

**QUALITY MANAGEMENT IN MANUFACTURING
ORGANIZATIONS-EMPLOYEES PERCEPTION: A CASE STUDY
OF BAMBURI CEMENT LTD**

BY

KAMAU PENNINAH NJOKI

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SUPERVISED BY:

ZIPPORAH N. KIRUTHU

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DECLARATION

This Management Research Project report is my original work and has not been submitted for another Degree qualification of this or any other University or Institution of learning.

Sign..... Date.....

Kamau Penninah Njoki

D61/67922/2011

This Management Research Project report has been submitted for examination with my approval as the University Supervisor.

Sign..... Date.....

Zipporah N Kiruthu

Department of Management Science,

School of Business,

University of Nairobi

DEDICATION

I dedicate this research report to my family and all friends who in one way or the other, financially, socially, ideally helped me. May god bless them abundantly.

Special thanks to my mother.

ACKNOWLEDGEMENT

I first wish to thank the almighty God for this far I have come.

Secondly, I acknowledge my supervisor for agreeing to supervise on my project and offering the much needed guidance throughout the entire work.

I also wish to acknowledge my fellow scholars who for the support and encouragement they accorded me through their valuable class discussions that assisted me to completing my research project

May God bless you all.

ABSTRACT

The objective of this study was to establish the effect of quality management practices implemented on quality outcomes in manufacturing organisations. The specific objectives were to establish the enablers of quality management, challenges of quality management and the effect of quality management at Bamburi cement limited as a case study. The study used descriptive research design method. A total of 979 respondents in managerial positions were targeted by the study out of which 294 (30%) respondents were sampled to participate in the study. Analysis of data was done using SPSS (Statistical Package for Social Sciences). Percentages from the findings helped in the deeper analysis of the variables in question in order to make logical conclusions. The study concludes that leadership, supplier alliances and employee training are the major enablers of quality management at Bamburi Cement Company Limited. The study concludes that there are challenges towards quality management implementation at Bamburi cement limited, which range from participation of senior management to corporate culture challenges.

The study concludes that; quality management practices have led to the introduction of more products in the organization, applications of quality management practices have enhanced effective product and process designing, that due to quality management, the company is able to supply to a big market both locally and in East Africa too. Quality management practices have led to 'attraction of more customers' in the recent past and that it is due to quality management practices that the sales team at Bamburi cement has been practicing in the recent past.

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LIST OF ABBREVIATIONS AND ACRONYMS

FIDIC:	Federation Internationale des Ingeneurs-Conseils
ISO:	International Organization for Standardization
JIT:	Just in Time Production
SPSS:	Statistical package for social sciences
TQM:	Total Quality Management

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CHAPTER ONE: INTRODUCTION

1.1 Background

Quality is a concept that has proved elusive, given the fact that it means different things to different people, and there is therefore no single universal definition. “Some people view quality as “performance to standards.” others view it as “meeting the customer’s needs” or “satisfying the customer” (Reid & Sanders, 2012).

David Garvin, a professor of Business Administration at the Harvard Business School has helped articulate both the definitions and dimensions of quality. First, Garvin found that most definitions of quality were either transcendent, product-based, user- based, manufacturing based, or value based. Using these five definitions of quality, Garvin developed a list of eight quality dimensions including: Performance, Features, Reliability, Conformance, Durability, Serviceability, Aesthetics and Perceived quality.

According to Singing (2012), quality means a product or service performs according to expectations, that the product or service has the features needed, that the product or service meets their expectations and predetermined conformance standards, the product is durable, the product is serviceable with ease and speed, has an appealing appearance, and is highly thought of.

Quality is a critical aspect of the performance of organizations across the globe. It is critical for organizations to be keen on matters of quality in order to enhance their performance. Quality translates to the level of market responsiveness that an organization

gets in general. The issue of quality comes into play because customers desire to maximize their utility by consuming the best the market can offer. Since organizations depend on their customers, they should understand current and future customer needs, should meet customer requirements and try to exceed the expectations of customers. An organization attains customer focus when all people in the organization know both the internal and external customers and also what requirements must be met to ensure that both the internal and external customers are satisfied. Furthermore, it is critical to understand that the level of quality maintained by an organization has power over its progress and continuity in the market.

1.1.1 Quality Management

Quality management can be considered to have four main components: quality assurance, quality planning, quality improvement and quality control. Quality management is focused not only on service or product quality, but also the means to achieve it. It therefore uses control of processes and quality assurance, as well as, products to achieve consistent quality (Nederpelt, 2012). Achieving high quality does not happen `by accident. The production process must be properly managed to achieve quality standards. Quality management is concerned with controlling activities with the aim of ensuring that products and services are fit for their purpose and meet the specifications (Adrian, Tom & Ed, 2006).

Organizations have quality management systems that help them deal with quality issues. These can be expressed as the organizational structure, procedures, processes and resources needed to implement quality management. Such systems contribute immensely to the quality performance of any organization (Hines, 2004). The purpose of quality management is to first understand the expectations of the client in terms of quality, and then put a proactive plan and process in place to meet or exceed those expectations.

Managers are keen on matters of quality because of the repercussions of losing out in the ever competitive market. According to Mentzer et al (2011), quality can be influenced by factors within or outside an organization. He indicates that factors such as environment, Just in Time Production (JIT), and supplier quality are integral in quality management. It is vital for organizations to understand the threats and weaknesses they face in line with quality management. This can help them in working on their weaknesses and threats by putting effort on their strengths and opportunities. Mentzer et al, insists that quality management is not an event that organizations should consider once in a while. Quality management is an ongoing process that they need to focus on throughout.

According to Jaafreh, managers are now resorting to Quality Management Practices in order to meet the ever changing customer demand for improved quality and to stay competitively relevant in the new emerging global competitive. He reckons that they use these practices as inputs toward quality which is the ultimate expected outcome.

Several factors have been attributed to achievement of quality in the various organizations. These are practices or measures that when implemented, help towards the

realization of quality goals in the organizations. On the other hand, several factors may act as inhibitors of quality achievement by slowing down or interfering with the process of quality achievement.

Human factors play an important but often overlooked role in quality management. Employee perceptions influence how the organization operates because they guide how an employee feels and acts; quality highly depends on the employees ability to spot potential issues and correct them on the spot (Mosher 2011)

1.1.2 Bamburi Cement

Bamburi Cement Limited is a Kenyan based company engaged in the manufacture and sale of cement and cement-related products. It also owns and manages a nature and environmental park developed from rehabilitated quarries. The Company's subsidiaries include Bamburi Special Products Ltd, which is engaged in manufacturing concrete paving blocks and other cement products under the brand name BamburiBlox, and Lafarge Eco Systems Ltd, which manages the Company's mining reserve lands and rehabilitates its quarries. Its other subsidiaries include Bamburi Cement Ltd, Uganda, HimCem Holdings Limited, Diani Estate Limited, Kenya Cement Marketing Ltd, Portland Mines Limited and Seruji Management Limited. The Company is a subsidiary of Lafarge Group (Bamburi, 2013).

Bamburi Cement Ltd is an organization established in 1951 by the Cementia Holding A.G Zurich director called Felix Mandi in Kenya (InsideView, 2013). Through several subsidiaries, the company mainly engages in cement manufacturing and sale. It also deals with cement related goods such as Portland limestone cement, Portland Pozzolana cement, and Portland cement. The organization also sells its products through several brands namely Plasta Plus, Multi-Purpose, Supaset, Nguvu Cement, and Power Plus Cement. Bamburi Cement Ltd is also the owner and manager of an international environment and nature park developed from several rehabilitation mines. The company also operates in Uganda, but its headquarters are located in Nairobi Kenya (Insideview, 2013).

According to a report by Dyer and Blair Investment Bank dated December 2012, Bamburi Cement commands an estimated market share of 40% in Kenya, with their main competitors being Athi River Mining Limited, East African Portland Cement Company Limited, National Cement Company Limited, Mombasa Cement Limited, and Savannah Cement Company. Bamburi Cement they say, contributes 33% of the total cement consumed in the Kenyan market, and is the best performing cement company in Kenya. These factors elicit interest in the company as a case study, in a bid to gain more insight on how they remain the top performers.

1.2 Problem Statement

Organizations across the globe have the task of ensuring that quality remains significant in operations. Poor quality management can place a permanent stain on any organization-it can stand in the way of its success. According to Adrian, Tom and Ed (2006), “In recent years the success stories to quality management have been replaced by more gloomy reports. While the broad message of these is that quality management is not fully delivering, there is much less information on the specific challenges in implementing quality management”. Without knowledge of the challenges experienced, it becomes hard to streamline quality management, and in turn achievement of quality goals is hindered.

The results of a survey in quality management in the construction industry conducted by Federation Internationale des Ingeneurs-Conseils (FIDIC) indicated that the failure in quality is a problem worldwide (Rumane, 2011). Additionally, a study conducted by Debby Willar on the implementation of quality management practices in Indonesian companies indicated difficulties in implementing quality practices in the construction industry.

Also, a study conducted by Taveira et al (2003), indicates that the existence of quality documentation such as quality plans, procedures and work instructions in organizations does not mean quality systems are implemented. This does not reflect the presence of deeply rooted practices needed for ensuring ultimate delivery of quality goals in an organization. The study highlighted the fact that there appears to be doubt in the

construction and manufacturing industry with regard to quality implementation and quality management practices

According to a report by Mars Group Kenya, Kenya's manufacturing sector is among the key productive sectors identified for economic growth and development. With this in mind, attention needs to be given to the sector to enhance growth to full potential having in mind that quality management may inhibit the sector's realization of its full potential.

Therefore, the problem of this study was to find out the quality management practices implemented in the manufacturing organizations, how they affect quality, as well as look at any challenges or enablers of quality they face. The research questions followed were: What are the challenges in quality management? What are the enablers of quality management? And; Is there a relationship between quality management practices and quality outcomes?

1.3 Objectives of the Study

This study was guided by the following objectives:

- i. To establish enablers of quality management at Bamburi Cement Company Limited
- ii. To establish challenges in quality management at Bamburi Cement Company Limited
- iii. To establish relationship between quality management practices and quality outcomes at Bamburi Cement Company Limited

1.4 Value of Study

This study will help in setting policies in line with quality management. Different policies of the government are based on analysis of data. Statistical data are now widely used in taking all administrative decisions for credibility reasons. This study will provide relevant information to the government that would be beneficial in making decisions and policy making as relates to the area of operations management.

This study would help draw some useful conclusion as to whether quality management practices are critical in organizations, and thus forming a pool of knowledge for management in the various sectors. Investors will also benefit from this study as it will provide useful information regarding quality management in the Kenyan perspective which will help them in decision making. Scholars will also gain from this study as it will bring into perspective the issues of quality that organizations face on a daily basis.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter looked at the various theories that are related to quality management in organizations such as Deming's, Crosby's and Juran's theories. The chapter also highlighted the dependent and independent variables of the study through the conceptual framework.

2.2 Quality Management Practices

With increased competition emanating from increased global changes and the ever increasing demand of quality from customers, organizations have resorted to a number of quality management practices such as total quality management (TQM), and benchmarking (Jaafreh, 2012). For the purpose of this study; we shall look at TQM, Benchmarking, and ISO certification.

Total Quality Management is "An integrated effort designed to improve quality performance at every level of the organization" with the aim of building quality into the product and process design. What characterizes TQM is the focus on identifying root causes of quality problems and correcting them at the source, as opposed to inspecting the product after it has been made. Not only does TQM encompass the entire organization, but it stresses that quality is customer driven. TQM attempts to embed quality in every aspect of the organization. It is concerned with technical aspects of

quality as well as the involvement of people in quality, such as customers, company employees, and suppliers (Reid & Sanders, 2012).

Benchmarking is the process of improving performance by continuously identifying, understanding, and adapting outstanding practices and processes (Kelessidis, 2000). This is done by comparing one's business processes and performance metrics to industry bests or best practices from other industries. He reckons that Benchmarking focuses on the improvement of any given business process by exploiting "best practices" rather than merely measuring the best performance. Best practices are the cause of best performance. Companies studying best practices have the greatest opportunity for gaining a strategic, operational, and financial advantage.

ISO (International Organization for Standardization) is the world's largest developer of voluntary International Standards. International Standards give state of the art specifications for products, services and good practice, helping to make industry more efficient and effective. The standards provide guidance and tools for companies and organizations who want to ensure that their products and services consistently meet customer's requirements, and that quality is consistently improved. The standards are based on a number of quality management principles including a strong customer focus, the motivation and implication of top management, the process approach and continual improvement. ISO certification provides independent confirmation that organizations meet the requirements thus stipulated (ISO 2013).

2.3 Enablers of Quality Management

Leadership, strategy, people, partnerships, resources, and products are the main enablers of quality management. Gary Yukl (2006) defines leadership as “the process of influencing others to understand and agree about what needs to be done and how to do it, and the process of facilitating individual and collective efforts to accomplish shared objectives” (Goffee & Jones 2007). Leadership ensures that quality goals are realized when the management takes charge. Organizations cannot succeed without the right people, resources, partnerships and products or services. This shows that quality management enablers are directly related to the daily operations of an organization.

Strategy means finding the best way to achieve the needs of quality in an organization. Training is one of the strategic ways of realizing quality management goals. Training is a critical enabler of quality management. Inadequate training can be detrimental to quality care. Less qualified employees are unable to offer quality requirements because they cannot think beyond the task at hand. The goal of education is for the employee to make their profession an art. To master this art, ethics, social and organizational skills as well as a holistic approach to the work environment must be taught. Education and training should be viewed as an ongoing process; therefore it is also important to keep contact with educational facilities, so that knowledge can be kept up to date (Musara, 2012).

Supplier alliances refers to an agreement between two or more suppliers to pursue a set of agreed upon objectives needed while remaining independent organizations. Partners may

provide the alliance with resources such as products, distribution channels, manufacturing capability, project funding, capital equipment, knowledge, expertise, or intellectual property. The suppliers' resources are incorporated in the final product presented to the customer, and so when well implemented, this may contribute towards quality goals (Musara, 2012).

2.4 Inhibitors of Quality Management

The involvement of management is critical for the success of quality management in organizations. Quality of a product can be ensured if there is an active participation of senior management of a company in the development of the product. If they are not showing any interest in the process and is not giving any suggestions for the improvement of the product then the tendency develops among the actual product developers to take things for granted and compromise with the quality of the product (Adrian, Tom and Ed, 2006).

There is a need for an appropriate culture to support the scope of Quality Management, This can be defined as the beliefs and behaviors that determine how a company's employees and management interact and handle business transactions. Advocates of organizational excellence show that the problems associated with achieving quality are associated with corporate culture. This is because lack of a dominant and coherent culture, in which values, commitments and approaches are likely to diverge, which can

present a barrier to co-operation, joint action and problem solving across the organization. Thus, managers need to periodically analyze the relevance of corporate values to the evolving organizational environment. As a result, enabling managers to adapt and nurture the constructs that support the development of an aspired organizational culture (Irani, Beskese & Love 2004)

2.5 Theories of Quality Management

Theories are a set of ideas upon which the research is to be based. These will act as my guides in the research

2.5.1 Deming's Theory

Edward Deming has made an enormous contribution to the study by shedding more light on matters of quality in organizations, and the universal transformations on what quality is have followed from his contributions. Deming is acknowledged for coming up with the *Fourteen points of management* and the *Shewart Cycle*, both of which have proved to be very useful tools for management.

Another very useful contribution by Deming is the system of profound knowledge, which consists of four points. The first point is System Appreciation which seeks an understanding of the way that the company's processes and systems work. Deming indicated that it is critical to understand how an organization works in order to achieve

quality standards sought (Deming, 2000). The Appreciation of a system involves understanding the fact that an organization is made up of different elements that need to work together in harmony for the entire system to work well. This is likened to a tree with many branches that need to be healthy for the tree to stay alive.

The second point is variation knowledge. Deming reckons that there should be an understanding of the variations happening in an organization and the reasons for such variations. Such an understanding is critical in ensuring that an organization achieves its quality objectives. Furthermore, the Knowledge of variation involves understanding that everything measured consists of both normal variation due to the flexibility of the system and of special causes that create defects. Quality involves recognizing the difference to eliminate special causes while controlling normal variation. Deming taught that making changes in response to normal variation would only make the system perform worse (Mann, 1999).

Additionally, Deming indicated that there is need to understand what can be known in a system, as well as, understanding human nature. This is because human beings form an integral part of the system and contribute towards the overall performance of an organization. Quality cannot be achieved without knowledge and human effort in any organization (Aguayo, 1991). People are a fundamental component within any successfully developing organization. Take away the people and the organization is nothing. Take away the people's motivation, commitment and ability to work together in well organized teams, and again, the organization is nothing. Conversely, inspire the

people to work well, creatively, productively, and the organization can fly. Logically therefore, the development and proper utilization of people are vital to the success of all quality management initiatives.

2.5.2 Crosby's Theory

Philip Crosby is also credited for his contribution towards quality. Just like Deming, Crosby based his work on the need to invest in quality, as this is guaranteed to give positive returns at the end of the day. To him, spending on quality improvement should not be viewed as a cost, but rather as an investment with guaranteed returns. Crosby's work is based on four absolutes of quality management and his own version of fourteen steps to quality improvement.

Crosby's four absolutes are: Definition of quality as adherence to requirements, prevention is the best way to ensure quality, zero Defects (mistakes) is the performance standard for quality and quality is measured by the price of nonconformity.

2.5.3 Joseph Juran's Theory

Joseph Juran is the mind behind "Quality Trilogy." This entails quality planning, quality improvement, and quality control. Juran reckons that for quality improvement to be successfully implemented, the actions undertaken need to be well planned and controlled, as well as enact continuous improvement measures. For Quality improvement, Juran

recommended ten steps that when followed; first, an awareness of the opportunities and needs for improvement must be created, followed by determination of improvement goals, then organization is required for reaching the goals. After this, training needs are provided, and then the projects are now initialized. These are then monitored and performance recognized. After this, achievements of improvement are tracked, followed by a repetition of the steps again.

Quality is ultimately the responsibility of top management. Deming, Juran and Crosby (2000) all emphasize the importance of top management leadership in implementing a quality program. Therefore, it observed that each of these thinkers on quality management has a distinct philosophy about quality and a unique language for implementing it, and a distinctive approach or process for managing and achieving it. In so doing, they created their own following among management and quality consultants.

Theoretical Framework

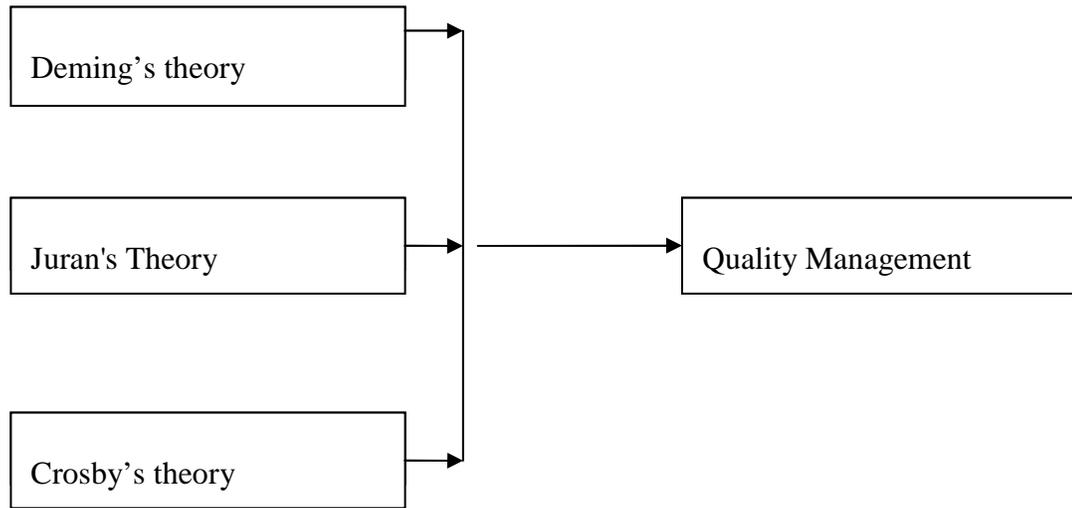
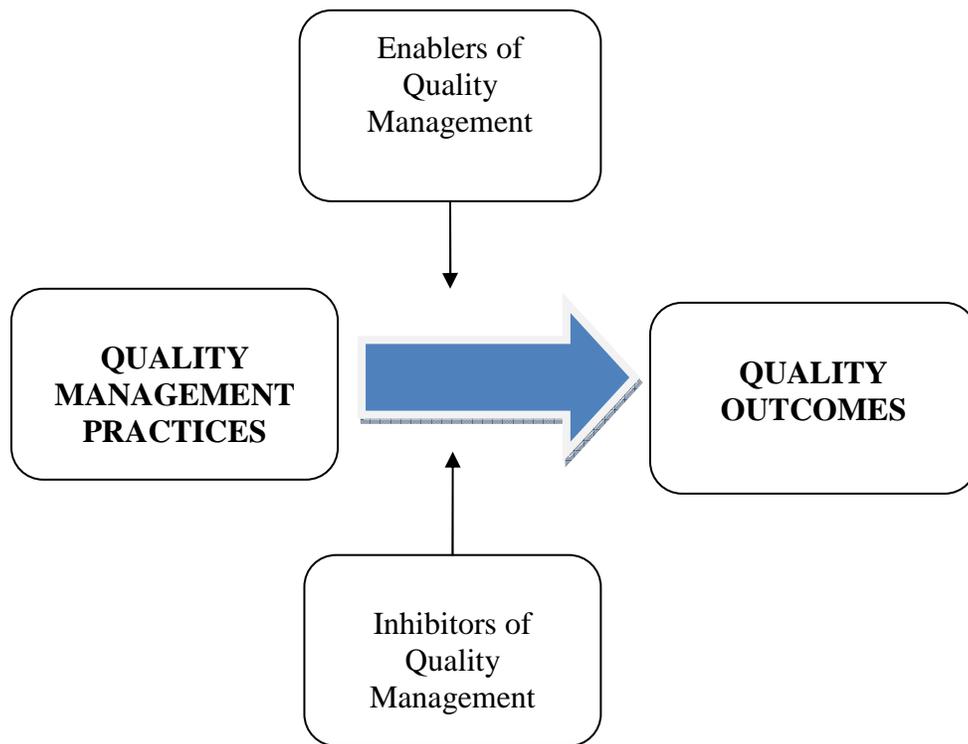


Figure 2.1: Theoretical Framework

Source: Author (2013)

2.6 Conceptual Framework

Jaafreh in his work appreciates the fact that quality management practices, if implemented, enhance quality outcomes in any given situation. However, it is expected that along the road leading to quality, organizations will face challenges and situations that will either enhance or inhibit quality management.



Independent Variables

Dependent variable

Figure 2.2: Conceptual Framework

Source: Author (2013)

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction.

This chapter presents the research methodology that was used in the study. The section is therefore a blue print of the various steps and techniques that were followed to fulfill the objectives of the study. The areas presented here are: research design, data collection and data analysis.

3.2 Research Design

For the purposes of this research, a descriptive research design was used. According to Cooper and Schindler (2003) a descriptive study is concerned with finding out the what, where and how of a phenomenon. It seeks to find the reasons behind a theory or phenomenon by telling what is, and thus using this, I was able to investigate my research questions.

The informants were the employees and management of Bamburi cement limited. The study targeted employees of the organization at all levels.

3.3 Data Collection

Primary data collection was achieved by the use of structured questionnaire. Data was collected from the employees and management of Bamburi cement limited. The questionnaires were distributed to respondents first, they were then picked up at later and the responses checked for correctness. Given that the research was out to get the employee perceptions, primary data was key in my research.

The company has a total of 979 employees including managers in the various departments. The study targeted 294 respondents as a representative sample of the total population. Twenty four (24) respondents were in managerial positions, 105 supervisors and 165 were staff in various sections including support staff. This study sampled 30 percent of the population from all population categories to collect data

3.4 Data Analysis

Quantitative data on quality management practices, enablers and challenges was used in the study. The collected questionnaires with the responses were checked for completeness upon which the valid data was coded. Analysis of data was done using SPSS (Statistical Package for Social Sciences). Percentages from the findings helped in the deeper analysis of the variables in question in order to make logical conclusions.

CHAPTER FOUR: DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter presents the data analysis, interpretation of the data findings on quality management practices in manufacturing organizations at Bamburi cement Ltd. The data was analyzed by use of quantitative technique where the SPSS program aided in the computations. The analysis of the data has been presented relative to the objectives and other aspects enquired in the research questionnaire.

4.1.1 Response Rate

	Frequency	Percentage (%)
Responded	223	75.8
Not responded	71	24.2
Total	294	100

This study targeted a total of 294 respondents. This therefore means that a total of 294 questionnaires were issued to the respondents. Out of this, a total of 223 questionnaires got responses while the rest never got responses or were wrongly filled, hence giving a response rate of $75.8\% \approx 76\%$ which is adequate according to Mugenda and Mugenda (2003).

The figure below presents the study response rate;

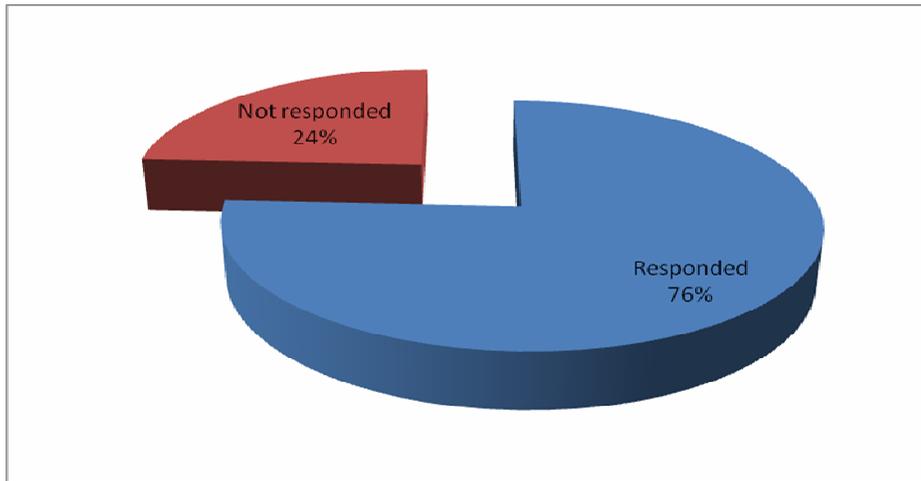


Figure 4.3: Response Rate

4.2 Aspects of Quality Management in the Organization

Table 4.1: Aspects of quality management in the organization

Quality of Bamburi Cement Ltd products can be explained as:	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
Perceived quality by customer	25	35	23	10	7
Product aesthetics/ beauty	10	38	50	1	1
Serviceability of the products	8	42	26	23	1
Durability of the products	33	54	8	4	1
Conformity of the products	20	60	14	4	2
Reliability of the products Ltd	23	66	10	1	0
Features of the products	16	74	10	0	0
performance of the products	6	88	2	2	2

The study required the respondents to state the extent to which they agreed on the various aspects of quality managements at Bamburi Cements Limited. According to the study findings, majority of the respondents were in agreement that perceived quality by customer, product aesthetics/ beauty, serviceability of the products, durability of the products, conformity of the products, reliability of the products, and features of the products are all aspects of quality at Bamburi Cement Ltd and that Bamburi Cement products can be explained as: performance of the products as shown by 94% of the respondents.

4.3 Quality Management Practices in the organization

Table 4.2: Total Quality Management (TQM)

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
Bamburi Cement Ltd implements TQM	10	90	0	0	0
TQM affects quality at Bamburi Cement Ltd	6	93	1	0	0

The study requested the respondents to indicate their level of agreement on total quality management; TQM as a practice in their organization. According to the results displayed in the table above by 90%, majority of the respondents were in agreement that Bamburi Cement Ltd implements TQM and that TQM affects quality at Bamburi Cement Ltd as shown by 93% respectively.

Table 4.3: Benchmarking

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
Bamburi Cement Ltd has benchmarking measures in place	16	74	10	0	0
Benchmarking affects quality at Bamburi Cement Ltd	29	63	11	1	0

Table 4.4: ISO Certification

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
Bamburi Cement Ltd is ISO certified	17	71	12	0	0
ISO certification affects quality at Bamburi Cement Ltd	15	70	11	2	2

On a five likert scale, respondents were required by the study to indicate their level of agreement on benchmarking and ISO certification based practices in the organization. On this question, majority of the respondents indicated that they were in agreement Bamburi

Cement Ltd has benchmarking measures in place and that benchmarking affects quality at Bamburi Cement Ltd as shown by 63%. Respondents also agreed that Bamburi Cement Ltd is ISO certified and that ISO certification affects quality at Bamburi Cement Ltd as shown by 71% and 70% respectively.

4.4 Enablers of Quality Management

Table 4.5: Leadership

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
Good leadership contributes towards implementation of quality goals at Bamburi cement	10	74	12	2	2
Bamburi Cement Ltd has a well-structured leadership	16	69	15	0	0

Respondents were required by the study to indicate their level of agreement on statements related to leadership as an enabler of quality management in organizations. According to the results displayed in the table above, the study revealed that 74% of the respondents were in agreement that good leadership contributes towards implementation of quality goals at Bamburi Cement and that Bamburi Cement Ltd has a well-structured leadership. This implied that leadership is an enabler of Quality management in the organization.

Table 4.6: Supplier Alliances

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
Suppliers contribute towards implementation of quality goals at Bamburi cement	20	79	0	1	0
Supplier alliances are critical for the realization of quality management goals	10	76	10	2	2

Respondents were to state their level of agreement on supplier alliances as an enabler of quality management in the organization. On this question, the study found out that majority of the respondents were in agreement that suppliers contribute towards implementation of quality goals at Bamburi Cement and that supplier alliances are critical for the realization of quality management goals as shown by 79% and 76% respectively.

Table 4.7: Training

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
Good training contributes towards implementation of quality goals at Bamburi cement	15	84	1	0	0
Bamburi Cement Ltd has a training programmes for its workforce	20	74	2	2	2

On whether training was a practice for quality management at Bamburi Cement limited, the study established that majority of the respondents were in agreement that good training contributes towards implementation of quality goals at Bamburi Cement and that Bamburi Cement Ltd has training programmes for its workforce as shown by 84% and 74% respectively.

4.5 Inhibitors of Quality Management

Table 4.8: Participation of senior management

	Strongly agree	Somewhat	Neither agree nor disagree	Somewhat disagree	Strongly disagree
Participation of senior management helps Bamburi Cement achieve quality goals	66	24	5	4	1
Senior management in Bamburi Cement Limited actively participate in the quest for Quality management	38	22	23	10	7

Respondents were required by the study to indicate their level of agreement on statements related to participation of leaders towards quality management at Bamburi Cement Kenya Limited. On this question, majority of the respondents as shown by 66% strongly agreed that participation of senior management helps Bamburi Cement achieve quality goals whereas 38% of the majority of the respondents strongly agreed that senior management in Bamburi Cement Limited actively participate in the quest for quality management respectively.

Table 4.4: Corporate culture

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
Corporate culture contributes towards implementation of quality goals at Bamburi Cement	70	20	5	5	0
Bamburi Cement Ltd has a well-defined corporate culture in place	40	20	20	12	8

On a five likert scale, the study required the respondents to indicate their level of agreement on how corporate culture is a challenge in quality management at Bamburi Cement Kenya limited. According to the study findings, the study established that 70% of the respondents strongly agreed that corporate culture contributes towards implementation of quality goals at Bamburi Cement and that Bamburi Cement Ltd has a well-defined corporate culture in place as shown by 40%.

4.6 Effect of quality management practices on quality outcomes

Table 4.5: Effect of quality management practices on quality outcomes

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
Quality management practices have led to the introduction of more products in the organization.	11	89	0	0	0
Applications of quality management practices have enhanced effective product and process designing.	15	76	5	4	0
Due to quality management, the company is able to supply to a big market locally and in East Africa too	17	63	8	3	4
Quality management practices have led to 'attraction of more customers' in the recent past	25	60	10	2	3
Its due to quality management practices that the sales at Bamburi cement has been going up in the recent past	41	59	0	0	0

Respondents were required by the study to indicate their level of agreement on statements on the effect of quality management practices on quality outcomes. According to the study findings, majority of the respondents were in agreement that quality management practices have led to the introduction of more products in the organization, applications of quality management practices have enhanced effective product and process designing, that due to quality management, the company is able to supply to a big market both

locally and in East Africa too, quality management practices have led to ‘attraction of more customers’ in the recent past and that it is due to quality management practices that the sales at Bamburi Cement has been going up in the recent past as shown by the percentages 89%, 76%, 63%, 60% and 59% respectively.

CHAPTER FIVE: DISCUSSION OF KEY FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the discussion of key findings, conclusion and recommendations of the study. The data has been presented relative to the study objectives which were; to establish enablers of quality management at Bamburi Cement Limited, to establish challenges in quality management at Bamburi Cement Limited and to establish relationship between quality management practices and quality outcomes at Bamburi Cement Company Limited.

5.2 Discussion of key Findings

The study found out that quality of Bamburi Cement Ltd products can be explained as: quality by customer, product aesthetics/ beauty, serviceability of the products, durability of the products, conformity of the products, reliability of the products, and features of the products.

The study also revealed that TQM, Benchmarking, ISO certification are some of the major quality management practices at Bamburi cement company limited. According to the results displayed in the table above by 90%, majority of the respondents were in agreement that Bamburi Cement Ltd implements TQM and that that TQM affects quality at Bamburi Cement Ltd as represented by 90% and 93% respectively. Majority of the

respondents indicated that they were in agreement Bamburi Cement Ltd has benchmarking measures in place and that benchmarking affects quality at Bamburi Cement Ltd as shown by 63%. The study also established that Bamburi Cement Ltd is ISO certified and that ISO certification affects quality at Bamburi Cement Ltd as shown by 71% and 70% respectively.

The study established that the various enablers of quality management at Bamburi Cement Ltd are: leadership, supplier alliances and employee training. According to the results the study revealed that 74% of the respondents were in agreement that good leadership contributes towards implementation of quality goals at Bamburi Cement and that Bamburi Cement Ltd has a well-structured leadership. Goffee & Jones (2007) confirms that leadership ensures that quality goals are realized when the management takes charge. The study found out that majority of the respondents were in agreement that suppliers contribute towards implementation of quality goals at Bamburi Cement and that supplier alliances are critical for the realization of quality management goals as shown by 79% and 76% respectively. The study also established that majority of the respondents were in agreement that good training contributes towards implementation of quality goals at Bamburi cement and that Bamburi Cement Ltd has training programmes for its workforce as shown by 84% and 74% respectively.

Musara (2012) asserts on the need of supplier alliances adding that the suppliers' resources are incorporated in the final product presented to the customer, and so when well implemented, this may contribute towards quality goals. The study by Musara

(2012) also reported that training is one of the strategic ways of realizing quality management goals. Training is a critical enabler of quality management. Inadequate training can be detrimental to quality. Less qualified employees are unable to offer quality requirements because they cannot think beyond the task at hand.

The study established that there are challenges towards quality management at Bamburi cement Kenya limited which range from participation of senior management to corporate culture challenges. In this case, the study established that majority of the respondents as shown by 66% strongly agreed that participation of senior management helps Bamburi Cement achieve quality goals and that senior management there actively participate in the quest for quality management respectively. The study results agree with Adrian, Tom and Ed (2006) whose study reported that quality of products is ensured if there is an active participation of senior management of a company in the development of the products.

According to the study, it is established that 70% of the respondents strongly agreed that corporate culture contributes towards implementation of quality goals at Bamburi cement and that Bamburi Cement Ltd has a well-defined corporate culture in place as presented by 40%. According to the reviewed literature, culture needs to be valued in quality management approaches in organizations. Irani, Beskese & Love (2004) asserted that managers need to periodically analyze the relevance of corporate values to the evolving organizational environment. As a result, this would enable to adapt and nurture the constructs that support the development of an aspired organizational culture.

The study found out that majority of the respondents were in agreement that the quality management practices have led to the introduction of more products in the organization, applications of quality management practices have enhanced effective product and process designing, that due to quality management, the company is able to supply to a big market both locally and in East Africa too. Quality management practices have led to 'attraction of more customers' in the recent past and that it is due to quality management practices that the sales at Bamburi cement has been going up in the recent past as shown by the percentages 89%, 76%, 63%, 60% and 59% respectively. The results on quality outcomes realization in the study by Mentzer et al (2011) asserts that managers need be keen on matters of quality because of the repercussions of losing out in the ever competitive market.

5.3 Conclusions

5.3.1 Enablers of Quality Management

TQM, Benchmarking, ISO certification are some of the major quality management practices at Bamburi cement company limited and that quality by customer, product aesthetics/ beauty, serviceability of the products, durability of the products, conformity of the products, reliability of the products Ltd, features of the products are all aspects of quality at Quality of Bamburi Cement Ltd. The study concludes that leadership and supplier alliances and employee training are the major enablers of quality management in the organization where; leadership contributes towards implementation of quality goals,

suppliers contribute towards implementation of quality goals at Bamburi Cement and good training contributes towards implementation of quality goals at Bamburi Cement and that Bamburi Cement Ltd has training programmes for its workforce.

5.3.2 Inhibitors of Quality Management

The study concludes that there are challenges towards quality management at Bamburi Cement Kenya limited which range from participation of senior management to corporate culture challenges. In this case, the study established that the participation of senior management helps Bamburi Cement achieve quality goals and that senior management in Bamburi Cement Limited actively participate in the quest for Quality management respectively. The study concludes that corporate culture contributes towards implementation of quality goals at Bamburi cement and that Bamburi Cement Ltd has a well-defined corporate culture in place.

5.3.3 Effects of Quality Management

On the effect of quality management practices on quality outcomes, the study concludes that; quality management practices have led to the introduction of more products in the organization, applications of quality management practices have enhanced effective product and process designing, that due to quality management, the company is able to supply to a big market both locally and in East Africa too, Quality management practices

have led to 'attraction of more customers' in the recent past and that its due to quality management practices that the sales at Bamburi Cement has been going up in the recent past.

5.4 Recommendations

This study recommends that the management at Bamburi Cement limited be always on the lookout towards maintaining quality aspects on the various products offered. In this case there is a need to depend on more quality measures/metrics that directly contribute to quality in the organization. Other major quality management practices need to be established so as to enable the management to understand and fully influence the quality outcomes in the organization.

On enablers the study recommends that there is a need to establish strategies which will see the effective management of leadership and supplier alliances and employee training since leadership contributes towards implementation of quality goals, suppliers contribute towards implementation of quality goals and that good training and development contributes towards implementation of quality goals. The managers may use transformational leadership, participatory leadership styles towards improving on quality management in the organization. The study recommends that the management offer scholarships for the employees or at times send employees to beneficial courses and

seminars related to quality management practices. This will help them learn new practices or approaches to improving quality management at Bamburi Cement Ltd.

The study recommends that the managers and the audit team in the organization be keen in establishing the right mitigation measures or strategies towards quality management in the organization, this will be in an effort to avoid risks that accompany the adoption of poor quality management practices thereby leading to the challenge of failing to achieve the right quality outcomes in the organization. Modern approaches on monitoring and evaluation must be put in place to approve the right quality management practices. This will help the company to get or improve on new markets, increase profits, create new products and processes, employ more staff, open more outlets, form mergers with upcoming cement firms and in general improve the capital structure of Bamburi cement limited.

5.5 Recommendation for Further Studies

This study recommends that further studies be done on quality management practices where more cement firms will be brought on board so as to find out whether the same findings obtained apply. Further study may also be done to include other companies or even government Parastatals or agencies to establish what quality management practices are in place and their effect towards good or bad quality outcomes.

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APPENDIX 1: QUESTIONNAIRE

The purpose of my research is to establish quality management practices in manufacturing organizations using a case study of Bamburi cement ltd

QUALITY	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
Quality of Bamburi Cement Ltd products can be explained as: Performance of the products	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Features of the products	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Reliability of the products Ltd	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Conformity of the products	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Durability of the products	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Serviceability of the products	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Product aesthetics/ beauty	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Perceived quality by customer	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

SECTION B: QUALITY MANAGEMENT PRACTICES

TQM	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
Bamburi Cement Ltd implements TQM	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
TQM affects quality at Bamburi Cement Ltd	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

BENCHMARKING	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
Bamburi Cement Ltd has benchmarking measures in place	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Benchmarking affects quality at Bamburi Cement Ltd	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

ISO CERTIFICATION	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
Bamburi Cement Ltd is ISO certified	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
ISO certification affects quality at Bamburi Cement Ltd					

Other Quality Management practices implemented at Bamburi Cement Ltd:

- 1.
- 2.
- 3.

SECTION C: ENABLERS OF QUALITY MANAGEMENT

LEADERSHIP	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
Good leadership contributes towards implementation of quality goals at Bamburi cement	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Bamburi Cement Ltd has a well-structured leadership	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

SUPPLIER ALLIANCES	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
Suppliers contribute towards implementation of quality goals at Bamburi cement	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Supplier alliances are critical for the realization of quality management goals	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

TRAINING	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
Good training contributes towards implementation of quality goals at Bamburi cement	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Bamburi Cement Ltd has a training programmes for its workforce	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

SECTION D: CHALLENGES OF QUALITY MANAGEMENT

The following are the challenges of Quality Management:

1. Lack of participation of senior management
2. Poor corporate culture

PARTICIPATION OF SENIOR MANAGEMENT	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
Participation of senior management helps Bamburi cement achieve quality goals	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Senior management in Bamburi Cement Limited actively participate in the quest for Quality management	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

CORPORATE CULTURE	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
Corporate culture contributes towards implementation of quality goals at Bamburi cement	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Bamburi Cement Ltd has a well-defined corporate culture in place	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

Other challenges in Quality Management experienced at Bamburi Cement Ltd:

- 1.
- 2.
- 3.

EFFECT OF QUALITY MANAGEMENT PRACTICES ON QUALITY OUTCOMES

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
Applications of quality management practices have enhanced effective product and process designing.					
Its due to quality management practices that the sales at Bamburi cement have been going up in the recent past					
Due to quality management, the company is able to supply to a big market locally and in East Africa too					
Quality management practices have led to the introduction of more products in the organization.					
Quality management practices have led to 'attraction of more customers' in the recent past					

