** refers to a situation in MRM, where all members of the organization participate in improving processes, products, services and culture at all levels to ensure sustainability objectives of the organisation.

## **ABBREVIATION AND ACRONYMS**

BPR:	Business Process Re-engineering
EQA:	European Quality Award
ISO:	International Organization for Standardization
JIT:	Just-In-Time
MBNQA:	Malcolm Baldrige and National Quality Award
MRM:	Mabati Rolling Mills
TQM:	Total Quality Management

## ABSTRACT

Organisations all over the world have been trying to cope with a rapidly changing business environment in which management have to be more astute in finding ways to sustain or gain competitive advantage. Most manufacturing companies are now adopting Total Quality Management (TQM) and other new philosophies to become more effective in the way they conduct business. The relationship between TQM initiative and improved performance has been researched with mixed results. The mixed results are a pointer for a need for a study to establish the effect of TQM practices on the performance of organisations. Secondly, studies in Kenya have not focused on the effect of TQM on the performance of manufacturing firms in Kenya hence a knowledge gap. The purpose of this study is to investigate the effect of TQM practices on the performance of manufacturing firms in Kenya with major focus on Mabati Rolling Mills. The objectives of the study were to establish the effect of customer focus on organisational performance, establish the effect of top management commitment on organisational performance, establish the effect of continuous improvement on organisational performance and to establish the effect of employee involvement on organisational performance at MRM. The study was anchored on the management theories, systems approach theory and the scientific management theory. The study employed a descriptive research design in which 121 employees were sampled from a target population of 400 using stratified random sampling method. Data was collected using questionnaires which was self-administered by the respondent. Data was analyzed using both descriptive and inferential statistics. Descriptive statistics such as frequency distribution, percentages, means and standard deviation were used. The study also used correlation and regression analysis to show the relationship between the dependent and the independent variables. Presentation of the findings was done in figures, tables and charts. The study established that generally, the TQM practices of customer focus, top management commitment, continuous improvement and employee involvement positively influenced the organizational performance. Individually, the study established that customer focus enhanced customer satisfaction which resulted into overall organizational performance. The study further established that top management commitment influenced organizational performance. The continuous improvement directly influenced organizational performance as employee involvement also affected organizational performance. The study recommended that there was need for the organization to grow a stronger culture that nurtures high-trust social relationship, respect for individuals and a shared sense of membership. The study also recommends that continuous improvement should be one of the pillars upon which manufacturing firms performance can be guaranteed. The firms should enhance top management commitment to quality management through motivation and incentives.

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Background to the Study**

During the last few decades, organisations all over the world have been trying to cope with a rapidly changing business environment in which management have to be more astute in finding ways to sustain or gain competitive advantage. The ever improving global competition and increasing requests for more qualified products by customers have caused organizations to understand that the only way of survival in the market is to deliver better quality products to meet customers' needs. As a result, these companies are ready to make drastic changes according to the demands of the market in order to be ahead of their competitors (Mosadeghrad, 2012). Many organizations, therefore, spend considerable amounts of their funds in activities related to improving products and services. As such, most manufacturing businesses have adopted new philosophies such as Concurrent Engineering, Lean Production, Just-In-Time (JIT) strategies, Total Quality Management (TQM), Business Process Re-engineering (BPR) and others, to become more effective in the way they conduct business. The main driver behind these philosophies is the optimization of the organization's performance both internally and externally within its respective market targets. This study will however focus on the TQM (Ming & Yuan, 2008).

#### **1.1.1 Total Quality Management**

According to Edwards Deming (1986) the major philosophy in quality improvement is through statistical control and reduction in variability. He explained that "statistical

control does not imply the absence of defective items. It is a state of random variation in which the limits of variation are predictable". According to Deming, many companies waste time and money looking for causes of chance or random variation in attempting to solve quality problems without using statistical methods. He advocates the use of statistics to measure performance in all areas, not just conformance to product or service specifications. Deming recognised "special" and "common" causes in variability.

Juran's (1988) definition of quality is "fitness for use" which attained widespread although not universal acceptance. Together with Deming, he pioneered the bulk of the quality initiatives in Japan. However, unlike Deming, Juran focused on the role of top and middle management in achieving quality. He concluded that the bulk of quality problems are the responsibility of management and hence they are responsible for the success of quality management. Ho, Duffy and Shi (2011) defined quality as conformance to the requirements or specifications and also suggested that to manage quality adequately; it must be able to be measured. ISO 9000: (2000) (cited in Vorley and Tickle, 2001) defined quality as the degree to which a set of inherent characteristics fulfil requirements. Adediran and Adediran (2009), defined quality as a source of employee's empowerment. According to the study, a major aim of a company is to make itself attractive to its employees and customers while making profits for its shareholders.

This is the highest level of quality management. It is concerned with the management of quality principle in all the facets of a business including customers and suppliers (Adediran & Adediran, 2009; Maloba, 2014). Total Quality Management (TQM) involves the application of quality management principles to all aspects of the organization, including customers and suppliers, and their integration with the key business processes. It is an approach which involves continuous improvement by everyone in the organisation. TQM is a principle which involves the mutual cooperation of everyone that aids the business process of an organisation and it involves all the stake holders of an organisation. Maloba (2014) defined TQM as a philosophy embracing all activities through which the needs and expectations of the customer and the community, and the objectives of the organisation are satisfied in most efficient and cost effective way by maximizing the potentials of all employees in a continuing drive for improvement.

Total quality origins can be traced back almost 80 years to the first use of statistical tools to improve the quality of manufactured products in the United States of America (Ngambi & Nkemkiafu, 2015). It is defined as an integrative management philosophy and a set of guiding principles, representing the foundation of a continuously improving organisation. It is also defined as a quest for excellence, fitness for use, value for money and customer satisfaction (Gimenez-Espin, Jiménez-Jiménez & Martínez-Costa, 2013). The International Organization for Standards (ISO) defines TQM as, a management approach for an organization, centred on quality, based on the participation of all its

members and aiming at long term success through customer satisfaction and benefits to all members of the organization and to society (ISO8402:1994).

TQM is more of an evolutionary approach to management that builds on the ideas of organizational designs that have failed, most notably QCs, but changes them to fit a new approach or philosophy. It constitutes the application of sound management principles, quantitative measurement methods and human resources with an underlying aspiration of improving all processes within an organisation, surpassing the current and future needs of the customer and increasing organisational performance. TQM is the philosophy of management that tends to link all organisational functions to focus on meeting the requirements of customers and main objective of organisation (Hashmi, 2004). It thus incorporates the importance of viewing all processes within an organisation as a combined system of integrated quality practices.

Total Quality Management (TQM) has become an accepted technique to ensure performance and survival in the modern economies according to Katller and Armstrong (2004). Prior studies including Gharakhani *et al.*, (2013) and Tasie (2016) suggest that TQM strategy that focuses on increasing customer levels of satisfaction does have a significant and positive impact on performance. Terzioski and Samson (2000), for example, suggest that attaining customer satisfaction is thought to increase the profits of the organisation by decreasing costs through fewer returns and increasing revenues through customer loyalty. The links between TQM and performance have been investigated by numerous scholars. While examining the relationship between TQM and

performance scholars have used different performance types such as financial, innovative, operational and quality performance. Although the effects of TQM on various performance types are inconsistent, quality performance generally indicated strong and positive relations (Prajogo & Sohal, 2003).

Gurd *et al.* (2002), for example, examine the factors that either encourage or inhibit accounting lag following the implementation of TQM practices. Specifically, the study found that industry sectors, management commitment, organisational structure, participation, and financial performance, have an impact on accounting lag. Studies have claimed that marketing and TQM are complementary business philosophies (Tasie, 2016). From Santos-Vijande, and Alvarez-Gonzalez (2007) many studies have attempted to develop an appropriate set of critical quality management constructs to represent an integrated approach to TQM implementation in a business unit. Some scholars (Prajogo & Sohal, 2004; Kaynak, 2003) have claimed that the effects of TQM practices on various types of performance measures differ. In addition, few empirical studies have investigated the mediating effect (indirect relationship) of one type of performance measure on the relationship between TQM practices and another type of performance measure (Kaynak, 2003; Prajogo & Sohal, 2006).

### **1.1.2 Organisational Performance**

The Organisation has to set clear performance standards which the workers have to meet in order for the workers to perform. Performance is essentially what an employee does or does not do and elements of employee performance are quantity output, quality output,

timeliness of output, presence at work and cooperativeness (Mathis & Jackson, 2004). Fox (2006) states that performance depends on the motivation and ability of individuals. The study continues to state that individuals must be willing to do the job, know how to do it, be able to do it and must receive feedback on how they are performing. The study further states that the management duty must be to coach and provide support to workers. Performance is the results document the relationship between what organisations do in terms of quality management practices and the results they achieve in several types of outcomes (NIST, 2010). Wheelen and Hunger (2010), in a hypercompetitive environment, organisations are increasingly seeking development, innovation and to improve the quality of the product/service (Alam & Yasin, 2010). Promoting superior quality and innovation should be one of the most important priorities in any organization (Zeng *et al.*, 2010).

According to Demirbag (2005) and Fotopoulos *et al* (2009) firms that focus on improving the quality of their product and processes leads to improved revenues and reduction of costs. So the financial performance of a firm as a result of quality initiatives can be measured by the increase in the level of sales, revenue produced and level of cost performance, the return on investment and assets and by the increase in market share. Hendricks & Singhal (2007) compare recipients of quality awards with different control companies. The indicators chosen in their research to study performance are changes in the operating income, the sales, and the return on assets, the return on sales, the total assets and the number of employees. The main conclusion from their research is that

companies that have received a quality award outperform the control companies concerning operating income-based measures.

### **1.1.3 Mabati Rolling Mills**

Mabati Rolling Mills Limited (MRM) is the largest company of the Safal Group, and was its founding operation, starting with the metal coating plant established in Mombasa, Kenya, in 1962. MRM has a metal coating plant in Mariakani, near Mombasa, and a colour coating line in Nairobi, both providing the world class coil from which it manufactures its prestigious roof sheeting products.

Mabati Rolling Mills was the first company in Africa to produce coated steel using a patented aluminium-zinc alloy recognised as the leading technology worldwide to deliver extended service life to steel (MRM, 2015). This technology is licensed to the Safal Group by BIEC International. Metal coated steel is sold as Zincal. Colour coated Zincal is marketed under the brand names Colorplus, Optima and Optima Plus in an array of popular colours that are both durable and beautiful. MRM's roofing products are the leading brands in their markets, and continue to define the standards in the industry. These include the Dumuzas, Galsheet Resincot and Versatile brands, which are the undisputed leaders in their field.

Since its inception in 1962, Mabati Rolling Mills was the only one of its kind in the whole of East African region. Sales were good and profit margins were also encouraging. The regulatory controls were also not too stringent and therefore it did not require too much effort on the part of the company for it to break even and realize some good returns

on investment. However currently, customers are becoming increasingly sophisticated. Competition on both export and local fronts are becoming fierce than ever. The company seems to find itself at the receiving end of trade liberalization and globalization with its attendant challenges of exposing the company to compete with global players (Kwesie & Partners, 2009). For instance, according to Ngigi (2013) MRM recorded a drop in revenues for the first time to Kshs. 15.9 billion in 2012 from Kshs. 18.7 billion in 2011 which was attributed to stiff competition. To ward off the stiff competition, the company was forced to reduce its prices in a strategy that cut into its profit margins.

To regain its position in the industry as the market leader, MRM adopted Total Quality Management to enable it competes effectively. Over the past years, the company has gained considerable experience in the production of roofing materials to the highest international quality standards. However, its capability as a business concern has not shown up in profits and growth. The company is facing stiff competition from cheap imports which sell below its cost of production. Increased competition has resulted in very low margins to the point where in order to survive in the industry the company needs to produce at very low cost to enable it sell at competitive prices. This is despite the fact that the organisation has invested in TQM and has received several quality awards in the last ten years. It was therefore imperative to determine the effectiveness of TQM of the organization's performance.

## **1.2 Statement of the Problem**

The relationship between TQM initiative and improved performance is frequently discussed. Some people claim that TQM programmes are ineffective (Mosadeghrad,

2012). Shukla and Agrawal (2012) and Leonard and McAdam (2008) argue that it is difficult to establish a relationship between TQM and improved performance in companies. On the other hand, results have been published which state that TQM investments do result in improved performance in companies (Ngambi & Nkemkiafu, 2015). The mixed results are a pointer for a need for a study to establish the effect of TQM practices on the performance of organisations.

Despite adoption of various strategies to make it competitive including the adoption of TQM, MRM has continued to record mixed results in its performance. The study sought to determine the effect of TQM on the performance of MRM. Several studies have been done in Kenya on TQM, for instance Muia (2014) did a study on the effects of TQM implementation on performance of microfinance institutions in Kenya. In another study by Karani and Bichanga (2011) investigated the effect of TQM implementation on business performance in service institutions. Ndungu and Nyaoga (2013) looked at the effect of quality management practices on the performance of public primary schools in Nakuru Municipality in Kenya. Finally, Wanderi (2015) conducted a study on the factors influencing implementation of TQM in construction companies in Rwanda. While these studies are beneficial to the researcher, only studies by Muia (2014, Karani and Bichanga (2011) and Ndungu and Nyaoga(2013) were done on the role of TQM on the organizational performance in the manufacturing industry hence a knowledge gap. It is therefore this gap which the researcher sought to fill.

## **1.3 Objectives of the Study**

### **1.3.1 General Objectives**

The general objective of the study was to determine the effects of TQM on the organisational performance in the manufacturing industry in Kenya with major focus on Mabati Rolling Mills.

### **1.3.2 Specific Objectives of the Study**

The study has the following specific objectives;

- i. To determine the effect of customer focus on organisational performance at MRM.
- ii. To establish the effect of top management commitment on organisational performance at MRM.
- iii. To investigate the effect of continuous improvement on organisational performance at MRM.
- iv. To find out the effect of employee involvement on organisational performance at MRM.

## **1.4 Research Questions**

- i. What is the effect of customer focus on organisational performance at MRM?
- ii. What effect has the top management commitment had on organisational performance at MRM?
- iii. How does continuous improvement affect organisational performance at MRM?

- iv. What effect has employee involvement had on organisational performance at MRM?

### **1.5 Significance of the Study**

This research makes a contribution to both industrial practice and academic knowledge. It is an endeavour to find out how TQM practices have affected the performance of firms in the manufacturing industry in Kenya and also offers a solid foundation for future academic research.

From the practical perspective this study could be utilized to design ways and means to improve the performance of manufacturing firms and especially the steel milling firms in Kenya.

The relationship between the elements of TQM and organisational performance could be revealed whereby the managers will get an opportunity to allocate the resources in a better way so as to enhance the performance of the organization in terms of service and product quality.

### **1.6 Scope of the Study**

The study was done on the effect of TQM on the organizational in the manufacturing industry in Kenya. The study focused on Mabati Rolling Mills, Nairobi branch. The study concentrated on Customer focus, top management commitment, continuous improvement and employee involvement. The target population of the study was employees at Mabati Rolling Mills, Athi River branch.

### **1.7 Limitations and Delimitation of the Study**

The main limitation of this study was that some respondents may have refused to fill in the questionnaires, or further, some respondents may decide to withhold information which they considered sensitive and classified. This reduced the probability of reaching a more conclusive study. However, the researcher assured the respondents that the information given was only used to for the intended purpose. The researcher also assured the respondents of their privacy.

### **1.8 Organization of the Study**

The study was organized into five chapters: chapter one focused on introduction based on the background, statement of the problem, objectives of the study which includes the general and specific objectives, research questions, significance of the study, the scope and limitation and delimitations of the study. Chapter two focused on theoretical review, review of related literature, summary of the literature review and research gaps and the conceptual framework. Chapter three was research methodology including research design, target population, sample size and sampling procedure, research instruments, instrument validity and reliability, data collection procedures, data analysis and presentation and the ethical consideration. Chapter four covered data analysis, presentation and discussion of the findings. and the study findings. Chapter five covered summary of research findings, conclusions, recommendations and suggestions for further research.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This Chapter presents reviews of existing literature relevant to the study. It contains theoretical review, empirical review, summary of existing literature and conceptual framework.

#### **2.2 Theoretical Review**

This study is anchored on three theories namely management theories, systems approach theory and scientific management theory.

##### **2.2.1 Management Theories**

In this study a few management theories in general will be explored to illustrate the impact of management on performance. Performance will be viewed in this study as the organization ability to achieve its intended goals. Theory provides the basis for action (Bush & West-Burnham, 1994). In order for the manager to be effective he/she needs a theoretical management base.

Hoyle (2006), states that a management theory is concerned with guiding practice and enables the practitioner to improve the organization's effectiveness. This implies a relationship between management and performance. Hoyle and MacMahan (2006) concur with Hoyle's statement adding that management theory is guiding practice which also

includes decision-making and authority. This theory is relevant to this study as it explains the importance of the management's decision on steering the organization to performance.

### **2.2.2 Systems Approach Theory**

The systems theory has had a significant effect on management science and understanding organizations. A system is a collection of part unified to accomplish an overall goal. If one part of the system is removed, the nature of the system is changed as well. A system can be looked at as having inputs (e.g., resources such as raw materials, money, technologies, people), processes (e.g., planning, organizing, motivating, and controlling), outputs (products or services) and outcomes (e.g., enhanced quality of life or productivity for customers/clients, productivity). Systems share feedback among each of these four aspects of the system.

The manager's job is to ensure that all parts of the organization are coordinated internally so that the organization can achieve its goals (Robbins 2000). The Systems Approach recognizes the importance of environment for the organization's sustainability (Robbins 2000). It depends on the manager to choose the management approach that suits him/her in order to have an effective and efficient organization that performs according to acceptable standards. No single management approach offers a complete solution and practitioners need to use approaches together (Boddy & Paton 1998). Management approaches may be effective or unproductive, depending upon their application and appropriateness to given situations (Pettinger, 2002).

This theory is relevant to the study as the researcher seeks to establish how that organization has put in place systems including focus on customers, the top management, the urge for continuous improvement and involving all the employees for the purpose of enhancing the organizational performance. The study seeks to find out the interrelationship between these systems and the outcome which is the goal of the organization.

### **2.2.3 Scientific Management Theory**

The proponents of Scientific Management Theory was Frederick Winslow Taylor in the late nineeinth Century. Taylor's main purpose was to increase productivity of the human work with a scientific approach. "Prerequisites for that are the separation of head and handwork, expropriation and systematic collection of the dexterities and the knowledge of the worker, becoming independent of the disposition functions respectively control functions and methodical forms of the work analysis" (Kocyba, Schumm, 2002). The achievement of the worker should be optimized by the systematic inspection of each side of management. According to Taylor's experience the workers had technologies of the achievement restraint, i.e. they worked, but not efficiently and not to their full potential (Wrege, Hodgetts, 2000).

This management approach is aimed at increasing productivity and makes work easier by scientifically studying work methods and establishing standards (Rue & Byars, 2000). This can be done through the selection and training of workers and supervisory support (Schermerhorn 2005). This management approach is also a method to address motivation because it offers wage incentives by linking pay to the outputs (Daft and Noe, 2001). Fayol, cited in Hanson (2003), outlines the assumptions of the Scientific approach about workers. He states that workers are unable to work out the relationships of their positions without detailed guidance from their superiors. He further states that coordination at work will not be achieved unless it is planned and directed from above. The principles of the Scientific Management approach according to Hanson (2003) are that the manager has to find a basic unit of work in any task through the use of scientific means and measurement. Secondly the most efficient and simplest manner of accomplishing that task has to be defined through the elimination of all wasted motions and resources. Next the procedures and the rules that are required to perform the task should be set for all workers in a prescribed manner.

Schermerhorn (2005) identifies the following steps: The manager has to carefully select workers with the right abilities for the job; The selected workers have to be carefully trained to do the job; They should also be given proper incentives to cooperate with the job 'science'. He further states that the workers should be supported by carefully planning their work and by smoothing the way as they go about their job. Rue and Byars (2000) add to this by stating that the scientifically selected work area should be taught and developed progressively in order to match the job with the worker. They conclude by

stating that the division of work will result in interdependence between management and workers and cooperation will follow naturally. The implication of this approach is that workers perform well when they are trained to do the job, goals of the organization are clearly articulated and documented and the management is being supportive.

The theory is relevant to this study as it is about increasing productivity in the organization. By adopting TQM the objective of the organization is to enhance its productivity in terms of quality for competitive purposes. Secondly, the theory is about making work easier by establishing work standards. TQM is about establishing work standards through continuous improvement, customer focus, top management and employee involvement.

#### **2.2.4 Action – Centered Leadership Theory**

John Adair model is that the action-centred leader gets the job done through the work team and relationships with fellow managers and staff. According to Adair's explanation an action-centred leader must; direct the job to be done (task structuring), support and review the individual people doing it and to co-ordinate and foster the work team as a whole.

His famous three circle diagram is a simplification of the variability of human interaction, but is a useful tool for thinking about what constitutes an effective leader/manager in relation to the job he/she has to do. The effective leader/manager carries out the functions and exhibits the behaviours depicted by the three circles. Situational and contingent elements call for different responses by the leader.

This theory is applicable to this study due to the fact that the top management of the organization need to be committed and must understand their role in the organization in order to perform their functions effectively. The theory is all about the team management and leadership is about team management for the achievement of organizational goals. The implementation of TQM in the organization require the leader to be action centered and mobilization of teams in order to achieve its goals.

### **2.3 Empirical Review**

Most empirical studies seem to agree with those of Powell (1995 cited in Santos-Vijande, and Alvarez-Gonzalez, 2007) and Ngambi and Nkemkiafu, (2015) that TQM practices have a positive impact on organizational performance. In Santos-Vijande, and Alvarez-Gonzalez (2007), data from 166 American firms were used to show that overall performance of TQM correlated positively and significantly with both implementing TQM and its degree of advancement or organizational performance. Although the empirical literature suggests a positive link between TQM and organizational performance, the level of contribution attributed to TQM was not large, suggesting that there could be other variables at play. Those variables could be the differences in the processes of implementing TQM with respect to economic trends, the type of industry, the business environment including technology, competitiveness and market, corporate strategy, resources of firm, etc.

Prajogo and Brown (2004) conducted an empirical study on Australian organizations to investigate the relationship between TQM practices and quality performance. The results indicated a strong and positive linkage between those two variables. Another study on ISO 9000 certified organizations of Taiwan performed by Talib, Rahman and Qureshi (2010) examined the linkage between six Quality Management practices and quality performance. The study found customer focus as the most powerful discriminating practice of quality performance while the remaining five practices showed low discriminating powers. Brah and Tee (2002) examined the relationship between TQM constructs and organization performance by measuring the quality performance of Singapore companies. They found that TQM and performance were positively correlated. These studies linked quality management to the performance of the organizations. However, they mainly focused on the quality performance of the organizations ignoring the overall performance of the organizations. Secondly, these studies were mainly done in the developed countries of Australia and Singapore where the setup and the quality standards may not be similar to those of developing countries as Kenya.

Another wave of research has focused on the study between TQM and financial performance. Demirbag (2005) and Fotopoulus *et al* (2009) studies show that firms that focus on improving the quality of their product and processes improve revenues and reduce costs. So the financial performance of a firm as a result of quality initiatives can be measured by the increase in the level of sales and revenues, the level of cost reduction, the return on investment, and by the increase in market share. There is a definite relationship between TQM and financial performance of the organization. However, the

studies generalized the TQM without investigating specific aspects of TQM and how they influenced the performance of the organizations. There is therefore a need to determine the effect of customer focus, top management commitment, continuous improvements and employee involvement on the performance of the organization.

Subedi and Maheshwari (2007) compared recipients of quality awards with a group of “control companies”. Using operating income, sales, return on assets, return on sales as a measure of performance, they found that companies that had received a quality award outperform those that did not receive the awards. These results were confirmed by Ngambi and Nkemkiafu (2015), as well as Wrolstad and Kreuger (2001) studies. The studies showed that awarding the performing companies had a positive effect on their performance. However, there is no link of the processes of the quality management on the performance, hence a need to determine their influence on the organizational performance.

Shaohan (2009) did a study on the importance of customer focus for organizational performance in Chinese companies where he sampled 143,000 Chinese companies, each with revenue of more than 5 million RMB (Chinese currency). The target companies were randomly selected from 29 Chinese provinces using the stratified probability proportional to sizes (PPS) method. Structure equation modelling was utilized to analyze data. The study established that organizational customer orientation affects customer relationship practices, which subsequently influence production performance and

customer satisfaction. Production performance and customer satisfaction lead to financial performance.

Vera (2001) did a study on the correlation of employee involvement and turnover in which the involvement was in the forms of decision making, quality cycles, quality of work life, gainsharing, job redesign, self-directed work teams, employee ownership, representative participation and managing by objectives. The results showed there was both direct and indirect correlation between employee involvement and turnover. However, the data was not enough to establish the magnitude of the relationship. The focus of this study was on turnover as a measure of the organizational performance. There is need to investigate how the employee involvement would influence of measures of performance such as profitability and the market share.

In a study conducted by Santos-Vijande, and Alvarez-Gonzalez (2007), behavioural factors such as top management commitment, employee empowerment and a quality oriented and open minded culture were found to produce competitive advantages more strongly than the application of data and analysis. Barros, Sampaio and Saraiva, (2014) found that the combination of employee commitment, shared vision and customer focus has a large positive impact on the performance of organizations. In continuation hereof, Lau and Idris (2001) and Fuentes *et al.* (2006) likewise stressed the importance of people management and alignment of strategies and TQM objectives as essential factors underlying and sustaining business growth.

## 2.4 Summary of Literature Review and Research Gaps

The above studies were carried out mostly in the developed countries and secondly they focused on TQM implementation. Their focus varied to include different issues related to the identification of critical success factors, the assessment of progress of TQM, difficulties and barriers to its introduction and implementation. The above studies also identified different critical factors to successfully implement TQM. However, there are other companies in Africa and particularly in Kenya which have TQM programmes, it has been found that there are difficulties in sharing experiences.

The pressure on organizations to improve has become intense, particularly those in developing countries. In addition, the proposition that the components of TQM programs may differ from one country to another and the fact that no empirical research has evaluated TQM implementation and its impact on organization in the context of Kenyan firms gives greater importance to the present study.

**Table 2.1** *Summary of Research Gaps*

Author/year	Study focus	findings	Research gaps	Focus of the current study
Santos-Vijande, and Alvarez-Gonzalez (2007)	TQM and firms performance	performance of TQM correlated positively and significantly with TQM and organizational performance	The TQM would perform differently in different industries	Manufacturing industry
Prajogo and Brown (2004)	relationship between TQM practices and quality performance in Australian firms	strong and positive linkage between TQM and organizational performance	Study done in Australia whose setup is developed country.	Manufacturing firms in Kenya
Brah and Tee (2002)	relationship between TQM constructs and organization	TQM and performance were positively correlated	Study done in Singapore whose setup is more	TQM practices on performance of manufacturing

	performance in Singapore companies		advanced/more industrialised than Kenya.	firms in Kenya
Shaohan (2009)	importance of customer focus for organizational performance in Chinese companies	organizational customer orientation affected customer relationship practices and hence production performance	Study focused on effect of customer focus	TQM practices of customer focus, top management commitment, continuous improvement and employee involvement

## 2.5 Conceptual Framework

The following is a conceptual framework of the proposed study.

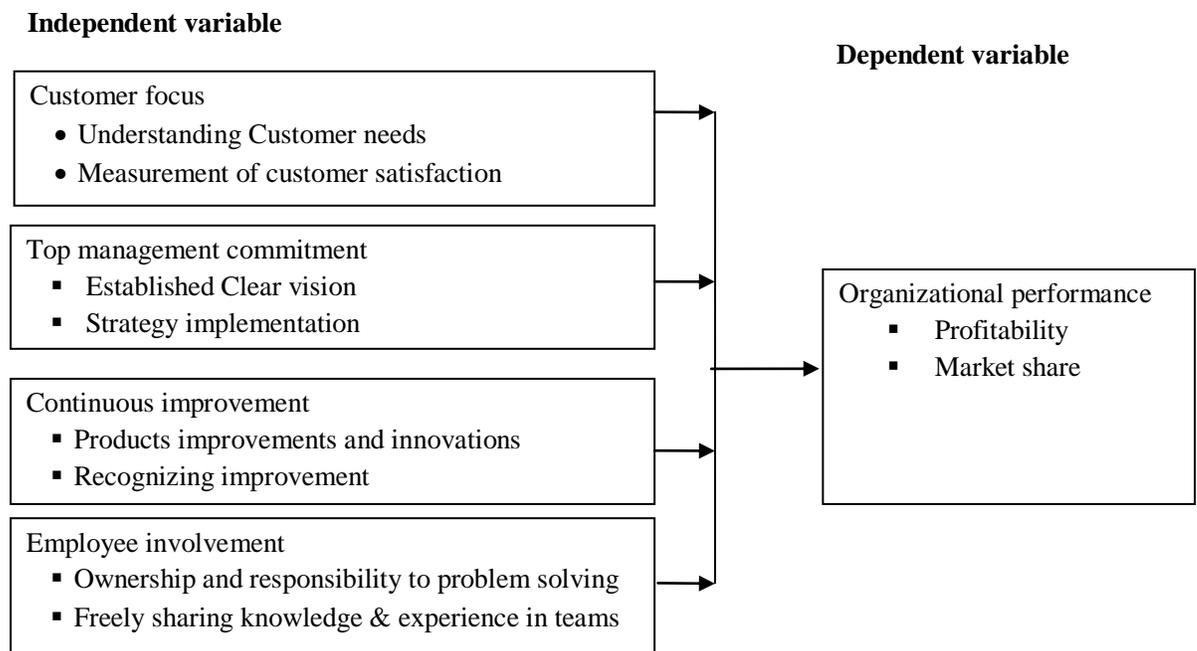


Figure 2.1: Conceptual Framework

*Source: (Author, 2016)*

In the figure 2.1 above, the study sought to show the relationship between the the dependent variable (DV) is organizational performance and the independent variable (IV) influencing dependent variable, are customer focus, top management commitment,

continuous improvement and employee involvement. The study shows how a combination of the customer focus measured in terms of understanding customer needs and management of customer satisfaction; the top management commitment through establishment of clear vision and strategy implementation; continuous improvement through product improvement and innovation and recognition of improvement and; employee involvement through ownership and responsibility and sharing of knowledge and experience influenced the organizations performance in terms of profitability and the market share.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter presents the research design and methodology that will be used to conduct the research. It presents the research design, the target population, sampling design, research instruments, data collection procedures, data analysis & presentation and ethical consideration.

#### **3.2 Research Design**

Research design refers to the way the study is planned to be carried out. It is an arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance with the research purpose (Kombo & Tromp, 2014) .This was a descriptive survey research design. Descriptive research design describes the state of affairs as it is at present. According to Mugenda and Mugenda (2003) a descriptive research is the process of collecting data and analyzing in order to describe the specific phenomenon in its current trends, current events and linkages between different factors at the current time. Therefore, descriptive research matched with the purpose of this study as its intention was to determine the effects of TQM practices on the performance of manufacturing firms in Kenya.

#### **3.3 Target Population**

A population refers to a group of individuals, objects or items from which samples can be drawn for measurements (Kombo & Tromp, 2014). A population is usually homogeneous

in some way. According to Mugenda & Mugenda (1999) population studies are more representative because everyone has equal chances to be included in the final sample that is drawn. The target population consisted of employees of Mabati Rolling Mills, Athi River branch. According to the Human Resource Department (2016), there are 400 employees.

### 3.4 Sampling Design

Kothari (2005) indicates that where members of a target population are considered, it becomes more representative of the population of interest. It fulfills the requirements of efficiency, representativeness, reliability and other factors like nature of units, size of the population, size of the questionnaire and the time available for completion of the study. The study used stratified random sampling to select the respondents. The employees were sampled according to their levels in the organization.

The study sampled 30% of employees from top, middle and low level management. According to Mugenda and Mugenda (2009) a sample size of 30% of the target population is representative and therefore its findings could be used for generalization. This was considered to be representative of the total population. The study then used stratified random sampling to select the respondents from each category.

<b>Target Population sections</b>	<b>Population</b>	<b>Percentage Sampled</b>	<b>Sample Population</b>
Top level Management	42	30	13
Middle Level Management	128	30	39

Low level Management	230	30	69
Total	400		<b>121</b>

Table 3.1 Target Population Summary

Source: Human Resource Department MRM, Athi River Branch (2016)

### **3.5 Research Instruments**

The researcher collected data using questionnaires. According to Mark *et.al*, (2009), a questionnaire is a data collection instrument in which each person is asked to respond to the same set of questions in a pre-determined order. Structured questionnaires were used to obtain data from the respondents for ease of analysis. The questionnaires consisted of closed-ended questions and open ended questions. To be successful, the questionnaires were short and simple (Kothari 2004).

### **3.6 Pilot Study**

One manufacturing organization which is not the study organization was selected from where 12 employees were selected for piloting of the questionnaires. This represents a 10% of the sampled population as per the recommendation of Mugenda and Mugenda (2003). The employee were sampled using simple random sampling method.

### **3.7 Validity and Reliability of Instruments**

#### **3.7.1 Validity**

A research instrument is said to be valid if it measures what it is supposed to measure (Borg & Gall 2003). Content validity was used in this study to measure the degree to which the data that was collected using a particular instrument can represent a specific

domain or content of a particular concept. There was an expert opinion requested to comment on the validity of the questions and give suggestions for corrections to the structure of the research tools. This was from colleagues, the supervisor with the view to improve the content validity of the collected data.

### **3.7.2 Reliability**

Reliability of instruments concerns the degree to which a particular instrument gives similar results over a number of repeated trials (Mugenda & Mugenda, 2003). The researcher pre-tested the questionnaires in one manufacturing firm, not the one being studied. Pre-testing was done in order to refine and ascertain the reliability of the research instruments before they are applied in the actual research. So as to test reliability of the instruments, using Cronbach's Alpha, the internal consistency techniques were applied for an internal consistency of at least 0.7. If piloting errors are discovered, they were removed. Questions were made clearer with a language that is understandable language, questions were made more relevant and some contents revised.

### **3.8 Data Collection Procedures**

The study employed both primary and secondary data. Primary data was collected by use of self-administered questionnaires. The questionnaires were preferred as the most suitable instruments for the data collection because they allow researchers reach many respondents (or large samples) within limited time (Mugenda and Mugenda, 2003). The questionnaires were distributed to the respondents after obtaining the required authority from the University and CEOs of the company. The researcher explained very candidly to

the respondents why it was important to fill in the questionnaires accurately. Where it was not possible to fill and return the questionnaire immediately, drop and pick later method was used, within duration of two weeks. The respondents therefore filled the questionnaires at their own free time. Secondary data was used to collect on the organizational performance mainly the profitability and the market share from the company's website and publications.

### **3.9 Data Analysis and Presentation**

Upon completion of the data collection exercise, for the quantitative data all completed research instruments were assembled, coded, summarized, and entered into the computer; and analyzed using the statistical package for social science (SPSS) for descriptive statistics. Descriptive statistics consisted of computation of sums, means, standard deviations, frequencies and percentages were used. The respondents' demographic information was analyzed using frequency distributions to show their distribution with regard to age, gender, the level of education, the position held, the department and the duration in the company. The data in the other sections was analyzed using percentages means and standard deviations. The results were presented in tables, charts and figures.

For the qualitative data, it was grouped into similar themes and analyzed so as to show the opinion of the respondents and conceptual content analysis was done.

A preliminary inferential analysis was employ correlations of study variables exploring the existing relationships between variables of the study. First the independent variables were correlated to determine the direction of the relationships and significance for each

independent variable and then the dependent variable in the study. Multiple regressions to assess the relationship between the dimensions of independent variables and dependent variable was done to predict the causal relationships and significance between the study variables.

The multiple regression model is presented as:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + e$$

Where;

Y = Organizational performance

$\beta_0$  = Constant

$\beta_1, \beta_2, \beta_3$  &  $\beta_4$  = Coefficients

X1 = Customer focus

X2 = Top management commitment

X3 = Continuous improvement

X4 = Employee involvement

e = error term.

### **3.10 Ethical Considerations**

The researcher assured the respondents of their confidentiality which was maintained throughout the whole process. Secondly, individual responsibility was fully accepted by the researcher. Thirdly, the researcher informed the respondents of their right to or not to participate and no respondent was coerced and their participation was purely voluntary. Lastly, the research questionnaire were open and honest and there was no exploitation whatsoever of the respondents.

## **CHAPTER FOUR**

### **DATA ANALYSIS, PRESENTATION AND DISCUSSION**

#### **4.1 Introduction**

This chapter presents the findings of the data analysis. The first section presents the findings of the demographic data. The subsequent sections present the findings and discussions of the study objectives including descriptive and inferential statistics.

#### **4.2 Response Rate**

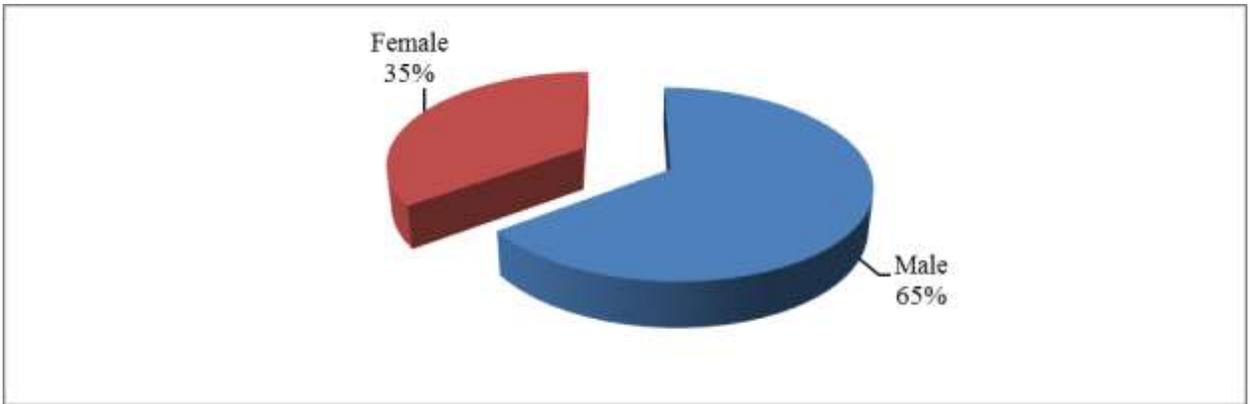
A sample of 121 respondents drawn from management level employees of MRM was used for the study and were given questionnaires to complete and return. However only 98 respondents returned the questionnaire after filling them. Since the number of questionnaires collected represented more than 81% of the sample it was deemed adequate and sufficient for purposes of data analysis as suggested by Sekaran (2003).

#### **4.3 Respondents Demographic Information**

The study sought to determine the respondents' demographic characteristics including gender, age, level of education, and the duration they have been in the organization. The findings are presented in the subsequent sections.

##### **4.3.1 Distribution of Respondents by Gender**

The study sought to determine the ages of the respondents. The findings are presented in Figure 4.1.

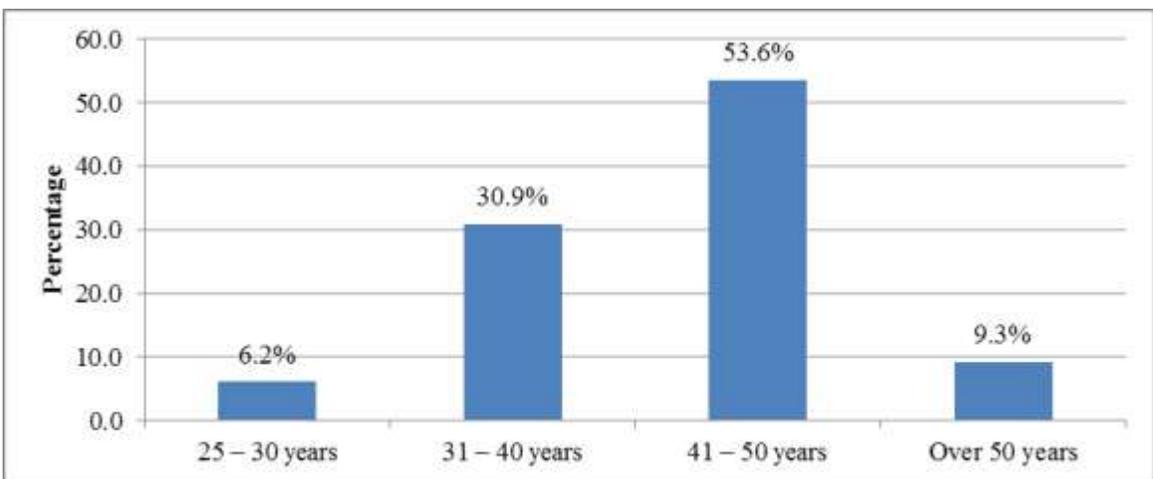


**Figure 4.1: Distribution of Respondents by Gender**

The results of the study show that the management of the firm is male dominated (65%). However, the composition of the management was in conformity with the constitution as the female though less than the male (35%), took more than one third of the management positions in the management.

#### 4.3.2 Distribution of Respondents by Age

The respondents were asked to state the age brackets they belonged. The findings are presented in Figure 4.2.

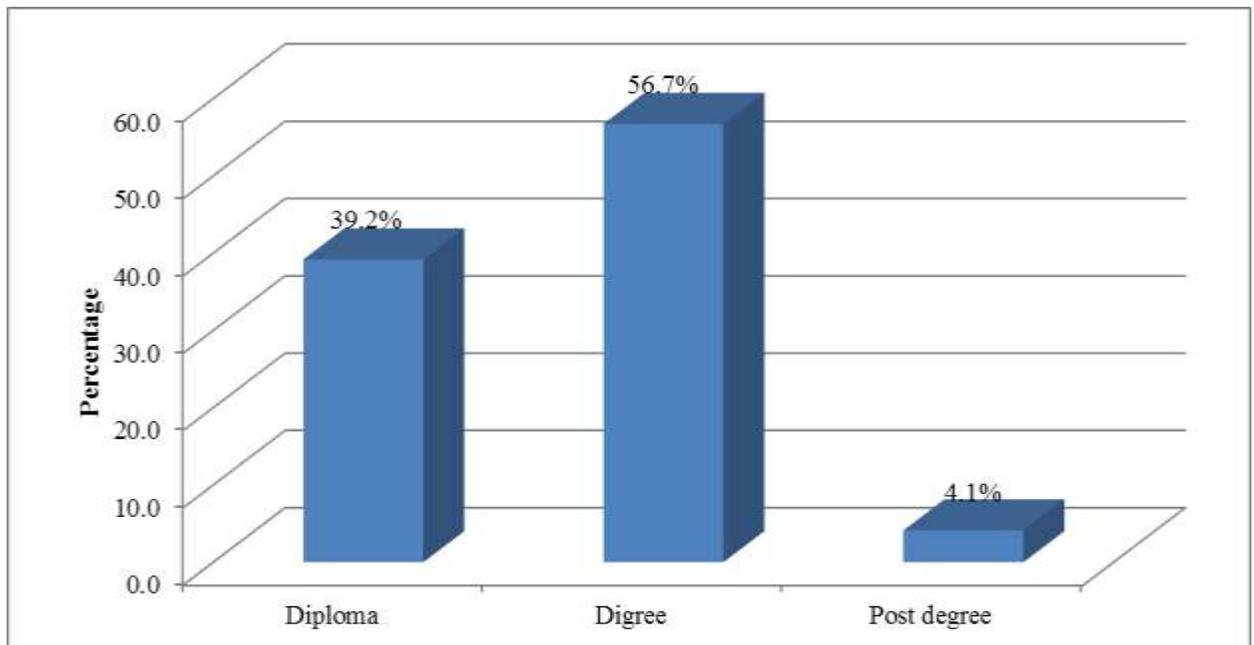


**Figure 4.2: Distribution of Respondents by Age**

The results of the study show that most of the respondents (53.6%) were aged between 41 and 50 years. The findings also show that 30.9% of the respondents were aged between 31 and 40 years. Least represented in the management was age 25 to 30 years (6.2%). The results mean that as the respondents advance in age, so does their chances to rise to the management positions which may be attributed to experience, the more experienced the more likely they become managers.

#### 4.3.3 Distribution by Level of Education

The study sought to determine the respondents' highest level of education attained. The findings are presented in Figure 4.3.



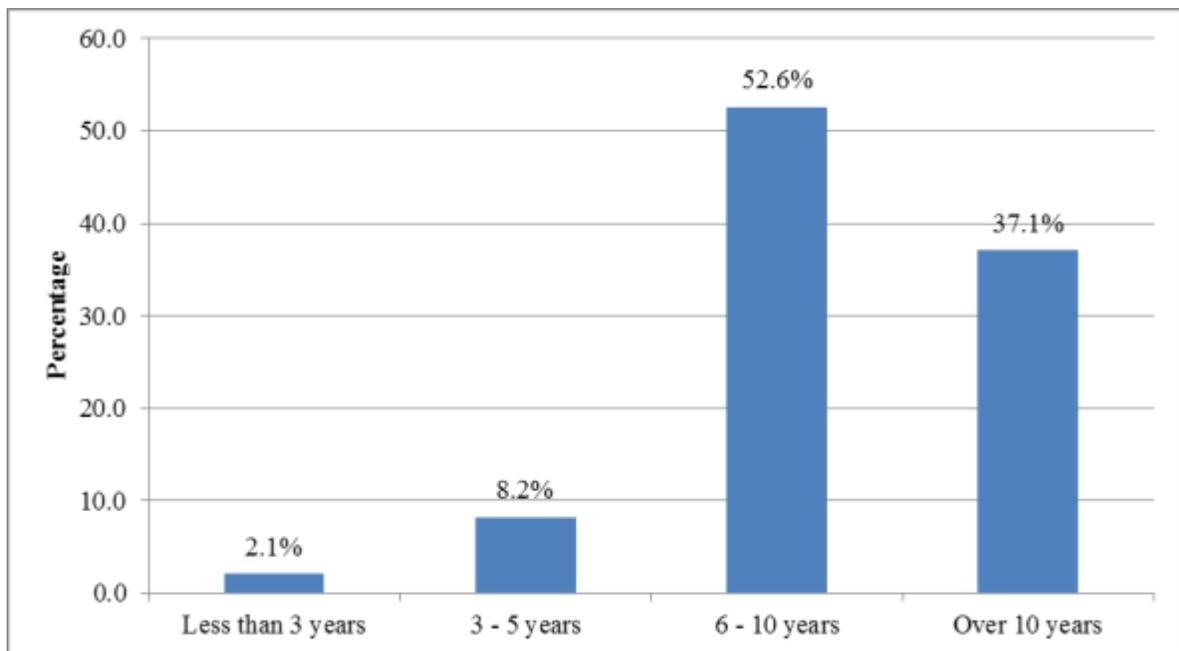
**Figure 4.3: Distribution by Level of Education**

The study findings show that most of the respondents (56.7%) had degrees while 39.2% had diplomas. The results show that those with post degree education were only 4.1%.

The findings mean that the respondents were well educated and that the responses received were therefore informed.

#### 4.3.4 Distribution of Respondents by Duration in the Organizations

Respondents were asked to state how long they had worked in the organizations. The results are presented in Figure 4.4.



**Figure 4.4: Distribution of Respondents by Duration in the Organizations**

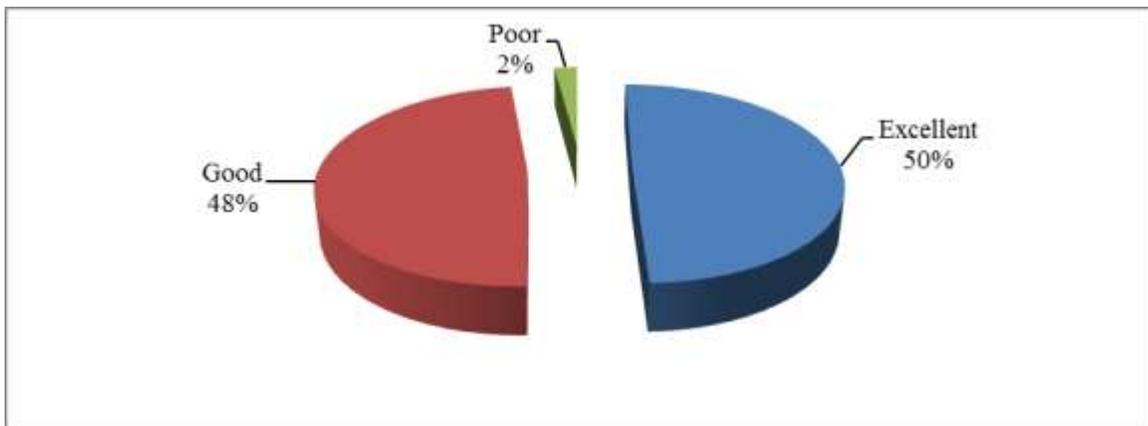
The study findings show that most of the respondents (52.6%) have been in the organization for between six and ten years. The findings also show that 37.1% of the respondents have been in the organization for over ten years. The results of the study mean that the respondents have been in the organization long enough and therefore the information provided could be termed as reliable.

#### 4.4 Organizational Performance

In this section the study sought to determine the performance of the organization. The findings are presented in the subsequent sections.

##### 4.4.1 Rating of Performance of the Organization

The respondents were asked to rate the performance of their organization. The findings are presented in Figure 4.5.



**Figure 4.5: Rating of Performance of the Organization**

The results show that 50% of the respondents rated that performance of the organization as excellent. The results also show that 48% of the respondents rated the performance of the firm as good. The results mean that perceived the organization as performing well.

##### 4.4.2 Factors Considered to Influence Organizational Performance

The respondents were asked to state the factors they considered to influence the organizational performance. This was on a scale of no extent, small extent, moderate extent, large extent and very large extent. The score 0.0 to 1.0 was taken to represent no extent, score 1.1 to 2.0 was taken to represent small extent, score 2.1 to 3.0 represented

moderate extent, score 3.1 to 4.0 represented large extent and score 4.1 to 5.0 represented very large extent. The findings are presented in Table 4.1.

**Table 4.1: Factors Influencing Organizational Performance**

	N	Mean	Std. Dev
Customer Focus	98	3.74	.956
Top Management Commitment	98	3.72	.928
Continuous Improvement	98	3.68	.948
Employee Involvement	98	3.73	.969

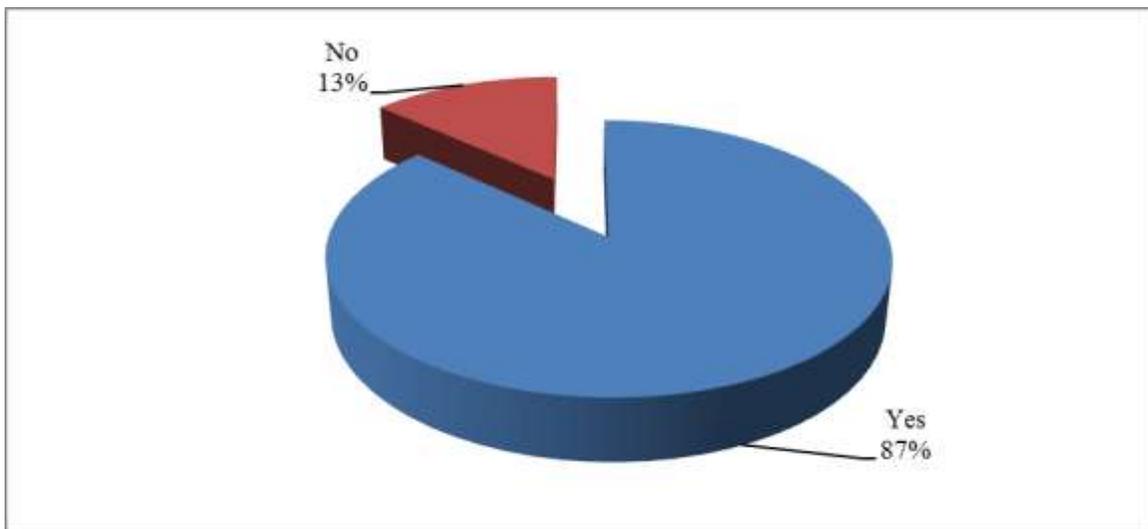
The study sought to determine whether customer focus by the firm influenced the performance of the organization. The study findings show that respondents generally agreed with the statement that indeed the customer focus enhanced the performance of the organization (Mean= 3.74, SD= 0.956). The results further revealed that the respondents agreed that the top management commitment influenced the organizational performance (Mean= 3.72, SD= 0.928). It was also evident from the study findings that the respondents agreed to the statement that continuous improvement influenced the performance of the firm (Mean= 3.68, SD= 0.948). And finally, the results show that respondents agreed that employee involvement was a determinant of organizational performance (Mean= 3.73, SD= 0.969). The findings mean that the four factors of customer focus, top management commitment, continuous improvement and employees involvement were great determinants of organizational performance.

#### **4.5 Effect of Customer Focus on Organisational Performance**

In this section the study sought to determine the effect of customer focus on organizational performance. The findings of the study are presented in the subsequent sections.

##### **4.5.1 Organization Focus on Understanding Current and Future Customer Needs**

The respondents were asked to state whether the organization focused on the current and future customer needs. The findings are presented in Figure 4.6.



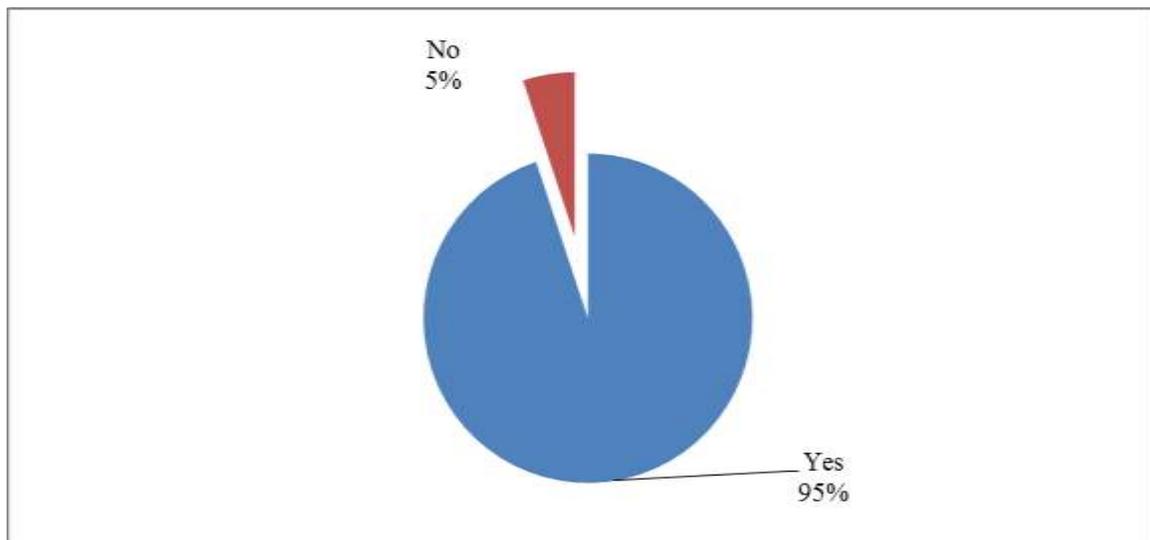
**Figure 4.6: Organization Focus on Understanding Current and Future Customer Needs**

The results of the study show that majority of the respondents indicated that indeed the organization focused on understanding the current and future customer needs. The findings therefore mean that the organization was keen on understanding the needs of the customers both now and in future. These findings concur with Hackman and Wageman

(1995) who in their study noted that one of the most frequently used TQM practices is obtaining information about customers so as to continually understand customer needs.

#### **4.5.2 Customers' Satisfaction everyone's Business**

The respondents were asked to state whether customer satisfaction was everyone's business in the organization. The findings are presented in Figure 4.7.



**Figure 4.7: Customers' Satisfaction everyone's Business**

The results of the study show that majority of the respondents (95%) indicated that it was everyone's business in the organization to ensure that the customers were satisfied. The findings mean that the organization's management together with its employees have taken seriously customer satisfaction. The findings of the study are in support of Mele and Colurcio (2006) who noted that customer satisfaction is a basic principle of TQM which emphasizes on creating value for customer and which results into organizational development and therefore becomes the key focus for everyone in the organization.

### 4.5.3 Customer Focus Practices

The respondents were asked to state the extent to which customer focus statements were true on a scale of very dissatisfied, dissatisfied, neutral, satisfied and very satisfied. The findings are presented in Table 4.2:

**Table 4.2: Customer Focus Practices**

	N	Mean	Std. Dev
Organization focused on customer needs	98	3.57	.812
There are systems to handle customer needs	98	3.54	.691
Organization has invested on creating awareness to customers on its new products	98	3.59	.771
The organization keen on inclusion of customer needs	98	3.72	.729
Organization understands customer needs	98	3.62	.767
Quality-related customer complaints are treated with top priority	98	3.31	.582

The study results show that the respondents were satisfied with the statement that the organization focused on customer needs was true (Mean= 3.57, SD= 0.812). The study findings further show that the respondents were satisfied that the statement that the organization was keen on inclusion of customer needs was true (Mean= 3.72, SD= 0.729). The respondents were satisfied with the statement that the organization understood customer needs was true (Mean= 3.62, SD= 0.767). The results of the study mean that the organization to a large extent practiced customer focus. These findings concur with the views of Sila (2007) and Wilson and Collier (2000) that organizations focus on customer needs through reliability and timely delivery of products/services, personalized services and improves customer satisfaction.

#### 4.5.4 Benefits of Customer Focus in the Organization

The respondents were asked to state whether the listed statements were benefits considered to be the outcome of customer focus in your organization. The findings are presented in Table 4.3.

**Table 4.3: Benefits of Customer Focus in the Organization**

	Yes	No	Not Aware
Increased revenue and market share obtained through flexible and fast response to market opportunities	93.9	3.1	3.1
Increased use of the organization's resource to enhance customer's satisfaction	85.7	5.1	9.2
Improved customer loyalty leading to repeat business	92.9	1.0	6.1

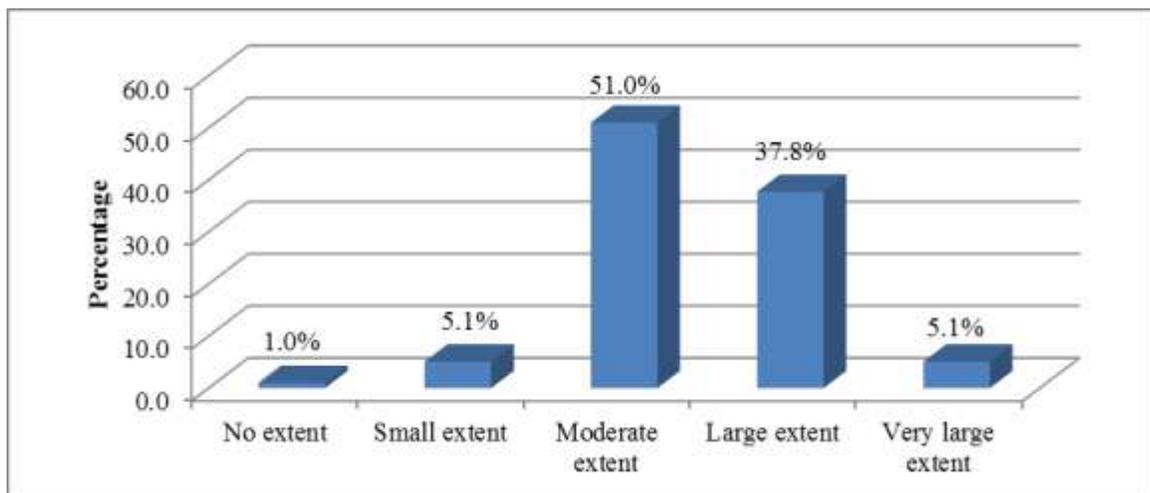
The results of the study show that majority of the respondents (93.95%) indicated that one of the benefits of the customer focus was that there was increased revenue and market share which was obtained through flexible and fast response to market opportunities. The results of the study further show that 85.7% of the respondents indicated that indeed there was increased use of the organization's resources to enhance customer satisfaction. The results also show that according to 92.9% of the respondents, due to customer focus, there was improved customer loyalty which led to repeat businesses. The results of the study mean that by focusing on customers, the organization enhanced its performance through increased revenue and market share, customer satisfaction and customer loyalty. These findings are in agreement with Deming (1986) who noted that by focusing on the customer needs, the organization will achieve organizational performance in terms of customer satisfaction, efficiency and profitability.

#### 4.6 Effect of Top Management Commitment on Organisational Performance

In this section the study sought to establish the effect of the top management commitment on the organizational performance of MRM. The findings are presented in the subsequent sections.

##### 4.6.1 Conducive Atmosphere for Involvement and Achievement of Organization's Objectives

The respondents were asked to indicate the extent to which the management leadership ensured there was conducive atmosphere for people to become fully involved in achieving the organization's objectives. The findings are presented in Figure 4.8.



**Figure 4.8: Conducive Atmosphere for Involvement and Achievement of Organization's Objectives**

The study findings show that 51% of the respondents indicated that the management leadership ensured a conducive atmosphere for all people to fully involve in the

achievement of the organizational objectives to a moderate extent. The results further show that the management to a large extent ensured a conducive atmosphere for all people to fully involve in the achievement of the organizational objectives. The results mean that to some extent the management ensured a conducive atmosphere for all people to fully involve in the achievement of the organizational objective.

#### 4.6.2 Top Management and Quality Management Activities

The respondents were asked to state the extent to which they agreed with the statements regarding the top management activities in the organization on a scale of strongly disagree, disagree, neutral, agree and strongly agree. The findings are presented in Table 4.4.

**Table 4.4: Top Management and Quality Management Activities**

	N	Mean	Std. Dev
Top management actively participates in quality management activities	98	3.52	.560
Top management learns quality-related concepts and skills	98	3.41	.571
Top management encourages employee involvement in quality management activities	98	3.64	.579
Top management arranges adequate resources for employee education and training	98	3.34	.555
Top management focuses on product quality rather than yields	98	3.74	.580
Top management encourages teamwork and performance appraisal	98	3.59	.589
Top management has established a clear vision of the organization's future	98	3.84	.637
The top management considering needs of all interested parties	98	3.41	.571
The top management is creating and sustaining shared values, fairness and ethical role models at all levels	98	3.52	.596

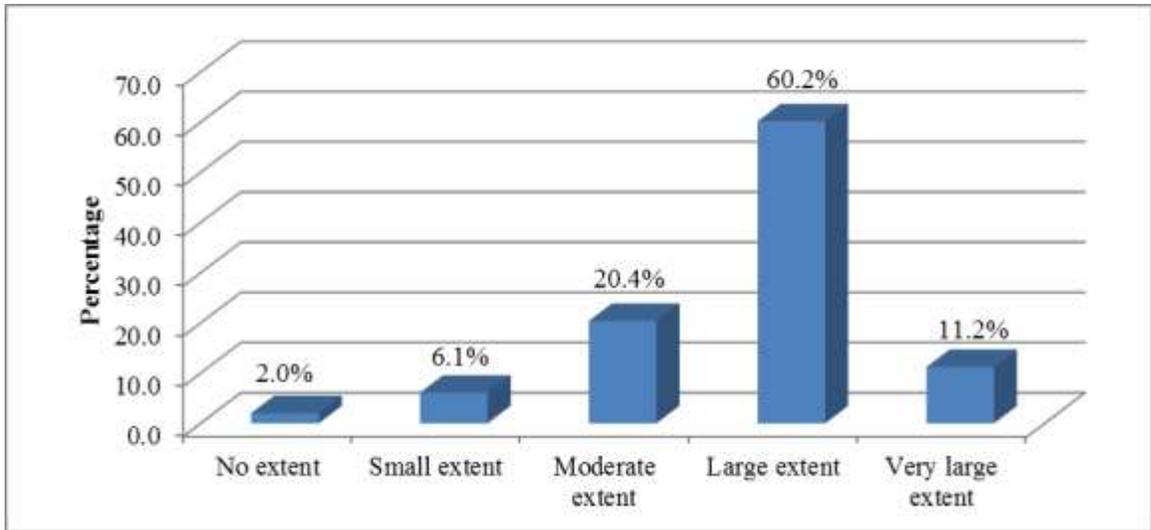
The study findings show that the respondents agreed with the statement that the management actively participated in the quality management activities in the organization (Mean= 3.52, SD= 0.560). The findings further show that the respondents agreed with the statement that top management encourages employee involvement in quality management activities (Mean= 3.64, SD= 0.579). Respondents agreed with the statement that the top management was focused on the product quality rather than the yields (Mean= 3.74, SD= 0.580). The study findings also revealed that the respondents agreed with the statement that the top management encourages teamwork and performance appraisal (Mean= 3.59, SD= 0.589). The study findings show that the respondents agreed with the statement that the top management has established a clear vision of the organization's future (Mean= 3.84, SD= 0.637). The study findings mean that to a large extent the top management was committed to quality management activities.

#### **4.7 Effect of Continuous Improvement on Organisational Performance**

In this section the study sought to determine the effect of continuous improvement on organizational performance. The findings are presented in the following sections.

##### **4.7.1 Management Ensured Continuous Improvement of Products and Services**

The respondents were asked to state extent to which the management had ensured there was continuous improvement of products and services in the firm. The findings are presented in Figure 4.9.



**Figure 4.9: Management Ensured Continuous Improvement of Products and Services**

The results of the study show that majority of the respondents (60.2%) indicated that the management ensured that there was continuous improvement of the products and services in the firm to a large extent. The findings also show that 20.4% of the respondents indicated that this was so to a moderate extent. The results of the study mean that the management was keen on the continuity of product and service improvement in the firm.

#### **4.7.2 Continuous Improvement Activities in the Organization**

The respondents were asked to state the extent to which they agreed with the statements regarding the continuous improvement in the organization. This was a scale of strongly disagree, disagree, neither agree nor disagree, agree and strongly agree. The findings are presented in Table 4.5.

**Table 4.5: Continuous Improvement Activities in the Organization**

	N	Mean	Std. Dev
Organization has a quality manual	98	3.67	.822
Management defines responsibilities and authorities of different functional departments	98	3.68	.781
Management solves the interface issues among different departments	98	3.43	.537
Management draws up quality system procedures by people from different departments	98	3.70	.721
Management integrates existing work documents into work instructions	98	3.35	.520
Management draws up various work instructions referring to procedures	98	3.70	.749
Management formulates work instructions by people from different departments	98	3.70	.661
Organization implements all quality system documents in practice	98	3.50	.561
Organization modifies quality system documents through quality audits and management review	98	3.59	.686
Organization improves quality system documents continuously	98	3.60	.638

The study findings show that the respondents agreed with the statement that the organization had quality manual (Mean= 3.67, SD= 0.822). The findings further revealed that according to respondents, the management defined the responsibilities and authorities of different functional departments in the organization (Mean= 3.68, SD= 0.781). The results revealed that the respondents agreed with the statement that the management drew up quality system procedures by people from different departments (Mean= 3.70, SD= 0.721). The respondents also agreed with the statement that

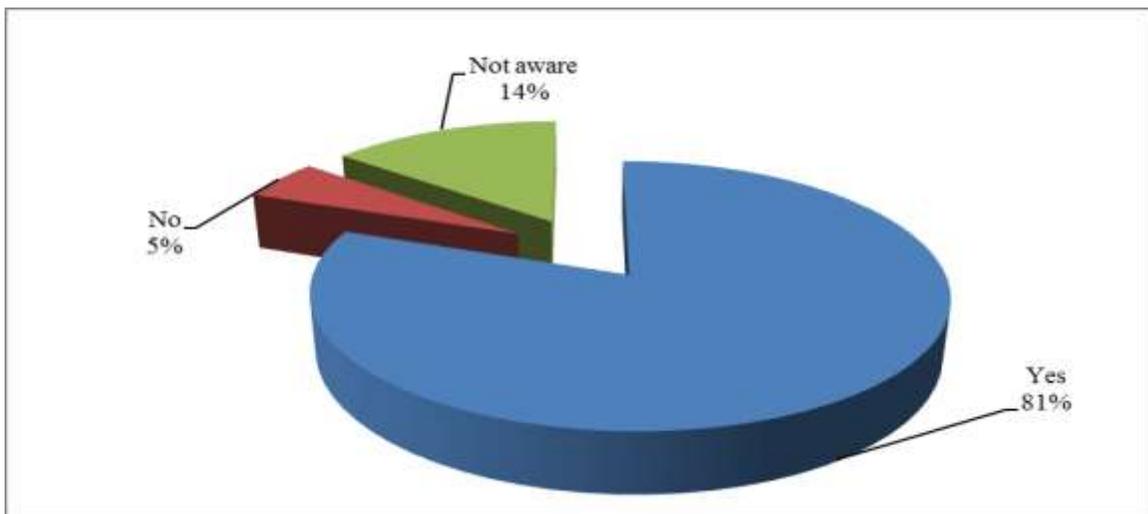
management drew up various work instructions referring to procedures (Mean= 3.70, SD= 0.749). The management equally formulated work instructions by people from different department (Mean= 3.70, SD= 0.661). Lastly, the results show that the respondents agreed that the organization improved the quality system documents continuously (Mean= 3.60, SD= 0.638). The study findings mean that the management was to a large extent engaged in continuous improvement activities in the organization aimed at enhancing the performance of the organization.

#### **4.8 Effect of Employee Involvement on Organisational Performance**

In this section the study sought to determine the effect of employee involvement on the organizational performance. The findings are presented in the following sections.

##### **4.8.1 Employees Full Involvement used for the Organization's Benefit**

The study sought to determine whether the all employees at all levels full involvement was for the benefit of the organization. The findings are presented in Figure 4.10.



**Figure 4.10: Employees Full Involvement used for the Organization's Benefit**

The study results show that majority of the respondents (81%) indicated that indeed all employees at all levels full involvement was for the benefit of the organization. The study findings mean that the involvement of all the employees at all levels was for the organizational benefit.

#### 4.8.2 Employee Involvement Activities

The respondents were asked to state the extent to which they agreed with the statements regarding the employee involvement in the organization. This was on a scale of strongly disagree, disagree, neither agree nor disagree, agree and strongly agree. The findings are presented in Table 4.6.

**Table 4.6: Employee Involvement Activities**

	N	Mean	Std. Dev
Employees openly discuss problems and issues	98	3.54	.645
Employees freely sharing knowledge and experience	98	3.50	.646
Employees actively seeking opportunities to enhance their competence, knowledge and experience	98	3.30	.502
Employees evaluating their performance against their personal goals and objectives	98	3.62	.634
Employees accepting ownership of problems and their responsibility for solving them	98	3.42	.536
Employees understanding the importance of their contribution and role in the organization	98	3.68	.652

The results of the study show that the employees agreed that the employees openly discussed problems and issues (Mean= 3.54, SD= 0.645). The findings of the study

further show that the respondents agreed with the statement that the employees freely shared knowledge and experiences in the organization (Mean= 3.50, SD= 0.646). The findings further revealed that respondents agreed with the statement that the employees evaluated their performance against their personal goals and objectives (Mean= 3.62, SD= 0.634). The findings also showed that the respondents agreed with the statement that the employees understood the importance of their contribution and role in the organization (Mean= 3.68, SD= 0.652). The findings of the study mean that to a large extent, the organization practiced employee involvement.

#### **4.9 Correlation Analysis**

The study conducted correlation analysis to test the strength of association/relationship between the research variables. Correlation is the measure of the relationship or association between two continuous numeric variables. Correlation indicates both direction and degree to which they covary with one another from case to case without implying that one is causing the other. Correlation coefficient can range from -1.00 to +1.00. The value of -1.00 represents a perfect negative correlation while value +1.00 represents a perfect positive correlation. A positive correlation between two variables means that if one increases, the other one increases. On the other hand, a negative correlation means that if one increase the other one decrease. A value of 0.00 represents a lack of correlation. The findings are presented in Table 4.7.

**Table 4.7: Correlation Analysis**

		Customer focus	Top management commitment	Continuous improvement	Employee involvement	Organizational performance
Customer focus	Pearson Corr Sig. (2-tailed)	1				
Top management commitment	Pearson Corr Sig. (2-tailed)	.512** .000	1			
Continuous improvement	Pearson Corr Sig. (2-tailed)	.648** .000	.745** .000	1		
Employee involvement	Pearson Corr Sig. (2-tailed)	.570** .000	.709** .000	.880** .000	1	
Organizational performance	Pearson Corr Sig. (2-tailed)	.689** .000	.788** .000	.914** .000	.817** .000	1

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The results of the correlation analysis revealed that customer focus is positively related to the top management commitment with a Pearson’s Correlation Coefficient of  $r = 0.512$  and at level of significance of 0.000, is statistically significant as the p-value is less than 0.05. This relationship could be described as moderate as it lies in the middle. This implies that considering top management commitment enhances customer focus (an increase in top management commitment increase results to increased customer focus). The study findings concur with Esin and Hilal (2014) who in his study found a positive and significant correlation between customer focus and top management leadership and attributed increase in customer satisfaction to top management commitment.

The results further show that there is a relatively strong positive relationship between customer focus and continuous improvement with a Pearson’s Correlation Coefficient of

$r = 0.648$  and at level of significance of 0.000, is statistically significant as the p-value is less than 0.05. This implies that an increase in customer focus will result into a change in the continuous improvement in the same direction.

The results also show that the relationship between customer focus and employee involvement was also positive with a Pearson's Correlation Coefficient of  $r = 0.570$  and a level of significance of 0.000 hence statistically significant. This implies that an increase in the employee involvement will result into a similar change in the customer focus.

The results show that there is a relatively strong positive relationship between customer focus and organizational performance with a Pearson's Correlation Coefficient of  $r = 0.689$  and at level of significance of 0.000, is statistically significant as the p-value is less than 0.05. This implies that an increase in customer focus will result into a change in the organizational performance in the same direction. This findings concur with Esin and Hilal (2014) who found a positive and significant association between customer focus and organizational performance in their study of the effect of TQM practices on organizational performance in Turkey.

The findings of the study show that there is a strong positive association between top management commitment and continuous improvement with a Pearson's Correlation Coefficient of  $r = 0.745$  and at level of significance of 0.000, is statistically significant as the p-value is less than 0.05. This implies that an increase in top management

commitment will result into a change in the continuous improvement in the same direction.

The top management commitment has a strong positive association with organizational performance with a Pearson's Correlation Coefficient of  $r = 0.788$  and at level of significance of 0.000, is statistically significant as the p-value is less than 0.05. This implies that an increase in top management commitment will result into a change in the organizational performance in the same direction. The results are in agreement with Esin and Hilal (2014) where in his study established that positive and significant correlation between top management commitment and the organizational performance.

The results show that the continuous improvement had a strong positive association with organizational performance with a Pearson's Correlation Coefficient of  $r = 0.914$  and at level of significance of 0.000, is statistically significant as the p-value is less than 0.05. This implies that an increase in continuous improvement will result into a change in the organizational performance in the same direction. These study findings mean that generally there was a strong positive and significant association between the variables. These findings concur with Santos-Vijande, and Alvarez-Gonzalez (2007) who in his study of 166 American firms found that overall performance of TQM correlated positively and significantly with both implementing TQM and its degree of advancement or organizational performance. These studies further agree with Brah and Tee (2002) who found that TQM indicators and organizational performance were positively correlated. The study finding are in consistence with Samson and Terziovski (1999) who noted in his

study that Total Quality Management practices which are customer oriented affect organizational performance

#### **4.10 Regression Analysis**

The study further carried out regression analysis to establish the statistical significance relationship between the independent variables namely TQM practices of customer focus, top management commitment, continuous improvement and employee involvement and the dependent variable, organizational performance. According to Green and Salkind (2003) regression analysis is a statistics process of estimating the relationship between variables. It helps in generating equation that describes the statistical relationship between one or more predictor variables and the response variable. The regression analysis results were presented using regression model summary tables, analysis of variance (ANOVA) table and beta coefficient tables.

##### **4.10.1 Coefficient of Determination**

On Table 4.8, the coefficient of determination is 0.874 which implied that 87.4% of the variation in the organizational performance was explained by customer focus, top management commitment, continuous improvement and employee involvement. This implied that there existed a strong positive relationship between the independent variables and the organizational performance of MRM. The remaining 12.6% can be explained by other variables not included in the study. The findings mean that the regression equation appears to be very useful for making predictions since the value of  $R^2$  is close to 1 and therefore there is a high variation that can be explained by the model.

**Table 4.8: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.935 <sup>a</sup>	.874	.869	.1860

a. Predictors: (Constant), Employee involvement, Customer focus, Top management commitment, Continuous improvement

#### 4.10.2 Analysis of Variance

The ANOVA showed that the regression model was adequate. The effect size of the regression model was shown to be over 162 that contributed by the residual mean sum of squares. The F critical at 5% level of significance was 162.007 since F calculated is greater than the F critical (value = 1.684), this shows that the overall model was significant.

**Table 4.9: ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.430	4	5.607	162.007	.000 <sup>b</sup>
	Residual	3.219	93	.035		
	Total	25.649	97			

a. Dependent Variable: Organizational performance

b. Predictors: (Constant), Employee involvement, Customer focus, Top management commitment, Continuous improvement

#### 4.10.3 Beta Coefficients

The study further determined the beta coefficients of customer focus, top management commitment, continuous improvement and employee involvement verses the organizational performance of MRM. The findings are presented in Table 4.10.

**Table 4.10: Beta Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.420	.153		2.746	.007
	Customer focus	.161	.050	.156	3.224	.002
	Top management commitment	.162	.039	.230	4.111	.000
	Continuous improvement	.574	.079	.638	7.256	.000
	Employee involvement	.003	.078	.003	.042	.967

a. Dependent Variable: Organizational performance

The model can be represented as:

Organizational performance = 0.420 + 0.161Customer focus + 0.162Top management commitment + 0.574Continuous improvement + 0.003Employee involvement

The study show that  $\beta_1 = 0.161$  (p-value = 0.002 which is less than  $\alpha = 0.05$ ). This implies that we reject the null hypothesis that there is no significant relationship between customer focus and organizational performance. The results mean that each unit increase in the positive effect of customer focus, there is a 0.161 unit increase in the organizational performance. Furthermore, the effect of customer focus was stated by the t-test value = 3.224 which implies that the effect of customer focus surpasses that of the error by over 3 times. These findings concur with the findings by Ahire and O'Shaughnessy (1998), Dow, Samson and Ford (1999) and Phan, Abdallah and Matsui (2011) that customer focus had a positive and significant relationship with organizational performance. The findings are further in support of Esin and Hilal (2014) who found that customer focus had a positive and significant relationship with quality performance.

The study also show that  $\beta_2 = 0.162$  (p-value = 0.000 which is less than  $\alpha = 0.05$ ) which indicates that we reject the null hypothesis stating that there is no significant relationship between top management commitment and organizational performance. This indicates that for each unit increase in the positive effect of top management commitment, there is 0.162 units increase in organizational performance. Also the effect of top management commitment was stated by the t-test value = 4.111 which implies that the effect of top management commitment surpasses that of the error by over 4 times. The study findings are in consistence with those of Esin and Hilal (2014) whose findings revealed that the top management commitment had a positive relationship with organizational performance. However, their test was insignificant. The findings of the study further support the views of Phan, Abdullah and Matsui (2011) that the top management commitment improved the operational performance of the firm.

The value of  $\beta_3 = 0.574$ (p-value = 0.000 which is less than  $\alpha = 0.05$ ) which implies that we reject the null hypothesis stating that there is no significant relationship between continuous improvement and organizational performance. This indicates that for each unit increase in continuous improvement, there is up to 0.574 units increase in organizational performance. The effect of continuous improvement is stated by the t-test value = 7.256 which indicates that the effect of continuous improvement is over 7 times that of the error associated with it. These findings are in consistent with Esin and Hilal (2014) who found that continuous improvement had a positive relationship with organizational performance. This test was however insignificant as the p-value was greater than 0.05. The findings of the study are equally in support of Lee, Rho and Lee

(2003) who found that continuous improvement in the areas of knowledge and process management resulted into improved operational performance of the firm.

The value of  $\beta_4 = 0.003$  (p-value = 0.967 which is greater than  $\alpha = 0.05$ ) which implies that we do not reject the null hypothesis stating that there is no significant relationship between focus and business performance. This indicates that for each unit increase in employee involvement, there is up to 0.003 units increase in organizational performance which is very negligible. The effect of employee involvement is stated by the t-test value = 0.042 which indicates that the effect of employee involvement is almost absent and near the error associated with it. These findings are in agreement with Gallup Organization (2004) which found critical link between employee involvement and organizational performance through customer loyalty, business growth and profitability. The findings also concur with Ott (2007) that higher employee involvement predicts higher earnings per share and organizations experienced 2.6 times more growth than those not practicing employee involvement.

In general the results of the study showed that TQM practices had a positive effect on organizational performance. The findings agree with Harsan and Kerr (2003) who in their study of the relationship between TQM practices found a positive relationship between customer focus, top management commitment, continuous improvement and employee involvement and organizational performance. The findings also concurred with Prajo (2005) who found in his study of the impact of TQM practices on the quality of

performance where he reported that there existed a positive relationship between the variables.

#### **4.11 Qualitative Data**

Asked to state how they would describe the customer focus in their organization, some five respondents stated that the organization offered its customers some after sale services which included transportation for the goods purchased and to be delivered within a radius of 25 kilometers. The respondents also stated that sometimes the company provided expertise to its customers at a subsidized rates which many customers loves. The study established that according the four respondents, the organizations sometimes tailormade products to clients who agreed to meet the cost as a way of enhancing customer satisfaction in the organization. The respondents indicated that the organization emphasized the importance of feedback from the customers for improvement in the quality of its products.

The respondents were asked to state in their opinion how the top management commitment had enhanced the performance of the organization. The study results revealed that according to several respondents, the top management encouraged the employees on the importance of quality management in order to achieve organizational performance. The respondents further indicated that due to the top management commitment to quality management, adequate allocation of resources was achieved as various departments were able to operate without a hitch. The respondents further stated that the top management encouranged teamwork in the achievement to quality

production. They noted that every employee took part in the quality management in the firm which enhanced the organizational performance.

The respondents were asked to state in their opinion how the employee involvement enhanced the organizational performance. The results of the study revealed that three respondents indicated that the organization achieved continuous improvement first by refreshing the skills of its staff through training and workshops. The respondents also indicated that the management of the organization has invested a lot on the latest technology with the aim of continuously improving on the quality of its products or services. The respondents further stated that through the department of research and development (R&D), the organization was able to compete favourably in the market where competition has intensified.

The respondents were asked to state how the employee involvement enhanced organizational performance. The results of the study revealed that six respondents reiterated the importance of all inclusive decision making in the organization as this was likely to minimize change resistance as all have participated in the process. The respondents indicated that employee involvement would motivate the employees and give a sense of ownership which will result into productivity of the organization.

## CHAPTER FIVE

### SUMMARY CONCLUSION AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter presents the summary of the study findings, conclusions, recommendations, and suggestions for further research.

#### 5.2 Summary of the Findings

The study established that customer focus was very important for the organization where customer need was at the centre and customer satisfaction was in everyones mind. The study established a strong and positive association between customer focus and organizational performance ( $r = 0.689$ ,  $p\text{-value} < 0.05$ ). The regression results revealed a positive and significant relationship between customer focus and organizational performance ( $\beta_1 = 0.161$ ,  $p\text{-value} < 0.05$ ).

The study established that the management provided a conducive environment where all were fully involved. The management was equally involved in the quality management activities while at the same time encouraging teamwork and focusing on product quality. The study established that there existed a strong positive correlation between top management commitment and organizational performance ( $r = 0.788$ ,  $p\text{-value} < 0.05$ ). The regression revealed that there was a positive relationship between top management commitment and organizational performance ( $\beta_2 = 0.162$ ,  $p\text{-value} < 0.05$ ).

The study established that continuous improvement was emphasized in the organization. These included the use of quality manuals, putting up quality systems procedure and formulation of work instructions. The study established that there was a strong positive association between continuous improvement and organization ( $r = 0.914$ ,  $p\text{-value} < 0.05$ ). Regression results revealed that there exist a positive relationship between continuous improvement and organizational performance ( $\beta_3 = 0.574$ ,  $p\text{-value} < 0.05$ ).

The study established that full involvement of employee was beneficial to the organization. Employee involvement included in problem solving, performance evaluation and decision making. The study established that there was a positive association between employee involvement and organizational performance ( $r = 0.817$ ,  $p\text{-value} < 0.05$ ). The regression results show that there was a positive relationship between employee involvement and organizational performance. However, this was not statistically significant ( $\beta_4 = 0.003$ ,  $p\text{-value} > 0.05$ ).

### **5.3 Conclusion**

From the results, the study concludes that the TQM practices positively influenced the organizational performance. The study established that customer focus enhanced customer satisfaction which resulted into organizational performance. The study further established that top management commitment influenced organizational performance. The study concludes that continuous improvement directly influenced organizational performance. The results revealed that employee involvement affected organizational performance.

## **5.4 Recommendations**

Based of the findings, the study made the following recommendations:

- i. Manufacturing firms should adopt customer focus as a practice of TQM with the aim of enhancing organizational performance through customer satisfaction.
- ii. Firms in the manufacturing sector should enhance top management commitment to quality management as a strategy of enhancing organizational performance.
- iii. Firms in the manufacturing sector should embrace continuous improvement as a quality management strategy with the aim of enhancing organizational performance.
- iv. The manufacturing firms should embrace employee involvement as quality management strategy to enhance organizational performance.

## **5.5 Suggestions for Further Research**

This study was done on MRM only, the study suggests that similar study be replicated in other firms with the aim to determine the effect of TQM practices on their performance.

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## APPENDICES

### APPENDIX I: LETTER OF INTRODUCTION

August, 2016

Dear Respondent,

#### **REQUEST FOR RESEARCH DATA**

I am a Master of Business Administration (MBA) student at Kenyatta University. I am required to submit as part of my course work assessment, a research project report on **“TQM practices and the organisational performance in the manufacturing industries in Kenya, a case of Mabati Rolling Mills”**. I am kindly requesting you to assist me in this study by filling the attached questionnaire to the best of your ability as it applies to you.

Please be assured that the information you provide will be used solely for academic purposes and all responses will remain confidential.

Thank you very much for your time.

Jared Omondi Otieno,

Student researcher.

## APPENDIX II: QUESTIONNAIRE

**Please provide the information requested here below**

### SECTION A: GENERAL INFORMATION

1. What is your gender? Male  Female
2. What age bracket do you belong? Below 25 years   
 25 – 30 years  31 – 40 years  41 – 50 years   
 Over 50 years
3. Highest level of education attained (Tick where applicable)  
 K.C.P.E  K.C.S..E  Diploma  Degree  Other
4. Which department do you work \_\_\_\_\_
5. How long have you worked in the organization?  
 Less than 3 years  3 – 5 years  6 – 10 years   
 Over 10 years

### SECTION B: ORGANIZATIONAL PERFORMANCE

6. How do you rate the performance in your organization? (Tick appropriately)  
 Excellent  Good  Poor
7. To what extent do you consider the following to have influence on business performance in your organization?

	No extent	Small extent	Moderate extent	Large extent	Very large extent
Customer Focus					
Top Management Commitment					
Continuous Improvement					
Employee Involvement					

**SECTION C: CUSTOMER FOCUS**

8. Does your organization focus on understanding current and future customer needs?      Yes [ ]      No [ ]      Not aware [ ]

9. Is customers' satisfaction everyone's business in your organization?  
    Yes [ ]      No [ ]      Not aware [ ]

10. State the extent to which the following statements regarding customer focus are true on a scale of 1-5?

Where 1 = Very dissatisfied, 2 = Dissatisfied, 3 = Neutral, 4 = Satisfied and 5 = Very satisfied

	1	2	3	4	5
The organization is focused on customer needs					
There are systems to handle customer needs					
The organization has invested on creating awareness to customers on its new products					
The organization is keen on inclusion of customer needs					
The organization understands customer needs					
Quality-related customer complaints are treated with top priority					

11. In your opinion, are the following benefits considered to be the outcome of customer focus in your organization?

	Yes	No	Not Aware
Increased revenue and market share obtained through flexible and fast response to market opportunities			
Increased use of the organization's resource to enhance customer's satisfaction			
Improved customer loyalty leading to repeat business			

12. In your opinion, how would you describe the customer focus in your organization?

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**SECTION D: TOP MANAGEMENT COMMITMENT**

13. To what extent does the management leadership ensure conducive atmosphere which people can become fully involved in achieving the organization’s objectives? No extent [ ] Small extent [ ]  
 Moderate extent [ ] Large extent [ ]  
 Very large extent [ ]

14. State the extent to which you agree with the following statements with regard to the top management on a scale of 1 – 5 where 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strongly agree.

	1	2	3	4	5
Top management actively participates in quality management activities					
Top management learns quality-related concepts and skills					
Top management encourages employee involvement in quality management activities					
Top management arranges adequate resources for employee education and training					
Top management focuses on product quality rather than yields					
Top management encourages teamwork and performance appraisal					
Top management has established a clear vision of the organization’s future					
The top management is considering the needs of all interested parties including customers, owners, employees, suppliers, financiers, local communities, and society as a whole					

The top management is creating and sustaining shared values, fairness and ethical role models at all levels of the organization					
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15. In your opinion, how has the top management commitment enhanced the organizations performance? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**SECTION E: CONTINUOUS IMPROVEMENT**

16. To what extent has the management ensured there is continuous improvement of products and services in the firm? No extent [ ]

Small extent [ ] Moderate extent [ ] Large extent [ ]

Very large extent [ ]

17. To what extent do you agree with the following statements with regard to continuous improvement in the organization on a scale of 1 -5 on where 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strongly agree.

	1	2	3	4	5
The organization has a quality manual					
The management defines responsibilities and authorities of different functional departments					
The management solves the interface issues among different departments					
The management draws up quality system procedures by people from different departments.					
The management integrates existing work documents into work instructions					
The management draws up various work instructions referring					

to procedures					
The management formulates work instructions by people from different departments					
The organization implements all quality system documents in practice					
The organization modifies quality system documents through quality audits and management review					
The organization improves quality system documents continuously					

18. In your opinion, how has continuous improvement influenced organizational performance in the firm? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**SECTION F: EMPLOYEE INVOLVEMENT**

19. Are employees at all levels are the essence of an organization and their full involvement enables their abilities to be used for the organization’s benefit?

Yes [ ] No [ ] Not Aware [ ]

20. State the extent to which you agree with the following statements with regard to employee involvement on a scale of 1-5 where 1 represents strongly disagree and 5 strongly agree.

	1	2	3	4	5
Employees openly discuss problems and issues					
Employees freely sharing knowledge and experience					
Employees actively seeking opportunities to enhance their competence, knowledge and experience					
Employees evaluating their performance against their personal goals and objectives					
Employees accepting ownership of problems and their responsibility for solving them					

Employees understanding the importance of their contribution and role in the organization					
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21. In your opinion, how has employee involvement enhanced organizational performance? \_\_\_\_\_

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Thank you for taking your time to fill in the questionnaire.