# FACTORS INFLUENCING IMPLEMENTATION OF QUALITY MANAGEMNET PRACTICES IN ORGANIZATIONS: A CASE OF ALLTEX (EPZ) LTD, KENYA.

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A RESEARCH PROJECT REPORT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF ARTS IN PROJECT PLANNING AND MANAGEMENT OF THE UNIVERSITY OF NAIROBI.

#### **DECLARATION**

This research project report is my original work and has not been presented for the award of degree in any other University

Signed ....

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This research project report has been submitted for examination with my approval as the University supervisor.

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# **DEDICATION**

This project is dedicated to my family whose prayers and support	ort has seen me through this work.
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#### ABBREVIATIONS AND ACRONYMS

AGOA African Growth and Opportunity Act

ASQ Acceptable Quality Levels

**COMESA** Common Market for Eastern Southern Africa States

**COI** Continuous Quality Improvement

**EPA** Export Processing Zones

GAS Generalized System of Preference

JIT Just-In-Time

ILO International Labour Organization

ISO International Standards Organization

MRP Material Requirements Planning

PIMS Profit Impact of Market Strategy

PDCA Plan Do-Check-Act

QMP Quality Management Practices

QFD Quality Function Deployment

QIDW Quality in Daily Work

**SQC** Statistical Quality Control

TQC Total Quality Control

TQM Total Quality Management

USAID United States Agency for International Development

#### **ABSTRACT**

Organizations face stiff competition in the international markets which is no longer based on the quantity of goods and services provided by companies but rather on the quality of products brought into the market. The Kenyan government has spent 40 billion on establishing EPZs and foregoes significant amounts of revenue on inputs. Due to this heavy investment, there was need to evaluate utilization of this investments. The purpose of this study was to examine the factors that influence the implementation of QM practices in organizations. Such factors formed the themes of the literature review. They included resources, employee qualifications and training, role of top management and influence of competition. The objectives of this study were to investigate the level to which resources influenced implementation of quality management practices in organizations, to establish the extent to which employees qualification and training influenced quality management practices in organizations, to determine how top management support influenced quality management practices in organizations and to establish the extent to which competition influenced implementation of quality management practices in organizations. A sample size of 60 employees was studied. This study employed the use of a survey study approach with its target population being the different categories of employees of Alltex (EPZ) limited. Primary data was derived through questionnaires distributed to employees, while secondary was sourced from literatures, articles and books and internet sources. Descriptive analysis was used. The study's findings show that resources influenced implementation of quality management practices with 65% supporting human resource influence, 71.7 agreeing with the influence of sophisticated equipment and 75% respondents agreeing that modern machinery had an influence. Employees qualification and training was also found to be an influencing factor with 61.7% of respondents agreeing, top management had 60% respondents agreeing compared to 16% that disagreed and competition had 81.6% respondents agreeing that it influenced implementation of quality management practices. From the findings of the study it was recommended that companies device practical means of ensuring their employees have relevant skills, invest in technology and work towards meeting customer demands. The management should also offer facilities that support the production process and improve the relationship between employees. Further enquiry into the impact of quality management practices on the performance of the export processing zones can therefore be made.

# CHAPTER ONE INTRODUCTION

#### 1.1 Background of the Study

Liberalization of economies has presented a scenario whereby business organizations face stiff competition from global competitors. Goods and services produced by companies at the local stage have to attain certain quality standards in order to favorably and profitably compete in the international markets. Faced with these challenges, the manufacturing industry has strived to achieve the required standards. These standards can be achieved through implementing quality management practices. Quality management is not only related to improving the quality of goods and services that are produced in order to satisfy customer demands, but rather, quality management presents a strategic option and an integrated management philosophy for organizations, which allows them to reach their objectives effectively and efficiently, and to achieve sustainable competitive advantage (Goldberg and Cole, 2002).

Quality Management resulted mainly from the work of the quality gurus and their theories. These authorities include American gurus such as Joseph Juran, W Edwards Deming and Armand Feigenbum who featured in the 1950's. Others are the Japanese quality gurus like Kaoru Ishikawa, Genichi Taguchi, and Shigeo Shingo who developed and extended the early American quality ideas and models as well as the 1970-80's American Western gurus, notably Philip Crosby and Tom Peters, who further extended the quality management concepts after the Japanese successes. Their theories were mainly directed towards improving organizational performance (Dale, 2008).

On account of these theories, various approaches have been implemented by business organizations seeking to enhance their performance. These approaches include embracing accreditation and certification systems, as well as different models of Total Quality Management (Wiklund *et al.*, 2003). However, promoters of quality management agree that organizations have not found it so easy to implement the quality management practices and to achieve the expected benefits (Kirk, 2000). More critically, Brown (2000) concluded that there are still organizations where, despite this criticism, the quality management philosophy continues to be a central focus of the business and a mechanism for contributing to better performances. This study builds on previous research on the 'Quality Management Practices' by establishing the

most critical quality management practices and tools used by companies in the export processing zone and will further highlight the challenges faced by local companies.

So much variation exists in the search of a universally accepted definition of the term quality. More often than not different definitions of quality become appropriate under different circumstances (Reeves, 1994). ISO 8402 which defines the fundamental terms relating to quality concepts, states that quality is the totality of features and characteristics of a product that bears on the ability to satisfy stated or implied needs. In this definition, features and characteristics of a product implies the ability to identify what quality measures can be measured or controlled or constitute an acceptable quality levels (AQL), while 'ability to satisfy given needs' relates to the value of the product or service to the customer, including economic value as well as safety, reliability, maintainability and other relevant features (Lysons and Farrington, 2006).

Crosby (1980) defines quality as 'conformity to requirements not goodness'. He also stresses that the definition of quality can never make any sense unless it is based on what the customer wants — that is, a product is a quality product only when it conforms to the customer's requirements.

For researchers and practitioners, understanding the nature of quality is more than a philosophical issue. Research conducted for the profit impact of market strategy (PIMS) program has led to the conclusion that in the long run, the most important single factor affecting a business unit's performance is the quality of its products and services, relative to those of competitors (Buzzel and Gale, 1987).

Dean and Bowen (1994) have described quality management practices as a collective interlinked system of practices that is associated with organizational performance. In this respect, several studies have attempted to identify the key quality management practices on which the success of a quality strategy is based (Seraph *et al.*, 1989). Quality management is thus the approaches and actions that are undertaken by an organization's management with the aim of improving quality. It is these management-initiated approaches that distinguish leading-edge companies from poor performers who may be pushed out of the competition (Adam and Ebert, 2001).

It is an organization's management responsibility to instill the culture of quality. This function cannot be delegated to technicians or workers. The idea is to help all in the organization to concentrate on doing their job right the first time. Without quality management an organization's effort to improve or control quality are likely to fail (Crosby et al., 1997). According to application Guidelines Malcolm Baldrige National Award (1991), various examination categories, items and point values are identified for the Malcolm Baldrige National Award. These include leadership, information and analysis, strategic quality planning, human resources utilization, quality assurance of products and services, quality results and customer satisfaction.

Benson et al (1991) propose a system structural model of quality management and quality performance. Lakhal et al., (2005) have identified critical quality management practices linking them in a model and testing the relationships empirically. Many empirical studies have been conducted in the past ten years to gauge the development and majority of quality management practices particularly amongst manufacturing firms and correlation with overall organization performance has been documented in the work of (Rahman and Sohel, 2002).

Export Processing Zones can be summarized as a unit bearing clusters of specially designed zones of aggressive economic activity for the promotion of export. The phenomenon of Export Processing Zones is not new. According to the ILO, Spain had the first zone set up as early as 1929. During the 1970s, there was an upsurge of EPZs, mostly in developing countries of Latin America, the Caribbean, Asia, and to a lesser extent Africa (ILO 1998). Even though large-scale interest in EPZs has only grown rapidly in the last few years, the concept was developed almost 40 years ago. The first EPZ was established in 1959 in Ireland, near Shannon Airport (Roberts 1992). By the end of the 1960s, there were about 10 zones, most of then in Asia (Taiwan, Singapore, Hong Kong, and India), and Latin America (Mexico, Colombia, and the Dominican Republic). In the early 1970s the EPZ concept began to gain momentum. By the middle of the 1970s, there were at least 79 zones established in 25 countries (Fröbel *et al.*, 1980). The rapid growth in the number of zones continued in the late 1970s and 1980s. Between 1975 and 1986, employment in the zones grew at a rate of 9 percent per year, while exports grew an impressive 15 percent per year (ILO/UNCTC, 1988). Recent estimates count more than 200 EPZs in about 50 countries (Burns, 1995).

According to the World Bank (2002), EPZs are larger and more widespread in East Asia than in other regions. Among zones with five or more years of operation, the median zone in Asian countries has 10,500 employees, while in Latin America the median zone has just over 3,500 employees. In addition, while the three largest EPZ countries in East Asia account for about 70 percent of total activity (measured by employment), in Latin America and Africa that percentage exceeds 90 percent. Many of the most successful EPZs were established in Asia, especially Taiwan and Korea (Rondinelli, 2005).

Kan (2010) confers that the first EPZ in Taiwan was established in 1966 and was quickly filled with factories churning out radios, garments, and other items. As of late 1967, EPZ tenant companies were employing 5,625 people. By 1976, the total workforce had swelled to just fewer than 75,000 According to (Rondinelli, 2005), the zones' contribution to Taiwan's exports peaked in 1974. In that year, goods produced by tenant enterprises accounted for just over 9% of Taiwan's total exports of US\$5.64 billion. By 2000, exports from the zones amounted to US\$8.7 billion, 5.86% of Taiwan's total exports. The zones' share of exports has continued to decline, and currently stands at around 3.5%. Until 1986, EPZ tenant enterprises were required to export all of their output. This rule was relaxed and finally dropped altogether in 1997. The proportion of EPZ-made goods entering the domestic market has since been growing gradually, yet the zones still live up to their name. In 2006, 66.2% of EPZ output was exported. In their first 35 years, Taiwan's EPZs brought the country something like US\$50 billion in foreign currency Kan (2010).

Kang (1996) asserts that one of the success stories of industrialization through EPZs is South Korea. Masan EPZ, established in 1970, was South Korea's first EPZ and is the largest in terms of employment, number of firms and amount of foreign trade and FDI. During the 1970s, more than 90 percent of the firms were foreign owned companies. The proportion remained at 80 percent throughout the 1980s. The majority of them were small and medium scale companies from Japan for whom location in South Korea is attractive because of geographical proximity. These foreign companies came to Masan EPZ in search of good quality, cheap labour assuming the existence within the EPZ of strong labour restrictions or even complete suppression of the basic legal rights of labour, as promised by the South Korean government by way of the 1970 Act on the Designation and Operation of Export Free Zones. In terms of types of manufacturing,

the majority of the small and medium Japanese enterprises that came to Masan were in labour-intensive electrical goods and electronics industries that were finding it difficult to survive in Japan because of the high labour costs there. As globalization intensifies, the South Korean EPZs are changing in character, and are becoming industrial hubs for capital-intensive and technology-intensive industries. At the same time, they are creating a new structure of sub-contracting and informal sector employment that is beyond the reach of legal and institutional protection (Cho, 1990).

Hong Kong initially took the course of a public sector-led import-substituting industrial regime. In the mid-1970s, a gradual policy shift began as the result of a worsening economic situation and a change in political leadership. The first EPZ, established in Sha tin, became operational in 1983 and it was followed by Tuen Mu EPZ in 1993. Subsequently six more EPZs were set up and currently two are at the implementation stage. The government in 1996 enacted a law allowing the establishment of EPZs by the private sector as well (Bhattacharya, 1998). The objectives of EPZs in Hong Kong were no different from those behind EPZ formation in other countries and were equally comprehensive. In addition to generous incentives offered by EPZs, firms operating in EPZs can avail themselves of a Generalized System of Preferences (GSP) facility that Hong Kong enjoys towards several countries and regions. As for the performance of EPZs, Bhattacharya (1998) concluded that as of the mid-1990s they were making a modest contribution to the economy in terms of investment generation, job creation and export earnings, but were definitely demonstrating more dynamism than the rest of the economy. He also estimated the net overall welfare effect of EPZs in Hong Kong was a positive one even after taking into account public loss in terms of capital and administrative costs. At about the same time, (Dowla, 1997) evaluated the performance of Hong Kong EPZs in the light of their stated objectives and found that they were successful in terms of the first two criteria, namely, foreign exchange earnings and employment generation.

The proliferation of EPZs in developing countries is a phenomenon that is likely to remain strong during the next few years in response to recent trends in international trade and production (Linneman, 1999). In Africa, the idea of establishing "export processing zones" (EPZs) has found support among several governments. This development is linked to the increasing acceptance of "globalization" and neoliberal policies across the region. Attempts to become internationally "competitive", to move towards export-led growth, and structural

adjustment programmes (SAPs) now characterize most African countries, and most governments regard EPZs as a suitable strategy to find a niche in the global economy (Rondinelli, 2000). The governments of Southern Africa are justifying EPZs by claiming that they will bring foreign investment, new industries and jobs to their countries. Zimbabwe, Namibia, Malawi, Zambia and Mozambique already have EPZs (World Bank, 2002).

A common characteristic of EPZs is the provision of special incentives to attract (mostly foreign) investment for export production. These incentives range from tax holidays, duty-free export and import, free repatriation of profits to the provision of infrastructure and the exemption from labor laws. However, there are differences in the way countries set up and operate their EPZs. Some operate as fenced-in zones, others are single factories that were awarded EPZ status (Export Processing Units – EPUs) and others are part of industrial parks or special economic zones (Jauch and Keet, 1996).

In Kenya, the first viability study into the establishment of EPZs was initiated in 1989 and completed in 1990 with financial assistance from United States Agency for International Development (USAID). The study findings indicated that Kenya possessed the basic infrastructural and human resources required for an EPZ Program and that such a program would enhance the countries comparative advantage to compete for international off-shore investments. This sought to help the economy through increased productive capital investment, jobs generated, technology transferred, backward linkages developed and diversified exports.

On the basis of the findings and recommendations of the study, the Government proceeded in creating the framework for the EPZ Program. The Export Processing Zones Program came into being in November 1990 following the enactment of the EPZ Act (Cap 517) of the Laws of Kenya by Parliament. This program was aimed at providing an attractive investment opportunity for export-oriented business ventures within designated areas or zones.

The EPZ Act provides for the legal, institutional and incentive framework for the EPZ program and the Export Processing Zones Authority as the agency charged with the responsibility of administering the program to achieve economic objectives on behalf of the government. Export Processing Zone Authority offers a range of attractive incentives to ensure

low cost operations, fast set up, smooth operations and high profitability. An effective one-stop-shop service at the EPZ Authority facilitates the investment process. EPZA is charged with initiating, promoting and providing attractive investment opportunities for the export-oriented business ventures in the country. Singularly and collectively, seven Export Processing Zones (EPZs) are strategically located across the country. These include Nairobi, Athi River, Mombasa, nearby Kilifi and Malindi along Kenya's North coastline, Voi and Kimwarer in the country's inland Rift Valley. These zones are intended to constitute an economic proposition that makes a compelling case for companies and businesses to contemplate. By 2008 the number of companies operating as EPZs in Kenya increased from the four in 1994 to 99 (http://www.epzakenya.com).

The advantages that EPZs in Kenya are expected to get are numerous. Kenya's central geographical location and membership in a number of preferential trade agreements makes it an ideal site from which to access both regional and world markets. Kenya is a signatory to the African Caribbean European Union Partnership Agreement. The European Union (EU) preferences available under this arrangement include: Duty and Quota Free entry for all industrial products of Kenyan origin, highly favorable treatment for a wide range of agricultural produce. Kenya also enjoys preferential market access under the Generalized System of Preferences (GAS). Under this scheme, products are entitled to preferential treatment in the United States of America (USA), Japan, Canada and several European countries. Kenya has no quota on the amount of apparel that can be exported to Europe, and the USA (under the African Growth and Opportunities Act - AGOA). Investors in Kenyan EPZs have access to a wider market in countries of the Common Market for Eastern Southern African States (COMESA), which have a combined population of 385 million.

Alltex EPZ Limited is situated in Athi River area outside Nairobi. It was established in 2003 and is a joint ownership between Industrial Promotion Services Kenya and Global Ready Made Garments of Doha, Qatar. The company has an investment of Kshs.570 million. It has a production capacity of 100, 000 dozens of woven and knitted garments per month, with an annual turnover of about Kshs. 2.6 billion.

# 1.2 Statement of the Problem

Issues of performance of EPZs remain critical to policymakers and regulatory authorities. Epzs operate within the global market which is characterized by a shrinking market for products due to increasing competition especially through reduction in trade barriers. Quality in production rather than mass production has taken a center stage in global business. The Kenyan government spent 40 billion shillings on establishing EPZs, and apart from this it foregoes a significant amount of revenue through issuance of tax holiday, stamp duty exemption, VAT and duty exemption on inputs. Taking into consideration such massive public and private investment, there is an urgent need to evaluate how this investment is being utilized by examining the quality of manufacturing processes and production of goods, the cadre of employees in the manufacturing sector as well as other resources and processes in place.

A number of studies have been done on the area of quality management. Musau (2003) did a case study on quality management practice at Colgate-Palmolive Kenya and recommended the need for Kenyan manufacturers to reassess the level of entrenchment of quality management practices in the organizations activities. He notes that for an organization to achieve competitive advantage it has to have all prerequisites of quality management working hand in hand. In his study, Karimi (2006) focused local authorities while Muthoni (2007) conducted a study on the hospitality industry.

Other studies carried out by Cua et al., (2001) and Kaynak (2003) found that there is an underlined importance and causal relations between quality management practices and competitive advantage and they went ahead the existence of a positive association between quality management practices and organizational performance. Although a number of studies had been done on the concept and context of quality management, none had been done within the context of Export Processing Zones of Kenya. There is need therefore for a study to be carried out focusing on the Export Processing Zones of Kenya in relation with the main quality management features. This prompts the question: What are the factors that influence implementation of quality management practices in organizations?

# 1.3 Purpose of the Study

To investigate factors influencing implementation of quality management systems practices in organizations: A case of Alltex (EPZ) limited Kenya.

# 1.4 Objectives of the Study

The objectives of the study were:

- 1. To investigate the level at which resources influence implementation of quality management practices in organizations.
- 2. To establish the extent to which employees qualification and training influence quality management practices in organization
- 3. To determine how top management support influence quality management practices in organizations.
- 4. To establish the extent to which competition influences implementation of quality management practices in organizations.

#### 1.5 Research Questions

The research questions were:

- 1. What is the level at which resources influence implementation of quality management practices in organizations?
- 2. To what extent do employees' qualifications and training influence the implementation of quality management practices in organizations?
- 3. How does top management support influence implementation of quality management practices in organizations?
- 4. To what extent does competition influence implementation of quality management practices in organizations?

# 1.6 Significance of the Study

The findings of this study would be useful to the management of companies in the zones by helping to provide an insight into decisions and decision making choices in the industry. To policy makers who include the Ministry of Trade as well as the Export Processing Zones

Authority (EPZA), the study offers a deeper understanding of the sector. The study will also be available to other scholars and researchers who may use the findings as reference material.

# 1.7 Basic Assumptions of the Study

The study was conducted under assumptions that the respondents gave truthful and honest responses to the instrument items, they would readily be available and would give information that is relevant to the study; the other assumption was that the questionnaire was an adequate instrument in gathering sufficient information regarding quality management practices at EPZ. It assumed that the respondents would understand the questions and answer them truthfully.

#### 1.8 Limitations of the Study

In this study, the researcher encountered time and financial limitations. Time constraint was overcome by seeking more leave—time from the employer while adequate finances were sought from family resources, friends and well wishers. These finances catered for transport costs, costs of production of the questionnaires and any other miscellaneous costs that cropped up as a result of the study.

### 1.9 Delimitation of the Study

The study covered Alltex (EPZ) Ltd. Despite having many firms in the manufacturing industry, the choice of EPZ was because there were many companies in the zone which manufactured similar products and offered the same services to the same markets. In this case competition of companies could be enhanced by implementing quality management practices.

# 1.10 Definition of Significant Terms used in the Study

Resources: The financial, human resources, infrastructure, work environment plant, labor, raw materials and assets available for the company's operations

Employee's Qualifications and Training: The skill possessed by employees that enable them to effectively perform their roles.

Top Management Support: Support offered by the top management this includes human resource, financial etc.

competition: The existing rivalry between Alltex (EPZ) Ltd and other companies offering milar products.

### .11 Organization of the Study

The study was organized into five chapters. Chapter one was the introduction. It onsisted of the background to the study; introduce the research problem, purpose of the study, esearch objectives, and research questions, significance of the study, limitations, delimitation, asic assumptions, and definition of significant terms used and organization of the study.

Chapter two covered literature review includes introduction, the concept of quality nanagement practices in organizations, rationale of quality management practices, influence of esources on implementation of quality management practices, influence of employees qualifications and training on implementation of quality management practices, influence of top nanagement support on implementation of quality management practices and the influence of competition on implementation of quality management practices, theoretical framework, conceptual framework and summary of literature review.

Chapter three contained the research methodology, which was divided into introduction, esearch design, target population, sample size and sampling procedure, research instrument, at a collection procedures, data analysis techniques and ethical considerations in research.

Chapter four covered the data analysis presentation, interpretation and discussion which as presented in tables which showed the frequencies and the valid percentages.

Chapter five covered the summary of finding, conclusions and recommendations, thereby the study's findings were compared and contrasted with the findings of other literature. also gave recommendations as per the study objectives as well as areas of further research.

# CHAPTER TWO LITERATURE REVIEW

#### 2.1 Introduction

This chapter presents a comprehensive review of relevant literature in an attempt to position the study in an appropriate theoretical framework. Thus it discusses findings of related researches to this study from both global and local perspectives.

# 2.2 The Concept of Quality Management Practices in Organizations.

With a wide variety of meanings and connotations attached to it, quality is a difficult and elusive term to define, having thus been referred to as a "slippery concept" (Pfeffer and Coote, 1991). It is slippery because it has a wide variety of meanings. The word implies different things to different people. It has been defined with different perspectives and orientations, according to the person, the measures applied and the context within which it is considered. Amid the wide gamut of such definitions, there seems to be no consensus definition, but they all deal either with the product or the services producing these products/services. From the perspective of the consumers or users, the product or service based definition is more useful. From the perspective of the organization providing goods/services, the process-perspective is more useful (Sangeeta and Banwe, 2004).

From a managerial philosophy viewpoint, the elements of QM are varied. The different terms like strategic quality management, total quality improvement, and total quality leadership are actually examples showing the different emphasis placed on particular aspects of what is generally called quality management (Sangeeta and Banwe, 2004). Seymour (1992) identified four philosophical principles for what he called strategic quality management: "meeting or exceeding customer needs", "everyone's job", "Continuous improvement" and "leadership". He believed that the domination of customers is a reality that displays itself. Relating to continuous improvement, Seymour (1992) highlighted the importance of processes and the necessity for a never-ending improvement strategy using the plant do-check-act (PDCA) cycle.

The Quality revolution can be traced back to 1992 when Radford suggested that organizations pay more attention to quality and proposed the standard model of a separate quality

control function to monitor operations. Shewhart added more rigorous statistical analyses in the 1980s, and for many years this remained the accepted approach to quality management. In the 1980s, organizations around the world began to learn their lessons, and realized the strategic importance of quality. By the 1990s quality management had broadened into a complete business philosophy – where high quality becomes a way of improving reliability, delivery time, flexibility, costs, productivity, profitability and just about every other measure of performance (Waters, 2006).

Benson *et al.*, (1991) proposed a model of quality management comprising a system-structural view of quality management. This system-structural view considers the organization's external context and its impact to the organization. With quality problems being driven by external factors such as customer demands, competitive pressures and government regulation, the system-structural view is particularly helpful in explaining the theory of quality management.

According to Dale (2004), a lasting and continuous improvement in quality can only be achieved by directing organizational efforts towards planning and preventing problems from occurring at source. This calls for a comprehensive quality management system to increase uniformity and conformity. More emphasis is placed on advanced quality planning, training, critical problem solving tasks, improving the design of the product, process and services, improving control over the process and including workers.

Quality management is a method for ensuring that all the activities necessary to design, develop and implement a product or service are effective and efficient with respect to the system and its performance (Deming, 1986). Quality management (QM), also called total quality management, evolved from many different management practices and improvement processes. QM is not specific to managing people, but rather is related to improving the quality of goods and services that are produced in order to satisfy customer demands. QM permeates the entire organization as it is being implemented. TQM has its roots in the quality movement that has made Japan such a strong force in the world economy. The Japanese philosophy of quality initially emphasized product and performance and only later shifted concern to customer satisfaction (Sergesketter, 1993). Youngless (2000), argued that rather than trying to inspect the quality of products and services after they have been completed, TQM instills a philosophy of doing the job correctly the first time. It all sounds simple, but implementing the process requires

an organizational culture and climate that are often alien and intimidating. Changes that must occur in the organization are so significant that it takes time and patience to complete the process. Just as the process does not occur overnight, the results may not be seen for a long period of time. Some experts say that it takes up to ten years to fully realize the results of implementing quality management.

According to Bank, (1992), Total Quality Management (TQM) refers to management methods used to enhance quality and productivity in organizations, particularly businesses. TQM is a comprehensive system approach that works horizontally across an organization, involving all departments and employees and extending backward and forward to include both suppliers and clients/customers (Barnard, 1999). TQM is only one of many acronyms used to label management systems that focus on quality. Other acronyms that have been used to describe similar quality management philosophies and programs include CQI (continuous quality improvement), SQC (statistical quality control), QFD (quality function deployment), QIDW (quality in daily work) and TQC (total quality control). TQM provides a framework for implementing effective quality and productivity initiatives that can increase the profitability and competitiveness of organizations (Deming, 1992).

Although TQM techniques were adopted prior to World War II by a number of organizations, the creation of the Total Quality Management philosophy is generally attributed to Dr. W. Edwards Deming. In the late 1920s, while working as a summer employee at Western Electric Company in Chicago, he found worker motivation systems to be degrading and economically unproductive; incentives were tied directly to quantity of output, and inefficient post-production inspection systems were used to find flawed goods (Hunt, 1992). Deming teamed up in the 1930s with Walter A. Shewhart, a Bell Telephone Company statistician whose work convinced Deming that statistical control techniques could be used to supplant traditional management methods. Using Shewhart's theories, Deming devised a statistically controlled management process that provided managers with a means of determining when to intervene in an industrial process and when to leave it alone. Deming got a chance to put Shewhart's statistical-quality-control techniques, as well as his own management philosophies, to the test during World War II. Government managers found that his techniques could be easily taught to

engineers and workers, and then quickly implemented in over-burdened war production plants (Weiss, and Gershon, 1989).

One of Deming's clients, the U.S. State Department, sent him to Japan in 1947 as part of a national effort to revitalize the war-devastated Japanese economy. It was in Japan that Deming found an enthusiastic reception for his management ideas. Deming introduced his statistical process control, or statistical quality control, programs into Japan's ailing manufacturing sector. Those techniques are credited with instilling a dedication to quality and productivity in the Japanese industrial and service sectors that allowed the country to become a dominant force in the global economy by the 1980s (Harry and Sergesketter, 1993). While Japan's industrial sector embarked on a quality initiative during the middle 1900s, most American companies continued to produce mass quantities of goods using traditional management techniques. America prospered as war-ravaged European countries looked to the United States for manufactured goods. In addition, a domestic population boom resulted in surging U.S. markets. But by the 1970s some American industries had come to be regarded as inferior to their Asian and European competitors. As a result of increasing economic globalization during the 1980s, made possible in part by advanced information technologies, the U.S. manufacturing sector fell prey to more competitive producers, particularly in Japan (Svenson, et al., 1994).

In response to massive market share gains achieved by Japanese companies during the late 1970s and 1980s, U.S. producers scrambled to adopt quality and productivity techniques that might restore their competitiveness. Indeed, Deming's philosophies and systems were finally recognized in the United States, and Deming himself became a highly sought after lecturer and author. The "Deming Management Method" became the model for many American corporations eager to improve. And Total Quality Management, the phrase applied to quality initiatives proffered by Deming and other management authorities, became a staple of American enterprise by the late 1980s. By the early 1990s, the U.S. manufacturing sector had achieved marked gains in quality and productivity (Saylor, 1992).

Presently, organizations carry out quality management and improvement programmes for a range of objectives. Successful results provide substantial benefits by achieving customer satisfaction, improving employee quality awareness and consciousness, improving organizational

performance, and supporting partnership in value chains. These benefits are important for all organizations.

# 2.3 Rationale of Quality Management Practices.

In a competitive market, the demand for quality is emerging as the single most critical factor for companies to survive in the ever-expanding global market place. Quality is vital in determining the economic success of manufacturing companies (Garvin, 1988, Curkovic *et al.*, 2000). World-class manufacturing companies gain competitive edge and greater market share through extraordinary levels of performance by providing a quality product with a competitive price as required by demanding customers.

The importance of QM in business organizations has increased significantly over the past 20 years. International quality management aims at understanding quality management in global context. The concept of international serves as the motivation for developing a global QM standard for evaluating QM practices within countries (Rao *et al.*, 1999). The practice of QM also affects from the national level to the international level (Kim and Chang, 1995), which helps organizations to compete internationally and gain a competitive edge in the global market (Liu and Kleiner, 2001).

According to Hackman and Wageman, (1995), quality management implementation "has become something of a social movement. Since its introduction, quality management's influence has broadened from manufacturing to other industries including educational institutions, health care organizations, public and government services, and non-profit organizations. Many authors characterize the advantages of quality management from various standpoints, such as business performance (e.g. Hendricks and Singhal, 1997), customer satisfaction (for example, Choi and Eboch, 1998), and employee satisfaction and empowerment (for example, Gunasekaran, 1999). In terms of strategy, the implementation of quality management is viewed as a promising business strategy. Feigenbaum (1999) characterizes the comprehensive coverage of the strategy, i.e. supporting employees' behavioural change, promoting important management ideas, upholding the discipline of quality cost economics, bridging improvement ideas as an international business language, assisting universal fact-based decision-making, and measuring the business results.

QM practices have been shown to enhance organizational performance through customer satisfaction. Edvardsson et al., (2000) reported the growing body of research on organization performance between products and services on external customer practices. By gaining a better understanding of customer needs and the use of this knowledge to produce a better product, a customer satisfaction has a direct impact on organizational performance (Johnson and Gustafsson, 2000). However, Johnson and Nilsson (2000) argued that concerning customer satisfaction, no direct customer measures were available.

A quality management system is a series of integrated and interlinked tasks and processes working towards mutually agreed and understood end objectives. Those objectives will satisfy the customer and supply with a product or service that meets all the specific requirements on time and every time. The standards provide some guidance on who specifies the requirements or to what extent the requirements need to be specified. It is generally accepted that this would mean those requirements specified by the customer in its contact purchase order (Sayle, 1994).

Every quality system will provide a set of deliverables, task elements which will help to perform auditing and quality assurance duties to analyze each and every work station; where work task comprises a set of up to five elements which are necessary for this performance. The chain of tasks that compromises a complete quality management system, whose function is to create the finished product or service, is only as strong as its weakest link. Each task element has to be performed correctly, enabling the recipient to do his or her job properly in order to achieve the quality of items or services supplied meeting the customers, user or community requirements (Sayle, 1994).

Quality management systems can assist organizations in enhancing customer satisfaction. Customer requirements maybe specified by the customer or maybe determined by the organization itself. In both cases the customers determine the acceptability of the product. Because customer needs and expectations are changing; and because of competitive pressures and technical advances, organizations are driven to improve continually their products and processes (BS EN 9000:2005).

The quality management system approach encourages organizations to analyze customer requirements, define processes that contribute to the achievement of a product which is acceptable to the customer, and keep the processes under control. As it will be seen in next chapter, quality management system can provide the framework for continual improvement, providing confidence to the organization and its customers to fulfill the requirements (BS EN 9000:2005).

### 2.4 Resources on Implementation of Quality Management Practices.

Resources are a prerequisite in any manufacturing organization and thus sufficient resources remain a major component necessary in the successful implementation of quality management practices. The management of an organization plays the role of distributing resources for various needs. A committed management in quality management should try its best to allocate sufficient resources for the purpose (Chan *et al.*, 2000). Tamimi and Sebastianelli (1998) conducted a study on factors affecting adoption of quality management in small and medium enterprises in Singapore. They came up with findings which showed that financial resources remain a huge factor either limiting or enhancing successful adoption of quality management. They acknowledge that sufficient funds are required to mobilize TQM driven activities such as instituting training programs as well as providing other quality resources.

Human resources, as the name implies, is one of the most important aspect that influences adoption of quality management. From the organizational level, human resources play an important role in the strategic planning on how to create competitive advantages. Snell *et al.*, (1999) discerned that a firm's human resources have two dimensions which are value and uniqueness. They further indicate that human resources are valuable when they allow improving effectiveness, capitalizing on opportunities and neutralizing threats. In the context of effective management, value focuses on increasing profits in comparison with the associated costs. In this sense, firm's human resources can add value if it contributes to lower costs, provide increased performances through implementing quality management.

Technology as a resource impacts greatly on successful implantation of quality management practices. In his studies done on Russian manufacturing companies, Radovilsky (1994) found out that many Russian companies lacked resources which included sophisticated equipment such as robots, flexible manufacturing systems, and computers mainly due to the fact

outdated, but mainly operated based on tight rigid production schedules with little room for flexibility and quality improvement. In fact low product quality results in low productivity, as well as higher levels of rejects and waste. In this manner, resources are utilized inefficiently. In manufacturing organizations, machinery used in production constitutes major resources. Use of poor conditioned machines in production processes result to issues such as high downtime, and poor coordination of equipment spare part procurement result in ineffective maintenance programs which in turn render production processes inefficient.

In a study done to find the impact of processes as one of the major resources affecting quality management in Europe, Birch and Pooley (1995) came up with a report that recommended a shift from meeting conformance or compliance (e.g. designs, specifications, etc.) to higher quality levels in both processes and products. To them, Implementing effective inventory management, like material requirements planning (MRP), just-in-time (JIT) as well as introducing greater flexibility in production systems, understanding that low product quality results in low productivity and resource wastage and enabling production workers to make decisions (within their own departments) contributed greatly towards improving quality in manufacturing organizations.

# 2.5 Employee Qualifications and Training on Implementation of Quality Management Practices.

Collis and Montgomery (1995) point out that the importance of employee qualifications depends on the degree to which it contributes to the creation of a competitive advantage. From an economic point of view, transaction-costs indicate that firm gains a competitive advantage when they own firm-specific resources that cannot be copied by rivals. Thus, as the uniqueness of human capital increases, firms have incentives to invest resources into its management and the aim to reduce risks and capitalize on productive potentials. Hence, individuals need to enhance their competency skills in order to be competitive in their organizations.

Training refers to the acquisition of specific skills or knowledge. Training programs attempt to teach employees how to perform particular activities or a specific job. Education, on

the other hand, is much more general, and attempts to provide employees with general knowledge that can be applied in many different settings (Cherrington, 1995). Cherrington suggested that education and training require a systematic approach. Crosby, in analyzing how he founded Philip Crosby Associates (PSA) in 1979 and the Quality College said that the idea of causing quality to become a normal part of an organization's operating arsenal did not catch on automatically (Crosby, 1996). It takes training and development of staff towards the organizational objectives of continuous improvement to meet up with sophisticated customers needs and excel the competitors in the global market economy. Organizations should take into account that before external customers can be satisfied, some of the obstacles to the internal customers, that is, the employees should be dealt with in order to create the conditions necessary for them to produce and deliver quality. It will be difficult if not impossible to meet and exceed the expectations of the external customers if quality is not delivered to and through the internal customers.

Every employee in an organization must be provided with the necessary education and training. Although, many traditional organizations view employee training and development as unnecessary overhead and costly, but, it is the fulcrum in implementing the Total Quality Management process. Many Total Quality organizations view employee education and training to yield improvements in customers' value as the key to organizational success. TQM will not work unless all employees are trained to use the tools". Based on field research, Unruh (1996) believes that "training is the number-one way that organizations focus their employees on serving customers". Oakland (1995) agrees with him in terms of the importance of training as he believes "that training is the single most important factor in actually improving quality, once there has been commitment to do so".

According to Stahl (1995), in the past, organizations maintained the traditional notion of "If it is not broken, do not fix it". But in today's changing business environment where competition has increased the awareness and demands of customers, continuous improvement requires something more than the traditional method of solving problems when they arose. Today, "the spirit of continuous improvement" in Total Quality organizations, is "If it is not perfect, make it better, and it strives for a continuous stream of base hits, rather than waiting for the home run".

This improvement theme requires several tools and different ideas, including understanding the kinds of variation in a process. It requires a proactive rather than a reactive mindset. The spirit of continuous improvement requires men and women who have the "can-do" attitude and desire for excellence. They must be committed to continually "improving a thousand things by one percent rather than one thing by a thousand percent". The most effective means of doing this is to use the people who do the job to identify and implement appropriate changes. This can only be achieved if employees are given adequate training and development. In commenting on the effectiveness of continuous improvement in achieving organizational quality objectives, Stahl (1995) posits that training and development should not be seen as a one-time event but a lifelong process. Many organizations recognize today that due to the massive changes taking place in the business world, booster shots of training and development are needed throughout employee careers. This will help them to acquire the necessary skills to initiate improvement strategies that would add value to customers.

Hackman and Wageman (1995) view training as the second most commonly used Total Quality Management implementation practice in the United States. Work centers that implement Total Quality Management invest heavily in training for employees at different levels. Deming (1986) spoke often of the importance of properly training workers in performing their work. Otherwise, it is difficult to improve their work. In order to have effective learning activities, a Work center should continually encourage employees to accept education and training. The Total Quality Management aspiration of continuous improvement in meeting customer requirements is supported by a thorough learning orientation, including substantial investments in training and the widespread use of statistical and interpersonal techniques designed to promote individual and team learning (Hackman and Wageman, 1995).

According to Deming (1986), Japanese Work centers obviously regard their employees as their most significant competitive assets and provide good general orientation as well as training in specific skills. Note that investment in employee education and training is to pursue long-term overall business excellence. In fact, employees are valuable resources worthy of receiving education and training throughout their career development.

In order to use various quality tools or methods effectively, employees should be trained in these methods. More training should be given to employees such as quality inspectors, supervisors, and production operators. It is important to provide training to employees just at the time they need it; namely, just-in-time training. In order to perform their work well, employees at different levels should accept specific work-skills training. Such training can improve employees' skills. In addition, employees should accept quality consciousness education in order to improve their commitment to quality. Newly recruited employees should accept more education on quality awareness. Newsletter, poster slogan, and quality day are commonly used for educating and/or training employees (Zhang, 2000). Education and training have failed if they do not result in a change of behavior (Juran and Gryna, 1993).

Ahire et al., (1996) believe that employee empowerment and involvement framework is not effective unless employees have received formal, systematic training in quality management. Ishikawa (1985) believes that education is crucial in determining the success of quality control and goes ahead to state that quality begins and ends with training. For McAdam et al., (2002) training and development are key components of all Total Quality Management initiatives. Crosby (1979) considers education of the workforce as being the key to developing awareness and understanding of the new quality philosophy.

Oakland (2000) adds that quality training must be objectively, systematically and continuously performed. Work centers that establish workplace education programs report noticeable improvements in their workers' abilities and the quality of their products (Cebeci and Beskese, 2002). Feigenbaum (1961) points out that the importance of training is to ensure that the skills of the workforce do not become obsolete in an environment of change and an understanding and attitude of quality is developed and maintained. According to Rao *et al.*, (1996) Total Quality Management training should be directed at all levels of the organization since senior managers who understand the Total Quality Management process are not only able to break down barriers within their own organizations, but they can also serve as role models for others who may resist to change.

Other scholars argue, however, that employee training has a mediated rather than a direct effect upon firm performance. These scholars argue that employee training, whilst effective in

raising skills, is more effective when it develops firm specific skills and so supports the operation of the particular business process systems within the firm. Training, when used to support quality management practices, should contribute to the effectiveness of the quality management system. Training should enhance the integrity of these systems, rather than merely raise the general level of employee skills (Gee and Nystrom, 1999).

# 2.6 Top Management Support on Implementation of Quality Management Practices.

According to Juran and Gryna (1993), certain roles of top management can be identified as: Establishing quality policies, establishing and deploying quality goals, providing resources, providing problem-oriented training, and stimulating improvement. Recognition of the critical role of leadership and its responsibility in pursuit of continuous quality improvement echoes the arguments put forward by quality gurus such as Deming (1986), Juran and Gryna (1993) and Crosby (1979). Thus, the concept of leadership in this study can be defined as the ability of top management to lead the Work center in continuously pursuing long-term overall business success. This is exemplified by top management participation, top management encouragement, employee empowerment, top management learning, top management commitment to employee education and training, and top management pursuit of product quality and long-term business success.

Lack of top management commitment is one of the reasons for the failure of Total Quality Management reforts (Brown et al., 1994). Total Quality Management requires increased effort from everyone in the company to satisfy the customer continuously (McAdam et al., 2002). Without clear and consistent quality leadership, quality cannot hope to succeed (Everett, 2002; Buch et al., 2002). This means that the leader provides the suitable environment to provide the most comfort to the group members to improve performance and productivity (Leiter et al., 2002). Juran (1993) related quality excellence of Japanese Work centers to the commitment of senior managers to quality.

Rao et al., (1996) cite a study conducted by Booz, Allen and Hamilton in 1992, which dwelled on problems associated with implementation of Total Quality Management in the Service Sector of Californian hotel industry in the United States. The findings revealed a number of problems, with one of them being lack of leadership from the top. The research concluded that

if these problems were avoided, Total Quality Management could be the right management approach for changing behavior and performance. This indicates the importance of leadership in the implementation process of Total Quality Management. Therefore, active and visible participation of top management in quality management implementation is decisive in supporting the actions and behaviors that steer the organization to success in internal and external quality performance. This indicates the importance of leadership in the implementation process of Total Quality Management. Sun (2000) reports that: in his letter to the 3rd Shanghai International Symposium on Quality, Juran (1998) said: There is a universal set of actions that are the essential elements of quality management. The first is upper management taking charge of quality, middle management involvement, training and education, reward and recognition, teamwork, effective communication and quality policy and strategy.

According to Yeung et al., (2005), top management support drives QM implementation by providing direction and resources for quality improvement. Top management support reflects on fostering a cooperative and learning environment needed for QM implementation (Anderson et al., 1994; Beer, 2003). The QM literature has found strong empirical support for the effects of top management support on traditional QM infrastructure practices such as customer relationship, supplier relationship, and workforce management. Top management support nurtures customer relationship by inviting customers to visit the plant and meeting with key customers, providing resources for employees to visit customer plants, requiring the collection of detailed information about customer needs and expectations, and involving customers in product design teams (Flynn et al., 1995).

A long-term cooperative relationship with suppliers is possible only when top management prioritizes quality and delivery performance over price in supplier selection and retention policies, requires suppliers to be certified for quality, and provides the assessment tools for supplier quality. Top management support facilitates workforce management by allocating resources for training, instituting a quality-based compensation policy, and supporting employee involvement (Kaynak, 2003).

Managers almost never realize how easy it is to implement and use the structure of ISO 9001:200 but there are some ways to make it easier to use and easy to adapt when following it. The first step of a quality manager is to take the standard and write it into his own words, using

guidance notes to help, personalizing what the clause says to the organization and call the revised version "Policies. Senior management shall ensure that targets for quality are established at all relevant levels for all appropriate functions within the organization (Wright, 2001)

Once the quality manager has policies, which states what the organization is doing and what it will achieve. Then the system has to show how these things are being done and how they are going to be achieved. These procedures should be inserted or referenced beneath each appropriate policy statement (Wright, 2001).

Defining the process is the area of ISO 9001:200 that probably caused more confusion. But it can be very simple. A process is any set of associated activities having inputs and generating outputs. ISO actually says that processes should cover management activities, provision of resources, product realization and measurement (Wright, 2001)

According to Wright there are several ways to satisfy this element of the standard, and quality manager has to choose which method best suits the organization: Mapping, Referencing, Corporate or global processes (stating the policies, processes and procedures) Try not to think of ISO as a set of rules that have to be obeyed, picture it as a statement being made to a potential customer, imagine the customer is being shown your quality manual (Wright, 2001).

According to BS EN ISO9000: 2005 there is an approach to develop and implement a quality management system consists of several steps including: Determining the needs and expectations from customers and interested parties, establishing a quality policy and quality objectives of the organization, determining the processes and responsibilities necessary to attain the quality objectives, determining and providing the resources necessary to attain the quality objectives, establishing methods to measure the effectiveness and efficiency of the process, applying these measures to determine the effectiveness and efficiency of the process, determining means of preventing nonconformities and eliminating their causes and establishing and applying a process for continual improvement of the quality management system.

The organization that adopts this approach can be sure that its processes and the quality products are reliable and ready for a continuous improvement For that companies establish, document, implement and maintain a quality system that conforms the ISO 9000 series

standards, with a quality manual that covers the requirements, including references, quality system procedures and outlines of the quality system structure documentation (Schmauch, 1995).

# 2.7 Competition on Implementation of Quality Management Practices.

In a competitive market, the demand for quality is emerging as the single most critical factor for companies to survive in the ever expanding global market place. Quality is vital in determining the economic success of manufacturing companies (Garvin 1988). World class manufacturing companies gain competitive edge and greater market share through extraordinary levels of performance by providing a quality product with a competitive price as required by demanding customers.

The influence of competition on implementation of quality management cannot be gainsaid mainly because quality management practices are developed as a result of intense global competition. Organizations with international trade and global competition have paid considerable attention to TQM philosophies, procedures, tools and techniques. International competition requires higher levels of quality by organizations (Blackiston, 1996).

According to Ho (1999), "At the close of the century, the creation of the global market, the international orientation of management which sweeps national boundaries, the introduction of new technologies and shifts toward customer focused strategies, make the competition stronger than ever". Quality Management has been recognized as a comprehensive management paradigm for enhancing organizational performance and competitiveness. Empirical research shows that competition affects quality management practices and hence organization performance (Das, Handfield, Calantone, & Ghosh, 2000). They envisaged a situation whereby other competing organizations in the industry contributed significantly on the methods and processes applied by such firms in terms of quality management in order to be able to survive in the turbulent environment.

# 2.8 Theoretical Framework

This study is linked to Scientific Management Theory. The proponent of this theory was Frederik Winslow Taylor who in 1911 came up with the scientific management methods as a

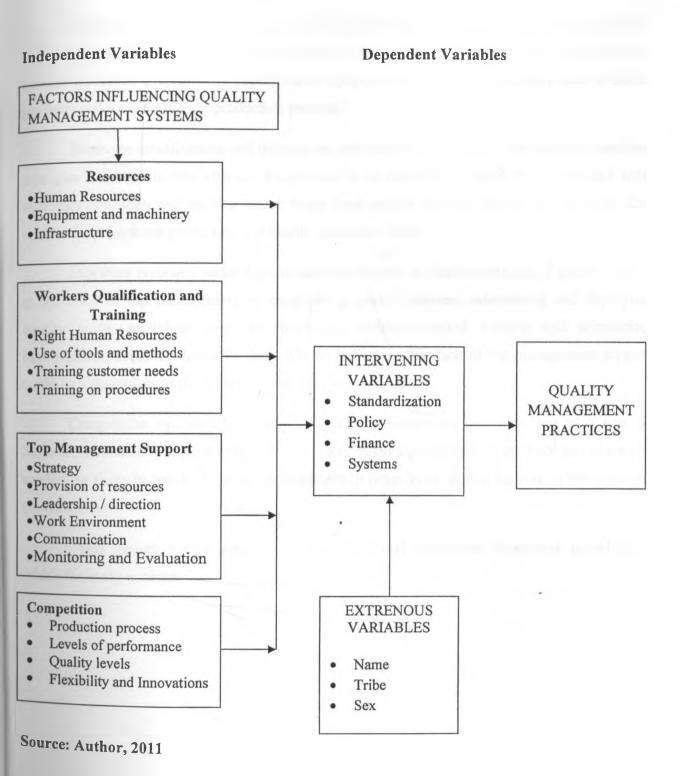
way of optimizing the way that tasks were performed. His contribution can be summarized into four principles. These include: replacement of rule-of-thumb work methods with methods based on a scientific study of the tasks; scientifically select, train, and develop each worker rather than passively leaving them to train themselves; cooperate with the workers to ensure that the scientifically developed methods are being followed; dividing work nearly equally between managers and workers, so that the managers apply scientific management principles to planning the work and the workers actually perform the tasks (Fleet and Peterson, 1994).

The Scientific Management Theory is relevant as the objectives of this study are related to the four principles as put forward by Frederik Taylor. By replacement of rule-of-thumb work methods with methods based on a scientific study of the tasks, this study equates this to implementation of quality management practices. The study also looks into influence of employee qualifications and training which is related to the Scientific Management Theory which advocates for scientifically selecting, training, and developing each worker rather than passively leaving them to train themselves. Thirdly, the study seeks to establish the role of top management in implementation of quality management practices, an objective related to the theory's principle whereby the management applies scientific management principles to planning the work and the workers actually perform the tasks.

In terms of gap in knowledge, the study fulfilled the following: first, the study highlights the types of resources necessary for implementation of quality management practices in the manufacturing industry. Secondly, the study provides a framework for the discussion on the role of employee qualification and training in the manufacturing industry; thirdly, the study brings to the picture how the efforts of top management influence implementation of quality management practices in the manufacturing industry. And fourth, the study provides a framework for further discussion on how competition influences implementation of quality management practices in organizations.

# 2.9 Conceptual Framework

This study will be guided by the conceptual framework given below which indicates he relationship between the various variables to be investigated by the study.



# 2.10 Summary of Literature

This chapter reviewed literature related to factors that influence implementation of quality management practices in organizations under the following thematic areas.

Literature reviewed under resources on implementation of quality management practices indicate that resources are an essential element in the implementation of quality management. Human resources coupled with sophisticated equipment and modern machinery lead to better products and a more efficient production process.

Employee qualifications and training on implementation of quality management practices was also reviewed in this chapter. Employees in an organization need to be provided with necessary education and training which helps them acquire specific knowledge and skills that enables them improve production and handle customers better.

Literature reviewed under top management support on implementation of quality looked at the roles of top management as establishing quality policies, establishing and deploying quality goals, providing resources, providing problem-oriented training and stimulating improvement. From the literature there was an indication that lack of top management support could be a major reason for failure of total quality management.

Competition on implementation of quality management practices was also part of literature reviewed. Competing organizations contributed significantly on methods and processes applied by firms in terms of quality management in order to be able to survive in the turbulent environment.

This chapter further presented a theoretical and conceptual framework model upon which the study is based.

## **CHAPTER THREE**

#### RESEARCH METHODOLOGY

## 3.1 Introduction

This chapter described the methodology that was used in conducting the study. This includes; research design, target population, sample size and sampling procedures, research instruments, data collection methods, data analysis techniques and ethical considerations.

# 3.2 Research Design

The study used a survey research design for establishing factors influencing the implementation of quality management practices in export processing zones in Kenya. According to Kothari (2005), surveys are conducted in case studies, which may either be census or sample surveys. Surveys are concerned with describing, recording, analyzing and interpreting conditions that either exist or existed. The researcher does not manipulate the variables or arrange for events to happen thus surveys are usually appropriate in case studies or social and behavioral sciences.

#### 3.3 Target Population

The population of interest for this study was the employees of Alltex (EPZ) Ltd. A list of all staff members was obtained from the human resources office as at March 2011. From these records, there were 240 workers who were in permanent employment. Of these 50 were in administration, 12 in sales while 178 were in factory.

# 3.4 Sample Size and Sampling Procedure

This section described the sample size and sampling procedure used in this study.

# 3.4.1Sample Size

A sample of 60 employees was studied; according to Mugenda (1999) a sample size of at least 40 is representative.

## .4.2 Sampling procedure

The researcher used purposive sampling techniques. According to Mugenda and Mugenda, (2003) purposive sampling technique allows a researcher to use cases that have the equired information with the respect to the objective of the study. Cases of subjects were herefore handpicked because they were informative or they possess the required characteristics. This approach was deemed to be the most appropriate for this study because it was reliable and flowed generalizability of a larger population with a margin error that is statistically eterminable. In this study, the sample size was 25% of the accessible population as shown in table 1 below.

able 1: Sampling Procedure

Department	Strata Size	Sample Size
Administration	50	12
Sales	12	3
Factory	178	45
TOTAL	240	60

ource: Alltex (EPZ) Ltd, 2011.

#### 5 Research Instrument

Primary data was collected with the help of a questionnaire, which was administered to be target population. The questionnaire was divided into sections, in line with the study bjectives, and it contained both open ended and closed ended questions.

The questionnaire was divided into four sections:

ection A: The first section is designed to capture general demographic data

ection B: Covered important elements Resources and Implementation of Quality Management ractices.

Section C: Dwelled on Employee Qualifications and Training on Implementation of Quality Management Practices.

Section D: Covered the role of top management in influencing the implementation of quality management practices

Section E: Consisted of questions on competition as a factor influencing the implementation of quality management practices.

# 3.5.1 Pilot Testing

In order to test the instrument prior to carrying out the research, a pilot test method was used. This involved conducting a preliminary test of data collection tools and procedures to identify and eliminate possible problems. Data collection simulating the actual data collection process was done to a small group of individuals that had similar characteristics to the target population in order to get feedback on whether or not the instruments was likely to work as expected in an actual situation.

Such pre-testing provided an opportunity to detect and remedy potential problems with the instrument. It also helped the researcher to identify ways to improve on how the instrument is administered. After conducting the pilot test, it was noticed that the respondents were taking too long to complete the instrument leading the researcher to shorten the instrument. The pilot testing for this study was undertaken at Yu-Un Kenya EPZ Company Limited, Nairobi after which the questionnaire was corrected with special attention not to compromise on its quality.

# 3.5.2 Validity of Instrument

Kothari (2000) states that validity indicates the degree to which an instrument measures what it is supposed to measure, that is the extent to which differences found with a measuring instrument reflect true differences among those being tested. Thus to enhance validity a pilot study will be carried out. The pilot study will help the researcher to identify items in the research instrument which will be found to be ambiguous in eliciting required information. Ten staff members will be used to validate the instruments.

## 3.5.3 Reliability of Instrument

Carmines and Zeller, (1979) confer that the reliability of a research instrument concerns the extent to which the instrument yields the same results on repeated trials. This study will employ the Split-Halves method and use the Spearman-Brown prophecy formula, whereby:

$$Pxx'' = 2Pxx'/1 + Pxx'$$

Where Pxx" is the reliability coefficient for the whole test and Pxx' is the split-half correlation.

Example

If the correlation between the halves is .75, the reliability for the total test is:

$$P_{XX}'' = [(2)(.75)]/(1 + .75) = 1.5/1.75 = .857$$

The questionnaires will be numbered consecutively and the items in the instrument divided into halves by assigning the odd numbered items to one half and the even numbered items to the other half of the test. One drawback of the split-halves method is that the correlation between the two halves is dependent upon the method used to divide the items.

#### 3.6 Data Collection Procedures

The questionnaire will be administered to sampled respondents either through self or researcher administered methods. In the self administered method, questionnaires will be hand-delivered to respondents who will be requested to complete the questionnaires themselves and send them back to the researcher. The researcher will in circumstances also use the questionnaire to interview the respondents to help in further explaining the items in the questionnaire.

# 3.7 Data Analysis Techniques

The data will be edited for accuracy, uniformity, consistency, completeness and then arranged to enable coding and tabulation before the final analysis. (The data will be collated, organized, summarized and described).

This being a descriptive study, descriptive statistics and inferential statistics will be used to analyze the data. Frequencies will be used to analyze all the four sections of the questionnaire. Summary measures of central tendency (mean) and dispersion (standard deviation) will be calculated for sections B, C and D. Respondents' opinions and perceptions will be assessed on a likert scale of 1='Strongly Disagree' 2='Disagree' 3='Neutral' 4='Agree' 5='Strongly Agree'. Visual presentations like graphs, tables will be used to present the information. These tools of analysis were successfully used by Mwaura (2002) and Muthoni (2007) in similar studies.

### 3.8 Ethical Considerations in Research

In the context of research, according to Saunders, Lewis and Thornhill, (2001), "... ethics refers to the appropriateness of your behavior in relation to the rights of those who become the subject of your work, or are affected by it". In this study, the informed consent of participants will be sought after. They will be informed in advance on the nature and importance of the study and further offered the choice of whether to participate or not.

This study will uphold the right to privacy. The identity of the participants will not be disclosed in any way. Furthermore, the nature and quality of participants" performance will be kept strictly confidential. Such confidentiality or anonymity offered to participants will positively impact on ensuring more open and honest responses.

The researcher shall be honest on his part. Findings will be reported in a complete and honest fashion, without misrepresenting what has been done or intentionally misleading others as to the nature of it. Data will not be manipulated to support a particular conclusion.

# 3.9 Operational Definition of Variables

OBJECTIVES	RESEARCH QUESTIONS	VARIABLES	INDICATORS	MEASURE SCALE	TOOLS OF ANALYSIS	TYPE OF ANALYSIS
To investigate the level to which resources influence implementation of quality management practices in organizations.	How do resources influence implementation of quality management practices in organizations?	Resources	Human Resource     Equipment     Infrastructure	Nominal ordinal	Percentage	Descriptive
To establish the extent to which workers qualification and training influence quality management practices in organizations.	How does workers' qualifications and training influence the implementation of quality management practices in organizations?	Qualifications     Training	Right Human     Resources     Use of tools and     methods     Training customer     needs     Training on     procedures	Nominal Ordinal	Percentage	Descriptive
To determine how top management support influence quality management practices in organizations.	How does top management support influence implementation of quality management practices in organizations?	Top     Management     support	<ul> <li>Strategy</li> <li>Provision of resources</li> <li>Leadership / direction</li> <li>Work Environment</li> <li>Communication</li> <li>Monitoring and Evaluation</li> </ul>	Ordinal . Ratio	Percentage	Descriptive
To establish the influence of competition on implementation of quality management practices.	What is the influence of competition on implementation of quality management practices in organizations?	Competition	Production process     Levels of     performance     Quality levels     Flexibility and     Innovations	Nominal ordinal	Percentage	Descriptive

#### **CHAPTER FOUR**

### DATA ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSION

#### 4.1 Introduction

This chapter presents the findings of the study which has been discussed in line with the study objectives based on the following themes:- questionnaire return rate, resources on implementation of quality management practices, qualification and training on implementation of quality management practices, top management support on implementation of quality management practices and influence of competition on implementation of quality management practices

## 4.2 Questionnaire Return Rate.

A total of 60 questionnaires were issued12 to Administration, 3 to sales department and 45 to the factory employees out of which 60 were received back representing 100% return rate. This return rate was achieved by constant follow up and analysis of data collected on a daily basis making it easy to identify areas whose data had not been collected and that was therefore collected the following day.

According to Fowler (2002), there is no agreed-upon standard for acceptable response rates; however, he indicates that survey procedures that are likely to result in a response rate of over 75% can be considered as favorable. This view is further supported by Bailey (1987) who also asserts that the minimal acceptable response rate was 75%

# 4.3 Influence of Resources on Implementation of Quality Management Practices

This study found it important to find out the influence of resources on implementation of quality management practices because every organization requires inputs in order to effectively perform its tasks. Resources in consideration in this study included Financial Resources, Human Resources and Technological Resources.

### 4.3.1 Human Resources on implementation of Quality Management Practices.

The first dimension to be examined under resources was how human resources influence the implementation of quality management practices through adoption of quality models prompting the researcher to ask the respondents to rate on a scale of 1 to 5 to what extent human resources allow adoption of quality models. The rating scale was given as: strongly agree=5,Agree=4, uncertain=3, strongly Disagree=1 disagree=2. The results of the respondents' views are shown in table 4.2

Table 4.2 Human Resources and Adoption of Quality Models

Scale of measurement	Frequency	Percent
Strongly Disagree	4	6.7
Disagree	10	16.7
Uncertain	7	11.7
Agree	29	48.3
Strongly Agree	10	16.7
Total	60	100.0

Out of 60 respondents who participated in the study 4 (6.7%) strongly disagreed that human resources influence adoption of quality models. 10 (16.7%) disagreed that human resources influence adoption of quality models. 7 (11.7%) were uncertain that human resources influence adoption of quality models. 29 (48.3%) agreed that human resources influence adoption of quality models while 10 (16.7%) strongly agreed that human resources influence adoption of quality models.

Based on the results presented in table 4.2, it can be observed that 65% of the respondents agreed compared to 23.4% who disagreed. This confirms that human resources influence the implementation of quality management practices. The findings are also in agreement with Snell et al., (1999) who found that human resources are one of the most important aspects that influence adoption of quality management.

# 4.3.2 Sophisticated Equipment and Quality Management

Use of technology is an important factor in the manufacturing component in the manufacturing industry. Technology has made work easier and increased the rate of production to a great extent. Looking at sophisticated equipment we refer to equipment like computers, scanners, modern office furniture, and any other items used to make work easier within an office

setup. The respondents where asked to state to what extent employment of sophisticated equipment influenced implementation of quality management practices. Table 4.3 shows the findings of how employment of sophisticated equipment influences quality management.

Table 4.3 Employment of Sophisticated Equipment

Scales of measurement	Frequency	Percent
Strongly Disagree	5	8.3
Disagree	7	11.7
Uncertain	5	8.3
Agree	33	55.0
Strongly Agree	10	16.7
Total	60	100.0

Out of 60 respondents who participated in the study 5 (8.3%) strongly disagreed that employment of sophisticated equipment influences quality management practices. 7 (11.7%) disagreed that employment of sophisticated equipment influences quality management practices 5 (8.30%) were uncertain employment of sophisticated equipment influences quality management practices. 33 (55.0%) agreed that employment of sophisticated equipment influences quality management practices. 10 (16.7%) strongly agreed that employment of sophisticated equipment influences quality management practices.

This shows that 71.7% of the respondents agreed as compared to 20% who disagreed. This study thus shows that technology through employment of sophisticated equipment influences the implementation of quality management practices. These findings confirm the views of Radovilsky (1994) whose study on Russian manufacturing companies showed that technology impacts greatly on successful implementation of quality management practices. It is therefore evident that sophisticated equipment reduces production of rejects and betters the quality of products as well as increasing efficiency and rate of production.

# 4.3.3 Remuneration and Implementation of Quality Management Practices

Remuneration contributes to the level of performance of workers as they receive compensation for duties they perform. Respondents were asked to state whether remuneration influenced implementation of quality management practices and the results are shown in figure 4.4.

Table 4.4 Remuneration and Implementation of quality management practices.

Scales of measurement.	Frequency	Percent
Strongly Disagree	5	8.3
Disagree	20	33.3
Uncertain	3	5.0
Agree	22	36.7
Strongly Agree	10	16.7
Total	60	100.0

Of the 60 respondents who participated in the study 5 (8.3%) strongly disagreed that remuneration influences implementation of quality management practices. 20 (33.3%) disagreed that remuneration influences implementation of quality management practices 3 (5.0%) were uncertain that remuneration influences implementation of quality management practices. 22 (36.7%) agreed that remuneration influences implementation of quality management practices. 10 (16.7%) strongly agreed that remuneration influences implementation of quality management practices.

Those who agreed were 53.4% while those who disagreed constituted 41.3% of the respondents. This shows that slightly more respondents hold the views that remuneration per se influences implementation of quality management practices.

## 4.3.4 Modern Machinery and Implementation of Quality Management Practices

Machineries are vital resources that drive the manufacturing industry. Respondents were asked whether modern machinery led to efficient production processes and the results were as shown in table 4.5.

**Table 4.5 Modern Machinery and Production Processes** 

Frequency	Percent
4	6.7
8	13.3
3	5.0
31	51.7
14	23.3
60	100.0
	4 8 3 31 14

Out of 60 respondents who participated in the study 4 (6.7%) strongly disagreed that modern machinery result in efficient production processes. 8 (13.3%) disagreed that modern machinery result in efficient production processes. 3 (5.0%) were uncertain that modern machinery result in efficient production processes. 31 (51.7%) agreed that modern machinery result in efficient production processes. 14 (23.3%) strongly agreed that modern machinery result in efficient production processes.

Majority of respondents represented by 75% agreed that modern machinery led to efficient production processes thereby influencing implementation of quality management practices. However, 20% disagreed that modern machinery led to efficient production processes. These findings are in agreement with the views of Radovilsky (1994) in his study of Russian manufacturing companies which showed that technology impacts on successful implementation of quality management practices. Machinery increases rate of production and also produces better quality.

# 4.4 Influence of Qualification and Training on Implementation of Quality Management Practices.

Employee qualification and training was important to this study because worker output in the manufacturing industry is determined by the level at which one understands the various processes of production. The various concepts were discussed under the following sub headings:-

## 4.4.1 Qualifications, Training and Implementation of TQM

Respondents were asked to state the extent to which qualifications and training impacted on implementation of TQM. The results are shown in table 4.6

Table 4.6 Qualifications, Training and Implementation of TQM

Scales of measurement	Frequency	Percent
Strongly Disagree	6	10.0
Disagree	8	13.0
Uncertain	9	15.0
Agree	24	40.0
Strongly Agree	13	21.7
Total	60	100.0

Out of 60 respondents who participated in the study 6 (10.0%) strongly disagreed that employee qualifications and training influences the implementation of TQM. 8 (13.0%) disagreed that employee qualifications and training influences the implementation of TQM, 9 (15.0%) were uncertain that employee qualifications and training influences the implementation of TQM. 24 (40.0%) agreed that employee qualifications and training influences the implementation of TQM. 13 (21.7%) strongly agreed that employee qualifications and training influences the implementation of QMP.

These results show that more than half the respondents (61.7%) agreed while only 23% disagreed that qualifications and training influenced the implementation of TQM thereby reflecting the views expressed by Oakland (1995) in his study on Total Quality Management Training where he states that training is the single most important factor in actually improving quality. Training enhances effectiveness of quality management practices and the integrity of the systems in place in an organization.

#### 4.4.2 Employee Training and use of Tools and Methods

Respondents were asked whether employee training had an impact on the use of tools and methods. The results are shown in table 4.7

Table 4.7 Training and use of Tools and Methods

Scales of measurement	Frequency	Percent
Strongly Disagree	4	6.7
Disagree	10	16.7
Uncertain	4	6.7
Agree	26	43.3
Strongly Agree	16	26.7
Total	60	100.0

Out of 60 respondents who participated in the study 4 (6.7%) strongly disagreed that training influences the use of tools and methods. 10 (16.7%) disagreed that training influences the use of tools and methods, 4 (6.7%) were uncertain that training influences the use of tools and methods. 26 (43.3%) agreed that training influences the use of tools and methods. 16 (26.7%) strongly agreed that training influenced the use of tools and methods.

These results show that 70% agree that training and use of tools and methods influence implementation of QMP unlike 24% of the respondents who disagree. These findings are in line

with the findings of Zhang(2000) in his work an instrument for measuring TQM Implementation for Chinese manufacturing companies where he stated that employees should be trained in the use various tools and methods in order to use them effectively. This clearly shows therefore that training on methods and tools leads to better implementation of quality management practices.

## 4.4.3 Employees Training and Customer Needs

Manufacturing companies strive to find markets for their goods by gearing their production processes towards satisfying customers' needs. Respondents were asked to state whether training by focusing on customer needs influenced implementation of quality management practices. The results are reflected in table 4.8.

Table 4.8 Employees Training and Customer Needs

Scales of measurement	Frequency	Percent
Strongly Disagree	5	8.3
Disagree	9	15.0
Uncertain	8	13.3
Agree	25	41.7
Strongly Agree	13	21.7
Total	60	100.0

Out of 60 respondents who participated in the study 5 (8.3%) strongly disagreed that training and customer needs influences the implementation of quality management practices. 9 (15.0%) disagreed that training and customer needs influences the implementation of quality management practices, 8 (13.3%) were uncertain that training and customer needs influences the implementation of quality management practices. 25 (41.7%) agreed that training and customer needs influences the implementation of quality management practices. 13 (21.7%) strongly agreed that training and customer needs influences the implementation of quality management practices.

Analysis shows that 63.4% of the respondents agreed while 23.3% disagreed. From the study, this shows that training for customer needs has a positive impact on implementation of quality management practices which confirms Mc Adam's (2002) findings in his work Business performance measurement and change management within a TQM framework. Employee training is more effective when it develops firm specific results and also supports the operation of particular business processes.

### 4.4.4 Employee Training and Standard Operating Procedures

A manufacturing company's standard operating procedures have a bearing on its productivity. Respondents were asked whether training on standard operating procedures impact on the implementation of quality management practices. The results are depicted in table 4.9

Table 4.9 Understanding of Standard Operating Procedures

Scales of measurement	Frequency	Percent
Strongly Disagree	5	8.3
Disagree	7	11.7
Uncertain	10	16.7
Agree	25	41.7
Strongly Agree	13	21.7
Total	60	100.0

Out of 60 respondents who participated in the study 5 (8.3%) strongly disagreed that training on customer needs influences the implementation of quality management practices. 7 (11.7%) disagreed that training on customer needs influences the implementation of quality management practices, 10 (16.7%) were uncertain that training on customer needs influences the implementation of quality management practices. 25 (41.7%) agreed that training on customer needs influences the implementation of quality management practices. 13 (21.7%) strongly agreed that training on training on customer needs influences the implementation of quality management practices.

Those who agreed were 63.4% compared to 20% respondents who disagreed who. This shows that training on standard operating procedures influence implementation of quality management practices. This is in agreement with the reports of Wright (2001)

# 4.5 Influence of Top Management Support on Implementation of Quality Management Practices

The study's aim in establishing role of top management on implementation of Quality Management Practices was vital because it is this category of workers that steer the company in its pursuit of long-term business success. This is discussed in the following subsequent themes:

# 4.5.1 Top Management and Establishment of Quality Policies of the company

In organizations, the top management establishes policies to be applied. Respondents were asked to state whether the action by top management influenced implementation quality management practices. The results are shown in table 4.10.

Table 4.10 Top Management and Establishment of Quality Policies

Scales of measurement.	Frequency	Percent
Strongly Disagree	7	11.7
Disagree	7	11.7
Uncertain	10	16.7
Agree	24	40.0
Strongly Agree	12	20.0
Total	60	100.0

Out of 60 respondents who participated in the study 7 (11.7%) strongly disagreed that top management influences implementation of quality management practices by establishing quality policies. 7 (11.7%) disagreed that top management influences implementation of quality management practices by establishing quality policies, 10 (16.7%) were uncertain that top management influences implementation of quality management practices by establishing quality policies. 24 (40.0%) agreed that top management influences implementation of quality management practices by establishing quality policies. 12 (20.0%) strongly agreed that top management influences implementation of quality management practices by establishing quality policies.

The study result shows that 60% of the respondents agreed that by establishing quality policies, top management influences implementation of quality management practices while 23.4% disagreed. This study therefore identifies establishing of quality policies as one way through which top management positively influences the implementation of quality management practices. Juran an Gryna (1993) identify the roles of top management.

# 4.5.2 Top management and Provision of Necessary Resources

Manufacturing organizations require resources for carrying out their activities. The study looked into efforts made by top management by providing resources that are required for production. This was important because quality is dependent on how resources are utilized.

Table 4.11 shows the results of respondents' views on how provision of necessary resources by top management influences the implementation of quality management practices.

Table 4.11 Top management and Provision of Necessary Resources

Factors	Frequency	Percent
Strongly Disagree	3	5.0
Disagree	7	11.7
Uncertain	8	13.3
Agree	27	45.0
Strongly Agree	15	25.0
Total	60	100.0

Out of 60 respondents who participated in the study 3 (5.0%) strongly disagreed that top management influences implementation of quality management practices by providing necessary resources. 7 (11.7%) disagreed that top management influences implementation of quality management practices by providing necessary resources, 8 (13.3%) were uncertain that top management influences implementation of quality management practices by providing necessary resources. 27 (45.0%) agreed that top management influences implementation of quality management practices by providing necessary resources. 15 (25.0%) strongly agreed that top management influences implementation of quality management practices by providing necessary resources.

The results show an overwhelming response in that 70% of respondents agreed compared to 20% who disagreed that top management influences implementation of quality management practices by providing necessary resources. This depicted a positive result to the study that indeed one way in which top management greatly influences implementation of quality management practices is by providing the necessary resources. This is inline with Kaynak, (2003) who in his study The relationship between TQM practices and other effects of firm performance stated that top management support facilitates workforce management by allocating resources for training, instituting a quality-based compensation policy and supporting employee involvement.

# 4.5.3 Top Management and Provision of Leadership / Direction on Implementation

The study found it important to find out the influence of top management in implementation of quality management practices through provision of leadership or direction.

This was necessary because workers take instructions from the management who set the goals that the organization strives to achieve. Table 4.12 shows the results of the influence that top management has on implementation of quality management practices through provision of leadership or direction.

Table 4.12 Leadership / Direction on Implementation

Factors	Frequency	Percent
Strongly Disagree	3	5.0
Disagree	6	10.0
Uncertain	7	11.7
Agree	26	43.3
Strongly Agree	18	30.0
Total	60	100.0

Out of 60 respondents who participated in the study 3 (5.0%) strongly disagreed that top management influence implementation of quality management practices by providing leadership and direction on implementation. 7(11.7%) disagreed that top management influence implementation of quality management practices by providing leadership and direction on implementation, 8 (13.3%) were uncertain that top management influence implementation of quality management practices by providing leadership and direction on implementation. 27 (45.0%) agreed that top management influence implementation of quality management practices by providing leadership and direction on implementation. 15 (25.0%) strongly agreed that top management influence implementation of quality management practices by providing leadership and direction on implementation of quality management practices by providing leadership and direction on implementation of quality management practices by providing leadership and direction on implementation.

The results show that 73.3% agreed, while 15% of the respondents disagreed that top management has influence on implementation of quality management practices through provision of leadership or direction. The findings of this study are in line with the report provided by Sun,(2000) in his letter to the 3<sup>rd</sup> Shanghai International Symposium on Quality. This result has an impact on the study in that it confirms through provision of leadership or direction to the workers, the top management positively influence implementation of quality management practices

# 4.5.4 Top Management and Provision of Suitable Work Environment

The study looked into whether through provision of suitable work environment top management influenced the implementation of quality management practices. This was important to the study because quality concerns can only be met in environments which allow workers to perform their roles comfortably. Table 4.13 shows the respondents views on how top management influence implementation of quality management practices by providing of a suitable work environment.

Table 4.13 Top Management and Provision of Suitable Work Environment

Factors	Frequency	Percent
Strongly Disagree	5	8.3
Disagree	9	15.0
Uncertain	5	8.3
Agree	27	45.0
Strongly Agree	14	23.3
Total	60	100.0

Out of 60 respondents who participated in the study 5 (8.3%) strongly disagreed that top management influences implementation of quality management practices by providing a suitable work environment. 9 (15.0%) disagreed that that top management influences implementation of quality management practices by providing a suitable work environment, 5 (8.3%) were uncertain that that top management influences implementation of quality management practices by providing a suitable work environment. 27 (45.0%) agreed that that top management influences implementation of quality management practices by providing a suitable work environment. 14 (23.3%) strongly agreed that that top management influences implementation of quality management practices by providing a suitable work environment.

The results show that 68.3% agreed compared to 23.3% who disagreed that top management influences implementation of quality management practices by providing of a suitable work environment. Thus the study positively confirms that top management has an influence on implementation of quality management practices on organizations just as was stated by Everett 2002; Buch 2002 in their study on production and operations management concepts, models and behavior.

#### 4.5.4 Top Management and Effective Communication

The study looked into the relationship between top management and effective communication. This was important because the top management make the policies which need to be implemented by employees. These policies should thus be communicated to the workers in a way they can understand. Table 4.14 shows the responses given on how top management influences implementation of quality management practices by offering effective communication.

#### 4.14 Top Management and Effective Communication

Factors	Frequency	Percent
Strongly Disagree	4	6.7
Disagree	8	13.3
Uncertain	3	5.0
Agree	28	46.7
Strongly Agree	17	28.3
Total	60	100.0

Out of 60 respondents who participated in the study 4 (6.7%) strongly disagreed that top management influences implementation of quality management practices by offering effective communication. 8 (13.3%) disagreed that that top management influences implementation of quality management practices by offering effective communication, 3 (5.0%) were uncertain that that top management influences implementation of quality management practices by offering effective communication. 28 (46.7%) agreed that that top management influences implementation of quality management practices by offering effective communication. 17 (28.3%) strongly agreed that that top management influences implementation of quality management practices by offering effective communication.

The results show that 75% agreed, while 20% disagreed that top management influences implementation of quality management practices by offering effective communication. The study thus shows that one way through which the top management greatly influences the implementation of quality management practices is through communication to the employees.

# 4.5.6 Top Management and Provision of clear Monitoring and Evaluation Criteria for Improvements

The study sought to find out if top management influences implementation of quality management practices through provision of clear monitoring and evaluation criteria for improvements. This was important because quality involves making necessary improvements, thereby calling for the need to ascertaining that all standards are met. Table 4.15 highlights the respondents' views on whether that top management influences implementation of quality management practices by providing clear monitoring and evaluation criteria for improvements made.

Table 4.15 Top Management and Provision of clear Monitoring and Evaluation Criteria for Improvements

Factors	Frequency	Percent
Strongly Disagree	6	10.0
Disagree	6	10.0
Uncertain	8	13.0
Agree	28	46.7
Strongly Agree	12	20.0
Total	60	100.0

Out of 60 respondents who participated in the study 6 (10.0%) strongly disagreed that top management influence implementation of quality management practices by providing clear monitoring and evaluation criteria for improvements made. 6 (10.0%) disagreed that top management influence implementation of quality management practices by providing clear monitoring and evaluation criteria for improvements made, 8 (13.0%) were uncertain that top management influence implementation of quality management practices by providing clear monitoring and evaluation criteria for improvements made. 28 (46.7%) agreed that top management influence implementation of quality management practices by providing clear monitoring and evaluation criteria for improvements made. 12 (20.0%) strongly agreed that top management influence implementation of quality management practices by providing clear monitoring and evaluation criteria for improvements made.

The results show that 66.7% agreed, while 20% disagreed that top management influence implementation of quality management practices by providing clear monitoring and evaluation criteria for improvements made. The study thereby show that one way in which top management

influences implementation of quality management practices is through providing a clear monitoring and evaluation criteria. This is in agreement with Wright, 2001

# 4.6 Influence of Competition on Implementation of Quality Management Practices

The study looked into the influence of competition on implementation of quality management practices. This was important to the study because the operations in organizations are geared towards satisfying a clientele that is also served by other companies. It was therefore necessary to find out how competition in turbulent markets affects the processes in the organization being studied.

### 4.6.1 Competition and Improved Production Processes

In order to understand how competition influenced implementation of quality management practices, the study looked into the relationship between competition and improved production processes. Table 4.16 shows the respondents' views of how competition encouraged improved productions processes.

**Table 4.16 Competition and Improved Production Processes** 

Factors	Frequency	Percent
Strongly Disagree	4	6.7
Disagree	2	3.3
Uncertain	5	8.3
Agree	29	48.3
Strongly Agree	20	33.3
Total	60	100.0

Out of 60 respondents who participated in the study 4 (6.7%) strongly disagreed that competition influences improved production processes. 2 (3.3%) disagreed that competition influences improved production processes, 5 (8.3%) were uncertain that competition influences improved production processes. 29 (48.3%) agreed that competition influences improved production processes. 20(33.3%) strongly agreed that competition influences improved production Processes.

A total 81.6% of the respondents agreed compared to only 10% who disagreed that competition influences improved production processes. The results indicate that the majority of the respondents overwhelmingly acknowledged that competition had an influence in improving production. This analysis shows that competition influences implementation of quality

nanagement practices to a very large extent and further confirms the literature reviewed that other competing organizations in the industry contributed significantly on methods and processes pplied in terms of quality management as stated by Garvin, (1988) managing Quality: the strategic and Competitive Edge. New York.

## .6.2 Competition and Extraordinary levels of Performance

The study looked into whether competition brought about extraordinary performance. The results of this are illustrated in table 4.17.

 Table 4.17 Competition and Extraordinary levels of Performance

Factors	Frequency	Percent
Strongly Disagree	7	11.7
Disagree	5	8.3
Uncertain	6	10.0
Agree	29	48.3
Strongly Agree	13	21.7
Total	60	100.0

Out of 60 respondents who participated in the study 7 (11.7%) strongly disagreed that competition influences extraordinary levels of performance. 5 (8.3%) disagreed that competition affluences extraordinary levels of performance 6 (10.0%) were uncertain that competition affluences extraordinary levels of performance. 29 (48.3%) agreed that competition influences extraordinary levels of performance. 13 (21.7%) strongly agreed that competition influences extraordinary levels of performance.

A total of 70% of the respondents agreed while only 20% disagreed. These findings mpact on the study by confirming that competition influences implementation of quality nanagement practices in organizations to a very high extent. The results further agree with terature reviewed from the work of Ho, (1999) Operations and Quality Management. London nat quality management practices enhance organizational performance.

# .6.3 Competition and Higher Quality Levels

To further understand how competition influenced the implementation of quality nanagement, he study looked into the relationship between competition and levels of quality. The results of the respondents' views are shown in table 4.18

Table 4.18 Competition and Higher Quality Levels

Factors	Frequency	Percent
Strongly Disagree	9	15.0
Disagree	6	10.0
Uncertain	10	16.7
Agree	27	45.0
Strongly Agree	8	13.3
Total	60	100.0

Out of 60 respondents who participated in the study 9 (15.0%) strongly disagreed that competition leads to higher quality levels. 6 (10.0%) disagreed that competition influences leads to higher quality levels 10 (16.7%) were uncertain that competition influences leads to higher quality levels. 27 (45.0%) agreed that competition influences leads to higher quality levels. 8 (13.3%) strongly agreed that competition influences leads to higher quality levels.

A total of 58.3% agreed compared to 25% disagreed that competition leads to higher quality levels. This shows that more than half of the respondents acknowledged that competition positively influences implementation of quality management practices. These findings support the literature reviewed by Blackiston,(1996) in his work on A barometer of Trends in Quality Management: National Productivity Review, that international competition requires higher levels of quality by organizations.

## 4.6.4 Competition and Introduction of Flexibility and Innovations

The study looked into how competition relates to improved production processes in the organization as a way of finding out how competition influenced implementation of quality management practices. Table 4.19 shows the respondents' views of how competition encouraged improved productions processes.

Table 4.19 Competition and Introduction of Flexibility and Innovations

Factors	Frequency	Percent
Strongly Disagree	6	10.0
Disagree	7	11.7
Uncertain	20	33.3
Agree	25	41.7
Strongly Agree	2	3.3
Total	60	100.0

Out of 60 respondents who participated in the study 6 (10.0%) strongly disagreed that competition leads to introduction of flexibility and innovations. 7 (11.7%) disagreed that competition leads to introduction of flexibility and innovations, 20 (33.3%) were uncertain that competition leads to introduction of flexibility and innovations. 25 (41.7%) agreed that competition leads to introduction of flexibility and innovations. 2 (3.3%) strongly agreed that competition leads to introduction of flexibility and innovations.

Less than half (45%) agreed compared to 21.7% who disagreed that competition led to the introduction of flexibility and innovations in organizations. This findings are in line with the findings of Das, Handfield, Calantone & Ghosh (2000) in their work A contigent view of quality management-The impact of international competition on quality. Where they envisaged a situation whereby other competing organizations in the industry contributed significantly on the methods and processes applied by such firms in terms of quality management in order to be able to survive in the turbulent environment.

#### CHAPTER FIVE

## SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter covered summary of findings. It also gave the conclusions and highlighted recommendations as per the study objectives, contributions towards the body of knowledge as well as areas of further research.

#### 5.2 Summary of findings

The findings of the study indicated that resources influence implementation of quality management practices in organizations to a very great extent. Such resources included human resources to which 65% of the respondents agreed as to influence adoption of quality models, 23.4% disagreed and 11.7 were uncertain. Human resources therefore played a major role in adoption of quality models. Employment of sophisticated equipment also had great influence on implementation of quality management practices as evident from 71.7% of respondents who agreed compared to 20% who disagreed and 8.3 who were uncertain that sophisticated equipment influenced implementation of quality management practices. However, the ability to offer remuneration gave contrasting findings as only 53.7% felt that it influenced implementation of quality management practices 41.6% disagreed and 5% who were uncertain. Modern machinery allowed for efficiency thereby greatly influencing implementation of quality management practices this is confirmed by the turn out of 75% who agreed, as opposed to 20% who disagreed and 5% who were uncertain.

Employees' qualification and training influenced quality management practices in organization. This is because employee qualification proved to be a fulcrum in such implementation. Training was fundamental as it prepared employees on the use of new tools preparing them to respond adequately to the unique customer needs as well as helping them understand standard operating procedures. This is confirmed by the findings of this study whereby 61.7% of the respondents agreed that training and qualification impacted on implementation of quality management practices compared to 23% that disagreed and 15% that were uncertain.

Top management support was a major influence on implementation of quality management practices in organizations. This was evident as top management was responsible for the

establishment of quality policies for the organization. Top management also provided the requisite resources to be used, they provided leadership and direction on implementation, ensured that there was a suitable work environment, offered the necessary communication and provided a clear monitoring and evaluation criteria for improvements made. The study,s findings support this with 60% of the respondents agreeing, 23.4% disagreeing and 16.7% being uncertain of the impact of top management support on implementation of quality management practices.

Competition influences implementation of quality management practices in organizations as it greatly led to improved production processes as the organization invested in improved production processes to improve quality. From the findings of this study, 81.6% of the respondents concurred that competition influenced implementation of quality management practices whereas 10% of them were in disagreement and 8.3 remained uncertain. These results show that competition has led to extraordinary levels of performance in order to enhance quality as well as through flexibility and innovations in production processes.

#### 5.3 Conclusions

The study established that the level at which resources influenced implementation of quality management practices in organizations was high. Sophisticated equipment that are used in the offices such as computers make work easier and more efficient therefore good quality products are produced within a short period of time.

It was also found out that employees' qualification and training influenced quality management practices in organization to a very large extent as such resources played a very vital role in the production processes. In training the employees get specific knowledge and skills to effectively tackle customer needs and demands, operate machinery and be up to date with the changing trends in production in order to survive the competition.

The study also determined that management support influenced quality management practices through establishment of quality policies that guide the operations of the company, provision of the requisite resources such as finances, raw materials, competitive human resources, machinery and sophisticated equipment needed in the production of goods and services, provision of leadership by example and direction on implementation, conducive work environment, offered the necessary communication and provided a clear monitoring and evaluation criteria for improvements made.

The study further established that competition greatly influenced implementation of quality management practices in organizations. This is because competition has emerged as the single most critical factor for companies to survive in the market. Due to competition, organizations have paid considerable attention to TQM philosophies, procedures, tools and techniques. Competition affects quality management practices and hence organization performance.

#### 5.4 Recommendations

- 1. In the global market place, organisations worldwide rely on their employees in order to compete favorably and gain competitive advantage. There is a growing need for manufacturing companies in the export processing Zone in Kenya to improve on quality. To be able to do this effectively, management of concerned companies must device a practical means of ensuring that their products are able to meet the requirements of their customers by ensuring that the employees have relevant skills, invest in technology that allow manufacturing processes to be geared towards meeting the needs of the customers. The following recommendations are suggested in view of the findings of the present study:
- 2. The management of Alltex (EPZ) Limited should further strive towards developing both the learning process that may involve the company sponsoring training as well as facilitating personal education efforts of employees. It is necessary for the management to offer facilities like sponsorship or scholarships for technical training for key personnel, who will in turn not only apply the outcomes of learning processes towards firm performance, but also transfer the knowledge learnt to colleagues.
- 3. Organizations should improve on the relationship between the management and the lower cadre employees who in the real sense perform the actual implementation. Through empowerment, the employees feel they are part of a team that works in tandem for the overall good of the company. Communication should be improved by changing from the top down method to horizontal in order to accommodate views from all members of staff involved in the production process.
- 4. The competitive environment in the contemporary global economy requires that any company that expects to survive the turbulence performs at a higher level than its competitors. Most of the raw materials such as cotton and leather used in this sector are imported thus making it even more difficult in terms of realizing appropriate profit margins. This study therefore recommends

that companies in the Export Processing Zone should invest in local content, whereby they could liaise with local suppliers who could provide the requisite quality raw material at lower prices so long as the quality standards are met.

### 5.5 Contribution towards the body of knowledge

Table 4.20 highlights contributions to the body of knowledge that are expected from the study.

Objective	Contribution towards the body of Knowledge
1. To investigate the level at which resources influence implementation of quality management practices in organizations.	The study highlights the types of resources necessary for implementation of Quality Management practices in the Manufacturing Industry.
2. To establish the extent to which employees qualification and training influence quality management practices in organization	The study provides a framework for the discussion on the role of employee qualification and training in the Manufacturing Industry.
3. To determine how top management support influence quality management practices in organizations.	The study brings to the picture how the efforts of top management influence implementation of Quality Management practices in the Manufacturing Industry.
4. To establish the extent to which competition influences implementation of quality management practices in organizations.	The study provides a framework for the discussion on the role of competition on implementation of Quality Management practices organizations.

# 5.6 Suggestions for further research.

The researcher suggests further inquiry into the impact of quality management practices on the performance of the export processing zones. It was noticed during the course of the study that some respondents were actually not conversant with the possible benefits or otherwise, which are derived from implementing quality management practices. Such a study when carried out will also provide a yardstick to the management of companies in this sector to instigate improvement measures in order to derive the full benefits quality management practices.

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#### APPENDIX 1

#### INTRODUCTION LETTER

Bernice A. Oganda, C/o University of Nairobi, P.O. Box 30197, 00100 Nairobi.

1<sup>ST</sup> May, 2011

Dear Sir/Madam,

# RE: REQUEST FOR RESEARCH DATA

I am a post-graduate student in the School of Distance and Continuing Education, University of Nairobi. I am conducting a management research titled "Factors influencing the implementation of Quality Management systems practices in organizations: The case of Alltex (EPZ) Ltd".

You have been selected to form part of this study. Kindly assist by filling in the attached questionnaire. The information you will give be treated in strict confidence and is needed purely for academic purposes. In no way will your name appear in the final report.

A copy of the final report will be availed upon your request.

Your assistance and cooperation will be highly appreciated.

Yours sincerely

Bernice A. Ogonda

(Student)

#### APPENDIX II

# **QUESTIONNAIRE**

# **SECTION A**

1.	What is your gender?	Male [ ]	Fen	nale [ ]		
2.	What is your department? Ad	ministration [	]	Sales [ ]	Factory	[]
3.	Duration worked in the depart	tment	(Y	ears).		
4.	What is your job title?	(Opt	iona	al)		

Agree'.

# **SECTION B.**

The following aspects related to resources of their influence on implementation of quality management practices. Please rate on a scale of 1 to 5 to what extent you agree with them.
 Whereby 1 = 'Strongly Disagree' 2 = Disagree' 3 = 'Neutral' 4= 'Agree' 5 = 'Strongly

Aspect	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
Human Resource allows adoption of quality models	1	2	3	4	5
Finances allow employment of sophisticated equipment	1	2	3	4	5
Allows for better numeration to workers	1	2	3	4	5
Modern machinery result in efficient production processes	1	2	3	4	5

# **SECTION C**

6. The following aspects relate to employee qualifications and training and their influence on implementation of quality management practices. Please rate on a scale of 1 to 5 to what extent you agree with them, whereby, 1= 'Strongly Disagree' 2= Disagree' 3= Neutral'4= 'Agree'

Aspect	Strongly Disagree	Disagree	Uncertain	Agree	Strongly agree
Qualifications are the fulcrum in implementation TQM	1	2	3	4	5
Training enhances effective use of various quality tools/methods	1	2	3	4	5
Training highlights sophisticated customers needs	1	2	3	4	5
Enhances ability to understand Standard Operating Procedures	1	2	3	4	5

# SECTION D

7. The following aspects relate to the influence of Management Support on Implementation of Quality Management Practices in your company. Please rate on a scale of 1 to 5 to what extent you agree with them, whereby, 1='Strongly Disagree' 2='Disagree' 3='Neutral' 4='Agree' 5='Strongly Agree'

Aspect	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
Management establishes quality policies and of the company	1	2	3	4	5
Top management provides the necessary resources	1	2	3	4	5
Provides leadership /direction on implementation	1	2	3	4	5
Participation in actual implementation	1	2	3	4	5
Provides the suitable work environment	1	2	3	4	5
Offer effective communication	1	2	3	4	5
Provide clear monitoring and evaluation criteria for improvements made	1	2	3	4	5

# **SECTION E**

8. The following aspects relate to influence of competition on implementation of quality management practices. Please rate on a scale of 1 to 5 to what extent you agree with them, whereby, 1='Strongly Disagree' 2='Disagree' 3='Neutral' 4='Agree' 5='Strongly Agree'

Aspect	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
Leads to improved production processes to gain competitive edge	1	2	3	4	5
Enhances extraordinary levels of performance to achieve greater market share	1	2	3	4	5
Competition leads to higher levels of quality	1	2	3	4	5
Competition has led to Introduction of flexibility and innovation.	1	2	3	4	5

Thank You

# APPENDIX III: BUDGET

It is estimated that the project will cost approximately Kshs. 75,300/=,

The cost that will be incurred is as follows:

	ITEM	COST (in Kshs.)
1	Literature reviews	
:	Computer time 120hrs	24,000
	Stationery	4,500
2	Questionnaire design	1,300
3	Pre-testing questionnaire; 15 questionnaires	7,500
4	Data collection	
	Field expenses	10,000
	Field assistant	4,000
5	Data Analysis	
	• Computer time (80hrs)	16000
6	Report writing	
	Secretarial services	8,000
	GRAND TOTAL	75,300

# APPENDIX IV - PLAN

MONTH	AUG. 2011	SEPT. 2011	OCT. 2011	NOVEMBER 2011		
Activity						
Submission of draft proposal						
Review of supervisors comments						
Pre-testing questionnaire		760				
Data collection			700			
Data analysis				25.2		
Report writing				1		
Submission of report						