

**EFFECT OF STRATEGIC QUALITY MANAGEMENT  
PRACTICES ON ORGANIZATIONAL PERFORMANCE  
OF THE STEEL MANUFACTURING SECTOR IN  
KENYA**

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of Philosophy in Business Administration (Strategic Management) in  
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## DECLARATION

This thesis is my original work and has not been submitted for a degree in any other University.

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This thesis has been submitted for examination with our approval as University Supervisors

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## **DEDICATION**

I dedicate this work to my beloved wife Njeri Wahome for her moral support and my children Jeff, Jimmy and Jessica for your wonderful inspiration during my research work.

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## **LIST OF ABBREVIATIONS AND ACRONYMS**

<b>AHP</b>	Analytical Hierarchy Process
<b>CAPA</b>	Corrective Action and Preventive Action
<b>CBS</b>	Central Bureau of Statistics
<b>CEO</b>	Chief Executive Officer
<b>CSF</b>	Critical Success Factors
<b>DEA</b>	Data Envelopment Analysis
<b>DFSS</b>	Design for Six Sigma
<b>EFQM</b>	European Foundation for Quality Management
<b>FEAHP</b>	Fuzzy Extended Analytic Hierarchy Process
<b>FMCG</b>	Fast Moving Consumer Goods
<b>GDP</b>	Gross Domestic Product
<b>GRC</b>	Governance, Risk, and Compliance
<b>IBM</b>	International Business Machines
<b>IDEA</b>	Imprecise Data Envelopment Analysis
<b>ISO</b>	International Organization for Standardization
<b>JIT</b>	Just In Time
<b>KAM</b>	Kenya Association of Manufacturers
<b>KNBS</b>	Kenya National Bureau of Statistics
<b>KPA</b>	Kenya Ports Authority

<b>MCS</b>	Management Control Systems
<b>MDG</b>	Millennium Development Goals
<b>MOLP</b>	Multi-Objective Linear Programming
<b>NBRI</b>	National Business Research Institute
<b>NIST</b>	National Institute of Standard Technology
<b>QC</b>	Quality Circle
<b>QI</b>	Quality Improvement
<b>QIS</b>	Quality Information System
<b>QMS</b>	Quality Management System
<b>R&amp;D</b>	Research and Development
<b>ROI</b>	Return on Investment
<b>ROK</b>	Republic of Kenya
<b>SCM</b>	Supply Chain Management
<b>SMEs</b>	Small and Medium Sized Enterprises
<b>SPSS</b>	Statistical Package for Social Scientists
<b>SRM</b>	Supplier Relationship Management
<b>TQM</b>	Total Quality Management
<b>VIF</b>	Variance Inflation Factor



## DEFINITION OF TERMS

<b>Quality Management</b>	An integrative management strategy aimed at the Continuous improvement of organizational performance (Wanza, 2017).
<b>Quality Management System</b>	A management system to direct and control an organization with regard to quality issues (Jing, 2010).
<b>Organizational Performance</b>	Actual output or results of an organization as measured against its intended outputs (or goals and objectives) and mainly focuses on three specific areas in a company; financial performance; product market performance and shareholders' return (Richard, Devinney, Yip & Johnson, 2009).
<b>Strategic Customer Relations</b>	Practices, strategies and technologies that companies use to manage, record and evaluate customer interactions in order to drive sales growth by deepening and enriching relationships with their customer base (Rouse, 2014).
<b>Strategic Employee Relations</b>	A practice of companies that gives their employees stake in decisions that directly affect their jobs (Owen, 2017).

<b>Strategic Quality Management practices</b>	Practices developed by the organizations for standardization, and serves as a framework for quality management systems, aimed at meeting the firm's performance (Gharakhani, 2013).
<b>Strategic Quality performance</b>	A numerical measurement of the performance of an organization, division, or process (Patyal & Kaolakuntla, 2017).
<b>Strategic Suppliers' Relationship Management</b>	The discipline of strategically planning for, and managing, all interactions with third party organizations that supply goods and/or services to an organization in order to maximize the value of those interactions (Hughes, 2009).
<b>Top Management Support</b>	The commitment that top management makes to an organization that ensures that the organization is kept from weakening or failing through providing for and maintaining by supplying the required funds and other necessities and which effectively gives confidence to all (Javed , 2015).

## ABSTRACT

The concept of strategic quality management in the steel manufacturing sector has attracted great attention in the recent days, and is key for organization survival. Many organizations find it difficult to sustain their competitive advantages, despite having a robust quality policy. The general objective of this study was to determine the effect of strategic quality management practices on organizational performance of the steel manufacturing sector in Kenya. The study specifically sought to establish the effects of strategic customer relations, strategic quality performance measurement, strategic top management support, strategic suppliers' relations, strategic employee relations practices and organizational learning as a moderator on performance of the steel manufacturing sector in Kenya. The study adopted a cross-sectional survey research design. Both qualitative and quantitative data was collected through structured questionnaires. The questionnaire was pretested before data collection for validation and reliability. Target population was 46 Kenyan Steel Manufacturing Companies listed in the Kenyan Business Directory 2015. Sample size of 42 was determined by the use of Krejcie and Morgan's Sample Size Table. The unit of analysis was the employees in charge of strategic quality management matters in the steel manufacturing companies in Kenya. Respondents were Management Representatives or Quality Assurance Managers or their equivalents. All respondents who were given the questionnaire filled and returned them. The collected data was coded and analyzed using both quantitative and qualitative methods with the help of descriptive and inferential statistics. The Statistical Package for Social Sciences was used. Testing of hypotheses was done using analysis of variance. Variance Inflation Factor was used to illustrate the significance of the association between financial performance and the strategic quality management practices. Analyzed data was presented using tables and percentages. Regression results indicated that strategic customer relations practices, strategic top management support practices, strategic quality performance measurement practices, strategic suppliers' relations practices and strategic employee relations practices were statistically significant on performance of the steel manufacturing companies in Kenya. The study also identified high organizational performance when strategic quality management practices are moderated by organizational learning. From the study, it is possible to conclude that the steel manufacturing companies in Kenya are not fully embracing the strategic quality management practices. Therefore in order to survive and prosper in a rapidly changing business environment, the companies should strive to maximize on implementation of the strategic quality management practices that positively influence organizational performance. The study therefore recommends that organizational managers should initiate and reinforce the various strategic quality management practices to enhance performance. Managers should focus their efforts on creating loyal customers through increased customer satisfaction. Managers should also actively involve employees in decision making since doing so makes them become highly motivated. The study also recommends that policy makers should create a policy framework that is geared towards improving performance. Policy makers should also establish explicit standard

guidelines for supplier relations that are based on quality so as to maintain quality based long term relationships with suppliers.

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background**

In such a competitive environment resulted from world globalization and liberalization, firms survive with much difficulty unless they create the competitive advantage over their competitors (Agus, 2004). Customers' needs become increasingly difficult to meet. They demand for faster response, better value for money, products or services, more product varieties, expect lower prices, reliable delivery, and product integrity. Firms in the steel manufacturing industry like firms in other sectors of the economy need to devise strategies for effective competition. In spite of its important role in the economy, steel manufacturing sector is in turmoil due to sub-standard products, high energy costs, dilapidated transport infrastructure, and the dumping of cheap imports. As a result of these challenges the steel manufacturing industry has remained stagnant and lacks adaptability.

The steel manufacturing companies are involved in stiff competition locally and internationally and some of them are closing down. In view of this, strategic quality management practices play a key role in positioning organizations in their quest to achieve sustainable competitive advantage and improve performance. With the increasing competitive, business survival pressure and the dynamic, changing customer-oriented environment, steel manufacturing companies are deemed to fail unless they strategically place themselves in a competitive edge. A quality management system can be expressed as the organizational structure, procedures, processes and resources needed to implement strategic quality management practices. Leading pioneers in the quality area, such as Deming (1982) and Juran (1993) asserted that competitive advantage can be gained by providing quality products or services.

In addition, quality management practices have widely been considered as an effective management tool to provide business with stability, growth, and prosperity. For long term survival organizations must adopt a broad, strong strategy that gives a sustainable competitive advantage and superior services that distinguish the organization from its competitors. Strategic quality management practices has tended to converge with sustainability and transparency initiatives, as both investor and customer satisfaction and perceived quality is increasingly tied to these factors (Cole & Kelly, 2011).

Strategic quality management practices enable one to demonstrate commitment to quality and customer satisfaction, as well as continuously improving company's operations. The goal is for all organizations to seek continuous performance improvement. Quality management of the product or service includes a quality planning requirement along with policies, objectives and quantifiable targets. Strategic quality management develops and builds relationships that help to retain existing customers; it improves customer relations; top management support, employees relations and it ensures carefully planned improvements, based on documentation and analysis and provides for regular audits/reviews of performance. Maxwell (2015), pointed out that organizational learning enhances an organization's capability to acquire and develop new knowledge and how that knowledge can be organized and used to improve performances. In their view, when knowledge is translated into new products and services, it can become a key source of wealth creation for organizations. Continuous and wholesome learning is predicted by some scholars to become the foundation for achieving sustained competitive edge for firms in current times. It is the very potent tool for an organization's continuous improvement since innovations will thrive when something new is learnt and put to test.

### **1.1.1 Global Perspective of Strategic Quality Management Practices**

Strategic quality management practices are progressively being adopted by all types of industries worldwide due to the fact that many business organizations are actively seeking ways in which they can improve the products and services they offer (Alonso

& Rodriguez, 2011). The global adoption of strategic quality management practices may be attributable to a number of factors. A number of major purchasers require their suppliers to embrace strategic quality management practices. In addition to several stakeholders' benefits, a number of studies have identified significant financial benefits for organizations embracing strategic quality management practices. Corbett *et al.* (2005) showed that organizations embracing strategic quality management practices achieved superior return on assets compared to otherwise similar organizations not implementing the practices. Sharma (2005) identified similar improvements in operating performance and linked this to superior financial performance.

While the connection between superior financial performance and embracing strategic quality management practices may be seen from the examples cited, there remains no proof of direct causation, though longitudinal studies, such as those of Corbett, Montes-Sancho, and Kirsch (2005), may suggest it. The mechanism for improving results has also been the subject of much research. Lo, Yeung, and Cheng (2007), identified operational improvements (e.g., cycle time reduction, inventory reductions) as following from certification. Internal process improvements in organizations lead to externally observable improvements. The benefit of increased international trade and domestic market share, in addition to the internal benefits such as customer satisfaction, interdepartmental communications, work processes, and customer/supplier partnerships derived, far exceeds any and all initial investment.

Quality has become one of the most important drivers of the global competition today. Quality management practices incorporated overall organizational strategy, communicated to all employees and well implemented may have a positive impact on organizational performance (Sigei, 2014). The benefits of quality improvement can not only be reflected on decreasing costs, but also on maximizing business profits. In terms of quality improvement, what really counts for a firm is not just cost minimization, but the effect that superior quality has on maximizing profits. Thus, a study on the relationship between strategic quality management practices and organizational performance is critical for organizations and researchers to better

understand the effects of strategic quality management practices onto different levels of organizational performance. In order to accomplish the requirement of quality, organizations have to spend time and effort on the implementation of strategic quality management practices.

A number of studies revealed that a large percentage of companies found their strategic quality management efforts failed to live up to their expectations mostly due to lack of top management support. Therefore, it appears that quality practices are important for continuous survival of organizations. Given the complex relationship between growth, costs and quality, and with the increasing competitive, business survival pressure and the dynamic, changing customer-oriented environment, strategic quality management practices could be a major strategic issue for the survival of organizations in the manufacturing sector (Isaac, Rajendran, & Anatharaman, 2004).

### **1.1.2 Regional Perspective of Strategic Quality Management practices**

In Africa, manufacturing sector is equally important. In Namibia, the sector accounts for an average of 10.3% of the GDP and 8% of the total employment and 34.8% of its exports. In South Africa, the sector accounts for an average of 17.4% of its GDP, 9% employment and 40% of its total exports (RON, 2007). As nations achieve higher levels of economic growth, manufacturing sector seems to contribute more to the GDP, employment levels and the exports. The sector goes through a lot of challenges in terms of infrastructure, sub-standard imports and high cost of energy. Managers of these companies must therefore seek to find a way of having a competitive advantage over the others. Thus, a study on the relationship between strategic quality management practices and organizational performance is critical for organizations and researchers to better understand the effects of strategic quality management practices onto different levels of organizational performance.

### **1.1.3 Kenya's Perspective of Strategic Quality Management practices**

Quality management practices incorporated overall organizational strategy, communicated to all employees and well implemented may have a positive impact



on organizational performance (Sigei, 2014). Muturi and Ochieng (2015) found that implementation of strategic quality management practices had a positive influence on the organizations' return on assets thus improving its performance. School focus on meeting student's needs, establishment of performance objectives (goal setting) on curricular activities and embracement of high level of communication on curricular issues especially from the students, enhance students' performance in national examinations (Ruinge & Kimani, 2015). Quality management practices in any organization are a crucial factor in efficient and effective leadership for successful functioning of the organization. Effective management leads to improved performance, and there is need to put more emphasis on all quality services or products to ensure more organization business performance, and tools in process approach need to be fully employed in enhancing quality services in KPA (Matata & Wafula, 2015).

Zipporah (2016) indicated that adoption of quality management practices has resulted to prompt delivery of services, quality of the products had improved in terms of reduced customer complaints' and the ability of product to meet the local and international standards. Wanyoike (2016) found that quality management practices had positive and significant effect on performance of manufacturing firms. Kagwiria, Namusonge & Iravo (2016) revealed that leadership was identified to promote organizational commitment, employee job satisfaction and improved individual productivity which in turn leads to organizational performance. Poor leadership was also identified as the major factor perpetuating strikes and lack of commitment of health workers. The study recommended that management should create favourable working environment for their employees and avoid negativism in reviewing employee recommendations for improvement. Total quality management practices significantly affect organizational performance thus any tertiary institution managers aiming to achieve organizational performance should pay close attention to all the elements of total quality management (Chepket & Cheluget, 2017).

#### **1.1.4 Steel Manufacturing Sector in Kenya**

Manufacturing is the art of transformation of raw materials into either intermediate goods or final products through mechanized process. Industrial activity, concentrated around the two major urban centers, Nairobi and Mombasa, is dominated by food-processing industries such as grain milling, beer production, and sugarcane crushing, and the fabrication of consumer goods, e.g., vehicles from kits. Kenya also has an oil refinery that processes imported crude petroleum into petroleum products, mainly for the domestic market. In addition, a substantial and expanding informal sector engages in small-scale manufacturing of household goods, motor-vehicle parts, and farm implements. About half of the investment in the industrial sector is foreign, with the United Kingdom providing half. The United States is the second largest investor (Kenya country profile, 2007). The sector is mainly agro-based and characterized by relatively low value addition, employment, and capacity utilization and export volumes partly due to weak linkages to other sectors.

The intermediate and capital goods industries are also relatively underdeveloped, implying that Kenya's manufacturing sector is highly import dependent. Additionally, the sector is highly fragmented with more than 2,000 manufacturing units hence divided into several broad sub-sectors. Nearly 50 per cent of steel manufacturing firms in Kenya employ 50 workers or less (ROK, 2000). Most of these firms are family-owned and operated. In addition, the bulk of Kenya's manufactured goods (95 per cent) are basic products such as food, beverages, building materials and basic chemicals. Only 5 per cent of manufactured items, such as pharmaceuticals, are in skill-intensive activities (KNBS, 2006). The sector finds itself in a very competitive environment that has resulted from world globalization and liberalization.

Kenya's steel manufacturing sector is among the key productive sectors identified for economic growth and development because of its immense potential for wealth, employment creation and poverty alleviation. In addition, the sector will continue to provide impetus towards achievement of Millennium Development Goals (MDGs) both in the medium and long term particularly goal one on Eradication of extreme Poverty and hunger and goal eight on Global Partnerships for Development

(Government of Kenya, 2002). The sector is expected to play a key role in the growth of the Kenyan economy (Manufacturing and Industry Sector Report, 2011). The overall goal of the sector is to increase its contribution to Gross Domestic Product (GDP) by at least 10 per cent per annum. In addition the sector was expected to register a growth of 10 per cent in the medium term period, (2008-2012) this was to be driven largely by local, regional and global markets. Manufacturing activities account for the greatest share of industrial production output and form the core of industry (KNBS, 2006). Although Kenya is the most industrially developed country in East Africa, manufacturing still accounts for only 14 percent of gross domestic product (GDP). This level of manufacturing GDP represents only a slight increase since independence. Expansion of the sector after independence, which was initially rapid, has stagnated since the 1980s, and is hampered by shortages in hydroelectric power, high energy costs, dilapidated transport infrastructure, and the dumping of cheap imports. However, due to urbanization, the industry and manufacturing sector have become increasingly important to the Kenyan economy, and has been reflected by an increasing GDP per capita (Government of Kenya, 2002). The manufacturing sector accounts for approximately 10 percent of Kenya's gross domestic product (Moraa, Etyan & Mwabu, 2011). The sector's output grew at an average rate of eight percent per annum between 1970 and 2005. In the government's planning document, Kenya Vision 2030, the manufacturing sector is expected to continue contributing 10 percent annually to Kenya's GDP.

### **1.1.5 Organizational Performance**

Companies must earn a good return from their investments that will enable the board of directors make a good dividend payout. In profit making organizations, organizational performance is mostly seen as the ability of an organization to make profits. Other indicators of organizational performance includes areas like product conformity to market requirements, reduced cost of operations, decreased wastage of resources and increased efficiency in operations. Manufacturing companies are seen to have good performance when they are profitable. Profitability refers to a company's ability to generate an adequate return on invested capital (Wild, Larson & Chiapetta, 2007). Therefore, companies are interested in the ability to use their assets

efficiently to produce profits (and positive cash flows). A return is judged by assessing earnings relative to the level and sources of financing. Profitability is also relevant to solvency. The key measures of profitability are return on capital employed, return on assets and return on investment.

The most important goal in operating a company is to earn an income for its owners. A business that is not profitable cannot survive. Conversely, a business that is highly profitable has the ability to reward its owners with a large return on their investment. Increasingly, profitability is one of the most important tasks of the business managers. Managers constantly look for ways to change the business to improve profitability (Refuse, 1996).

## **1.2 Statement of the Problem**

Steel manufacturing companies have a great responsibility to provide quality products and services to their customers. Besides this, they have a greater responsibility to be profitable and remain competitive as expected by their stakeholders. These companies are expected to consistently increase their competitiveness while at the same time provide quality products and services to the customers (Manufacturing and Industry Sector Report, 2011). Following market liberalization, the steel manufacturing industry in Kenya is experiencing fierce competition. Players have quickly acknowledged the imperativeness of a liberalized economic environment which (being more demand driven) leads to higher appreciation of the increased choice affordable to developers who can no longer be taken for granted.

Firms in the steel manufacturing industry like firms in other sectors of the economy need to devise strategies for effective competition. In spite of its important role in the economy, steel manufacturing sector is in turmoil due to sub-standard products, high energy costs, dilapidated transport infrastructure, and the dumping of cheap imports. As a result of these challenges, the steel manufacturing industry has remained stagnant and lacks adaptability. The steel manufacturing companies are involved in stiff competition locally and internationally and some of them are closing down. Since most of them are foreign owned, even their strategies are formulated in the

mother countries. Local industries have tried to implement these strategies in vain due to varying environments and difference in competitive variables. Therefore the varying circumstances and environments as well as the global operations of this industry make it unique and complex, thus called for a separate local study.

Past studies have explored a linear relationship between strategic quality management and organization performance. A review of the empirical studies show that the researchers were mostly interested in the influence of strategic quality management on sectors like service, education, finance and government. The manufacturing sector and especially steel manufacturing industry has not been exhaustively studied. Zipporah (2016) indicated that adoption of quality management systems has resulted to prompt delivery of services, quality of the products had improved in terms of reduced customer complaints' and the ability of product to meet the local and international standards. Wanyoike (2016) found that quality management practices had positive and significant effect on performance of manufacturing firms. Kagwiria, Namusonge and Iravo (2016) sought to establish the effect of leadership on Organizational Performance in Health Sector in Kenya. The study revealed that leadership was identified to promote organizational commitment, employee job satisfaction and improved individual productivity which in turn leads to organizational performance. Chepket and Cheluget, (2017) found that total quality management practices significantly affect organizational performance thus any tertiary institution managers aiming to achieve organizational performance should pay close attention to all the elements of total quality management.

From the foregoing therefore, it is evident that many studies have been done on strategic quality management practices in general. As a consequence, this study considered the least investigated sector, being the steel manufacturing sector. This sector strongly contributes to economic growth and is in line with the effort of realization of Kenya's Vision 2030 strategy specifically the economic pillar that emphasizes on economic development. In view of this, the study sought to determine the effect of strategic quality management practices on organizational performance of the steel manufacturing sector in Kenya.

## **1.3 Research Objectives**

### **1.3.1 General Objective**

The study sought to determine the effect of strategic quality management practices on organizational performance of the steel manufacturing sector in Kenya.

### **1.3.2 Specific Objectives**

The study was guided by the following specific objectives;

1. To determine the effect of strategic customer relations practice on organizational performance of steel manufacturing sector in Kenya.
2. To assess the effect of strategic top management support practice on organizational performance of steel manufacturing sector in Kenya.
3. To determine the effect of strategic quality performance measurement practice on organizational performance of steel manufacturing sector in Kenya.
4. To determine the effect of strategic suppliers' relations practice on organizational performance of steel manufacturing sector in Kenya.
5. To evaluate the effect of strategic employee relations practice on organizational performance of steel manufacturing sector in Kenya.
6. To determine the moderating effect of organizational learning on the relationship between strategic quality management practices and organizational performance of steel manufacturing sector in Kenya.

## **1.4 Research Hypotheses**

The study was guided by the following null hypotheses;

**H<sub>01</sub>:** There is no significant relationship between strategic customer relations practices and organizational performance of steel manufacturing sector in Kenya.

**H<sub>02</sub>:** There is no significant relationship between strategic top management support practices and organizational performance of steel manufacturing sector in Kenya.

**H<sub>03</sub>:** There is no significant relationship between strategic quality performance measurement practices and organizational performance of steel manufacturing sector in Kenya

**H<sub>04</sub>:** There is no significant relationship between strategic suppliers' relations practices and organizational performance of steel manufacturing sector in Kenya.

**H<sub>05</sub>:** There is no significant relationship between strategic employee relations practices and organizational performance of steel manufacturing sector in Kenya.

**H<sub>06</sub>:** Organizational learning has no significant moderating effect on the relationship between strategic quality management practices and organizational performance of steel manufacturing sector in Kenya.

## **1.5 Significance of the Study**

The study would be of great significant to the management of the steel manufacturing companies in Kenya, policy makers and research institutions in the following ways;

### **1.5.1 Steel Manufacturing Companies in Kenya**

The findings of the study are expected to benefit the managers, shareholders, and other stakeholders of these companies to understand the effects of strategic quality management practices on organizational performance of steel manufacturing sector. Further, the study would assist the management by providing important information that is of great relevance to the management in making decisions that support in organizing and directing employees towards efficient strategic quality management initiatives. The findings obtained from this study could also be useful for researchers

and practitioners in the area of quality management for better strategic quality management practices.

### **1.5.2 Policy Makers**

The study contributes greatly to the increasing relevance of strategic quality management in policy development by informing the policy makers and relevant companies as to what effects strategic quality management has on organizational performance. The findings can be used by the policy makers to ensure compliance to existing guidelines and also encourage continual improvement.

### **1.5.3 Research Institutions**

The research has also contributed to the existing literature and provided relevant information to scholars giving a better understanding on the effects of strategic quality management practices on organizational performance. The study also provides a basis for further studies in other sectors like agriculture.

## **1.6 Scope of the Study**

Most of the steel manufacturing activity is concentrated around the two major urban centers in Kenya; Nairobi and Mombasa. The study was conducted on 46 firms of the steel manufacturing sector in Kenya and targeted 46 management officers in the manufacturing companies. This information was picked from the Kenyan Business Directory, 2015 for the purpose of traceability. The study examined the effects of strategic customer relations, top management support, quality performance measurement, suppliers' relationship management, employee relations practices and organizational learning on organizational performance. The researcher was particularly interested in studying the steel manufacturing sector since it is among the key productive sectors identified for economic growth and development due to its immense potential for wealth, employment creation and poverty alleviation in Kenya (Government of Kenya, 2002). Organizational performance in this study specifically looked at how well an organization achieves its financial goals. The study was conducted between January 2015 and May 2017. The choice of these companies was



well informed in that information on financial reports and other annual reports relevant to this study was available.

### **1.7 Limitations of the Study**

The study sought to examine the effects of strategic quality management practices on performance of the steel manufacturing companies in Kenya. In carrying out this study, the researcher had difficulty accessing the target population, particularly due to policy requirements and the nature of the information being sourced. This limitation was however dealt with by placing appointments with the managers picked as respondents prior to having them fill the questionnaire. The study was limited to only those manufacturing companies that were listed in the Kenyan Business Directory, 2015. They were only 46 in number. This decision was arrived at to ensure traceability. Since respondents were scattered in different sites spread far from each other, some difficulties were faced in giving orientations, following up respondents and collecting responses. This was mitigated by use of emails, telephone calls and research assistant doing follow-ups. Most of the data was collected using a Likert scale. There is a possibility that some of the respondents may either under rate or over rate their scoring on some of the questions leading to a score that is different from the actual position. This was however mitigated by having a number of questions asked addressing the same measure. The study experienced an initial slow response from the respondents due to their busy schedule and availability. This was mitigated by having constant follow up on phone and physical visits to the respondents' offices. The variables included in the conceptual framework are not exhaustive. There are other quality management practices at play that may impact on performance of the steel manufacturing companies. The study provides a basis for further studies.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter summarizes information from other researchers who carried out their research in the same field of strategic quality management and organizational performance. The choice of literature for this study was limited to those that have a vital contribution to strategic implementation of quality management practices. The study specifically contains theoretical discussions, a conceptual framework that depicts the relationship between the independent variables and the dependent variables, and empirical review of the variables. The chapter ends with establishing the research gaps which points out what remains to be done.

#### **2.2 Theoretical Framework**

The study contains Stakeholder Theory, Strategic Choice Theory and Quality management theories which form the theoretical foundation and fundamental basis of the variables to be studied. Implementation of strategic quality management practices is a complex phenomenon and will therefore require to be looked at from different theoretical backgrounds. A combination of different theories that are relevant to this area will be explored to explain the variables used in this study.

##### **2.2.1 Stakeholder Theory**

Stakeholder Theory is a theory of organizational management and business ethics that deals with principles and values in managing an organization (Freeman, 1983). The founder of the Stakeholder Theory (Freeman, 1983) defined stakeholders as any group or individual who can affect or is affected by the achievement of the organization's objectives. According to this theory, stakeholders are recognized as the group of people interested in the company's activities. Freeman (1983) identified stakeholders as customers, employees, local communities, suppliers and distributors as well as shareholders. Other groups and individuals are also considered

stakeholders, including: the media, the public, business partners, future generations, past generations (founders of the organizations), academia, competitors, NGOs, activists, trade unions, trade associations, financiers, regulators, the government and policy makers.

According to Stakeholder Theory, the company's major objective is to balance the expectations of all stakeholders through their operating activities (Ansoff, 1965). The way organizations involve shareholders, employees, customers, suppliers, governments, NGOs, international organizations and other stakeholders is a key feature of the quality management concept. Clarkson (1995) stated that the fundamental aspect of Stakeholder Theory is determined by the stakeholders of an organization and reveal the organization's responsibility for them. In addition, they are important to the organization because their investment is subject to risk due to the activities of the organization. According to the modern view of strategic quality management and Stakeholder Theory, organizations have a responsibility that requires them to consider the interests of all parties affected by their actions. Stakeholder Theory is useful to this study since it acknowledges that managers of the steel manufacturing companies should not only consider shareholders in decision making but also any other individual/party that will be affected by the decisions thereof.

### **2.2.2 Agency Theory**

Agency Theory is founded on the idea that, in a modern corporation there is a separation of ownership and management, resulting in agency costs associated with resolving the conflict between the owners and the agents (Jensen & Meckling, 1976). This implies that management cannot be trusted, thereby calling for strict monitoring by the Board of Management in order to protect shareholders' interest. The main concern of Agency Theory therefore is effective monitoring which is achieved when the Board of Management have majority of outside and ideally independent directors (Chemwile, 2017). The position of Chairman and Chief Executive Officer should be held by different persons. However, this separation sometimes becomes a challenge in family owned organizations. This theory is useful in this study since it explains

that managers and directors are agents of shareholders who are principals in the manufacturing companies. As agents they make decisions expected to maximize utility of organizational resources and subsequently increase shareholder value and interest through enhanced performance.

### **2.2.3 Strategic Choice Theory**

Strategic Choice Theory was developed and advanced by Child in 1972. According to this theory, the goal of the organization is to achieve high performance standards and increase the efficiency to the limits of economic constraints. Steel manufacturing companies need to consider contextual factors as very important if firms are to perform well. For instance, managers who make sound decisions for their organizations and adopt modern technology to analyse risks are likely to become competitive. Strategic decisions in organizations have significant effects on organizational outcomes. This was concurred by Child (1972), in his seminar article on the role of strategic choice, provided a theoretical framework for this theory. Strategic Choice Theory, according to Child's perspective is less concerned with the functional operation of the organization and has more to do with the governance structure and political actions in organizations.

Therefore managers should establish structural reforms, manipulate environmental features, and choose relevant performance standards in achieving organizational goals. Strategic Choice Theory views managers as proactive agents who are downstream decision makers and mainly focus on directing major decisions and change processes in organizations. This theory is useful to this study because managers play an important role in achieving organizational outcomes through their decision making. For instance, managers of the steel manufacturing companies must foster continuous commitment to communication and collaboration at different levels across, within and between organizations, involving employees from different departments, supply chain members and organizational levels in strategic planning and establish risk awareness through training and education, if they are to perform.

#### **2.2.4 Deming's Theory of Total Quality Management**

Deming's Theory of Total Quality Management was developed and advanced by Deming in 1982. Considered by many to be the father of the total quality management movement, all Deming's theories are based on the simple concept that continual improvement can help increase quality while decreasing costs. Deming (1982) suggested that the manufacturing process is not a series of unrelated processes, but is an entire system, and when viewed as an entire system, opportunities to improve efficiencies are more easily identified. Deming also suggested that the idea of tolerance limits is detrimental to the quality of a product. Tolerance limits are the degrees of variance from the goal that management considers acceptable. For example, a manufacturer of one-foot rulers may say that any ruler between 11.9 inches and 12.1 inches is acceptable. Deming suggested that those tolerance limits hinder quality because, as long as enough products are within the tolerance limits, management won't make any changes to the process.

Deming's Theory of Total Quality Management rests upon fourteen points of management, the system of profound knowledge, and the Shewart Cycle, Plan-Do-Check-Act (Bowen, 2013). Quality is equal to the result of work efforts over the total costs. If a company is to focus on costs, the problem is that costs rise while quality deteriorates. Deming's system of profound knowledge consists of the System Appreciation – an understanding of the way that the company's processes and systems work, Variation Knowledge – an understanding of the variation occurring and the causes of the variation, Knowledge Theory – the understanding of what can be known, and Psychology Knowledge – the understanding of human nature. By being aware of the different types of knowledge associated with an organization, then quality can be broached as a topic. Quality involves tweaking processes using knowledge. The fourteen points of Deming's theory of total quality management are; Create constancy of purpose, Adopt the new philosophy, Stop dependencies on mass inspections, Don't award business based upon the price, Aim for continuous production and service improvement, Bring in cutting-edge on the job training, Implement cutting-edge methods for leadership, Abolish fear from the company, Deconstruct departmental barriers, Get rid of quantity-based work goals, Get rid of

quotas and standards, Support pride of craftsmanship, Ensure everyone is trained and educated and Make sure the top management structure supports the previous thirteen points (Goetsch & Davis, 2013).

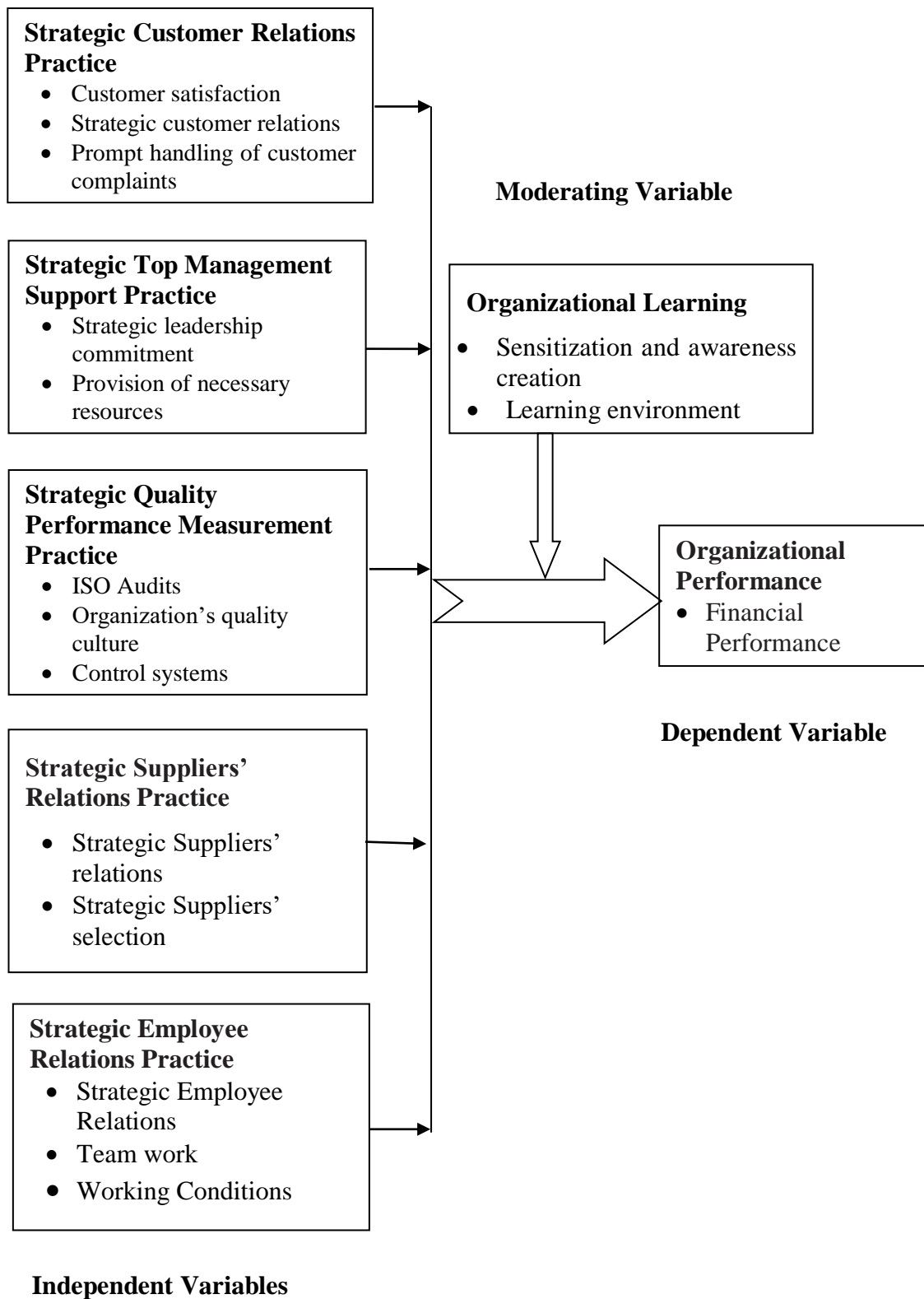
The theory is useful in this study because it explains different quality management practices that organizations can adopt to realize high performance and remain competitive. For instance, this study has selected Customer relations, top management support, performance measurement (quality performance), Supplier relations (relationship) and Employee relations (workforce management) as the quality management practices to be studied. However, the theory has left out very important quality practices such as Customer relations and Employee relations practices. A few of the fourteen points of Deming's theory of total quality management are also outdated. To sum it all, the theory explains that top management should ensure they support all other efforts being made by the organization towards improved quality. The theory is useful to this study since it explains the importance of top management support and quality performance measurement which form part of the practices under study.

### **2.3 Conceptual Framework**

A conceptual framework is a pictorial representation where descriptive categories are systematically placed in a broad structure on explicit propositions, statements of relationships between two or more empirical properties accepted or rejected. It comprises of independent and dependent variables. Talib (2013) developed and proposed a conceptual framework and research model of TQM implementation in relation to company performance particularly in context with the Indian service companies. It examined the relationships between TQM and a company's performance by measuring the quality performance as a performance indicator. For the purpose of this research, a conceptual framework has been developed showing the influence of the independent variables on the dependent variable. Borrowing from the Quality Management Theories and the Stakeholder Theory, the independent variables are classified according to stakeholder focused practices that include; Customer relations practices, top management practices, quality performance

practices, Supplier relations practices and Employee relations practices. Borrowing from the Strategic Choice Theory, managers must foster continuous commitment to communication and collaboration at different levels across, within and between organizations, involving employees from different departments, supply chain members and organizational levels in strategic planning and establish risk awareness through training and education, for them to realize high performance and remain competitive. The framework also borrows heavily from Deming's Theory of Total Quality Management which rests upon fourteen points of management, the system of profound knowledge, and the Shewart Cycle, Plan-Do-Check-Act (Bowen, 2013).

The dependent variable in the conceptual framework is organizational performance proxied by financial indicators. Borrowing from the Agency Theory, managers and directors are agents of shareholders who are principals in the organizations. Agents make decisions expected to maximize utility of organizational resources and subsequently increase shareholder value and interest through enhanced performance. This is envisaged in the conceptual framework that agent decisions with respect to quality management practices enhance financial performance of the organizations.



**Figure 2.1: Conceptual Framework**



## **2.4 Review of Literature on Variables**

This section reviews literature from prior scholars regarding the influence of strategic customer relations, strategic top management support (leadership commitment), strategic quality performance measurement, strategic supplier relationship management and strategic employee relations on organizational performance of the steel manufacturing companies in Kenya.

### **2.4.1 Strategic Quality Management Practices**

The adoption of strategic quality management practices may be attributable to a number of factors. In addition to several stakeholders' benefits, a number of studies have identified significant financial benefits for organizations embracing strategic quality management practices. Ngniatedema (2014, showed that ISO 9001 certified organizations achieved superior return on assets compared to otherwise similar organizations without certification. Similarly superior performance demonstrated that this was statistically significant and not a function of organization size. Milé-Terziovskia (2014, showed that implementing ISO 9001 led to superior operational performance. In addition there was identification of improvements in operating performance and linked this to superior financial performance, showing that a better overall financial performance was achieved for companies in Denmark. Oakland, (2008) showed that ISO 9001 certification resulted in superior stock market performance and suggested that shareholders were richly rewarded for the investment in an ISO 9001 system. In addition, "Benefits of ISO 9000 implementation in Spanish industry" showed that Basque companies report substantial operational and financial benefits from certification.

The ability to meet customers' expectations and even exceed these expectations by improvement initiative of excellence is very essential for firms' survival. Manufacturing companies should shift attention from the cost of implementing quality practices and focus on the sustainability, as they stand to gain from these practices. One of the basic aims of adapting a quality process is to consistently improve value to customers (Khairul, 2013).

## **2.4.2 Strategic Customer Relations Practices**

The push by organizations to become more customer focused has been taken as a strategic move to improve organizational performance both in financial and market performance (James & William, 2008). There are two sets of customers referred to in this context that is internal customers (employees) and external customers (suppliers, buying organizations and other stakeholders). The management should determine the customer's perception of the degree to which the organization's service meets his or her expectations. Organizations depend on their customers and therefore should understand current and future customer needs, should meet customer requirements and strive to exceed customer expectations (ISO 9000:2005). Customer focus is a key requirement of ISO 9001:2008 standard. For example, in the Management Responsibility section, one requirement is "Top management shall ensure customer requirements are determined and are met with the aim of enhancing customer satisfaction". This puts the responsibility for customer relations on senior management (Evans & Lindsay, 2008). For business enterprises, the significant driving force to establish the quality goals basically originates from customer needs. Generally speaking, customer needs identify the operational goals for firms to meet. Aaker, Emily, and Kathleen (2007), mentioned that quality started with the understanding of customer needs and ended when those needs were satisfied. In order to meet the requirement of customers, top management should clarify the expectations of its customers.

Kumar and Balakrishnan (2011), pointed out that strategic customer relations is the underpinning principle for firms to implement TQM programs. Since senior management may have the influence and authority to dominate the entire TQM implementation, dedicated commitment from top management about implementing TQM is certainly a necessity. Trend data of customer satisfaction should be supported by objective evidence. The organizations should discuss with customers their satisfaction perceptions. Service is a kind of performance that is offered by one party to another (Kotler & Keller, 2012). Lukasz and Kristensen (2012), found that the TQM has a positive relationship with customer satisfaction. One of the principles for sustaining success is creating customer value to encourage customers to feel

satisfied with the value they are receiving. Satisfaction measures determine the degree to which values meet customers' needs and expectations. Measurement results help the organizations to increase value by improving their processes for creating customer value. With respect to changes in strategic customer relations, new interfaces and instruments are installed, resulting in increased customer-focus. Most organizations now have functional customer care units and public relations offices. These offices have acted as valuable instruments for introducing a client focus (Brynaert, 2004). ISO certification has been instrumental in helping the organizations to introduce instruments to monitor client satisfaction. In another research it was revealed that the strengths of an organization's quality management implementation lie in strategic customer relations and process management. It was also concluded that there existed a satisfactory level of practices in leadership, strategic planning, human resource development and management (Kumar & Balakrishnan, 2011).

For business enterprises, the significant driving force to establish the quality goals basically originates from customer needs. Generally speaking, customer needs identify the operational goals for firms to meet. Oakland, (1996-2016) mentioned that quality started with the understanding of customer needs and ended when those needs were satisfied. In order to meet the requirement of customers, top management should clarify the expectations of its customers. Further, organizational strategy should also be developed based on customers' needs. Measuring customer satisfaction is generally a complex qualitative process that requires careful engagement, selection of tools and careful analysis by the person trying to measure satisfaction. Niveen (2013) for instance, identifies ten dimensions of service quality which, he argues, are useful in achieving customer satisfaction. They are tangibility of the product/ service, responsiveness, communication, credibility, security, competence, courtesy, a deep understanding of the customer, and access to more information regarding the product or service. Customer satisfaction has broadly been defined as an emotional response to the use of a product or a service.

### **2.4.3 Strategic Top Management Support Practices**

Strategic Top management support also referred to as leadership commitment is one of the practices or principles of the quality management system. Top management can be referred to as the corner stone of a successful Quality Management System programme. Wahid and Corner's (2009) study on service firms in Malaysia established that ISO implementation is a critical factor on performance. Those factors were strategic top management commitment, strategic employee participation and involvement, teamwork, continuous improvement, reward systems, understanding of ISO 9001, strategic performance measurement and communication. The study ranked the support and involvement of the top management a most critical factor. The conclusion made from the results of the 83.33% of the respondents interviewed stated that the success and sustainability of ISO 9001 is influenced by top management. Javed (2015) conducted a study whose objective was to empirically investigate the impact of strategic top management commitment on the success of quality management. This study was limited to ARL Company in Islamabad. The Correlation analysis explained a positive moderate relationship between top management commitment and success of quality management. That is, strategic top management commitment is positively related to the success of quality management in an organization. Commitment and personal involvement is required from top management in creating and deploying clear quality values and goals consistent with the objectives of the company, and in creating and deploying well defined systems, methods and performance measures for achieving those goals. These systems and methods guide all quality activities and encourage participation by all employees (Sturman, 2014).

Top Management in organizations maintains the leadership responsibility for the quality management systems, with involvement of all organizational staffs. This responsibility includes; ensuring the availability of resources to all staff to ensure improved service delivery is achieved for the realization of the organization's vision and mission. Establishing and reviewing the quality policy and quality objectives quarterly to ensure compliance to the quality standards (Matata, 2015). Leaders should provide a clear vision of the organization's future and set challenging goals

and targets. It is only through unity of purpose and direction of employees that achieves organization's objectives. Leader should maintain internal environment where people can get fully involved by establishing trust and eliminating fear. (Cole & Phil 2011) defines leadership as the process of influencing others to understand and agree about what needs to be done and how to do it, and the process of facilitating individual and collective efforts to accomplish shared objectives. Lee (2011) investigated top management commitment role in maintenance of ISO 9001:2008 and in outcomes of Quality Management System in Algeria, practices and implementation in two large service organizations. The investigation concerned with strategic top management commitment and leadership from different approaches such as involvement in quality improvement, providing necessary resources and showing steady commitment to quality perfection. The results showed a variation in extent of top management commitment role in ISO 9001:2008 maintenance and TQM system and practices between the two organizations. The respondents of the first company reflected higher positive statements on their top management. The final conclusion of the study emphasized on the positive role of top management in ISO 9001:2008 maintenance and TQM system outcomes (Lee, 2011).

An investigation into ISO 9001:2008 certified public universities operating in Kenya and Uganda to identify the most important factor for the implementation of TQM revealed that management leadership and commitment are imperative factors in implementation of TQM (Gudo, 2016). From a service quality approach Mustafa (2011), found that leadership as TQM construct has a strong positive association with service quality in the commercial banks in Malaysia. The same degree of importance of management leadership is supported by findings of a study conducted by Okioga (2012). Outcomes of the study showed visionary leadership as one of most four critical human resource related factors that promise successful TQM implementation in high education institutes in Kenya. The authors discussed vitality and criticality function of visionary leadership in high education institutions. This importance occurs in involvement of top executives in creating sustains and customer orientation work dimension and presenting apparent quality values in their institutes. The positive impact of leadership in TQM in high education has been outlined in a study

that assigned weights to the criteria of the Malcolm Baldrige National. It is therefore apparent that top management support is pertinent to the success of Quality Management System implementation in organizational settings. If leadership roles in TQM aren't taken up by Chief Executive Officers (CEO's) and their line senior managers, nothing much in ways of changes would be implemented and any such won't stand the test of time.

Magd (2008) focused on the implementation of ISO certification pointed out that it depends on how the standard was perceived by Egyptian firms themselves. The findings of the research indicated that Egyptian manufacturing organizations are aware of ISO and it was considered relevant to their organizations. The main motivators for seeking ISO certification were to improve the efficiency of the quality of products or services and to achieve a firm's performance. The vital benefits perceived from implementing the certification were improved documentation and improvement in the efficiency of the quality system. However, the participants perceived lack of top management commitment and lack of qualified personnel to be major barriers in the effective implementation of ISO.

#### **2.4.4 Strategic Quality Performance Measurement Practices**

With the adoption and implementation of one form of quality management system or the other, there is great enthusiasm among manufacturing industries in the maintenance of their attained competitive lead. Due to this, many manufacturing companies have been interested in monitoring their quality performance in the overall organization's performance. There are numerous studies that have examined the correlations between strategic quality management practices and various performance measures. Talib (2013) developed and proposed the conceptual framework and research model of TQM implementation in relation to company performance particularly in context with the Indian service companies. It examined the relationships between TQM and a company's performance by measuring the strategic quality performance as a performance indicator. The theoretical model was proposed to help companies to gain a better understanding of TQM practices by focusing on identified practices while implementing TQM in their companies.

Different indicators used for measuring organizational performance have been identified from literature.

Honarpour1 (2012), agree that quality performance and innovation performance are indicators of organizational performance. Others like Talib (2010), stated that employee satisfaction, business results and customer satisfaction are indicators for organizational performance. Santos-Vijande(2007), suggested that the inputs of the framework are quality management practices while quality performance represents outcomes. Barros (2014), did a study on the relationship of TQM practices and quality performance on manufacturing companies in Malaysia through multiple regression and correlation analyses and showed that there was partial correlation of the quality practices with quality performance. Lianqi (2014), indicated that a firm's ability to track the status and financial outcomes of all Six Sigma projects, the maturity of the implementation, the selection of strategically-aligned projects, the integration of Design for Six Sigma (DFSS) into projects, and the breadth of the implementation have a statistically significant impact on subjective and/or objective performance measures.

Strategic performance measurement (quality performance) endorses a process perspective where the focus is on the internal process of quantifying the effectiveness and the efficiency of action with a set of metrics. Honarpour1 (2012), revealed that strategic performance measurement represents management and control systems that produce information to be shared with internal and external users. The performance measurement models evolved from a cybernetic view whereby strategic performance measurement was based mainly on financial measures and considered a component of the planning and control cycle to a holistic view based on multiple nonfinancial measures where performance measurement acts as an independent process integrated in a broader set of activities. Strategic performance measurement is traditionally viewed as an element of the planning and control cycle that captures performance data, enables control feedback, influences work behavior (Kariuki, 2013) and monitors strategy implementation. In a holistic view, performance measurement plays a key role in the development of strategic plans and evaluating the achievement of organizational objectives as well as acting as a signaling and learning device

(Zeitham, 2004). It is commonly recognized that Birnberg (2011), seminal work played a major role in the development of the Management Control Systems (MCS) literature.

#### **2.4.5 Strategic Suppliers' Relations Practices**

In many manufacturing firms, the selection of capable suppliers could help reduce waste in terms of quality and time. There is constant emphasis on quality and timely delivery which has taken outsourcing and supplier selection decisions to an entirely new dimension (Moon, 2006). Suppliers contribute to the overall performance of a supply chain. Poor supplier performance affects the whole chain (Lauro, 2014). Therefore, the process of supplier selection is a very important task for the procurement department. Due to the need to have the right materials and parts at the needed time and affordable costs, many organizations have a large supplier base. This on one hand has proven to be a great disadvantage to organizations as they have to sometimes deal with a lot of unreliable suppliers which may have found their way into the pool. In a competitive manufacturing environment mostly controlled by customers' demands and unrelenting strife to survive in the present harsh economy, there is need for organizations to improve their supply chain and reduce waste by adequately selecting suppliers who are capable and reliable in delivering materials with the required quality on time and at affordable prices.

The selection of suppliers is very important in Supply Chain Management (SCM) for the reduction of costs and adequately satisfying customers. Organizations now find it true that in order to satisfy customers, they have to make sure that their suppliers are committed to quality just as they are themselves. However, Roberta (2016) found that in the process of selection of suppliers, the precise rules are not always well established. In general, there is a logical way to handle the problem. It was concluded in one study that the most important criteria for supplier selection are quality, delivery and performance history. In research, there have been many different approaches used for supplier selection. Aksoy (2011) applied Data Envelopment Analysis (DEA) to measure the efficiencies of suppliers by evaluating nine factors. In order to strategically reduce the number of suppliers and selecting suppliers with



greater supply variety, this further suggested a simplified DEA model which evaluates the overall performances of a supplier.

This proposed the application of Imprecise Data Envelopment Analysis (IDEA) for the selection of the best suppliers in the presence of both cardinal and ordinal data. The integration of Analytical Hierarchy Process (AHP) and linear programming was implored by Makhitha, (2014) in considering both tangible and intangible factors in the selection of suppliers. Another integration of methods was proposed and applied on the AHP to select suppliers and also Multi-Objective Linear Programming (MOLP) model for optimal allocations of order quantities to the candidate suppliers. Important and critical decision criteria including risk factors for the development of an efficient system for global supplier selection were identified by with the application of Fuzzy Extended Analytic Hierarchy Process (FEAHP)-based methodology to select suppliers (Patricia, 2015).

An effective strategic suppliers' relations will enforce the cooperation between suppliers and firms by allowing suppliers' involvement and/or participation not only in the design process but also in the production process, and help the procurements of materials or parts meet firm's requirements and be efficiently utilized (Amelia, 2007). The research findings of further showed that strategic suppliers' relations, which emerged as an important component of TQM implementation, had direct positive effects on both design management and process management. In addition, the quality of materials provided by suppliers is important and the starting point for firms to produce quality products. Eventually, a good quality of raw materials will reduce the occurrences of rework, scrap, and/or defective outputs. Ultimately, it can result in a good operational performance. From the discussion above, suppliers' relationship management can be used to streamline the suppliers' base to facilitate the following tasks such as managing suppliers' relationship, developing strategic alliances with suppliers, cooperating with suppliers to ensure meeting the customers' expectations, involving suppliers early in the product development process, and enhancing the process management. Therefore, the researcher proposes that strategic suppliers' relations are related to organizational performance.

#### **2.4.6 Strategic Employee Relations Practices**

Motivated, committed and involved employees are eager to participate in and contribute to continual improvement within the organization (Prottas, 2016). His other assumption that should be of particular importance to total quality implementers is that in most organizations, the average employees' intellectual potentialities are under-utilized. In today's increasingly competitive market, organizations are continuously searching for new approaches that can cause them to be more flexible, adaptive and competitive. More and more organizations are rediscovering or led to rediscover that their employees are their biggest asset. More and more organizations are moving towards greater employee relations in their decision making process. They realized that attaining greater employee relations requires loosening of and removing well-established structures of control within the organization. The success of implementing a particular initiative depends on a number of factors such as technology, environment, and culture (Hab, 2011). One thing is clear, that the bottom-line requires a fundamental change in the way management views employees in today's competitive environment. Results indicate that the greater the use of employee relations, the greater is the company's performance, profitability, and competitiveness (Chong *et al.*, 2005).

Kraus (2000), stressed that the workers on the shop floor know more about the problems on the floor than the supervisors and they have their ideas of dealing with workplace improvements. He added that it is up to management to solicit ideas from their workers and not to expect those volunteer opinions. No suggestion should be dismissed as being insignificant. It is to be expected that under the traditional bureaucratic structure, some employees may underestimate the value of their ideas or knowledge or may even believe that management may not be interested in whatever they think. Thursby (2014), pointed out that only 41 per cent of employees surveyed believed that they are listened to. One of the strongest ways to show that employee's suggestions are valued is recognition and acknowledgement of employee suggestions conveyed through an achievement reward system. It is expected that the suggestion system is successful in those organizations that are seen to be employee-friendly.

An essential element of effective employee relations is teamwork. Organizations need to install quality improvement teams. Small group improvement activities comprise the most fundamental layer of support and can greatly reduce waste-related costs (Oanda, 2014). Team members can come from a single section or department and may include representatives from the customers or suppliers. Members can come from a mixture of different levels in the organization. It is expected that teams must meet regularly and often to be effective. This is to facilitate exchange of ideas, provide a means of reporting of activities, identifying and evaluating problems and creates opportunity to build a trustworthy relationship between members. When employees are focused on performance improvement and business objectives, management must reinforce behaviours that lead to the achievement of these objectives to help accelerate the process of change. Quality circles are also recognized as one of the platforms where employees get involved in the continuous improvement in the organization (Asli, 2011).

#### **2.4.7 Organizational Learning**

Continuous and wholesome learning is predicted by some scholars to become the foundation for achieving sustained competitive edge for firms in current times. It is the very potent tool for an organization's continuous improvement since innovations will thrive when something new is learnt and put to test. Learning can be referred as being a relatively permanent change in an individual's worldview, attitudes and behavior that occurs as a result of experience or reinforcement (Lunenburg, 2011). It is a lifelong process that may help in analysis and problem solutions, satisfying curiosity, passing assessment tests, or assists in career progression. These understandings are an organization's mental models relating to the company, their markets or competitors.

Maxwell (2015), pointed out that organizational learning enhances an organization's capability to acquire and develop new knowledge and how that knowledge can be organized and used to improve performances. In their view, when knowledge is translated into new products and services, it can become a key source of wealth creation for organizations. Consequently, such organizations that value

organizational learning shall be able to adapt to the realm of uncertainty while rising to positions of sustained growth ahead of competition. Such firms are also able to survive and excel through the challenges of economic crisis, severe competition, changing customer preferences or advances in technology. Nafei (2015), on “Organizational Learning and Organizational Performance: The Case of Slovenia”, demonstrated the statistically significant, strong and positive impact of organizational learning on performance. In their study, they noted that companies which invest more efforts into the systematic approach to organizational learning succeeds in achieving higher-level organizational profit in terms of increased level of employee trust in the leadership, improved efficiency of work organization, a more committed workforce, decreased cost of work per employee (compared to the industry’s average), increased employee flexibility, and increased employee satisfaction.

On a different account, Dimovski (2006), in a study involving 202 Croatian companies employing more than 50 people carried a research on the “Relationship between Organizational Learning and Organizational Performance: The Case of Croatia”. The researchers found empirical evidence about existence of strong, statistically significant and positive relationship between organizational learning and organizational performance. Besides they confirmed earlier findings that financial measures alone are not good predictors of organizational performance and those behavioral and cognitive changes is the organizational learning construct variable which is the most important for enhancing organizational performance. Further, they determined that employees’ measures are the most strongly related with organizational learning process.

## **2.5 Empirical Review**

Organizations are getting more and more complex given the factors in the business environment that must be managed to ensure the realization of strategic objectives. Equally so, the review of the literature indicates that strategic management is a complex task that requires management to give it due consideration in order to achieve success. Namusonge and Sasaka (2014) sought to establish whether or not

parastatals which utilize strategic management practices such as strategic planning practices, strategic corporate governance practices, strategic competitive practices and strategic total quality management practices results in evident CSR performance.

They established that those parastatals develop deep insight into the demand of social responsibility, hence enabling and promoting CSR policy and practices. Adalakun (2010), found that, top managers who use TQM practices provide a vision, reinforce values emphasizing quality, set quality goals, have a free flow of information and deploy resources for the quality program which result to greater customer satisfaction, less wastage, increased total productivity, reduced costs, improved profitability and an environment in which quality has high priority. While the connection between superior financial performance and ISO 9001 may be seen from the above, there remains no proof of direct causation, though longitudinal studies (Prakash, 2011). Suggesting that while there is some evidence of this, the improvement is partly driven by the fact that there is a tendency for better performing companies to seek ISO 9001 certification.

The short-term objectives of QMS are primarily to enhance quality and increase productivity, while long-term objectives are to increase market share and profits for the organization. It has been suggested that companies strive to perform best in quality practices associated with the quality management system implemented (Yadollah, 2014). Any organizational initiative, including a certified quality management system, should ultimately lead to enhanced organizational performance. The mechanism for improving results has also been the subject of much research. Muturi and Ochieng (2015), found that ISO 9001 certification has had a positive influence on the organizations' return on assets thus improving its performance. There were no significant differences across sectors that the organizations represented.

Psomas, Pantouvakis, and Kafetzopoulos (2013), sought to define and subjectively measure ISO 9001 effectiveness as the achievement of the standard's objectives and determine its impact on the performance dimensions of service companies related to product/service quality, operational and financial performance. Data was collected

using both qualitative and quantitative methodologies. The product/service quality and operational performance of the service companies were directly and significantly influenced by ISO 9001 effectiveness. The financial performance was directly influenced only by operational performance, while the impact of ISO 9001 effectiveness was indirect through its significant correlation with operational performance. Ruinge and Kimani (2015), revealed that, school focus on meeting student's needs, establishment of performance objectives (goal setting) on curricular activities and embracement of high level of communication on curricular issues especially from the students, enhance students' performance in national examinations. Matata and Wafula (2015) revealed that quality management systems in any organization are a crucial factor in efficient and effective leadership for successful functioning of the organization. Effective management leads to improved performance, and there is need to put more emphasis on all quality services or products to ensure more organization business performance, and tools in process approach need to be fully employed in enhancing quality services in KPA.

Wanza (2017) sought to determine the effects of quality management practices on performance of Kenyan Universities. The research adopted an explanatory survey resaerch design. Data was collected using both qualitative and quantitative methodologies. The findings indicated that quality management practices had a significant effect on performance of universities. The study unveiled that employee relations in the university activities, leadership commitment and continuous improvement and customer relations have a significant effect on the university performance.

Top management should facilitate employees for any successful implementation of quality management practices. The study recommended that universities operating in Kenya should embrace quality management system to improve their performance. Njenga and Kibombo (2017) sought to determine the influence of implementation of quality management systems on operational performance of Technical Training Institutions in Meru County: A case of Nkabune Technical Training Institute, Kenya. The study adopted a case study research design. Data was collected using both qualitative and quantitative methodologies. The findings revealed that there is a

significant relationship between implementation of quality management systems and operational performance. The study concluded that there is a greater influence of leadership style on operational performance. It was deduced that visionary leadership, delegation of duties and provision of leadership greatly influence operational performance. Further it was revealed that Employee relations, empowerment and recognizing staff contribution and provision of resources greatly influence operational performance.

Ogbari and Borishade (2015), sought to evaluate the relationship between top management commitments and customer retentions as well as to examine the influence of organizational reputation on customer's continuous patronage. The research adopted a descriptive survey design. Data was collected using both qualitative and quantitative methodologies. They found that there was a strong relationship between total quality management and customer satisfaction in the achievement of organizational goals especially in the current dispensation of globalization and stiff competitions. The study also revealed that total quality management and customer satisfaction have increased steadily over a period of time in some service industries but top management still have much to do in order to entrench TQM and customer satisfaction as policies in their organizations. They recommended a holistic adoption of TQM and customer services tenets and its entrenchment as policies in all organizations for quality customer services and satisfactions.

Zipporah (2016) indicated that adoption of quality management systems has resulted to prompt delivery of services, quality of the products had improved in terms of reduced customer complaints' and the ability of product to meet the local and international standards. She further reveals that ISO certification also ensured consistent training and therefore improved performance. Quality Management Systems implementation has positive effects on overall organizational performance and implementing does pay off since the benefits accrued include; improved quality, employee satisfaction, productivity, employee participation, teamwork, communication, profitability and greater market share. The idea behind the implementation of quality management systems is to ensure that adequate attention is

given to quality so as to give room for an error free transactional process and less room for customer complaints while maximizing customer satisfaction. It is proven that satisfied customers are more willing to recommend quality service to others. Wanyoike (2016) found that continuous improvement had positive and significant effect on performance of manufacturing firms. Customer relations was found to be significant in explaining the variation of performance and top management commitment was found to have a significant effect of performance of manufacturing firms. This study recommended that management should be committed to quality by providing strategic direction with respect to quality management practices, which should be aligned to the firms' objectives.

Kiprotich and Chebet (2017) sought to determine the effects of total quality management practices on organizational performance in Tertiary Institutions in Kenya. The research adopted a descriptive survey design. Data was collected using both qualitative and quantitative methodologies. The findings revealed that total quality management practices had a significant effect on organizational performance in Tertiary Institutions in Kenya. The study concluded that customer relation was critical for organizational performance. The results indicated that the organization always attempted to meet its customer needs, address customers complaints as a priority for the organization, the organization actively performed market research to identify customer needs and that the organization provided clear channels of communication to its customers.

Kiprotich (2014), studied on the degree, to which top management sets up quality management objectives and strategies, provides and allocates necessary resources, contributes in quality improvement efforts, and assesses quality management implementation and performance. The research adopted a descriptive survey design. Data was collected using both qualitative and quantitative methodologies. Quality Management System is a way of life for a company. It has to be introduced and led by top management. The findings pointed out that attempt to implement QMS often fail because top management doesn't lead and get committed - instead it delegates and pays lip service.



Odhiambo (2014), realized the challenge related to the measurement of manufacturing performance by insisting on the need of senior management to abandon short-term financial measures based on manufacturing assumptions of standardization in favour of developing indicators that foster long-term competitiveness and profitability. Further suggestion was that emphasis must shift from controlling operations to continuous improvement by providing timely and relevant information to workers and managers. Hodges (2015), empirically found a positive relationship between the reporting of manufacturing performance measures to line personnel and the implementation of Just-in Time (JIT), teamwork and Total Quality Management (TQM) practices. Patyal and Kaolakuntla (2017) revealed that infrastructure Quality Management practices have a positive effect on core Quality Management practices and indirectly on quality performance, whereas, core Quality Management practices have a positive effect on quality performance. Also, quality performance has a positive effect on business performance.

## **2.6 Critique of Literature Review**

Muturi and Ochieng (2015), sought to establish the impact of ISO 9001 implementation on organizational performance in Kenya. The research adopted a descriptive survey design. Data was collected using both qualitative and quantitative methodologies. The findings revealed that ISO 9001 certification has had a positive influence on the organizations' return on assets thus improving its performance. According to the findings, there were no significant differences across sectors that the organizations represented. It covered five sectors namely: Finance; Automobiles; Manufacturing; Energy / petroleum and Commercial services. This clearly indicates that there is a strong correlation between ISO implementation and organization performance and especially in financial performance. The study specifically targeted organizations listed on the Nairobi Securities Exchange which is the leading securities exchange in East Africa leaving out other sectors.

The study scope was therefore limited as they focused on the Nairobi Securities Exchange only yet it should have focused on other sectors. Abdullah, Rushami, and Rabiou (2013), investigated the effect of Total Quality Management practices

(customer satisfaction, education and training, continuous improvement, teamwork, and top management commitment) on organizational performance (financial and non-financial) in the Jordanian banking sector. The results showed that there is a positive relationship between TQM practices and organizational performance (financial and non-financial) in the Jordanian banking sector. The study suggested that banks be more concerned with TQM practices that could increase the organizational performance whether it's financial or non-financial. The study scope was limited as it focused on the banking sector only yet it should have focused on other sectors.

Psomas, Pantouvakis, and Kafetzopoulos (2013), sought to define and subjectively measure ISO 9001 effectiveness as the achievement of the standard's objectives and determine its impact on the performance dimensions of service companies related to product/service quality, operational and financial performance. The product/service quality and operational performance of the service companies were directly and significantly influenced by ISO 9001 effectiveness. The financial performance was directly influenced only by operational performance, while the impact of ISO 9001 effectiveness was indirect through its significant correlation with operational performance. However, the sample of the responding ISO 9001 certified service companies was limited to small and medium-sized enterprises from one country. Moreover, the introduced instrument was of subjective nature as the data collected through quality managers may be biased regarding ISO 9001 effectiveness and company performance. Furthermore, the influence of ISO 9001 effectiveness on service company performance with regard to market share and customer satisfaction was not determined and therefore the need for carrying out the study on steel manufacturing sector.

Ruinge and Kimani (2015), sought to establish the relationship between selected total quality management practices employed by Public Secondary Schools Principals and students' performance in Kenya Certificate of Secondary Education in Kiambu County, Kenya. The research adopted a descriptive survey design. Data was collected using both qualitative and quantitative methodologies. The findings revealed that, school focus on meeting student's needs, establishment of performance

objectives (goal setting) on curricular activities and embracement of high level of communication on curricular issues especially from the students, enhance students' performance in national examinations. The selected Total Quality Management (TQM) practices in this study were; school focus on meeting students' needs, goal setting (establishing performance objectives) and communication of curricular issues. The study customized the quality practices dealing with the education sector only. These TQM practices may not be directly applicable in areas like the manufacturing sector. The TQM practices that are common to most sectors would have been customer relations, quality performance measurement, supplier relations, continuous improvement and top management support. These would have been more applicable to other sectors other than just the education sector.

Matata and Wafula (2015) sought to establish the effects of quality management systems on performance of Kenya Ports Authority. The research adopted a descriptive survey design. Data was collected using both qualitative and quantitative methodologies. The findings revealed that quality management systems in any organization are a crucial factor in efficient and effective leadership for successful functioning of the organization. Effective management leads to improved performance, and there is need to put more emphasis on all quality services or products to ensure more organization business performance, and tools in process approach need to be fully employed in enhancing quality services in KPA.

There is also need to focus more on already established factors like management response to customer' complaints, service delivery to customers and organization communication and balancing the needs and expectation of interested parties which have an impact on customer satisfaction. This study however was specifically for Kenya Ports Authority and may not be wholly applicable in the steel manufacturing sector. Its scope was limited to Kenya Ports Authority only. The study relied more on one TQM practice, which is customer relations. The study never touched on top management support, continuous improvement and supplier relations practices which are also essential TQM practices to enhance organization performance. Kiprotich (2014), sought to establish the degree to which top management sets up quality management objectives and strategies, provides and allocates necessary resources,

contributes in quality improvement efforts, and assesses quality management implementation and performance. Quality Management System is a way of life for a company. It has to be introduced and led by top management. The findings indicated that attempts to implement Quality Management System (QMS) often fail because top management doesn't lead and get committed - instead it delegates and pays lip service. This study only dealt with one quality practice and left out all other quality practices.

Ogbari and Borishade (2015), sought to evaluate the relationship between top management commitments and customer retentions as well as to examine the influence of organizational reputation on customer's continuous patronage. They found that there was a strong relationship between total quality management and customer satisfaction in the achievement of organizational goals especially in the current dispensation of globalization and stiff competitions. The study also revealed that total quality management and customer satisfaction have increased steadily over a period of time in some service industries but top management still have much to do in order to entrench TQM and customer satisfaction as policies in their organizations. Majority of the literature reviewed in this study was carried in other sectors none focused on the steel manufacturing sector. The study did not exhaust the entire TQM practices to clearly indicate whether they correlate with organization performance.

Patyal and Kaolakuntla (2017) aimed at establishing the impact of Quality Management Practices on Performance. The findings revealed that infrastructure Quality Management practices have a positive effect on core Quality Management practices and indirectly on quality performance, whereas, core Quality Management practices have a positive effect on quality performance. Also, quality performance has a positive effect on business performance. This study considered Quality Management from two dimensions (infrastructure and core quality practices), the study further contributes to the understanding of the different roles played by diverse Quality Management dimensions in determining business performance in terms of increased return on investment, shareholder and stakeholder value.

Zipporah (2016) indicated that adoption of quality management systems has resulted to prompt delivery of services, quality of the products had improved in terms of reduced customer complaints' and the ability of product to meet the local and international standards. She further reveals that ISO certification also ensured consistent training and therefore improved performance. Quality Management Systems implementation has positive effects on overall organizational performance and implementing does pay off since the benefits accrued include; improved quality, employee satisfaction, productivity, employee participation, teamwork, communication, profitability and greater market share. The idea behind the implementation of quality management systems is to ensure that adequate attention is given to quality so as to give room for an error free transactional process and less room for customer complaints while maximizing customer satisfaction. It is proven that satisfied customers are more willing to recommend quality service to others.

Wanyoike (2016) found that continuous improvement had positive and significant effect on performance of manufacturing firms. Customer relations was found to be significant in explaining the variation of performance and top management commitment was found to have a significant effect of performance of manufacturing firms. Organizational capability had a partial mediating effect on the relationship between quality management practices and performance. Operating environment had a moderating effect on the relationship between quality management practices and performance. This study recommended that management should be committed to quality by providing strategic direction with respect to quality management practices, which should be aligned to the firms' objectives.

Policy makers should create a quality framework that is geared towards improving performance and ensure it is adhered to by all stakeholders in the manufacturing firms in Kenya. The study however did not exhaust all the management practices and was generalized for all manufacturing firms. The existing studies have not satisfactorily exhausted on whether the quality management practices and performance in the Kenyan manufacturing sector are correlated. This study is therefore appropriate in that it filled the gaps in the existing literature by studying on

the effects of the selected quality management practices on organizational performance of the steel manufacturing sector within Kenya.

Wanza (2017) sought to determine the effects of quality management practices on performance of Kenyan Universities. The research adopted an explanatory survey research design. Data was collected using both qualitative and quantitative methodologies. The findings indicated that quality management practices had a significant effect on performance of universities. The study unveiled that employee relations in the university activities, leadership commitment, continuous improvement and customer relations have a significant effect on the university performance. Top management should facilitate employees for any successful implementation of quality management practices. The study recommended that universities operating in Kenya should embrace quality management system to improve their performance.

Kiprotich and Chebet (2017) sought to determine the effects of total quality management practices on organizational performance in Tertiary Institutions in Kenya. The findings revealed that total quality management practices had a significant effect on organizational performance in Tertiary Institutions in Kenya. Concerning employees' involvement, the study concluded that employee relations had a direct relationship with organizational performance. Employees were involved in decision making within their respective organizations, employees are provided with adequate training and education to perform their tasks, and there were clear communication channel between employees and senior managers listened to employee's opinions and encouraged team work among employees.

The study also concluded that customer relations was critical for organizational performance. The results indicated that the organization always attempted to meet its customer needs, address customers complaints as a priority for the organization, the organization actively performed market research to identify customer needs and that the organization provided clear channels of communication to its customers. The study recommended that tertiary institutions managers be enlightened on the importance of total quality management practices on organizational performance to

enhance the level of top management commitment to the practice and consequently achieve better organizational performance.

Njenga and Kibombo (2017) sought to determine the influence of implementation of quality management systems on operational performance of Technical Training Institutions in Meru County: A case of Nkabune Technical Training Institute, Kenya. The study adopted a case study research design. The findings revealed that there is a significant relationship between implementation of quality management systems and operational performance. The study concluded that there is a greater influence of leadership style on operational performance. It was deduced that visionary leadership, delegation of duties and provision of leadership greatly influence operational performance. Further it was revealed that Employee relations, empowerment and recognizing staff contribution and provision of resources greatly influence operational performance. These studies had a limited scope as they focused on the education sector only. Other sectors including the manufacturing sector were left out. Majority of the literature reviewed in these studies was carried out in other sectors and none has focused on the steel manufacturing sector.

## **2.7 Research Gaps**

A critical review of past literature showed that several conceptual and contextual research gaps existed in the relationship between quality management practices and organizational performance. A number of prior studies have measured organizational performance using both financial and market criteria, including Return on Investment (ROI), market share, profit margin on sales, the growth of ROI, the growth of sales, the growth of market share, and overall competitive position (Suhong Li, 2006). There exists an objective gap since this study seeks to determine the effects of strategic quality management practices on organizational performance. In addition, there exists a scope gap since this study focused on steel manufacturing companies.

Abdullah, Rushami and Rabiou (2013), sought to establish the effect of Total Quality Management practices (customer satisfaction, education and training, continuous improvement, teamwork, and top management commitment) on organizational

performance (financial and non-financial) in the Jordanian banking sector. There exists an objective gap since this study seeks to determine the effects of strategic quality management practices on organizational performance. There also exists a scope gap since this study focused on steel manufacturing companies. In addition, there exists a geographical gap since this study is based in Kenya. Ogbari and Borishade (2015) evaluated the relationship between top management commitment and customer retentions and also examined the influence of organizational reputation on customer's continuous patronage. There exists an objective gap since this study seeks to determine the effects of various selected strategic quality management practices on organizational performance. There also exists a scope gap since this study focused the steel manufacturing companies. Ochieng and Jackie (2015) sought to establish the impact of ISO 9001 implementation on Organizational Performance in Kenya. There exists an objective gap since this study seeks to determine the effects of strategic quality management practices on organizational performance. In addition, there is also a scope gap since the study is focused on the steel manufacturing sector.

Ruinge and Kimani (2015) sought to establish the relationship between selected total quality management practices employed by public secondary schools principals and students' performance in Kenya Certificate of Secondary Education in Kiambu County, Kenya. There exists an objective gap since the study seeks to determine the effects of strategic quality management practices on organizational performance. In addition, there also exists a scope gap since the study is focused on the steel manufacturing sector. Matata and Wafula (2015) sought to determine the effects of quality management systems on performance of Kenya Ports Authority. There exists an objective gap since the study seeks to determine the effects of strategic quality management practices on organizational performance. There also exists a scope gap since the study is focused on the steel manufacturing sector. Zipporah (2016) indicated that adoption of quality management systems has resulted to prompt delivery of services, quality of the products had improved in terms of reduced customer complaints' and the ability of product to meet the local and international standards.



Wanyoike (2016) found that continuous improvement had positive and significant effect on performance of manufacturing firms. Namusonge, Muturi and Olaniran (2016) sought to establish the relationship between innovativeness and firm performance in Nigeria. There exists an objective gap since their study did not look at the contribution of quality management on the performance of these organizations. There also exists a scope gap since this study focused on the steel manufacturing sector. In addition, there exists a geographical gap since the study is based in Kenya. Wanza (2017) sought to determine the effects of quality management practices on performance of Kenyan Universities. There exists a scope gap since this study is focused on the steel manufacturing sector. Patyal and Kaolakuntla (2017) revealed that infrastructure Quality Management practices have a positive effect on core Quality Management practices and indirectly on quality performance, and that diverse Quality Management dimensions determines business performance in terms of increased return on investment, shareholder and stakeholder value. This current study aimed at how Quality Management influences organizational performance in steel manufacturing firms.

Barasa, Namusonge and Iravo (2015), assessed the impact of supply- chain collaboration practice on the performance of Steel Manufacturing Companies in Kenya and revealed that supply chain collaboration practice statistically significantly predicted the performance of Steel Manufacturing Companies in Kenya. The findings showed that there is a significant and a moderate positive correlation between supply chain collaboration practice and performance of Steel Manufacturing companies in Kenya. The current study however, went ahead to analyze the relationship between suppliers and quality management in the steel manufacturing firms in Kenya. Kiprotich and Chebet (2017) found that total quality management practices significantly affect organizational performance thus any tertiary institution managers aiming to achieve organizational performance should pay close attention to all the elements of total quality management.

Kiprotich and Chebet (2017) sought to determine the effects of total quality management practices on organizational performance in Tertiary Institutions in Kenya. There exists an objective gap since this study seeks to determine the effects

of strategic quality management practices on organizational performance. In addition, there exists a scope gap since the study focused on the steel manufacturing sector. Njenga and Kibombo (2017) sought to determine the influence of implementation of quality management systems on operational performance of Technical Training Institutions in Meru County: A case of Nkabune Technical Training Institute, Kenya. There exists an objective gap since this study seeks to determine the effects of strategic quality management practices on organizational performance. There also exists a scope gap since the study is focused on the steel manufacturing sector.

## **2.8 Summary**

The above chapter reviewed the various theories that explain the independent and dependent variables. The reviewed theories are then critiqued for relevance to specific variables. The chapter also explored the conceptualization of the independent and the dependent variables by analyzing the relationships between the two set of variables. In addition, an empirical review was conducted where past studies both global and local were reviewed in line with the following criteria; title, scope, methodology resulting into a critique. It is from these critiques that the research gaps were identified.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter discusses the methods and procedures that were used in the research study. It outlines the methods that were used to obtain information with a view to addressing the research problem. This chapter describes the research methodology and design adopted by the study. It comprises research design, target population, sampling frame, sample size and technique, data collection procedure and data analysis and presentation.

#### **3.2 Research Design**

A research design is a general plan or strategy for conducting a research study to examine specific testable research questions of interest (Lavrakas, 2008). A research design functions to articulate the strategies and tools by and through which empirical data will be collected and analyzed. Additionally, it serves to connect research questions to the data and articulates the means by which the research hypotheses shall be tested and research objectives satisfied Cooper and Schindler (2011). In this regard, Cooper and Schindler (2011) argue that the research design has to (1) articulate the research questions (2) identify relevant data (3) determine data collection methods (4) select method by which data will be analyzed and verified.

This study adopted a cross sectional survey research design. A cross section survey allows the researcher to collect a wide range of information without interfering the environment (nothing is manipulated) thus it enables a researcher obtain large amounts of data from a sizeable population in a highly effective, easy and in an economical way using questionnaires. It is called cross sectional because the information about X( predictor variable) and Y (dependent variable), that is gathered, represents what is going on at only one point in time (Olsen & George, 2004). In addition, the study employed both qualitative and quantitative analysis methods. The

purpose of this form of research is that both qualitative and quantitative researches, in combination provide a better understanding of a research problem or issue than either research approach alone. According to Sekaran and Bougie (2009) a researcher should use more than one design to enhance the study, hence these two designs were used to achieve the optimal results as recommended by Saunders, Lewis and Thornhill (2009).

According to Creswell (2014), it involves administering a survey to a sample or to the entire population of people to describe the attitudes, opinions, behaviours, or characteristics of the population. In this procedure, survey researchers collect quantitative, numbered data using questionnaires or interviews and statistically analyze the data to describe trends about responses to questions and to test research questions or hypotheses. The design enabled a thorough and comprehensive determination of the effect of strategic quality management practices on organizational performance of the manufacturing sector in Kenya. The use of this research design is justified by the fact that other studies on organizational performance have used the same design. Sidiq and Javed (2014) used the design to describe the impact of corporate social responsibility on organizational performance.

### **3.3 Target Population**

Target population, is the total population for the study to which the researcher wants to generalize the results of the study (Mugenda & Mugenda, 2003). Newing (2011) describes a population as the set of sampling units or cases that the researcher is interested in. Target population consists of all members of a real or hypothetical set of people, events or objects from which a researcher wishes to generalize the results of their research while accessible population consists of all the individuals who realistically could be included in the sample (Borg & Gall, 2007). An accessible population was drawn from the target population according to Mugenda and Mugenda (2003) who pointed out that it is impractical to select a representative sample from the target population because it may be difficult to identify individual members.

The accessible population which was more narrowly defined and manageable population was then drawn and care taken to ensure sampling validity by ensuring that it was as representative as possible to the target population. The target population for this study constituted the 46 steel manufacturing firms in Kenya listed in the Kenyan Business Directory, 2015. The study targeted top managers in the target population. This population was justified because it is the one mandated with implementation of the strategic quality management practices.

### **3.4 Sampling Frame**

A sampling frame is a complete list of the units of analysis of interest from which the samples are selected while a sample size is the number of items to be selected from the universe to constitute a sample (Kothari, 2007). Target and accessible sample comprised of management representative and quality assurance officers in the manufacturing companies in Kenya since they are involved in strategy execution matters. Strategic management issues are mostly handled by top managers of organizations. Strategy is initiated and led by top management and hence they appreciate the influence of strategic initiatives in a company more than the ordinary workers. This study therefore purposely handpicked 42 senior management staff from the manufacturing companies given that they are more informed and conversant about strategic issues and have strategic responsibilities in the organization. The sampling frame was 46 companies from the Iron and Steel Industries in Kenya listed in the Kenyan Business Directory 2015 (Directory, 2015). The companies are operational in Nairobi and Mombasa.

### **3.5 Sample Size and Sampling Techniques**

This section describes the sampling technique that was utilized in this study. The section also outlines the procedure that was used to choose a sample from the target population.

### 3.5.1 Sample Size

Kombo and Tromp (2009) describe a sample as a collection of units chosen from the universe to represent it. Sampling is the procedure a researcher uses to gather people, places or things to study. It is the process of selecting a number of individuals or objects from a population such that the selected group contains elements representative of characteristics found in the entire group (Kombo & Tromp, 2006). The unit of analysis for this study was senior managers responsible for implementation of strategic quality management practices.

An optimum sample is one which fulfils the requirements of efficiency, representativeness, reliability and flexibility. Efficient sample size is based on an estimate of the sample size required to limit sampling variability to the desired level. Generally, the larger the sample, the more likely the scores on the variables will be representative of the population scores. Sample size in this study was determined using Krejcie and Morgan Sample Size Table (appendix IV).

Krejcie and Morgan (1970) used the following formula to determine sample size;

$$s = \frac{X^2NP(1-P)}{d^2(N-1) + X^2P(1-P)}$$

where s = required sample size

$X^2$  = the table value of chi-square for one degree of freedom at the desired confidence level.

N = population size

P = population proportion, assumed to be 50 since this would provide the maximum sample size

d = the degree of accuracy expressed as a proportion (0.05)

Based on Krejcie and Morgan Sample Size Table, when N is 46, at a confidence level of 95 percent (giving a margin error of 0.05), the sample size is 42 (Krejcie &

Morgan, 1970). The sample size for this study was therefore forty two (42) employees drawn from 42 steel manufacturing companies in Kenya. The respondents were senior managers since they are conversant with strategic quality management practices. The specific firms will be those occupying position 1 to 42 in the sampling frame according to the list provided (Appendix III).

### **3.5.2 Sampling Techniques**

Sampling is the procedure a researcher uses to gather people, places or things to study (Orodho & Kombo, 2002). This study employed sampling whose purpose is to secure a representative group which enabled the study gain information about a population. The study used judgmental sampling. Judgmental sampling is a non-probability sampling technique where the researcher selects units to be sampled based on their knowledge and professional judgment (Kothari, 2004). This type of sampling technique is also known as purposive sampling and authoritative sampling.

Purposive sampling is used in cases where the specialty of an authority can select a more representative sample that can bring more accurate results than by using other probability sampling techniques. The process involves nothing but purposely handpicking individuals from the population based on the authorities or the researcher's knowledge and judgment.

### **3.6 Data Collection Instruments**

Data is anything given or admitted as a fact on which a research inference is based. Cooper and Schindler (2011) and Mugenda and Mugenda (2012) defined data collection instruments as the tools and procedures used in the measurement of variables in research. This study used primary data. According to Kothari (2009) primary data is original information collected for the first time. On the other hand secondary sources of data consist of information that has been gathered and often interpreted by other researchers and recorded in books, articles and other publications. Both Orodho (2003) and Kothari (2009) regard questionnaires as the most important means of data collection. The researcher used questionnaires which

had both closed ended questions and open ended questions where the respondents were required to explain briefly.

Primary data collection was carried out between January 2015 and May 2017. A cross sectional survey research design was adopted and utilized questionnaires to collect data from Management Representatives or Quality Assurance Managers or their equivalents in 42 Kenyan manufacturing firms in the metal and allied sector. According to researchers, questionnaires are preferred for primary data collection because they are less costly, especially when the population is large and widely spread geographically. They ensure anonymity, permit use of standardized questions and ensure uniform procedures. It also ensures that respondents who are not easily approachable are reached conveniently. Besides, questionnaires can provide time for respondents to think about responses and are easy to administer and score (Mugenda & Mugenda, 2004; Kothari, 2011).

Therefore it was appropriate to use questionnaires as important tools for collection of primary data due to their many positive attributes. The questionnaire comprised of both structured and unstructured questions. Expected number of respondents were therefore 42. According to (Mugenda & Mugenda, 2003), a structured questionnaire format can be used to collect quantitative data which can produce numerical or quantifiable data. The unstructured section of the questionnaire was used to collect the qualitative data which provides a complete detailed description of the perceptions, suggestions, experiences and opinions regarding the effects of strategic quality management practices on organizational performance. The study used a combination of both open ended and closed ended questions. The questionnaires begin with a series of closed questions, with boxes to tick or scales to rank, and then end with a section of open ended questions for more detailed response.

According to Zikmund (2010), Likert scales are widely used in business research and that's why the study adopted this style. Likert scale types of questions were designed in the questionnaire and were balanced between the quantity and the quality of data to be collected. Following the procedures used by other researchers (Sim & Killough, 1998; Ahire & Drefus, 2000; Gakure, 1995), the questionnaire survey asked



respondents to indicate their factual information and perception based on the Likert scale. The responses were anchored on a five point scale which ranges from strongly agree to strongly disagree (a scale of 1-5, where, 5= strongly agree, 4=Agree, 3= Neutral, 2= Disagree and 1= Strongly disagree).

### **3.7 Data Collection Procedure**

The researcher paid a visit to all the sampled companies to inform them of the intended study and to seek permission to carry out the research explaining its purpose and benefits. Once permission was granted, the researcher together with the research assistant administered the questionnaires to the respective manager in every company depending on the different structures in the organizations. The questionnaires were used to obtain both quantitative and qualitative data for analysis.

### **3.8 Pilot Test Study**

The purpose of pilot testing is to establish the accuracy and appropriateness of the research design and instrumentation. A pilot study, is a small experiment designed to test logistics and gather information prior regarding a larger study, in order to improve the latter's quality and efficiency. A pilot study can reveal deficiencies in the design of a proposed experiment or procedure and these can then be addressed before time and resources are expended on large scale studies. According to Newing (2011), the importance of pilot testing cannot be overemphasized; one will almost always find that there are questions that people fail to understand or interpret in different ways, places in the questionnaire where they are not sure where to go next, and questions that turn out simply not to elicit useful information.

A pilot test is an evaluation of the specific questions, format, question sequence and instructions prior to use in the main survey. Questions answered by the pilot test include: Is each of the questions measuring what it is intended to measure? Are questions interpreted in a similar way by all respondents? Do close-ended questions have a response which applies to all respondents? Are the questions clear and understandable? Is the questionnaire too long? How long does the questionnaire take to complete? Are the questions obtaining responses for all the different response

categories or does everyone respond the same? According to Blumberg, Cooper and Schindler (2011) a pilot test is aimed to show the duration it takes to complete the questionnaire, confirm the clarity and logical flow, confirm if the questions are clear and short, and to test the questionnaire credibility and should constitute at least 1% of the sample size.

A sample of 10% of respondents was involved in the pilot test which was four respondents. The pilot sample size is informed by Simon (2011) who suggests that a sample size of between 10% and 20% of the actual study sample size is adequate for a pilot study. The pilot respondents were drawn from four steel manufacturing companies that were purposively arrived at so as to cover the two regions, two from Nairobi and two from Mombasa and were also not part of the main study. Four questionnaires were used to collect data in the four companies.

The proposed pilot test was within the recommendations. The respondent for the pilot were requested to complete the questionnaires in a period of three days giving the researcher sufficient time to make any arising amendments. The results of the pilot test were used to develop a more reliable and effective data collection tool. The questionnaire was revised to incorporate the feedback that was provided before it was used for data collection. The data collected was converted into numerical codes to facilitate the determination of reliability. The results of the pilot testing however were not included in the final analysis

### **3.8.1 Reliability**

Reliability refers to the stability and consistency of scores over time (Golafshani, 2003). A reliability test ensures that scores from an instrument are stable and consistent after several tests. Scores should be nearly the same when researcher administers the instrument multiple times at different times as a proof of reliability (Creswell, 2014). Data reliability is a cornerstone of making a successful and meaningful study (Newing, 2011). In order to collect reliable data, the researcher designed the questionnaire through an elaborate procedure which involved a series of revisions under the guidance of the study supervisors to ensure that fieldwork is to be

conducted by use of high quality data collection tools and procedure. Also quotes from interview and statement from questionnaires were used as references to ensure reliability.

Researcher used a checklist of questions when making personal interviews with respondents so as to achieve data consistency and completeness. In order to measure internal consistency, researcher used Cronbach's alpha method. Cronbach alpha, which is a measure of internal consistency, was used to test the internal reliability of the measurement instrument. In order to refine the scale, the researcher started with computing coefficients (Cronbach's alphas) in line with Churchill's (1979) recommendations. Due to the multidimensionality of the independent variables' constructs, Cronbach alpha was computed separately for the determinants of each variable to ascertain the extent to which the items making up each variable shared a common core.

$$\alpha = \frac{N \cdot \bar{c}}{\bar{v} + (N - 1) \cdot \bar{c}} \dots\dots\dots \text{Equation (Cronbach, 1951)}.$$

Based on the feedback from the pilot test, the questionnaire was modified and a final one developed and adopted. As a rule of thumb, acceptable alpha should be at least 0.70 or above (Maizura, Masilamani & Aris, 2009). For this case, the Cronbach's alpha values of all the variables were above 0.7, which implied that the instruments were sufficiently reliable for measurement. The higher the score, the more reliable the generated scale is.

### **3.8.2 Validity**

On the other hand, validity refers to the extent to which an instrument truly measures that which it was intended to measure or how truthful the research instruments are (Golafshani, 2003). Validity has to do with how accurately the data obtained in the study represents the variables of the study. There is need to develop sound evidence to demonstrate that the test interpretation of scores about the concept or construct that the test is assumed to measure matches its proposed use (Creswell, 2014).

Validity can be measured by the extent the data obtained accurately reflects the theoretical or conceptual concepts; that is if the measurements gotten are consistent with the expectations. The validity of this study was determined by asking a series of questions, and often looked for the answers in the research of others such as supervisors, statisticians and colleagues. This study used both construct validity and content validity. For construct validity, the questionnaire is divided into several sections to ensure that each section assesses information for a specific objective, and also ensures that the same is closely tied to the conceptual framework for this study. To ensure content validity, the questionnaire was subjected to thorough examination by three randomly selected strategic quality management experts and expert judgement by two PhD holders in strategic management from JKUAT.

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

Data analysis refers to the application of reasoning to understand the data that has been gathered with the aim of determining consistent patterns and summarizing the relevant details revealed in the investigation (Zikmund *et al.*, 2010). To determine the patterns revealed in the data collected regarding the selected variables, data analysis was guided by the aims and objectives of the research and the measurement of the data collected.

#### **3.9.1 Qualitative Analysis**

Qualitative data obtained from the responses of the open ended question was described, summarized and analyzed. The researcher sought to find out the relationships between various themes that have been identified, or to relate behaviour or ideas to biographical characteristics of respondents such as age or gender. Qualitative data was coded into different factors and analyzed through computer aided content analysis. The content analysis (Berelson, 1952), is an objective technique that ensures systematic, quantitative description of and communication of information. The technique is able to detect the presence of certain words, concepts, themes, phrases, characters, or sentences within texts and quantify them in an objective manner. According to Pope *et al.* (2007), qualitative research employs a

range of philosophies, research designs and specific techniques, including in-depth qualitative interviews; participant and non-participant observation; focus groups; document analyses; and a number of other methods of data collection. The results were presented in continuous prose. This data added value to the quantitative data.

### **3.9.2 Quantitative Analysis**

Quantitative research is based on testing the theories composed of variables, measured with numbers, and analyzed using statistical techniques and aims at determining whether the predictive generalization of the theories hold true (Bryman, 2004). Quantitative data was sorted, coded and entered into Statistical Package for Social Scientists (SPSS) after which descriptive and inferential statistics were obtained. A multiple regression technique was used to predict the value of a variable (dependent) based on the value of two or more other variables (independent variables). This technique allows the determination of the overall fit of the model and the relative contribution of each of the predictors to the total variance explained. Analysis of variance (ANOVA) was used to analyze the differences between group means and their associated procedures (such as "variation" among and between groups). Frequency distributions were obtained for all personal data or classification variables. Means and percentages were obtained for the interval-scaled independent and dependent variables. The results were interpreted and inferences made and later the information presented in tables. The results were used to make conclusions and recommendations.

Inferential statistics were employed with variance inflation factor and multiple regression analysis done. Firstly, variance inflation factor (VIF) and descriptive statistics were conducted to test the multicollinearity problem and the usefulness of the data set. Variance inflation factor (VIF) quantifies how much the variance is inflated. It is a measure of how much the variance of the estimated regression coefficient  $b_k$  is "inflated" by the existence of correlation among the predictor variables in the model. The standard errors and hence the variances of the estimated coefficients are inflated when multicollinearity exists. A VIF of 1 means that there is no correlation among the  $k^{th}$  predictor and the remaining predictor variables, and

hence the variance of  $b_k$  is not inflated at all. The general rule of thumb is that VIFs exceeding four warrant further investigations, while VIFs exceeding 10 are signs of serious multicollinearity requiring correction.

Secondly, multiple regression analysis was used to predict the amount of variance accounted for the criterion (dependent variable) from a set of predictors (independent variables). The multiple linear regression model used is shown below;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \epsilon \dots \dots \dots \text{Equation 3.1}$$

Where;

Y = Represents the dependent variable; Performance of Steel Manufacturing Company

$\beta_0, \beta_1 - \beta_5$  = regression coefficients to be estimated

$X_1$  = Strategic customer relations practices

$X_2$  = Strategic top management support practices

$X_3$  = Strategic quality performance measurement practices

$X_4$  = Strategic suppliers' relationship management practices

$X_5$  = Strategic employee relations practice

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_1 X_1 Z + \beta_2 X_2 Z + \beta_3 X_3 Z + \beta_4 X_4 Z + \beta_5 X_5 Z + \epsilon \dots \dots \dots \text{Equation 3.2}$$

(Ott & Longnecker, 2010)

Where;

Y = Represents the dependent variable; Performance of Steel Manufacturing  
Company

$\beta_0, \beta_1- \beta_5$ = coefficients for the various independent variables

$X_i$  = Strategic quality management practices

Z= Moderating Variable (Organizational learning)

$\varepsilon$  = Random Error of the Model

Regression analysis is a statistical modeling technique used to identify meaningful, stable relationships among sets of data. The application of analytical procedures is based on the premise that, in the absence of known conditions to the contrary, relationships among information may reasonably be expected to exist. Regression measures the causal relationship between one dependant and one independent variable. Multiple regression analysis measures the effects of multiple independent variables on one dependent variable. The test for significance of coefficient of multiple correlations was determined by the use of Fischer distribution test (F- test). It refers to the ratio between the model mean square divided by the error mean square.

This test checked the significance of the whole regression model at 0.05% level of significance with the prediction that all the independent variables that is; strategic customer relations, top management support, quality performance measurement, suppliers' relationship management and employee relations practices have no influence on the dependent variable that is  $\beta_1=\beta_2=\beta_3=\beta_4= \beta_5=0$  and the alternative prediction that at least one of the independent variable is not equal to zero that is  $\beta_i \neq 0$ ;  $i=1, 2, 3, 4, 5$ . The null hypothesis is rejected if F calculated  $>$  F critical hence concluding that at least one of  $\beta_1, \beta_2, \beta_3, \beta_4$  or  $\beta_5$  is not equal to zero. The p-value for the F-statistic was applied in determining the robustness of the model.

The conclusion was based on the basis of p value where if the null hypothesis of the beta is rejected then the overall model was significant and if null hypothesis accepted the overall model is insignificant. In other words if the p-value is less than 0.05 then it will be concluded that the model is significant and has good predictors of the dependent variable and that the results are not based on chance. If the p-value is greater than 0.05 then the model is not significant and cannot be used to explain the variations in the dependent variable.

The following formula was used to compute the F statistic;

$$F = \frac{R^2 / (k-1)}{(1-R^2) / (n-k)}$$

Where, R is multiple coefficient of correlation, k is the number of variables involved, n is the number of paired observations; in this study k was 5 and n was equal to 42 respondents. This test was performed by entering tables of F distribution with k-1 freedom for the variance in numerator and n-k for degrees of freedom for variance in denominator. If F calculated was less than table value, then the decision would be that there was no statistical evidence of significance correlation at 5% level of significance. The conclusion was based on the basis of p-value, where if the null hypothesis of the beta is rejected, then the overall model was significant and if the null hypothesis is accepted, the overall model was insignificant. In other words, if the p-value is less than 0.05, then it was concluded that the model is insignificant and has good predictors of the dependent variable and that the results are not based on chance. If the p-value is greater than 0.05 then the model was not significant and cannot be used to explain the variations in the dependent variable.

In this study, an analysis of partial correlation between variables was also determined. Kothari (2004) points out that partial coefficient of correlation measures separately the relationship between two variables in a way that the effects of other related variables are eliminated; the aim of the analysis is to measure the relationship between an independent variable on the dependent variable holding all other variables constant; thus each partial coefficient of correlation measures the effect of



its independent variable on dependent variable. For this reason coefficient correlation between each set of pairs of variables was computed guided by research questions as follows;

a) To what extent does strategic customer relations practice affect organizational performance in Kenyan steel manufacturing sector? This was determined by;  $y = \alpha_1 + \beta_1 X_1$ , where  $y$  was performance of steel manufacturing companies in Kenya,  $X_1$  was the variable strategic customer relations practice, and  $\beta_1$  is coefficient of correlation of customer relations. The independent variables top management support, quality performance, suppliers' relationship management and employee relations were held constant.

b) How does strategic top management support practice affect organizational performance in Kenyan steel manufacturing sector? The relationship was determined by regression equation;

$y = \alpha_2 + \beta_2 X_2$  where  $\beta_2$  was the coefficient of correlation of strategic top management support practice,  $X_2$  was the variable top management support and  $y$  was performance of steel manufacturing companies in Kenya. The independent variables customer relations, quality performance, suppliers' relationship management and employee relations were held constant.

c) How does strategic quality performance practice affect organizational performance in Kenyan steel manufacturing sector? The correlation was determined by regression equation;

$y = \alpha_3 + \beta_3 X_3$ ; where  $\beta_3$  was the coefficient of correlation of strategic quality performance,  $X_3$  was the variable quality performance and  $y$  was performance of steel manufacturing companies in Kenya. The independent variables held constant included customer relations, top management support, suppliers' relationship management and employee relations.

d) To what extent does strategic suppliers' relationship management practice affect organizational performance in Kenyan steel manufacturing sector? The correlation was determined by regression equation;

$y = \alpha_4 + \beta_4 X_4$ ; where  $\beta_4$  was the coefficient of correlation of suppliers' relationship management practice,  $X_4$  was the variable suppliers' relationship management and  $y$  was performance of steel manufacturing companies in Kenya. The independent variables held constant included customer relations, top management support, quality performance and employee relations.

e) To what extent does strategic employee relations practice affect organizational performance in Kenyan steel manufacturing sector? The correlation was determined by regression equation;

$y = \alpha_5 + \beta_5 X_5$  where  $\beta_5$  was the coefficient of correlation of strategic employee relations practice,  $X_5$  was the variable employee relations. The independent variables customer relations, top management support, quality performance and suppliers' relationship management were held constant.

### **3.9.3 Measurement of Study Variables**

As summarized in Table 3.1, strategic quality management practices were measured in terms of primary data responses to Likert item questions in the questionnaire.

**Table 3.1: Measurement of Study Variables**

<b>Variable</b>	<b>Indicator</b>	<b>Scale</b>	<b>Questionnaire Reference/ Measurement</b>
Strategic customer relations practice	Customer satisfaction Strategic customer relations Prompt handling of customer complaints	Interval	Questions 1, 2 and 3
Strategic top management support practice	Strategic leadership commitment	Interval	Questions 4 and 5
Strategic quality performance measurement practice	Provision of necessary resources ISO Audits Organization's quality culture	Interval	Questions 6, 7, 8 and 9
Strategic suppliers' relationship management practice	Control systems Strategic suppliers' relations Strategic suppliers' selection	Interval	Questions 10 and 11
Strategic employee relations practice	Strategic employees relations Team work	Interval	Questions 12, 13 and 14
Organizational learning	Working conditions Sensitization and awareness creation Learning environment	Interval	Questions 15, 16 and 17
Organizational performance	Financial Performance	Interval	Questions 18, 19 and 20

### **3.9.4 Diagnostic Tests**

The most important assumption was that the data for analysis were drawn from a normally distributed population. Therefore, before conducting the regression analysis, several diagnostic tests, such as Normality, Linearity and Multicollinearity tests were conducted to establish the appropriateness of the data for making inference (Field, 2009).

#### **a) Normality Test**

Normality is the assumption that the error term is normally distributed with a mean of zero and a constant variance. Multiple regression analysis requires that data is normality distributed. The normality data distribution was assessed by examining its skewness and kurtosis. A variable with an absolute skew-index value greater than 3.0 is extremely skewed while a kurtosis index greater than 8.0 is extreme kurtosis (Kline, 2005). Cunningham (2008) stated that an index smaller than an absolute value of 2.0 for skewness and an absolute value of 7.0 is the least violation of the assumption of normality. A value of zero meant that the distribution was symmetric, while a positive skewness indicated a greater number of smaller values, and a negative value indicates a greater number of larger values. A kurtosis value near zero indicated the shape of data was close to normal. A negative value indicated a distribution which was more flat than normal, and a positive kurtosis indicates a shape peaked than normal. Creswell (2008) indicate that Kurtosis and skewness statistics of + or -2 are adequate for statistical analysis.

#### **b) Linearity Test**

The Pearsons correlation coefficient was used to test the linearity of the relationship between the variables as recommended by (Dancey, 2004). The correlation coefficient indicates the strength and direction of linear relationship. A negative coefficient indicates an inverse relationship where an increase in one variable caused a decrease in the other, whereas a positive correlation indicates a direct influence, where an increase in one variable causes an increase in the other variable (Field, 2009).

### **c) Test for Homogeneity**

The assumption for homoscedasticity requires that the variance of the disturbance term be constant for all observations, and a violation of this assumption will give rise to the problem of heteroscedasticity. Presence of heteroscedasticity will render the estimates inefficient. Levene test for equality was computed using one-way Anova procedure. It was used to assess the equality of variances for a variable calculated for two or more groups. The level of significance for the study was  $\alpha = 5\%$ , for  $p \geq 0.05$  fail to reject, while for  $p < 0.05$  was rejected and conclude that there is a difference between variances of the population. The result shows that the significance level for Levene's test is greater than 0.05, indicating variances homogeneity (Tabachnick & Fidell, 1996).

### **d) Multicollinearity Test**

Multicollinearity occurs when two or more predictors in the model are highly correlated and provide redundant information about a response. The assumption of non-multicollinearity requires that none of the explanatory variables in the model should be correlated with any other explanatory variable or with any linear combination of those explanatory variables. Variance inflation factor (VIF) quantifies the severity of multicollinearity in a regression analysis and it provides an index that measures how much the variance of an estimated regression coefficient is increased because of multicollinearity. A mean VIF for all the independent and dependent variables less than 3 ( $VIF \leq 3$ ) indicated no multicollinearity (Hair *et al.*, 2010). Furthermore, Field (2009) has suggested that if the variance inflation factors (VIFs) are more than 10, then there is cause for concern about multicollinearity. Tolerance value of  $\geq 0.1$  indicates no multicollinearity. Multicollinearity poses a problem for multiple regression models, since as collinearity increases, the standard error of coefficients also increases, making them less trustworthy. Multicollinearity where it exists is solved by deleting one of the highly correlated variables. Hypotheses were tested to determine whether influence by independent variable were significant or not. If  $p < 0.05$ , then null hypotheses was rejected and vice-versa. SPSS Version 21 was used to aid in data analysis. Tables were used to summarize,

organize and present the data collected and analyzed. The results and discussions were provided in Chapter Four.

### **3.9.5 ANOVA Test**

Analysis of Variance (ANOVA) was done to establish whether the whole model was a significant fit of the data. ANOVA is a method for testing the assumption that there is no significant difference among three or more sample means. It tests the assumption about means by comparing two different estimates of the population variances (Hinkelmann & Kempthorne, 2008). ANOVA consists of calculations that provide information about the levels of variability within a regression model and forms a basis for test of significance. Pagano (2004) indicated that ANOVA test can be used to determine the impact that the independent variables have on the dependent variable in a regression model.

### **3.9.6 Correlation Analysis**

Correlation analysis was done by computation of Pearson correlation coefficient. Pearson's correlation coefficient is a test statistics that measures the statistical relationship, or association, between two variables. It is known as the best method of measuring the association between variables of interest because it is based on the method of covariance (Tabachnick & Fidell, 2007). It gives information about the magnitude of the association, or correlation, as well as the direction of the relationship. As a rule of thumb, Choudhury (2009) gave a guideline that can be applied in establishing the strength of the relationship.

## **CHAPTER FOUR**

### **RESEARCH FINDINGS AND DISCUSSIONS**

#### **4.1 Introduction**

This chapter presents the data analysis, empirical results there from, interpretation of the results and findings, and discussions of the study results. The study chose to use descriptive statistics with the help of (SPSS) as a tool of analyzing the data. Data was presented statistically using frequency tables.

#### **4.2 Response Rate**

The sample size of the targeted population was 42. All respondent who were given the questionnaire filled and returned them meaning there was 100% response rate. According to Best and Kahn (2006), a response rate of 50% is considered adequate, 60% good and above 70% very good. Therefore, in view of this, the response rate was considered very good and exceeded the threshold postulated by Best and Khan.

#### **4.3 Reliability Results**

##### **4.3.1 Reliability Tests for Strategic Quality Management Practices**

As explained by Kothari (2004), reliability refers to the extent to which a measurement is able to yield consistent results each time it is applied under similar conditions. To measure the reliability of the data collection instrument, Cronbach's alpha ( $\alpha$ ) was used. Cronbach's alpha is a measure of internal consistency that tests how closely related a set of items are as a group. A value of alpha (close to 1) is high and often used as evidence that the items measure an underlying construct.

Table 4.1 shows the summary of the reliability statistics for strategic quality management practices indicators. As explained by Sekaran (2003), Cronbach alpha coefficient of above 0.7 implies reliability of the data collection instrument. From the results, it is inferred that all the questions met the Cronbach's alpha coefficient of assessing the internal consistency of the instruments with alpha coefficients of above

0.7 which therefore implies reliability. The overall reliability of the instrument was 0.737 which indicates an acceptable level of internal consistency. This implied that the research instrument was reliable.

**Table 4.1: Reliability Statistics**

<b>Variable</b>	<b>Alpha (<math>\alpha</math>)</b>	<b>Comment</b>
1. Strategic customer relations practices	0.741	Reliable
2. Strategic top management support practices	0.712	Reliable
3. Strategic quality performance measurement practices	0.711	Reliable
4. Strategic suppliers' relationship management practices	0.703	Reliable
5. Strategic employee relations practices	0.817	Reliable
Overall	0.737	Reliable

#### **4.4 Descriptive Results**

##### **4.4.1 Descriptive Results on Strategic Customer Relations Practices**

The first objective of the study aimed at examining the extent to which strategic customer relations practices affects organizational performance in steel manufacturing sector in Kenya. The respondents based their responses on a Likert scale whose items were either (strongly agree (SA), agree (A), undecided (UD), disagree (D) or strongly disagree (SD). The outcome of data analysis is presented in the section below. The study sought data on organization's customer relations practices and presented the results of descriptive analysis as shown in Table 4.2.



**Table 4.2: Descriptive Results in Percentage on Strategic Customer Relations Practice**

<b>Statement</b>	<b>SA</b>	<b>A</b>	<b>UD</b>	<b>D</b>	<b>SD</b>
1. Organization investigates and fixes customer complaints	9.5	21.4	16.7	38.1	14.3
2. Organization measures customer satisfaction	9.5	28.6	11.9	35.7	14.3
3. Achievement of ISO 9001:2008 has made the institution create value for customers	19.0	52.4	14.3	7.3	7.0
4. Customer care office is strategically located and has acted as a valuable tool for introducing a client focus in the institution	16.7	21.4	4.8	38.1	19.0
5. Customer complaints have decreased over the last three years	7.1	26.2	9.5	38.1	19.0
6. Quality management and customer satisfaction are integrated in organizational plans	16.7	40.5	7.1	21.4	14.3

Cumulatively 52.4% (n=22) of the respondents were not of the opinion that the organization investigates and fixes customer complaints whereby 38.1% disagreed while 14.3% strongly disagreed. This means that majority of companies that manufacture steel in Kenya neither investigates nor fixes customer complaints. Liusar (2009), argued that customer relations lead to customer loyalty which can be achieved by providing customers with reliable and durable product/service.

Kumar, Choisne, Danuta, and Kumar (2009), investigated the impact of Total Quality Management (TQM) implementation on different dimensions of company performance and revealed that there was hypothesized positive impact of TQM on customer satisfaction which was indicated by reduced number of customer complaints. Shaohan (2009), found that organizational customer orientation affects

customer relationship practices, which subsequently influence production performance and customer satisfaction. Production performance and customer satisfaction lead to financial performance. This implies that companies need to promote customer orientation in their organization by investigating and fixing customers complaints, in order to successfully implement customer relationship practices. It is only when companies effectively utilize the knowledge that they collect to improve production performance that they enhance customer satisfaction and their financial outcomes. These findings underline the importance of steel manufacturing firms to get information and track customers' complaints for them to remain ahead in the quality improvement process and subsequent improved financial performance.

The findings of the study indicate that (50%, n=21) of the respondents were not of the opinion that their company measures customer satisfaction whereby 35.7% disagreed and 14.3% strongly disagreed. This implies that about half of the steel manufacturing companies in Kenya do not measure customer satisfaction. Eugenia (2010), observes that most companies are trying to satisfy their customer's needs and expectations. This can only be achieved through improvement in product quality, increased customer satisfaction and continuous improvement towards world class organizations. Customer satisfaction does have a positive effect on organization's profitability. Satisfied customers form the foundation of any successful business because customer satisfaction leads to repeat purchases, brand loyalty, and positive word of mouth (Dean, 2016).

Delivering great customer service takes both understanding of what the customers want and developing a way to see that they receive it. The simplest way to find out how customers feel and what they want is by measuring their satisfaction through asking them questions (NBRI, 2016). Neyestani and Juanzon (2017), revealed that ISO 9001:2008 standards has shown its capabilities to lower costs, increase productivity, and satisfy customers in the organizations as it has proven its benefits to different sectors in all over the world. Kassim and Abdullah (2010), found that perceived service quality was found to have a significant impact on customer satisfaction and in turn customer satisfaction was found to have a significant effect

on trust. Johnson, Sivadas and Garbarino (2008), found that commitment has a positive influence on customer satisfaction and diminishes risk perceptions.

Clarke (2014), showed that satisfied customers are the key to sustainability and growth for any business. The more satisfied the customers are, the more likely the company will be successful. To gauge customers' satisfaction, business owners and managers should get the data for customer satisfaction by asking them questions frequently and regularly. The author further argues that since customer satisfaction is a moving target, business owners and managers must continually survey the customers to find out what it takes to satisfy them. The study therefore shows that there is dire need for steel manufacturing companies in Kenya to increase the practice of measuring customer satisfaction on a regular basis.

The findings of the study indicate that majority (71.4%, n=30) of the respondents were of the opinion that achievement of ISO 9001 certification has made their companies create value for customers whereby 52.4% agreed and 19.0% strongly agreed. This implies that achievement of ISO 9001 certification by the Kenyan steel manufacturing sector has created value for customers of steel products. This corroborates Kagumba (2013), who established that appreciation and participation in ISO certification resulted in improved firm performance, improved organizational outcomes and, accordingly, increased revenue inflows for development.

Peter (2009), sought to explore the patterns with which ISO 9000 was implemented in service organizations and to examine the performance outcomes and contextual factors which are associated with different ISO 9000 implementation patterns and found that organizations with different ISO 9000 implementation patterns performed differently. This therefore implies that managers must realize that ISO certification is capable of generating a competitive advantage to meeting customer needs but only if top management is fully committed to the program implementation from a strategic perspective.

Bichanga (2012), also revealed that ISO 9001 certification defines responsibilities clearly, improves communication within the organizations, facilitates data gathering for management, improves the attitude of the staff, improves staff management, improves integration within the organization and reduces improvisation. Ismyrlis and Moschidis (2015), carried out a study whose purpose was to examine the benefits of ISO 9001 certification and the association between them, the level of implementation of the critical success factors (CSFs) required for the appropriate functioning of the quality management system in ISO 9001 certified companies and between other demographic variables. The study found that the least important benefits of ISO certification were mostly business results, such as profits, costs and market share.

Differences were detected between the level of performance and certain demographic variables such as the use of International Organization for Standardisation (ISO) alone, size and years of certification. The certified companies have generally benefited from ISO implementation. This implied that measures presented in the study can be used by certified companies to evaluate performance (financial or not) related to ISO 9001 certification and to discover those factors that contribute to the better exploitation of the ISO 9001 standard. About a million (982,832) organizations in 176 countries, have already implemented the ISO 9001 requirements. Between 2007 and 2008 the number of certifications worldwide increased by 3% (ISO, 2008).

The findings of the study indicate that majority (57.1%, n=24) of the respondents were not of the opinion that customer care office is strategically located and has acted as a valuable tool for introducing a client focus in the institution, whereby 38.1% disagreed and 19.0% strongly disagreed. This implies that to a significant extent customer care office location has not acted as a valuable tool for introducing a client focus in the steel manufacturing companies in Kenya. Karakaya and Nora (2010), noted that consumer opinions about customer care in socially-based web sites impact consumer opinions and consumer engagement and consequently consumer choice of brand or company when making purchases. The web sites, including government/consumer advocacy information sites, company web sites and information found through search engines are not considered important in influencing consumers. This implies that companies need to pay attention to the

voices of customers through customer care offices and respond appropriately in order to keep customers brand-loyal. However, advancement of technology means such as office should be capable of interacting with customers through social websites. Kantsperger, Santouridis and Trivellas (2010), showed that customer service, pricing structure and billing system are the service quality dimensions that have the more significant positive influence on customer satisfaction, which in turn has a significant positive impact on customer loyalty.

The customer care office should therefore be such an important concern of steel manufacturing companies and should be linked to pricing and billing. Kunz (2005), that aimed at showing how to manage overall service quality in customer care office, revealed that employees' satisfaction is the main factor for driving customer orientation. The findings showed that management efforts resulting in employee orientation will facilitate the job of employees and increase employee loyalty at a customer care office. This suggests that for steel manufacturing companies in Kenya to use the customer care office as a tool for introducing client focus, they should aim at increasing employee satisfaction in customer care offices as well as put efforts in enhancing orientation of employees working in the offices. The failure by steel manufacturing companies in Kenya to have the customer care office strategically located and acting as a valuable tool for introducing a client focus in the companies suggests a failure in the implementation of QMS rather than a problem with QMS itself.

The findings of the study indicate that majority (57.1%, n=24) of the respondents were of the opinion that customer complaints had not decreased over a period of three years prior to the study, in which case 38.1% disagreed while 19.0% strongly disagreed. This implies that there are customer complaints in the steel manufacturing industry and that steel manufacturing companies' quality management approaches have not yet achieved the desired levels of reducing customer complaints. Homburg and Furst (2005), addressed how an organization's complaint management affects customer justice evaluations and, in turn, customer satisfaction and loyalty revealed that though both the mechanistic and the organic approach significantly influence

complaining customers' assessments, the mechanistic approach has a stronger total impact.

In delineating an organization's complaint management, the authors drew a distinction between two fundamental approaches, the mechanistic approach (based on establishing guidelines) and the organic approach (based on creating a favorable internal environment). The study provided evidence of a primarily complementary relationship between the two approaches. The study revealed that the beneficial effects of the mechanistic approach are stronger in business-to-consumer settings than in business-to-business ones and achieve better results in service firms when compared to manufacturing firms.

Mangula (2013), revealed that the quality of products in manufacturing firms in Tanzania had significantly improved following the adoption and certification through ISO 9001. More specifically the findings depict that quality product had improved in terms of reduced customer complaints and the ability of products to meet the local and international standards. This suggests that in their bid to improve quality, steel manufacturing firms should aim at reducing as well as being prompt in handling customer complaints.

The findings of the study indicate that majority (57.2%, n=24) of the respondents were of the opinion that quality management and customer satisfaction are integrated in organizational plans whereby 40.5% (n=17) agreed and 16.7% (n=7) strongly agreed. This means that quality management and customer satisfaction are integrated in organizational plans which corroborates Goetsch and Davis (2010), who noted that quality is a dynamic state associated with product, services, people, processes, and environments that meet customer needs and expectations and help produce superior value. Satisfying customers is only the base line and may not be sufficient for survival (Hu, Kandampully & Jawaheer, 2009).

Management should focus on gaining customer loyalty by enhancing customer perceptions of service quality and increasing it as perceived by the consumer. This indicates that delivering high quality service and creating superior customer value

can result in achieving high customer satisfaction, thus having a positive effect on the firm's corporate image and ultimately leading to consumer retention. Manufacturing firms and especially in the Kenyan steel manufacturing sector should always aim at quality management and customer satisfaction.

**(a) Customer Satisfaction Index in the Last Customer Satisfaction Survey**

The study obtained data on customer satisfaction index in the last customer satisfaction survey. Table 4.3 shows that majority (40.5%, n=17) of respondent's customer satisfaction index in the last customer satisfaction survey was between 20-40% while 35.7% (n=15) of respondents had 41-60%. This implies that majority of respondent's customer satisfaction index in the last customer satisfaction survey is between 20 and 40%. A customer satisfaction index is used to identify the most important services that a company provides and measures how satisfied customers currently are with each of these services. Its assessment considers performance of 'what if' scenarios based on hypothesized improvements to service levels (University of South Australia, 2014).

**Table 4. 3: Customer Satisfaction Index in the Last Customer Satisfaction Survey**

<b>Index</b>	<b>Frequency</b>	<b>Percent</b>
< 20%	4	9.5
< 20-40%	17	40.5
41-60%	15	35.7
>60	6	14.3
Total	42	100

**(b) Organization has a Customer Care Office or its Equivalent**

The study also sought data on whether organization has a customer care office or its equivalent. The results are presented on Table 4.4 that shows that majority (57.1%,

n=24) of the respondent's organization has a customer care office or its equivalent while 42.9% (n=18) does not have customer care office. This implies that majority of respondent's organization has a customer care office or its equivalent. Customer service consists of a set of behaviors that a company undertakes during interaction with its customers. It also refers to a series of activities designed to enhance the level of customer satisfaction. That is, the feeling that a product or service has met the customer expectation. Often these services are assigned to a specific person, desk or an office which is set up to provide general assistance to customers (Aden, 2016). Customer service is critical to profitability and is the lifeblood of any business. Companies that focus on providing outstanding customer service experience ultimately reap the benefits that is displayed through more loyalty, better acquisition and increased spend (FONOLO, 2017).

**Table 4.4: Organization Has a Customer Care Office or its Equivalent**

<b>Customer Care Office available</b>	<b>Frequency</b>	<b>Percent</b>
Yes	24	57.1
No	18	42.9
Total	42	100

#### **4.4.2 Descriptive Results for Strategic Top Management Support Practice**

The second objective of the study aimed at assessing the effect of strategic top management support practice on organizational performance in Kenyan steel manufacturing sector. The respondents based their responses on a Likert scale whose items were either (strongly agree (SA), agree (A), undecided (UD), disagree (D) or strongly disagree (SD). The outcome of data analysis is presented in the section below. The study sought data on organization's top management support and presented the results of descriptive analysis in Table 4.5. The Table shows that majority (57.1%, n=24) of respondents were of the opinion that top management in



their company actively encourages implementation of the Quality Management System (QMS) whereby 35.7% (n=15) agreed and 21.4% (n=9) strongly agreed.

**Table 4.5: Descriptive Results on Strategic Top Management Support Practice**

Statement	SA	A	UD	D	SD
1. Top management in the respondent's company actively encourages implementation of the QMS	21.4	35.7	7.1	23.8	11.9
2. Top management considers quality improvement as a way to increase profit	19.5	31.0	16.7	23.8	9.5
3. Top management allocates adequate resources towards efforts to improve quality	7.1	19.0	9.5	40.5	23.8
4. Company has quality goals identified by top management	7.1	28.6	16.7	33.3	14.3
5. Top management encourages Employee relations in the production process	19.0	42.9	11.9	16.7	9.5
6. Internal process improvement in the organization has led to externally observable improvements.	11.9	33.3	19.0	23.8	11.9

While acting as a “wedge” that both holds the gains achieved along the quality journey, and prevents good practices from slipping (Department of Trade and Industry- UK, 2011), QMS helps coordinate and direct an organization's activities to meet both the customers and regulatory requirements and improve the companies effectiveness and efficiency on a continuous basis (American Society for Quality, 2017). The cornerstone of a quality organization is the concept of the customer and supplier working together for their mutual benefit (Department of Trade and Industry- UK, 2011). For this to become effective the customer-supplier interfaces must extend into, and outside of, the organization, beyond the immediate customers and suppliers and thus there is need for the management to implement quality management

practices. (Chin, 2003), focused on the impact of ISO and the firm's performance and established that the most important factor in the standardization process and subsequent certification is the top management. In the same vein, Chin-Keng (2011), indicated that top management needed to be more helpful and effective towards TQM practices and implementation.

Das, Kumar and Kumar (2011), sought to identify the specific leadership competencies required for implementing Total Quality Management (TQM); to examine the influence of leadership competencies for implementing individual TQM principles; and to examine the relationship of the TQM implementation principles with TQM outcomes among the Thai manufacturing companies with different levels of leadership competencies, and confirmed the necessity for top management to perform as leaders for implementing TQM. Companies with high leadership competencies execute each of the TQM principles more effectively and are able to produce higher quality products.

The research also found that the relationships of TQM implementation constructs and the outcome construct (product quality) are not same in the different contexts of leadership competencies. The predictors of product quality in the context of high leadership competencies are: customer relations; continuous improvement; employee relations; and supplier quality management. The predictors of product quality in companies with low leadership competencies are top management commitment; customer relations; and product innovation. This suggests that the top management in an organization is responsible for the active encouragement in the implementation of the strategic quality management practices.

The findings of the study indicate that (50.0%, n=21) of respondents were of the opinion that top management considers quality improvement as a way to increase profits whereby 31% agreed and 19% strongly agreed. This suggests that majority of steel manufacturing companies consider quality improvement as a way to increase profits. Decenzo, Robbins, and Verhulst (2010), opine that TQM is synonymous to continuous improvement and that it represents a commitment to constantly improve the quality of products and by extension profitability. Subedi and Maheshwari

(2007), indicated that TQM can have positive impact on the bottom line of a company and that lean inventory and quality management go hand in hand. The study however indicated that with TQM, firms may or may not gain advantage in cost or in ability for premium pricing. However, TQM strategy that focuses on increasing customer levels of satisfaction does have a significant and positive impact on performance (Decenzo, Robbins, & Verhulst, 2010). This suggests that attaining customer satisfaction is thought to increase the profits of the organization by decreasing costs, leads to fewer returns and increases revenues through customer loyalty.

Currently, the main concern of any organization including manufacturing or service companies is to reach the world class excellence through high quality products and services, customer satisfaction, and cost reduction with profit optimization (Arauz & Suzuki, 2004). Prodromos and Chatzoglou (2015), showed that ISO 9001 implementation is highly associated with improvements in overall financial performance. Moreover, it was found that ISO implementation is directly associated with significant improvements in quality awareness, operations execution, market share, customer satisfaction and sales revenue which result to profits. Oluwatoyin and Oluseun (2008), revealed the benefits that accrue from the implementation of TQM as a strategic tool for an organization to employ in its quest to remain competitive. If adequately deployed, the principle brings about added value to an organization in terms of efficiency in operation, employee satisfaction, customer satisfaction and even profitability.

The findings of the study indicate that majority (64.3%, n=27) of the respondents were not of the opinion that top management allocates adequate resources towards efforts to improve quality whereby 40.5% disagreed and 23.8% strongly disagreed. This means top management in most of the companies does not allocate adequate resources towards efforts to improve quality. Wahid (2009), revealed that top management commitment contributes to higher performance through proper utilization of resources. Wahid, Corner and Tan (2011), investigated top management commitment role in maintenance of ISO 9001 and its outcome on quality management system, practices and implementation in two large service organizations

and concluded that there is a positive role of top management in ISO 9001 maintenance and Quality Management System outcomes.

Further, the findings corroborated Yeung, Cheng and Lai (2005), who established that top management commitment enhances resource allocation, leading to enhanced organizational capability. The investigation focused on top management commitment and leadership from different approaches such as involvement in quality improvement, providing necessary resources and showing steady commitment to quality perfection. Delic, Radlovacki, Kamberovic, Maksimovic and Pecujilija (2013), revealed that the systematic improvement of organizational performance should include improving managers' commitment to quality management, effective quality planning and organizational learning. The findings suggest that the top management of the Kenyan steel manufacturing sector should increase the allocation of resources in their efforts to improve quality products and services. This would lead to increase in profits for the companies.

The findings of the study indicate that cumulatively, 47.6% (n=20) of respondents were not of the opinion that companies has quality goals identified by top management whereby 33.3% disagreed and 14.3% strongly disagreed. This means that to a significant extent, most of the companies do not have quality goals identified by top management. Ahmend (2008), determined that top management leadership is a major factor in TQM programs and initiative especially in the context of research and development (R&D).

Cochran (2000), indicated that the most significant change for ISO 9001 certifications is a requirement that quality objectives be established at each relevant organizational function and level. The manner of establishing quality objectives and their management could have a significant impact on the organization's performance. This is because quality objectives can drive the strategic improvements throughout the organization, significantly elevating the importance of the quality management system. This puts a major responsibility of managers within companies that manufacture steel in Kenya to ensure that they set quality goals and cascade them throughout their organizations.

The findings of the study indicate that cumulatively, 61.9%, n=26 of the respondents were of the opinion that top management encourages Employee relations in the production process whereby 42.9% agreed and 19% strongly agreed. This suggests that top management is active in encouraging employee relations in the production process in most of steel manufacturing companies in Kenya. Contrasting findings made by Samat, Ramayah, and Saad (2006), in a study that explored the relationship between management support, employee commitment and service quality as well as the relationship between management support, employee commitment and market orientation concluded that such organizations had no significant different effect on service quality and on market orientation when compared with organizations that have adopted TQM examined in the study.

However, Feng, Terziovski and Samson (2007), concluded that successful implementation of ISO 9001 certification would be increased through good planning and which should have a background of an organizational philosophy coupled with employee training, and commitment at all levels of the organization. This study suggests that the top management in organization should ensure that employees are involved both in the production process and achievement of quality production process. The findings in this current study suggest that there are deficiencies from the top management's commitment to quality management in terms of involving and training employees, despite the fact that their role in achieving quality performance is very crucial.

The findings of the study indicate that majority (45.2%, n=19) of the respondents were of the opinion that internal process improvement in their companies had led to externally observable improvements whereby 33.3% agreed and 11.9% strongly agreed. This means that internal process improvement in the organization has led to externally observable improvements in most of steel manufacturing companies. For any organization to be successful there are several indicators that can be measured including communication effectiveness, customer relationships, employee satisfaction, brand image, distraction, trust, supplier relationships and employee competence (Anderson, 2016). Results for better internal processes aimed at improving the performance of steel manufacturing companies needs to be evinced

through such indicators. The results of the study therefore imply that there are visible changes that are occurring in the steel manufacturing companies in Kenya following improvement of internal processes.

**(a) Strategic Top Management Commitment in Quality Improvement**

The study sought data on how top management is committed in quality improvement by seeking data on the specific manager to whom the officer responsible for quality management reports to. The obtained data was analyzed and the results presented in Table 4.6.

**Table 4.6: Data on Top Management Commitment in Quality Improvement**

<b>Category of Manager</b>	<b>Frequency</b>	<b>Percent</b>
Chief Executive Officer	12	28.6
Head of Department	12	28.6
Production Manager	15	35.7
Supervisor	3	7.1
Total	42	100

Table 4.6 shows that majority (35.7%, n=15) of the respondents agreed that the person responsible for quality improvement normally reports to the production manager while to 28.6% of the respondents, the person reports to both the Chief Executive Officer and head of department. This implies that in most of steel manufacturing companies, the person in charge of quality improvement reports to production managers. This implies that quality improvement is given a production dimension most often.

Crosby (2009) showed that the quality manager must be a real manager and report at the same level as the managers he or she measures and reports about and therefore the person who is responsible for quality should report to the overall leader in the organization who is the Chief Executive Officer. The quality manager should also be part of the business and the business planning function and should thus sit in

planning meeting and have a say about the business plans. In this context therefore, the data shows that there is need for the steel manufacturing companies to change the organizational structure so as to ensure that the person in charge of quality improvement reports directly to the Chief Executive Officer.

#### **4.4.3 Descriptive Results for Strategic Quality Performance Measurement Practice**

The third objective of the study aimed at establishing the extent to which strategic quality performance measurement practices affects organizational performance in Kenyan steel manufacturing sector. The respondents based their responses on a Likert scale whose items were either (strongly agree (SA), agree (A), undecided (UD), disagree (D) or strongly disagree (SD). The outcome of data analysis is presented in the section below. The study sought data on organization’s quality performance and presented the results of descriptive analysis in Table 4.7.

**Table 4.7: Descriptive Results on Strategic Quality Performance Measurement Practice**

<b>Statement</b>	<b>SA</b>	<b>A</b>	<b>UD</b>	<b>D</b>	<b>SD</b>
1. The Company believes that getting certified is not an end in itself but a starting point to introducing other quality initiatives	23.8	33.3	21.4	9.5	11.9
2. The company takes preventive action to ensure product conformance	14.3	33.3	14.3	23.8	14.3
3. In the company everyone participate in improving quality of product/ processes.	19.0	11.9	9.5	28.6	31.0
4. Prevention of defects in products is key in the operation of the steel manufacturing companies	19.0	16.7	14.3	35.7	14.3
5. Company uses control systems for monitoring performance	11.9	21.4	16.7	33.3	16.7

The findings of the study indicate that (57.1%, n=24) of the respondents were of the opinion that their company believes that getting ISO certified is not an end in itself but a starting point to introducing other quality initiatives whereby 33.3% agreed and 23.8% strongly agreed. This means that majority of steel manufacturing companies believes that getting ISO certified is not an end in itself but a starting point to introducing other quality initiatives. Rezaei, Celik, and Baalousha (2011), indicated that one of the most common quality standards is the ISO 9001:2008 quality management standard and many companies are seeking ISO 9001 certification in today's highly competitive market.

However, in getting this certification, most companies face challenges that range from high amount of paperwork, improper documentation, poor communication among employees and project participants, and low employee morale as a result of lack of motivation. Despite these challenges the companies must forge ahead to ensure quality management practices are upheld. Edirumuni (2001), revealed that although ISO certification should not be viewed as an end in itself, there are good and bad companies which are ISO accredited. Nonetheless, the fact that a company has expended the effort to achieve ISO status is an indicator of a company's commitment to serving its customers and to compete with its competitors. The findings in this study suggest that steel manufacturing companies should regard ISO certification as a journey rather an end to itself and should thus continuously improve on its processes.

The findings of the study indicate that majority (59.6%, n=25) of the respondents were not of the opinion that everyone participates in improving quality of product/ processes, whereby 31.0% of them strongly disagreed while 28.6% disagreed. This means in most of steel manufacturing companies, not everyone participates in improving quality of product/ processes. Work Group for Community Health and Development (2016) showed that by developing a "culture of quality" the staff members and volunteers could know that they and the organization are doing the best job possible, and thus effectively building their morale and making them proud of themselves and the company. The findings of this study therefore imply that staffs in most of the steel manufacturing companies in Kenya are not usually involved in



quality improvement activities. It is therefore important that management in these companies design ways of increasing the awareness and involvement of all employees in the quality of products and services.

Fifty percent of the respondents were not of the opinion that prevention of defects is key operation of their company whereby 35.7% disagreed and 14.3% strongly disagreed. This suggests that to a significant extent in majority of steel manufacturing companies, prevention of defects is not a major concern in their operations. Early detection of defects can have several advantages in a company. For example, on detecting defects in software development, the National Institute of Standard Technology (NIST) published a study in 2002 that revealed that the cost of fixing one bug found at the production stage of software was 15 hours compared to the effort of five hours if the same bug were found in the coding stage.

Furthermore, the Systems Sciences Institute at International Business Machines (IBM) reports shows that the cost of fixing an error found after a product release is about four to five times much more when compared with an error discovered during design. This rises to 100 times more than when the error is identified in the maintenance phase (Soni, 2016). The findings in this study therefore implies that steel manufacturing companies could be going through losses due to defects of their products and should thus refocus their efforts of quality control on defect detection steps.

The findings of the study indicate that 50% of respondents were not of the opinion that the company uses control systems for monitoring performance whereby 33.3% disagreed and 16.7% strongly disagreed. This means that majority of steel manufacturing companies in Kenya do not use control systems for monitoring performance. Parzinger (2006), examined the link between TQM and software quality and found that TQM implementation improves the software quality and performance and thus, increases customer satisfaction. To control any system, one need to know what it is supposed to do, as well as knowing how well it is doing (Mastascusa, 2017).

The ability to leverage a quality management solution to reach an entire workforce and drive operational improvement provides a powerful competitive advantage. It can elevate agent engagement and performance and in turn deliver unprecedented levels of customer satisfaction (NICE Limited, 2015). Neyestani, Berline, and Juanzon (2016), suggested that the success of TQM implementation is tightly dependent on identifying and selecting the appropriate critical success factors (CSFs), quality tools, and performance measures (KPIs) within TQM framework. The study further suggests that a set of suitable performance measures (indicators) has a significant role to verify and ensure that TQM implementation can successfully achieve its aims in the organization. This study implies that there is need for steel manufacturing companies in Kenya to adopt and use control systems for monitoring performance under QMS.

**(a) Number of Quality Audits per Year in the Company**

The study also sought data on the number of quality audits per year in the company. The results are presented on Table 4.8.

**Table 4.8: Number of Quality Audits per Year in the Company**

<b>No. of Audits</b>	<b>Frequency</b>	<b>Percent</b>
Less than or equal to 2	25	59.5
3-4	10	23.8
5-6	3	7.1
>6	4	9.5
Total	42	100

The table 4.8 shows that majority (59.5%) of respondent’s company do quality audit less than or 3 times in a year. The internal quality audit is one of the most powerful tools in the quality management toolbox though it is most often underutilized or misapplied. As a result the management fails to obtain the information necessary to

help ensure an effective quality management system (O'leary, 2016). In principle, the International Organization for Standardization (2016) proffers that audits should add value to the organization though this is not always the case. In practice, Saud (2015), revealed that the business environment has become increasingly complex, and so have compliance requirements that touch on quality among other challenges.

Governance, Risk, and Compliance (GRC) programs at organizations are constantly evolving to embrace newer requirements and achieve the organization's compliance goals. Subsequently, the study notes that audits need to look at the bigger picture and focus on higher business objectives. The audit function needs to work with a good understanding of voluntary boundaries set by the management, such as public commitments and organizational values. Auditors also need to know the organization's business model, as well as its objectives, and the obstacles and risks that lie in the way of achieving those objectives. Therefore any business organization is required to have auditing in general and particularly quality improvement audits. In retrospect, though the number of times that steel manufacturing companies conduct audits is an important contributor to the aspect of continuous improvement, what is more important is the concern whether such audits add value to the companies.

#### **4.4.4 Descriptive Results on Strategic Supplier's Relations Practice**

The fourth objective of the study aimed at establishing the effect of strategic suppliers' relations practice on organizational performance in Kenyan steel manufacturing sector. The respondents gave responses based on a Likert scale (strongly agree (SA), agree (A), undecided (UD), disagree (D) or strongly disagree (SD) on preset statements whose responses were converted to statistical data. The obtained responses were analyzed and the results presented in the section below. The study sought data on supplier's relationship management and presented the results of descriptive analysis in Table 4.9.

**Table 4.9: Descriptive Results on Strategic Suppliers' Relations Practice**

<b>Statement</b>	<b>SA</b>	<b>A</b>	<b>UD</b>	<b>D</b>	<b>SD</b>
1. Company has good relationship with major suppliers	21.4	33.3	14.3	28.3	7.1
2. Organization/company requires their major suppliers to be ISO certified	23.8	28.6	11.9	31.0	4.8
3. The company has criteria for supplier selection	16.7	38.1	7.1	28.6	9.5
4. The company maintains long term relations with suppliers	7.1	23.8	9.5	40.5	19.0
5. Suppliers are made aware of the company's quality policy	26.2	31.0	9.5	19	14.3

The findings of the study indicate that majority (54.7%, n=23) of respondents were of the opinion that company has good relationship with major suppliers whereby 33.3% agreed while 21.4% strongly agreed. This suggests that to a significant extent, the steel manufacturing companies in Kenya have good relationship with their major suppliers. This was further corroborated by qualitative responses that showed that majority (84%) of companies, implied good relationship with the suppliers and which they regarded as being critical to the business. The respondents highlighted issues such as quality and quantity of scrap metals from supplier's side which could affect their products. Turkyilmaz (2010) and Demirbag (2006) revealed that the importance of creating and sustaining superior supplier relationships is widely emphasized in empirical studies, since the quality of input, such as purchased raw materials is directly related to the final product. This interrelatedness leads to better record keeping and provision of feedback on quality performance. Under QMS, this is considered highly important for the purpose of problem identification and supplier process improvements.

Embracing good relationship with suppliers would result in improved organizational performance in the Kenya's steel manufacturing sector. In retrospect, the management in these companies should maintain a good relation with suppliers and establish explicit standards in this regard. Such a relationship should be a quality-based one. For instance, emphasizing the relationship between quality and price and evaluation of suppliers' quality levels would lead the suppliers to adapt quality measures established by the companies' management (Tari, Molina, & Castejon, 2007). Achilles (2014), found that suppliers touch on every part of a business and to ensure a company can run as it should, it needs to ensure the seamless flow of quality goods and products.

Therefore, strategic supplier relations practices should be key for an effective supply chain that is properly optimized and accountable for quality in the organization. Rosca (2015), further adds that as the business landscape is ever changing, numerous innovations have allowed companies to transcend borders and become global entities. In this fiercely competitive global marketplace, success requires companies to pay closer attention to supplier relations. This suggests that global leaders should retain suppliers with vested interest in the long-term success of their companies. These partners should be willing to extend more value added services, flexibility and resources. To attain this level of trust with suppliers, companies should approach these relationships with the same care they use when approaching their customers.

The findings of the study indicate that majority (52.4%, n=22) of respondents were of the opinion that their company requires their major suppliers to be ISO certified whereby 28.6% agreed while 23.8% strongly agreed. This suggests that majority of steel manufacturing companies in Kenya require their major suppliers to be ISO certified. Modern companies are in a dynamic and competitive environment, within which prices are always under increasing pressure. This makes quality concerns a determining factor in the competitive struggle (Carstea, Paun, & Paun, 2014).

Rubio-Andrada, Alonso-Almeida, and Rudriguez-Anton (2011), noted that certified quality systems are progressively being adopted by all types of industries worldwide due to the fact that many business organizations are actively seeking ways in which

they can improve the products and services they offer. This implies that certified quality management systems are a strategic tool that can be used in a proactive way to contend with market changes and adverse economic situations. Rodriguez-Anton and Alonso-Almeida (2011), also states that many business organizations are at present, actively seeking ways in which they can improve and provide value for the services they offer. In this environment, supply chain management directly impacts product quality and the overall profitability of a company. Consequently, ensuring quality control in the supply chain is a vital contributor and critically contributes to maintenance of a competitive edge in the marketplace and reduces operating costs and wastes (DeBenedeti, 2017).

Without quality control, waste could rise to levels beyond what is tolerable. The process of procurement and management of material resources directly affects the quality of the final products and therefore the performance of the organization. This means that this is a key process for the quality management system. Efficient procurement and management of material resources guided by good relationships with suppliers can increase the overall effectiveness and efficiency of a company. This leads to lasting success by meeting the expectations of all stakeholders (Carstea, Paun, & Paun, 2014). In this context, the steel manufacturing companies in Kenya should strive to ensure they source supplies from suppliers who embrace quality management practices.

Fifty five percent of the respondents were of the opinion that that the company has criteria for supplier selection whereby 38.1% strongly agreed while 16.7% agreed. This means that to a significant extent majority of the steel manufacturing companies in Kenya have a criteria for supplier selection. Suppliers should be selected on basis of quality instead of price or delivery schedule (Baird, Hu, & Reeve, 2011). This especially applies to manufacturing organizations. Jabbour and Jabbour (2009), noted that companies still use traditional criteria such as quality and cost to select suppliers and do not adopt environmental requirements in the supplier selection process in a uniform manner.

Suppliers contribute to the overall performance of a supply chain and poor supplier performance affects the whole chain (Aarkar, 2006). Quality which is an important component in the supply chain could be quality inspections during the manufacturing process, or checking the quality on raw materials and parts before they enter the factory. Before any part or entire raw material is used in manufacturing a product, the purchasing department should ensure that the received raw materials are of the correct quality specification (Murray, 2017). In retrospect, the process of supplier selection is a very important task for the procurement department in a manufacturing company.

However, the need to access the right materials and parts in time and at affordable costs has led to many organizations having a large supplier base. Apparently this has resulted in a great disadvantage for concerned organizations since at times they deal with a lot of unreliable suppliers that could have found their way in to the pool (Jacobs & Chase, 2013). Supplier quality audits are critical in ensuring that suppliers deliver products that meet pre-defined quality specifications. In practice, instead of attempting to audit all suppliers at once, companies should classify suppliers by risk, and then prioritize audit activities accordingly.

The high risk suppliers are those that are critical to the company's product's availability and quality. These do require more frequent and regular on-site audits to ensure that they have adequate quality controls and measures in their system. On the other hand, the lower risk suppliers are those that have no direct product impact, thus require fewer audits (metricstream.com, 2016). A vigorous supplier relationship management (SRM) strategy can assist organizations in maximizing partnership value, minimize risk, and manage costs through the entire supplier relationship lifecycle (Rosca, 2015). This implies that the Kenya steel manufacturing companies should focus on quality right from identification of suppliers and in procurement as a strategy of improving their performance.

The findings of the study indicate that majority (59.5%, n=25) of the respondents were not of the opinion that their companies maintain long term relationship with suppliers, whereby 40.5% (n=17) agreed and 19.0% (n=8) strongly disagreed. This

implies that to a significant extent majority of steel manufacturing companies in Kenya do not maintain long term relationship with suppliers. Gheorghina (2008) and Turkyilmaz (2010) noted that having a close vendor and supplier cooperation in combination with the creation of long term mutually beneficial relationships with reliable suppliers, is accentuated in several studies as an important factor underlying the success of TQM.

Hill, Eckerd, Wilson, and Greer (2009), stated that trust in buyer–supplier relationships has tended to focus on the performance outcomes of a trusting relationship, as well as the processes that serve to build the trust. It further states that largely absent from the buyer–supplier literature, is an in-depth examination of activities that break down trust and the resulting effect on suppliers’ trust in the buyer. This suggests that a supplier's perception of a violation of the psychological contract either partially or fully mediates the relationship between the buyers’ activity and the suppliers’ trust in the buyer. This implies that in a bid to maintaining a long term relationship with suppliers, steel manufacturing companies should build and maintain long term relationships with the suppliers. This could provide basis for quality management improvements.

The findings of the study indicate that majority (57.2%, n=24) of the respondents were of the opinion that suppliers are made aware of the company's quality policy whereby 31.0% agreed and 26.2% strongly agreed. This implies that majority of suppliers to steel manufacturing companies are made aware of the company's quality policies. Besides addressing the importance of mutually beneficial supplier relationships, Vachon and Klassen (2008), acknowledge the importance of involving the organization’s suppliers in the product development process and establishing clarity of the specifications provided to customers, in order to ensure that quality standards are met.

In addition, Ahire, Waller, and Golhar (1996), argue that a lack of market clout may impact the ability of small companies to obtain a satisfactory level of supplier involvement in designing quality into the product and ensuring reliable deliveries of high quality raw materials. In spite of this argument, the analysis revealed no



significant differences in the importance of supplier quality management documented between small and large companies. This indicates that the suppliers of a company should be aware of the customers' quality policy in order to help them actively play a role in achieving the required quality standards.

Reiss (2010) noted that a company's approach to suppliers needs to be part of the strategic plan for a company since almost every company, whether product or service-oriented, is dependent on suppliers. In addition, many business owners seem to get this supplier issue backwards as they think that because they write the order, they're in the dominant position and can exploit it with unreasonable demands, including personal perks. In this regard, the steel manufacturing companies in Kenya should ensure that their suppliers are regularly updated on the quality management system requirements in their bid to continuously improve on their quality. They should also incorporate matters related to suppliers in their long term plans.

#### **4.4.5 Descriptive Results for Strategic Employee Relations Practice**

The fifth specific goal of the study aimed at examining the extent to which strategic employee relations practices affects organizational performance in the Kenyan steel manufacturing sector. The respondents gave responses based on a Likert scale (strongly agree (SA), agree (A), undecided (UD), disagree (D) or strongly disagree (SD) on preset statements whose responses were converted to statistical data. The obtained responses were analyzed and the results presented in the section below. The study sought data on organization's employee relations practices and presented the results of descriptive analysis in Table 4.10.

**Table 4.10: Descriptive Results on Strategic Employee Relations Practice**

<b>Statement</b>	<b>SA</b>	<b>A</b>	<b>UD</b>	<b>D</b>	<b>SD</b>
1. Employees are involved in high level decision making	11.9	11.9	23.3	31.5	21.4
2. The companies that manufacture steel are employee-friendly	25.5	28.6	11.9	21.4	16.7
3. The steel manufacturing companies acknowledge and encourage employee suggestions	14.3	26.2	14.3	33.3	11.9
4. The company has installed quality management improvement teams	14.3	28.6	9.5	38.1	9.5
5. Quality management teams meet frequently	9.5	28.6	14.3	35.7	11.9
6. The organization puts a lot of emphasis on teamwork and team building	21.4	32.5	11.9	16.7	17.5
7. Quality management circles are one of the platforms where employees get involved in continuous improvement in the organization	16.7	35.5	7.1	28.6	12.1

The findings in the Table 4.10 shows that majority (52.9%, n=22) of the respondents were not of the opinion that employees are involved in high level decision making whereby 31.5% disagreed and 21.4% strongly disagreed. This shows that to a significant extent, employees in steel manufacturing companies are not involved in high level decision making. Woerkom (2008), stated that employees' relation is often an area that needs serious improvement. It is important to realize that employees should actively participate in decision making of a company. In fact employees

become more knowledgeable about the environment and in long run they are much more focused and highly motivated.

Employee engagement is defined as a positive attitude held by the employees towards the organization (Robinson, Perryman, and Hayday, 2004). An engaged employee is aware of business context, and works with colleagues to improve performance within the job for the benefit of the organization. The organization must work to develop and nurture engagement, which requires a two way relationship between employer and employee. Employees are the strength of an organization and the prime contributors to its success (Ampater, 2013). Employees involvement is a way of life and crucial to TQM, and that could mean the difference between being competitive and going out of business. This is because they hold the future of the company in their hands.

Arguably, involving and empowering them and bringing them into decision making process provide the opportunity for continuous process improvement (Syed, 2009). (Laudon, 2006) established that managers should involve the employees in the design and operations of TQM because they are more likely to react positively to the completed system if they have been active participants in the change process. Incorporating employee's knowledge and expertise leads to better solutions. In addition, employee participation is a procedure that authorizes workers to contribute in decision-making behavior suitable to their rank in the association. In retrospect, companies that manufacture steel in Kenya should involve their employees in high decision making especially on matters related to quality management.

The findings of the study indicate that majority (54.1%, n=28) of the respondents were of the opinion that companies that manufacture steel in Kenya are regarded to be friendly to their employees whereby 28.6% agreed and 25.5% strongly agreed. Quality and quality management involves integration of all functions of a business with an aim of achieving high quality of products through continuous improvement efforts from all the employees. Quality is a concept that revolves around meeting and if possible exceeding customer expectations applied to a product or service. Achieving high quality is an ever changing continuous process that involves every

aspect of the company: processes, environment and people. For this reason, the entire whole workforce must be involved in a shared commitment to improving quality (Aminga, 2015).

Thus quality and quality management is directing and managing the whole production process to produce an excellent product or service. For this to be achieved, the working environment must be conducive and friendly. This is corroborated by Saad, Weheba, and El-Said (2008), in a study that aimed at investigating the relationship between employees' positive and negative behaviours, customers' perception of service quality and overall customer satisfaction. The study concluded that a company should think strategically and implement effective ways to make the working environment friendly in order to motivate employees towards behaving positively to customers.

The findings of the study indicate that majority (53.2%, n=22) of the respondents were not of the opinion that the company acknowledges and encourage employees' suggestion whereby 33.3% disagreed and 11.9% strongly disagreed. This implies that majority of companies that manufacture steel in Kenya neither acknowledges nor encourages employees' suggestion towards quality management. Employees' relations entail a gradual but radical delegation of control to those closest to a business process. Examples of true involvement include self-managed teams, cell-based manufacture, autonomous work groups and high performance work systems. Empowerment grants all employees a feeling of responsibility and authority to participate in decision making and problem solving, which overall enables the company to have a distinct competitive advantage (Apostolou, 2000).

Such levels can be achieved by instituting employee suggestion systems which in practice refers to efforts businesses make to solicit and utilize input from their employees and geared towards saving costs, product quality improvement, and efficiency at workplace, better customer service, and better working conditions. The efforts could range from simple suggestion boxes in common areas to formal programs implemented through committees that review ideas and offer of rewards for ideas that are adopted. Suggestion programs create a win-win situation and

importantly, bring about more involvement and input from employees while improving efficiency and saving costs for the companies (Reference for Business, 2017). Jackson (2005), suggested that employee participation at board level involves employees participating in top level management board meetings on a variety of issues, where it can play a vital role in protecting the wealth and interests of the employees. This is premised on the assumption that an employee representative can present all the problems, concerns and issues of the employees to all levels of management and encourage board members to create incentives, changes and opportunities for employees.

The findings of the study indicate that 47.6% of the respondents were not of the opinion that the company has installed quality management improvement teams whereby 38.1% disagreed and 9.5% strongly disagreed. This therefore means that majority of companies in the Kenyan steel manufacturing sector have not installed quality management improvement teams. And and Sohal (2008), found that Employee relations is a major focus of a company when TQM is first implemented. However, the lack of ongoing employee relations as teams at the shop-floor level has been identified as a major reason for the non-sustainability of TQM in organizations. Teams are formed when two or more people who interact and influence each other, are mutually accountable for achieving common objectives and perceive themselves as a social entity within an organization. They are held together by their interdependence and need for collaboration to achieve a common goal (Syed, 2009). Rasmussen and Jeppesen (2006), argues that teamwork has been linked to a number of positive outcomes in organizations.

Employees working in teams have been found to report higher job satisfaction and well-being and lower levels of absenteeism than those not working in teams. Implementation of teamwork in healthcare settings has been shown to improve important objective outcomes such as patient mortality rates (Michie & West, 2004). Participation and team work are key elements of an effective quality management system.

Simplifying an organization leads to establishment of an infrastructure of integrated business functions where employees participate and work as teams while supporting the strategic vision of the organization (Dale, 2003). Teamwork offers creativity and innovation; it is a source of competitive advantage, helps the employees to understand the quality principles and infuses these principles into corporate culture. It also allows employees to solve problems at the source immediately and thereby improving quality and productivity (Siddiqui *et al.*, 2014). The findings in this study suggests that companies in the Kenya steel manufacturing sector should install quality management improvement teams as a way of developing a culture for quality and enhance contribution of ideas from team members.

Mangula (2013), in his study on the effect of quality management systems (ISO 9001) certification on organizational performance in Tanzania: A Case of manufacturing industries in Morogoro; recommended that top management should be committed and active in implementing the requirement stipulated in the ISO 9001 certification, regular training as well as adhering to team work approach. The magic of working with a team demonstrates employees getting involved with the team members and working with effective combination of core competencies (Dykstra, Hoddie, & Wasko, 2011). It is about the uniqueness in each employee's idea that makes a product different from any other. A business with Employee relations makes it be a leader in the market with good team's capabilities. In fact there is always trust in employee, giving them opportunity to do more than what they would on an ordinary day. In this regard, steel manufacturing companies should endeavor to install quality management improvement teams as a strategy of improving performance.

The findings of the study indicate that majority (47.6%, n=20) of the respondents were not in agreement that quality management teams meet frequently, whereby 35.7% disagreed and 11.9% strongly disagreed. This implies that quality management teams in the companies that manufacture steel in Kenya do not meet frequently. Though team meetings are a must-do to leaders, those who skip them quickly lose control of any project. In practice, team meetings don't have to be long

and drawn out and they should have specific agendas to keep the meeting on track (Scheid, 2017).

Nation Media have quoted that "A quality circle is a group of five to ten people who are experts in a particular work area that meet regularly to identify, analyze and solve the problems arising in their area of operation" (Nation Media, 2012). This would assume any stakeholder within the organization, who is a master with high amounts of experience in a specific field, can become a member of the quality circle. This would be a successful strategy for the organization as it is an ideal way to identify potential issues and develop strategies to improve working on the overall conditions of the organization.

Goyder (2012), the Wesfarmers Chief Executive Officer has indicated the corporate giant uses this as one of its strategies in performance management meetings which have been an essential tool in improving the quality and function of Microsoft. Any team's regularly scheduled meetings should maintain work momentum and should also aim at strengthening the relationships between team members. The frequency of the regular meetings sets the team's work cadence (i.e. team's meeting rhythm) thus setting a pace that keeps the team pulling together fast enough to achieve preset goals, but not so fast that they wear out before they reach the goals (Keith, 2016). In retrospect, the study suggests regardless of the regularity of quality team meetings at the companies that manufacture steel in Kenya, it is important to ensure that the meetings are effective and that they sustain the cadence towards quality goals.

The findings of the study indicate that majority (53.9%, n=21) of the respondents were of the opinion that the steel manufacturing companies puts a lot of emphasis on teamwork and team building whereby 32.5% agreed while 21.4% strongly agreed. This means that majority of steel manufacturing companies to a significant extent puts a lot of emphasis on teamwork and team building. The relentless pursuit of improvement in service delivery bring about added value to customers by making the organizations to focus on satisfying customers' needs, while team work and training empowers employees for the continuous improvement drive of the organization (Oluwatoyin & Oluseun, 2008). This study focused on the implication of managing

every facet of the organization and it revealed that each production unit is seen to affect and in turn is affected by other units. This implies that a dysfunction in the process of service delivery has an overall effect on the total production process. This means that for effective management there is a need for a holistic approach that should involve every functional area.

However, even though teams can bring a competitive advantage some tasks are performed just as easily by one person as by a group. This notwithstanding, teams take time to develop and maintain, which leads to hidden costs that are often referred to as process losses. Another concern with building teams is that they require the right environment to flourish. Many companies could forget this by putting people in teams without changing anything else. Teams should get appropriate rewards, be accorded communication systems and access to team leadership among other conditions for them to perform. Without such, the shift to a team structure could be a waste of time and could lead to losses in the company (Syed, 2009). The findings in this current study suggest that for organizations to reap the benefit of quality teams, they must continuously put emphasis on collective actions through commitment of funds and time. This way the teams can contribute to greater organizational performance and a move towards quality goals.

The findings of the study indicate that majority (52.2%, n=22) of the respondents were of the opinion that quality management circles are one of the platforms where employees get involved in continuous improvement in the organization, whereby 35.5% agreed and 16.7% strongly agreed. This suggests that quality management circles are one of the platforms where employees get involved in continuous improvement. A Quality Circle is composed of a volunteer group composed of workers, usually under the leadership of their supervisor, who are trained to identify, analyze and solve work-related problems and present their solutions to management in order to improve the performance of the organization, and motivate and enrich the work of employees (Satyendra, 2016).



Qualitative responses showed that at steel manufacturing companies in Kenya do put a premium on their staff relations as a means of achieving organizational goals. The general views among majority (94% of qualitative responses) of the respondents was that pursuit of quality goals cannot be realized without adequate employer-employee relationship and also between employee to employee. The human resource as a factor of production is at the center of quality management and those processes designed to improve quality are pegged on the way employees relate with each other. The qualitative data further showed respondents were of the opinion that employees being human beings need a comfortable working environment and where they support one another in order to pursue company's performance goals in unison.

When true quality circles are matured they become self-managing having gained the confidence of management. Quality Circles develop positive attitudes among employees who derive job satisfaction when they feel that their companies are good place to work and consequently, more willing to extend their efforts to the company (Abo-alhol, Ismail, Sapuan, & Hamdan, 2016). Satyendra (2016), revealed that top management in the steel industry is critical in ensuring a successful implementation of quality circles in a company. They need a steering committee made up of middle management and a coordinator who facilitates and is responsible for coordinating and directing the quality circle activities within the company, through functions that make the operations of quality circles smooth, effective and self sustainable. The results in this study suggest that there is need for companies in the steel manufacturing sector to continue improving quality management through quality circles.

#### **(a) Number of Employee Satisfaction Surveys Carried In a Year**

The study also sought data on the number of employee satisfaction surveys carried out within one year. The results are presented on Table 4.11.

**Table 4.11: Number of Employee Satisfaction Surveys carried in a Year**

No. of Surveys	Frequency	Percent
<3	20	47.6
3-6	17	40.5
7-10	2	4.8
>10	3	7.1
Total	42	100

The table presents that majority (47.6%, n=20) of the respondent's company carry out employee satisfaction for less than 3 times in a year while 40.5% does between 3 and 6 times. This implies that majority (88.1%) of steel manufacturing companies carry out employee satisfaction survey between 0-6 times in a year. Zheng (2009), revealed that what employees think is not something to be feared but it is something to be harnessed, since managers realize that information is power. Consequently, the importance of the annual employee satisfaction survey cannot be overstated. Employee engagement is a stronger predictor of positive organizational performance and leads to emotional attachment of employees to their organization (Markos & Sridevi, 2010). They subsequently become highly involved in their job with a great enthusiasm which ultimately results in the success of their employer since they go an extra mile beyond the stipulations of the employment contractual agreement.

Employees and customers feedback systems are important building blocks for ISO 9000 Quality Certification (Piskar, 2007). No executive would want to run an organization without a firm grasp on the thinking of their employees, which is one of the two most important human factors controlling their destiny (the other being the thinking of their customers). This is so in quality management since people are an essential element of a quality management system. In several organizations potential of employees remains locked up due to the management styles of their leaders. In such organizations, managers do the thinking while workers do the implementation of their thoughts.

Nonetheless, full involvement of employees and in respect to their diversity, in the context of continuous improvement is key to successful implementation of TQM (Matlhape & Lessing, 2002). The findings in this study suggests that steel manufacturing companies in Kenya should strive and improve on how they carry out employee’s satisfaction survey in order to know if they are meeting the needs of their employees. When not meeting them, the survey would help them identify the gaps and efforts the management should put in place in order to satisfy their employees and subsequently improve productivity in their organizations.

**(b) Number of times the company goes for Team Building Activities**

The study also sought to find out the number of times the steel manufacturing companies take their employees for team building activities within a year. The findings are presented in the Table 4.12.

**Table 4.12: Number of times the company goes for Team Building Activities**

<b>No. of Activities</b>	<b>Frequency</b>	<b>Percent</b>
0-2	17	40.4
2-3	23	54.8
>3	2	4.8
Total	42	100

The findings shows that slightly more than half of the respondents indicated that the company goes for team building activities 2 to 3 times in a year, 40.4% indicated that it is less than 2 times while 4.8% indicated that it is more than three times per year. This therefore suggests that 38.1% of steel manufacturing companies take their employees for team building activities regularly. Senecal, Loughhead and Bloom (2008), showed that team goal setting is an effective team-building tool for influencing cohesiveness in the work place. Principally, team-building aims at improving productivity and motivating the staff members, by taking them out of the

office in order to break down political and personal barriers, eliminate distractions and have fun. The benefits of team building include; improving morale and leadership skills, enabling the employees to identify barriers that thwart creativity, enabling clear definition of objectives and goals, helping improve processes and procedures, facilitating improved organizational productivity, helping identify a team's strengths and weaknesses and improving the employees' ability to solve problems (Collins, 2017).

#### 4.4.6 Descriptive Results for Moderating Effect of Organization learning

The study sought data to establish the moderating effect of organization learning on the relationship between strategic quality management practices and organizational performance of the steel manufacturing companies in Kenya. The respondents gave responses based on a Likert scale (strongly agree (SA), agree (A), undecided (UD), disagree (D) or strongly disagree (SD) on preset statements whose responses were converted to statistical data. The obtained responses were analyzed and the results presented in the section below. The study sought data on organization learning and presented the results of descriptive analysis in Table 4.13.

**Table 4.13: Descriptive Results on Organization Learning**

<b>Statement</b>	<b>SA</b>	<b>A</b>	<b>UD</b>	<b>D</b>	<b>SD</b>
1. The organization offers good learning environment to facilitate innovation.	9.5	40.5	4.8	31.0	14.3
2. The company considers employee learning capability as one key factor to improve performance	19.0	21.4	16.7	35.7	7.1
3. Sensitization is done in the company to keep everyone conscious of its quality systems	7.2	40.9	7.1	40.5	2.4
4. The company has wide training and development process including career path planning for all employees	9.5	19.0	9.5	50.0	11.9

The findings show that 50%, n=21 of the respondents were of the opinion that the organization offers good learning environment to facilitate innovation whereby 40.5% agreed while 9.5% strongly agreed. This indicates that to a significant extent, the steel manufacturing companies in Kenya offer good learning environment to facilitate innovation. Commitment to learning can be achieved with the support of management (Gomez *et al.*, 2005). Management should encourage the employees to understand and become involved in the process of learning. It should take the responsibility to create an organization capable of regenerating itself and coping with new challenges by leading the process of change and thus ensuring commitment to learning diffusing to the whole organization. In the literature, the idea that innovation is essential for firms' long-term success and survival constituting a competitive instrument is widely recognized.

Montes (2008) revealed that innovation allows organizations to progress parallel to the changes flourishing in the environment. Garvin, Edmondson, and Gino (2008), noted that an organization that provides employees with a learning environment tend to make their employees skilled at creating, acquiring and transferring knowledge. Furthermore, such organizations are able to help their employees to cultivate tolerance, foster open discussion, and to think holistically and systemically. Such learning organizations would be able to adapt to the unpredictable more quickly than their competitors. In addition, Liao (2008), found that a learning environment is strategic in responding to new challenges of an environment with full of uncertainties.

Santos and Alvarez-Gonzalez (2007) further noted that for an organization, innovation would denote the generation or adoption of novel ideas or behavior. Smith (2012), found that the effectiveness of dialogic interaction is described in achieving a transition towards sustainability of quality by people, organizations and society as a whole. This suggests that in a bid for companies that manufacture steel in Kenya to improve on quality performance, they should strive to offer a good learning environment to facilitate innovation.

The findings of the study indicate that 42.8% (n=18) of the respondents were not of the opinion that their company considers employee learning capability as one key factor to improve performance whereby 35.7% disagreed and 7.1% strongly disagreed. This means that most of the steel manufacturing companies do not consider employee learning capability as a key factor of improving performance. Ussahawanitchakit (2008), noted that the survival of the firms in knowledge-based economies is determined by the successful knowledge management.

Moreover, gaining superior firm efficiency, promoting high competitive advantage, achieving outstanding organizational performance and surviving in the competitive knowledge-based markets can be obtained by organizational learning. Hsu and Fang (2009), found that human capital and relational capital actually improve new product development performance through organizational learning capability. Although structural capital positively affects organizational learning capability, managers should pay attention to possible negative effects of structural capital on new product development performance.

The findings of the study indicate that majority (50.1%, n=21) of the respondents were of the opinion that sensitization is done in the company to keep everyone conscious of its quality systems, whereby 40.9% agreed and 7.2% strongly agreed. This implies that most of steel manufacturing companies do sensitization to keep everyone conscious of their quality systems. The data further reveals that majority (60.9%, n=26) of the respondents were not of the opinion that steel manufacturing companies has a wide training and development process including career path planning for all employees whereby 50.0% disagreed and 11.9% strongly disagreed. This means that most companies do not have wide training and development process including career path planning for all employees. Kimutai (2014) noted that one of ISO 9001:2008 standard requirements is employees' extensive continuous training on core knowledge of their jobs skills and competency.

Adoption of Quality Management Systems ensures consistent training and therefore improved performance of workers in their institutions. Since Employee relations can contribute to the improvement of products and processes, employers should embrace involvement of all individuals. "You tell me, and I forget, you teach me, and I remember, you involve me, and I learn" (Schrebier, 2001). This statement by the famous author Benjamin Franklin emphasize that companies should engross employees in the success and failure of the businesses.

Qualitative responses showed that most respondents appreciated that their organizations are in constantly changing environment that demand learning as a core characteristic of their firms. All of them were in agreement that organization learning is a positive influence on the relationship between strategic quality management practices and their company's performance. A few were explicit to show that their companies did not have clear cut guidelines on entrenching learning in their organizations.

The organization can help employee achieve this by putting them through various training which would help them gain experience in terms of communicating effectively at all levels of the organization and making it equally important for the employee to know their roles in the operation of the company. Silberman (2015), found that organizational learning allows teams to learn exactly what is relevant to their specific tasks and specialties while other information they do not need is given to the individuals and teams that need it, with some Venn overlap between them for cooperation. With organizational learning, teams work together to help each other learn and to ensure that nobody is left behind in the overall progress and achievement of the organization's target goals. The findings also agree with results in a study done by Otieno and Kinuthia (2013), on TQM practices in selected private hospitals in Nairobi, Kenya which found out that training on TQM practices would go a long way in eliminating information asymmetry since its success is highly dependent on information dissemination and feedback across all levels of an organization.

Overall respondents gave differing views on why their companies had to implement strategic quality management practices. A few were of the opinion that they needed to ensure highest quality of products that they released to the market especially in a background of increased competition. They also felt that tastes and preferences of the customers were likely to change over time and thus needful to respond to such changes, either real or anticipated. Majority (81%) of them were of the view that their strategic focus would grant their companies an edge over customer satisfaction and as well ability to entrench quality management as an organization-wide practice.

#### **4.5 Correlation Results**

The study conducted correlation analysis to test the strength of association/relationship between the research variables. Correlation indicates both direction and degree to which the variables co-vary with one another from case to case without implying that one is causing the other. Correlation analysis results give a correlation coefficient which measures the linear association between two variables (Crossman, 2013). The generated correlation matrix presented as Table 4.14 helped to determine whether multi-co linearity existed between the study variables.



**Table 4.14: Correlation between Variables**

Variable	Customer relations practices	Top management support practices	Quality performance practices	Suppliers' relationship management practices	Employee relations practices	Organizational Performance
Customer relations practices	1					
Top management support practices	.321*	1				
Quality performance practices	.423*	.047	1			
Suppliers' relationship management practices	.215	.352*	.057	1		
Employee relations practices	.027*	-.053	-.143	-.241	1	
Organizational Performance	0.167*	0.551	0.18	0.095	0.574	1

\*Correlation is significant at the 0.05 level (2-tailed)

The study found out that strategic customer relation practices had a positive significant linear relationship with organizational performance with Pearson correlation coefficient of 0.167 at 0.05 significant level. This implied that there was a positive correlation between strategic customer relations practices and organizational performance. Thus, customer relation practices increases organizational productivity.

Likewise, the study found that strategic top management support practices had a positive significant linear relationship with organizational performance with Pearson correlation coefficient of 0.551 at 0.05 significant level. This implied that there was a positive correlation between strategic top management support practices and organizational performance. Thus, top management practices increases organizational productivity.

The study also found that strategic quality performance measurement practices had a positive significant linear relationship with organizational performance with Pearson correlation coefficient of 0.18 at 0.05 significant level. This implied that there was a positive correlation between strategic quality performance measurement practices and organizational performance. Thus, quality performance measurement practices increases organizational productivity.

In addition, study also found that strategic supplier relationship management practices had a positive significant linear relationship with organizational performance with Pearson correlation coefficient of 0.095 at 0.05 significant level. This implied that there was a positive correlation between strategic supplier relationship management practices and organizational performance. Thus, supplier relationship management practices increases organizational productivity.

Finally, the study found out that strategic employee relations practices had a positive significant linear relationship with organizational performance with Pearson correlation coefficient of 0.574 at 0.05 significant level. This implied that there was a positive correlation between strategic employee relations practices and organizational performance. Thus, employees relations is important aspect in business since it translates to increased organizational productivity.

## 4.6 Regression Assumptions

### 4.6.1 Multicollinearity

The test result for multicollinearity was done using both the VIF and tolerance. With VIF values being less than 5, it was concluded that there was no presence of multicollinearity in this study. The VIF shows us how much the variance of the coefficient estimate is being inflated by multicollinearity. Heteroscedasticity was also not a concern in this study as indicated in Table 4.15.

**Table 4.15: Multicollinearity Test of Independent Variables**

Variables	Collinearity Statistics	
	Tolerance	VIF
Strategic Customer Relations Practice	0.698	2.0
Strategic Top Management Support Practice	0.736	3.0
Strategic Quality Performance Measurement Practice	0.813	2.0
Strategic Suppliers' Relationship Management Practice	0.892	2.0
Strategic Employee's Relations Practice	0.734	3.0

### 4.6.2 Normality Tests for Strategic Quality Management Practices

The normality data distribution was assessed by examining its skewness and kurtosis. A variable with an absolute skew-index value greater than 3.0 is extremely skewed while a kurtosis index greater than 8.0 is extreme kurtosis (Kline, 2005). Cunningham (2008) stated that an index smaller than an absolute value of 2.0 for skewness and an absolute value of 7.0 is the least violation of the assumption of normality. The following are results of normality test of the different variables.

**Table 4.16: Normality Test for Strategic Customer Relations**

<b>Variable</b>		<b>Statistic</b>	<b>SE(+/-)</b>
Strategic Customer Relations	N	42	
	Mean	2.73	0.171
	Median	2.88	
	Standard Deviation	1.109	
	Range	3.38	
	Skewness	0.053	0.365
	Kurtosis	-1.099	0.717

The results of normality test for strategic customer relations indicated skewness of 0.053 and kurtosis of -1.099. These figures are in the range of -1 and +1 as shown in Table 4.16. This implies that assumption of normality for strategic customer relations was satisfied.

**Table 4.17: Normality Test for Strategic Top Management Support**

<b>Variable</b>		<b>Statistic</b>	<b>SE(+/-)</b>
Strategic Top Management Support	N	42	
	Mean	2.84	0.189
	Median	2.71	
	Standard Deviation	1.228	
	Range	3.86	
	Skewness	0.095	0.365
	Kurtosis	-0.999	0.717

The results of normality test for strategic top management support indicated skewness of 0.095 and kurtosis of -0.999. These figures are in the range of -1 and +1 as shown in Table 4.17. This implies that assumption of normality for strategic top management support was satisfied.

**Table 4.18: Normality Test for Strategic Quality Performance Measurement**

<b>Variable</b>		<b>Statistic</b>	<b>SE(+/-)</b>
Strategic Quality Performance Measurement	N	42	
	Mean	2.65	0.196
	Median	2.42	
	Standard Deviation	1.271	
	Range	4	
	Skewness	0.454	0.365
	Kurtosis	-0.581	0.717

The results of normality test for strategic quality performance measurement indicated skewness of 0.454 and kurtosis of -0.581. These figures are in the range of -1 and +1 as shown in Table 4.18. This implies that assumption of normality for strategic quality performance measurement was satisfied.

**Table 4.19: Normality Test for Strategic Supplier Relations**

<b>Variable</b>		<b>Statistic</b>	<b>SE(+/-)</b>
Strategic Supplier Relations	N	42	
	Mean	2.81	0.202
	Median	2.4	
	Standard Deviation	1.307	
	Range	3.7	
	Skewness	0.137	0.365
	Kurtosis	-1.187	0.717

The results of normality test for strategic supplier relationship management indicated skewness of 0.137 and kurtosis of -1.187. These figures are in the range of -1 and +1 as shown in Table 4.19. This implies that assumption of normality for strategic supplier relationship management was satisfied.

**Table 4.20: Normality Test for Strategic Employee Relations**

<b>Variable</b>		<b>Statistic</b>	<b>SE(+/-)</b>
Strategic Employee Relations	N	42	
	Mean	2.76	0.179
	Median	2.72	
	Standard Deviation	1.162	
	Range	3.67	
	Skewness	0.029	0.365
	Kurtosis	-0.652	0.717

The results of normality test for strategic employee relations indicated skewness of 0.029 and kurtosis of -0.652. These figures are in the range of -1 and +1 as shown in Table 4.20. This implies that assumption of normality for strategic employee relations was satisfied.

**Table 4.21: Normality Test for Organizational Performance**

<b>Variable</b>		<b>Statistic</b>	<b>SE(+/-)</b>
Organizational Performance	N	42	
	Mean	2.87	0.18
	Median	2.71	
	Standard Deviation	1.166	
	Range	3.71	
	Skewness	0.235	0.365
	Kurtosis	-1.019	0.717

The results of normality test for organization performance indicated skewness of 0.235 and kurtosis of -1.019. These figures are in the range of -1 and +1 as shown in Table 4.21. This implies that assumption of normality for organization performance was satisfied. Tests for normality were confirmed using regression standardized residual and regression standardized value. (See appendix v)

## 4.7 Regression Results

### 4.7.1 Regression Results of Strategic Customer Relations Practices

The regression analysis revealed the relationship between the dependent variable, performance of steel manufacturing companies in Kenya and independent variable which is strategic customer relations practice.

**Table 4.22: Model Summary for Strategic Customer Relations Practices**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.267 <sup>a</sup>	0.071	0.048	0.829

- a. Predictors: (Constant), Strategic Customer Relations Practice
- b. Dependent Variable: Organizational Performance

Table 4.22 provides the R and R<sup>2</sup> value. The R value is 0.267, which represents the simple correlation. It indicates a relatively low degree of correlation between strategic customer relations and organizational performance. Conventionally a correlation greater than 0.8 is generally described as strong, whereas a correlation less than 0.5 is generally described as weak. These values can vary based upon the "type" of data being examined. A study utilizing scientific data may require a stronger correlation than a study using social science data. The R<sup>2</sup> value indicates how much of the dependent variable, "organizational performance", can be explained by the independent variable, "customer relations". In this case, 7.1% can be explained, which is fairly weak.

This implies that the performance being experienced within the steel manufacturing companies in Kenya is driven by customer relations to a low extent. This implies there is need for steel manufacturing companies in Kenya to improve the role of customer relations in managing their performance, since customer relations is an integral principle in quality management systems. The findings imply that steel

manufacturing companies are missing out on a major concern of quality management and should take necessary corrective actions.

The study did analysis of variance (ANOVA) between strategic customer relations practices and organizational performance of the steel manufacturing companies in Kenya. The results indicate that the regression model predicts the outcome variable significantly. This indicates the statistical significance of the regression model that was applied. An F statistic of 3.062 indicated that the model was significant. This was supported by a probability ( $p$ ) value of 0.048 ( $p < 0.05$ ), and indicates that on overall, the model applied can statistically significantly predict the outcome variable. This means that the null hypothesis  $H_{01}$  that there is no significant relationship between strategic customer relations practices and organizational performance in Kenyan steel manufacturing sector is rejected.

**Table 4.23: ANOVA (F-Test) for Strategic Customer Relations Practice**

Model 1	Sum of Squares	df	Mean Square	F	Sig.
Regression	2.106	1	2.106	3.062	0.048 <sup>b</sup>
Residual	27.513	40	0.688		
Total	29.619	41			

a. Dependent Variable: Organizational Performance

b. Predictors: (Constant), Strategic Customer relations practice

Results of statistical analysis provide the information needed to predict organizational performance from strategic customer relations practice. Both the constant and strategic customer relations contribute significantly to the model. The linear regression model is presented as follows;

$Y = \beta_0 + \beta_1 X_1$ ; where  $Y$  = Performance of steel manufacturing companies in Kenya;  $\beta_0, \beta_1$  = Coefficient of Performance of Steel manufacturing companies;  $X_1$  = strategic customer relations practice. Therefore  $Y = 1.301 + 0.167X_1$ . The collinearity statistics returned a VIF value of 2. The interpretation was guided by the range where  $VIF = 1$  showed no correlation,  $1 < VIF < 5$  showed moderately correlation of



variables while  $VIF > 5$  to 10 meant highly correlated. In this case, the results showed that strategic customer relations and organizational performance are lowly correlated. The results are shown below;

**Table 4.24: Coefficient and the VIF for Strategic Customer Relations Practice**

Model	Coefficients <sup>a</sup>					Collinearity Statistics VIF
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
(Constant)	1.301	0.293		4.443	0.000	
Customer relations	0.167	0.095	0.267	1.750	0.048	2.000

a. Dependent Variable: Performance of Steel Manufacturing companies in Kenya

b. Predictors: (Constant), Strategic Customer relations practice

#### 4.7.2 Regression Results of Strategic Top Management Support Practices

The regression analysis revealed the relationship between the dependent variable, performance of steel manufacturing companies in Kenya and independent variable which is strategic top management support practice. Table 4.25 provides the R and  $R^2$  value.

**Table 4.25: Model Summary for Strategic Top Management Support Practice**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	0.807 <sup>a</sup>	0.652	0.643	0.508

a. Predictors: (Constant), Strategic Top Management Support Practice

The R value is 0.807, which represents the simple correlation. It indicates a relatively strong degree of correlation between strategic top management commitment and organizational performance. The  $R^2$  value indicates how much of the dependent variable, "organizational performance", can be explained by the independent

variable, “strategic top management support practice”. In this case, 65.2% can be explained, which is strong. This implies that the performance being experienced by the steel manufacturing companies in Kenya is driven by strategic top management support to a high extent. This is a good practice and should be maintained.

The study did analysis of variance (ANOVA) between strategic top management support and organizational performance and presented the results in Table 4.26.

**Table 4.26: ANOVA (F-Test) for Strategic Top Management Support Practice**

<b>Model</b>	<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Regression	19.308	1	19.308	74.899	0.000 <sup>b</sup>
Residual	10.311	40	0.258		
Total	29.619	41			

a. Dependent Variable: Organizational Performance.

b. Predictors: (Constant), Strategic Top Management Support practice.

The results indicate that the regression model predicts the outcome variable significantly. This indicates the statistical significance of the regression model that was applied. An F statistic of 74.809 indicated that the model was significant. This was supported by a probability ( $p$ ) value of 0.000 ( $p < 0.05$ ), and indicates that on overall, the model applied can statistically significantly predict the outcome variable. Therefore the null hypothesis  $H_0$  that there is no significant relationship between strategic top management support and organizational performance in Kenyan steel manufacturing sector is rejected.

**Table 4.27: Coefficient and the VIF for Strategic Top Management Support**

Model	Coefficients <sup>a</sup>					Collinearity Statistics VIF
	Unstandardized		Standardized	t	Sig.	
	Coefficients		Coefficients			
	B	Std. Error	Beta			
(Constant)	1.62	0.201		0.805	0.0426	
Strategic Top Management Support Practice	0.551	0.064	0.807	8.654	0.000	1.000

a. Dependent Variable: Organizational Performance

b. Predictors: (Constant), Strategic Top Management Support Practice

Results of statistical analysis shown in Table 4.27 provide the information needed to predict organizational performance from strategic top management support. Both the constant and strategic top management support contributes significantly to the model. The linear regression model is presented as follows;

$Y = \beta_0 + \beta_2 X_2$ ; where  $Y$  = Performance of steel manufacturing companies in Kenya;  $\beta_0, \beta_2$  = Coefficient of Performance of Steel manufacturing companies;  $X_2$  = strategic top management support practice. Therefore  $Y = 1.62 + 0.551 X_2$ . The collinearity statistics returned a VIF value of 1. The interpretation was guided by the range where  $VIF = 1$  showed no correlation,  $1 < VIF < 5$  showed moderately correlation of variables while  $VIF > 5$  to 10 meant highly correlated. In this case, the results showed that strategic top management support practice and organizational performance are lowly correlated.

#### 4.7.3 Regression Results of Strategic Quality Performance Measurement

The regression analysis revealed the relationship between the dependent variable, performance of steel manufacturing companies in Kenya and independent variable which is strategic quality performance measurement practice.

**Table 4.28: Model Summary for Strategic Quality Performance Measurement Practice**

<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>
	0.297 <sup>a</sup>	0.088	0.065	0.822

a. Predictors: (Constant), Strategic Quality Performance Measurement

Results of statistical analysis shown in Table 4.28 provide the R and R<sup>2</sup> value. The R value is 0.297, which represents the simple correlation. It indicates a relatively low degree of correlation between strategic quality performance measurement practices and organizational performance. The R<sup>2</sup> value indicates how much of the dependent variable, "organizational performance", can be explained by the independent variable, "strategic quality performance measurement ". In this case, 8.8% can be explained, which is weak. This implies that the performance being experienced by the steel manufacturing in Kenya is driven by strategic quality performance measurement to a low extent. In the context of quality management, this indicates a dire need for steel manufacturing companies to enhance strategic quality performance measurement practices as a way of improving quality management.

The study did analysis of variance (ANOVA) between strategic quality performance measurement practices and organizational performance of the steel manufacturing companies in Kenya. The results indicate that the regression model predicts the outcome variable significantly through the statistical significance of the regression model that was applied. An F statistic of 3.859 which was supported by a probability ( $p$ ) value of 0.048 ( $p < 0.05$ ) was significant. This indicates that on overall, the model applied can statistically significantly predict the outcome variable. Thus the null hypothesis  $H_0$  that there is no significant relationship between strategic quality performance measurement and organizational performance in Kenyan steel manufacturing sector is rejected.

**Table 4.29: ANOVA (F-Test) for Strategic Quality Performance Measurement Practice**

<b>Model</b>	<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Regression	2.606	1	2.606	3.859	0.048 <sup>b</sup>
Residual	27.013	40	0.675		
Total	29.619	41			

a. Dependent Variable: Organizational Performance

b. Predictors: (Constant), Strategic Quality Performance Measurement Practice

Results of statistical analysis provide the information needed to predict organizational performance from strategic quality performance measurement practices. Both the constant and strategic quality performance measurement contributes significantly to the model. The linear regression model is presented as follows;

$Y = \beta_0 + \beta_3 X_3$ ; where Y = Performance of steel manufacturing companies in Kenya;  $\beta_0, \beta_3$  = Coefficient of Performance of Steel manufacturing companies;  $X_3$  = Strategic Quality Performance Measurement practice. Therefore  $Y = 1.303 + 0.18X_3$ . The collinearity statistics returned a VIF value of 2. The interpretation was guided by the range where  $VIF = 1$  showed no correlation,  $1 < VIF < 5$  showed moderate correlation of variables while  $VIF > 5$  to 10 meant highly correlated. In this case, the results showed that strategic quality performance measurement practices and organizational performance are lowly correlated. The results are shown below;

**Table 4.30: Coefficient and the VIF for Strategic Quality Performance Measurement Practice**

Model	Coefficients <sup>a</sup>					Collinearity Statistics VIF
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
(Constant)	1.303	0.266		4.905	0.000	
Quality Performance Measurement	0.180	0.092	0.297	1.965	0.048	2.000

a. Dependent Variable: Organizational Performance

b. Predictors: Strategic Quality Performance Measurement Practice

#### 4.7.4 Regression Results of Strategic Suppliers' Relations Practice

The regression analysis revealed the relationship between the dependent variable, performance of steel manufacturing companies in Kenya and independent variable which is strategic suppliers' relations practice.

**Table 4.31: Model Summary for Strategic Suppliers' Relations Practice**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	0.146 <sup>a</sup>	0.021	0.003	0.851

a. Predictors: (Constant), Strategic Suppliers' relations practice

Results of statistical analysis shown in Table 4.31 provide the R and R<sup>2</sup> value. The R value is 0.146, which represents the simple correlation. It indicates a weak correlation between strategic suppliers' relations and organizational performance. The R<sup>2</sup> value indicates how much of the dependent variable, "organizational

performance", can be explained by the independent variable, "strategic suppliers' relations practice ". In this case, 2.1% can be explained, which is weak. This implies that the performance being experienced by the steel manufacturing sector in Kenya is driven by strategic suppliers' relations practices to a low extent. In the context of quality management, this indicates a dire need for steel manufacturing companies to enhance their relationship with suppliers as a way of improving quality management and in the long run lead to improved organizational performance.

The study did analysis of variance (ANOVA) between strategic suppliers' relations practices and organizational performance of the steel manufacturing companies in Kenya. The results indicated that the regression model predicts the outcome variable significantly. This indicates the statistical significance of the regression model that was applied. An F statistic of 0.868, supported by a probability ( $p$ ) value of 0.035 ( $p < 0.05$ ) indicated that the model was significant. This indicates that on overall the model applied can statistically significantly predict the outcome variable. This means the null hypothesis  $H_{04}$  that there is no significant relationship between strategic suppliers' relations practice and organizational performance in Kenyan steel manufacturing sector is rejected.

**Table 4.32: ANOVA (F-Test) for Strategic Suppliers' Relations Practice**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	0.629	1	0.629	0.868	0.035 <sup>b</sup>
Residual	28.990	40	0.725		
Total	29.619	41			

a. Dependent Variable: Organizational Performance

b. Predictors: (Constant), Strategic Suppliers' Relations Practice

Results of statistical analysis shown in Table 4.32 provide the information needed to predict organizational performance from strategic suppliers' relations practice. Both the constant and strategic suppliers' relations practice contributes significantly to the model.

**Table 4.33: Coefficient and the VIF for Strategic Suppliers' Relations Practice**

Model	Coefficients <sup>a</sup>					Collinearity Statistics VIF
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
(Constant)	1.499	0.311		4.822	0.000	
Strategic supplier relations	0.095	0.102	0.146	0.932	0.035	2.000

a. Dependent Variable: Organizational Performance

b. Predictors: (Constant), Strategic suppliers' relations practice

The linear regression model is presented as follows;

$Y = \beta_0 + \beta_4 X_4$ ; where  $Y$  = Performance of steel manufacturing companies in Kenya;  $\beta_0, \beta_4$  = Coefficient of Performance of Steel manufacturing companies;  $X_4$  = suppliers' relations practice. Therefore  $Y = 1.499 + 0.095X_4$ . The collinearity statistics returned a VIF value of 2. The interpretation was guided by the range where  $VIF = 1$  showed no correlation,  $1 < VIF < 5$  showed moderate correlation of variables while  $VIF > 5$  to 10 meant highly correlated. In this case, the results showed that strategic suppliers' relations and organizational performance are lowly correlated.



#### 4.7.5 Regression Results of Strategic Employee Relations

The regression analysis revealed the relationship between the dependent variable, performance of steel manufacturing companies in Kenya and independent variable which is strategic employee relations practice.

**Table 4.34: Model Summary for Strategic Employee Relations Practice**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.718 <sup>a</sup>	0.515	0.503	0.499

a. Predictors: (Constant), Strategic employee relations practice

Results of statistical analysis shown in Table 4.34 provide the R and R<sup>2</sup> value. The R value is 0.718, which represents the simple correlation. It indicates a relatively strong degree of correlation between strategic employee relations and organizational performance. The R<sup>2</sup> value indicates how much of the dependent variable, "organizational performance", can be explained by the independent variable, "strategic employee relations". In this case, 51.5% can be explained, which is strong. This implies that the performance being experienced by the steel manufacturing companies in Kenya is driven by strategic employee relations to a moderate extent. In the context of quality management, this indicates that strategic employee relations practices by the steel manufacturing companies has significantly contributed to improved quality management and in the long run has led to improved organizational performance.

The study did analysis of variance (ANOVA) between strategic employee relations and organizational performance of the steel manufacturing companies in Kenya. The results revealed that the regression model predicts the outcome variable significantly. This indicates the statistical significance of the regression model that was applied. An F statistic of 42.507 supported by a probability ( $p$ ) value of 0.000 ( $p < 0.05$ ) indicated that the model was significant. This indicates that on overall the model applied can statistically significantly predict the outcome variable. Thus the null hypothesis  $H_0$  that there is no significant relationship between strategic employee

relations practice and organizational performance in Kenyan steel manufacturing sector is rejected.

**Table 4.35: ANOVA (F-Test) for Strategic Employee Relations Practice**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	15.260	1	15.260	42.507	0.000 <sup>b</sup>
Residual	14.360	40	0.359		
Total	29.619	41			

a. Dependent Variable: Organizational Performance

b. Predictors: (Constant), Strategic employee relations

Results of statistical analysis shown in Table 4.35 provide the information needed to predict organizational performance from employee relations practice. Both the constant and strategic employee relations practices contribute significantly to the model. The linear regression model is presented as follows;

$Y = \beta_0 + \beta_5 X_5$ ; where  $Y$  = Performance of steel manufacturing companies in Kenya;  $\beta_0, \beta_5$  = Coefficient of Performance of Steel manufacturing companies;  $X_5$  = strategic employee relations practice. Therefore  $Y = 0.024 + 0.574X_5$ . The collinearity statistics returned a VIF value of 3. The interpretation was guided by the range where  $VIF = 1$  showed no correlation,  $1 < VIF < 5$  showed moderately correlation of variables while  $VIF > 5$  to 10 meant highly correlated. In this case, the results showed that strategic employee relations practices and organizational performance are moderately correlated. The results are shown below.

**Table 4.36: Coefficient and the VIF for Strategic Employee Relations Practice**

Model 1	Coefficients <sup>a</sup>						Collinearity Statistics VIF
	Unstandardized		Standardized	t	Sig.		
	Coefficients		Coefficients				
	B	Std. Error	Beta				
(Constant)	0.024	0.282		0.087	0.931		
Strategic Employee's Relations	0.574	0.162	0.718	6.520	0.000	1.000	3.000

a. Dependent Variable: Organizational Performance

b. Predictors: (Constant), Strategic employee relations practice.

#### 4.7.6 Regression Results of the Moderating Effect of Organizational Learning

Results of statistical analysis shown in Table 4.37 below provide the R and R<sup>2</sup> value. The R value is 0.791, which represents the simple correlation. It indicates a relatively high degree of correlation between organizational learning and organizational performance. The R<sup>2</sup> value indicates how much of the dependent variable, "organizational performance", can be explained by the moderating variable, "organizational learning ". In this case, 62.5% can be explained, which is relatively strong.

**Table 4.37: Model Summary for Organization Learning**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	0.791 <sup>a</sup>	0.625	0.616	0.527

a. Predictors: (Constant), Organization Learning

The study did analysis of variance (ANOVA) between organizational learning and organizational performance and presented the results in Table 4:38. The results indicate that the regression model predicts the outcome variable significantly. This indicates the statistical significance of the regression model that was applied. An F statistic of 66.690 indicated that the model was significant. This was supported by a probability ( $p$ ) value of 0.000 ( $p < 0.05$ ) which indicates that on overall, the model applied can statistically significantly predict the outcome variable. Thus the null hypothesis  $H_{06}$  organizational learning has no significant moderating effect on the relationship between strategic quality management practices and organizational performance of steel manufacturing sector in Kenya is rejected.

**Table 4.38: ANOVA (F-Test) for Organization Learning**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	18.514	1	18.514	66.690	0.000 <sup>b</sup>
Residual	11.105	40	0.278		
Total	29.619	41			

a. Dependent Variable: Organizational Performance

b. Predictors: (Constant), Organizational Learning

Results of statistical analysis shown in Table 4.39 provide the information needed to predict organizational performance from organizational learning. Both the constant and organizational learning contribute significantly to the model. The regression equation is presented as follows;  $Y = 0.219 + 0.514Z$ . The collinearity statistics returned a VIF value of 5. The interpretation was guided by the range where  $VIF = 1$  showed no correlation,  $1 < VIF < 5$  showed moderately correlation of variables while  $VIF > 5$  to 10 meant highly correlated. In this case, the results showed that Learning Organizations and other variables are correlated. The results are shown below;

**Table 4.39: Coefficient and the VIF for Organization Learning**

Model	Coefficients <sup>a</sup>					Collinearity Statistics VIF
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
(Constant)	0.219	0.206		1.065	0.293	
Organizational Learning	0.514	0.063	0.791	8.166	0.000	5.000

a. Dependent Variable: Organizational Performance

b. Predictors: (Constant), Organizational Learning

#### 4.8 Overall Regression Model

The study conducted a multiple regression of the independent variables and the dependent variable. The results are presented in Table 4.40.

**Table 4.40: Multiple Regression Analysis**

Variables	Coefficients <sup>a</sup>				
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)-Overall	2.051				
Strategic customer relations practice	0.167	0.095	0.267	1.750	0.048
Strategic top management support practice	0.551	0.064	0.807	8.654	0.000
Strategic quality performance measurement practice	0.180	0.092	0.297	1.965	0.048
Strategic suppliers' relations practice	0.095	0.102	0.146	0.932	0.035
Strategic employee relations practice	0.574	0.162	0.718	6.520	0.000
Organizational Learning	0.514	0.063	0.079	8.166	0.000

a. Dependent Variable: Organizational Performance

The estimated multiple regression model to estimate performance is as follows;

$$Y = 2.051 + 0.167X_1 + 0.551X_2 + 0.180 X_3 + 0.095 X_4 + 0.574 X_5 + 0.167(0.514)X_1 + 0.551(0.514)X_2 + 0.180(0.514) X_3 + 0.095(0.514) X_4 + 0.574(0.514) X_5 \dots \text{Equation 3.3}$$

Where:

Y = Organizational performance of the steel manufacturing companies

0.167 = Strategic customer relations practices

0.551 = Strategic top management support practices

0.180 = Strategic quality performance measurement practices

0.095 = Strategic suppliers' relations practices

0.574 = Strategic employee relations practices

0.514 = Moderating effect of organizational learning

2.051 = Constant

The study shows that strategic employee relations practice has the highest influence on organizational performance. The findings concur with a study by Laudon, (2006) which established that managers should involve the employees in the design and operations of the quality management because they are more likely to react positively to the completed system if they have been active participants in the change process. Incorporating employee's knowledge and expertise leads to better solutions. In addition, employee participation is a procedure that authorizes workers to contribute in decision-making behavior suitable to their rank in the association. In retrospect, steel manufacturing companies in Kenya should involve their employees in high decision making especially on matters related to quality management. Strategic top management support, quality performance measurement, customer relations and finally suppliers' relations practices also increase organizational productivity in different ratings. Organizational learning also has a moderating effect on the relationship between strategic quality management practices and organizational performance.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

This study sought to investigate the effects of strategic quality management practices on organizational performance in steel manufacturing sector in Kenya. Specifically, the study sought to achieve six objectives by testing six hypotheses. It focused on the effects of strategic customer relations, top management support, quality performance measurement, suppliers' relations and employees' relations practices on organizational performance in the steel manufacturing sector in Kenya. This chapter presents the summary of major findings of the study, conclusions, recommendations and suggested areas for further research.

#### **5.2 Summary of Major Findings**

The general objective of this study was to investigate the effects of strategic quality management practices on organizational performance in steel manufacturing sector in Kenya. With support of regression analysis results, the study established that the relationship between the various strategic quality management practices and organizational performance is statistically significant.

##### **5.2.1 Effect of Strategic Customer Relations Practices on Organizational Performance**

The first specific objective of the study aimed at establishing the extent to which strategic customer relations practices affect organizational performance in steel manufacturing sector in Kenya. Correlation analysis results show that there is a moderate correlation between strategic customer relations practices and organizational performance. The first hypothesis that tested the relationship between strategic customer relations practices and organizational performance was rejected as the findings show that strategic customer relations practices positively influenced organizational performance. The regression results indicated that strategic customer

relations practices positively influence the predictor variable, in this case organizational performance.

### **5.2.2 Effects of Strategic Top Management Support Practices on Organizational Performance**

The second specific objective of the study aimed at establishing the extent to which strategic top management support practices affect organizational performance in Kenyan steel manufacturing sector. Correlation analysis results show that there is a fairly strong correlation between top management support practices and organizational performance. The second hypothesis that tested the relationship between strategic top management support practices and organizational performance was rejected as the findings show that strategic top management support practices positively influenced organizational performance. The regression results indicated that strategic top management support practices positively influence the predictor variable, in this case organizational performance.

### **5.2.3 Effects of Strategic Quality Performance Measurement practices on Organizational Performance**

The third specific objective of the study aimed at establishing the extent to which quality performance measurement practices affects organizational performance in Kenyan steel manufacturing sector. Correlation analysis results show that there is a fairly weak correlation between quality performance measurement practices and organizational performance. The third hypothesis that tested the relationship between strategic quality performance measurement practices and organizational performance was rejected as the findings show that strategic quality performance measurement practices positively influenced organizational performance. The regression results indicated that quality performance measurement practices was a predictor of organizational performance hence has a significant positive influence on organizational performance of steel manufacturing companies in Kenya.



#### **5.2.4 Effects of Strategic Suppliers' Relations Practices on Organizational Performance**

The fourth specific objective of the study aimed at establishing the effects of strategic suppliers' relations practices on organizational performance in Kenyan steel manufacturing sector. Correlation analysis results show that there is a weak correlation between suppliers' relationship management practices and the organizational performance. The fourth hypothesis that tested the relationship between strategic suppliers' relations practices and organizational performance was rejected as the findings show that strategic suppliers' relations practices positively influenced organizational performance. This indicates that suppliers' relation was a predictor of organizational performance hence it has a significant positive influence on performance of steel manufacturing companies in Kenya.

#### **5.2.5 Effects of Strategic Employee Relations Practices on Organizational Performance**

The fifth objective of the study aimed at examining the extent to which strategic employee relations practices affect organizational performance in Kenyan steel manufacturing sector. Correlation analysis results show that there is a strong positive correlation between strategic employee relations practices and organizational performance. The fifth hypothesis that tested the relationship between strategic employee relations practices and organizational performance was rejected as the findings show that strategic employee relations practices positively influenced organizational performance. The regression results indicated that strategic employee relations practices positively influence the predictor variable, in this case organizational performance.

#### **5.2.6 Moderating Effect of Organization Learning on the Relationship between Strategic Quality Management Practices and Organizational Performance**

The sixth objective sought to establish the moderating effect of organization learning on the relationship between strategic quality management practices and

organizational performance in the steel manufacturing sector in Kenya. Correlation analysis results show that there is a strong correlation between organization learning and organizational performance. This shows that organization learning was a predictor of organizational performance hence it has a significant positive influence on performance of steel manufacturing companies in Kenya.

### **5.3 Conclusion**

The main aim of the study was to investigate the effects of strategic quality management practices on organizational performance of steel manufacturing companies in Kenya. The study findings indicating that strategic customer relations practices affect organizational performance implied that the strategic customer relations practices adopted by the steel manufacturing companies do positively influence their levels of performance. Regression analysis results support the findings indicating that the model was significant. Correlation analysis results show that there is a moderate correlation between strategic customer relations practices and organizational performance, which was supported by low customer satisfaction index obtained in the study.

The findings from descriptive analysis indicated that after achievement of ISO certification, majority of companies have created value for customers. However, the study established that majority of the companies neither investigate nor fix customer complaints and that about half of the steel manufacturing companies in Kenya do not measure customer satisfaction. This further suggests that quality improvement is not entirely driven by data. Though there is persistent complaint from customers, the companies do not have an established approach, either mechanical or organic, to receive the complaints. This betrays lack of a proactive approach to the handling of customer complaints. In addition, the customer-care office operations are peripheral to the implementation of strategic quality management practices in most steel manufacturing companies. Arguably, the failure of the steel manufacturing companies in data collection and fully utilizing the customer-care office is failure at the implementation of the strategic quality management practices but not the practices as such. This means that failure of

effective strategic quality management practices to achieve the desired goals, and a subsequently relative low customer index in steel manufacturing is much more about implementation level rather than the practices.

The study findings of a positive relationship between strategic top management support practices and organizational performance implied that the strategic top management support practices adopted by the steel manufacturing companies do positively influence their levels of performance. Regression analysis results support the findings indicating that the model was significant. Correlation analysis results show that there is a fairly strong correlation between strategic top management support practices and organizational performance. The findings from descriptive analysis indicates that in majority of the steel manufacturing companies, top management encourages employee relations in the quality improvement process while in most of the companies, internal process improvement has led to externally observable improvements. However, some of the shortcomings established in the study affecting majority of the steel manufacturing companies in Kenya include failure by top management to allocate adequate resources towards efforts of improving quality, which is ironical since their perception is that quality management would lead to increase in profitability. The findings also showed lack of high-level coordination of management commitment, customer relations and production/innovation. This is a failure in implementation of the strategic quality management practices but not the practices as such.

The study findings indicating that strategic quality performance practices affect organizational performance implied that the quality performance practices adopted by the steel manufacturing companies do positively influence their levels of performance. Regression analysis results support the findings indicating that the model was significant. Correlation analysis results show that there is a fairly weak correlation between strategic quality performance practices and organizational performance. The findings from descriptive analysis indicates that majority of steel manufacturing companies believes that getting certified is not an end in itself but a starting point to introducing other quality initiatives and that most of the companies take preventive/corrective action to ensure product conformance. The control system

for quality in these companies is not well established and thus they may not be optimizing their performance. Even though most companies conduct audit at least annually, the extent to which the audits add value to the companies is not clear.

The study further concludes that strategic suppliers' relations practices contribute significantly to organizational performance. This implied that the strategic suppliers' relations practices adopted by the steel manufacturing companies positively influence their levels of performance. Qualitative responses shows all the companies appreciate suppliers as an important link to in the quality management process. Regression analysis results support the findings indicating that the model was significant. Correlation analysis results show that there is a weak correlation between suppliers' relations practice and organizational performance. Majority of these companies have good focus on the relationship and communication with major suppliers where they require their major suppliers to be ISO certified. They also keep them abreast on the internal quality policies. In addition, majority of the steel manufacturing companies in Kenya has criteria for supplier selection. However, most of these companies fail in continuous awareness to suppliers of the company's quality policy while more often the relationship is focused on the short-term concerns. This is a major weakness in quality management since it makes it difficult to ensure materials supplied are to the required standards which are continuously improving. Short-term approach in term of suppliers- relationship could compromise the aspect of continuous improvement of products manufactured by the steel manufacturing companies in Kenya.

The findings of a positive relationship between strategic employee relations practices and organizational performance implied that the strategic Employee relations practices adopted by the steel manufacturing companies do positively influence their levels of performance. Regression analysis results support the findings indicating that the model was significant. Correlation analysis results show that there is a strong positive correlation between employee relations practices and organizational performance. Descriptive analysis indicates that steel manufacturing companies are employee friendly and they conduct employee satisfaction surveys frequently. However, there is limited involvement of employees in high-level decision-making which suggests a concern in the corporate continuity and succession planning for the

future of the steel manufacturing companies. This continuity is an important consideration in quality management since it ensures company's preparation and push towards its future. This further suggests that the companies could be missing on knowledge management which is an aspect of organizational wealth that could enhance participatory approach in quality management. Majority also lacks frequently meeting quality management teams which agree with the fact that quality culture has yet to take root in most of the steel manufacturing companies. Majority of the companies use quality management circles as platforms through which employees get involved in continuous improvement. Qualitative responses indicate that all the companies are conscious that employer-employee relationship and employee-employee relationship are critical in the managing quality in the steel manufacturing companies.

The study proposed that there is a relatively high degree of correlation between organizational learning and organizational performance in the steel manufacturing companies. This implied that organizational learning has a significant moderating influence on the relationship between strategic quality management practices and organizational performance. The presence and absence of organizational learning will significantly influence performance of the steel manufacturing companies. All steel manufacturing companies recognize organization learning as a major component in the management and improvement of quality but not all of them have policies or guidelines on organizational learning.

Based on the findings of this study, it is reasonable to conclude generally that strategic quality management practices positively contribute to performance of steel manufacturing firms in Kenya. The study further concludes that continuous improvement was found to be statistically significant in influencing the organization's performance. Strategic employees' relations practices have the highest contribution on organizational performance, followed by strategic top management support practices, then strategic quality performance measurement practices, then strategic customer relations practices and finally strategic suppliers' relations practices.

## **5.4 Recommendations**

The study sought to investigate the effects of strategic quality management practices on organizational performance of the steel manufacturing sector in Kenya. The findings are quite informative to organizational managers and policy makers.

### **5.4.1 Management Recommendations**

Managers of companies require information for enhancing their performance and enhancing company value. Since strategic customer relations practices relate positively with organizational performance, the study recommends that organizational managers should initiate and reinforce strategic customer relations practices to enhance organizational performance and increase company value. Managers should focus their efforts on creating loyal customers through increased customer satisfaction. In order to achieve this, they should deal with customer complaints and aim at reducing them, offering after sales service to clients, soliciting customer inputs in product design, developing accounts for key customers, training customer and using customer satisfaction criterion to evaluate the performance of the company. This will significantly help in enhancing the customer satisfaction. This can be achieved by getting information and tracking customers' complaints for them to remain ahead in the quality improvement process. They should aim at fixing or reducing customer complaints to lowest levels. They should also increase the practice of measuring their customer satisfaction levels on regular basis. Top level managers must lead from the front in customer service.

Strategic top management support practices have been found to positively influence organizational performance. Top level managers must be seen to champion for implementation of the strategic quality management practices by all means. Managers can achieve this by allocating the required resources to enable proper implementation of the strategic quality management practices. The person in charge of quality management should also report directly to the Chief Executive Officer.

Since strategic quality performance measurement practices relate positively with organizational performance, the study recommends that managers should initiate and

reinforce quality performance practices to realize high organizational performance. They should allocate resources towards quality measurement and improvement ensuring that they set quality goals and distribute them throughout the organization. Managers should refocus their efforts of quality control on defect detection steps. The companies should adopt and use control systems for monitoring performance under the quality management system. Early detection of defects has several advantages. The detection and elimination of such defects is vital for sustaining product quality and reducing costs, many manufacturers look to identify such defects as early as possible to avoid producing tons of defective material at considerable expense.

Strategic employee relations practices positively influence organizational performance. The study therefore recommends that managers of steel manufacturing companies should involve all their staff members in quality improvement activities. This will effectively build their morale and make them proud of themselves and the company. The study recommends that employees should actively participate in decision making of a company since doing so makes them become more knowledgeable about the environment and in the long run they are much more focused and highly motivated. The companies should also acknowledge and encourage employee suggestion towards quality management. In addition, companies should install quality management improvement teams and have them meet frequently. Every employee should be regarded as a unique human being, not just a cog in a machine, and each employee should be involved in helping the organization meet its goals. Each employee's input is solicited and valued by his/her management.

There was moderating effect of organizational learning on the relationship between strategic quality management practices and organization performance. Managers should focus their efforts on prompt sensitization and awareness creation on emerging issues to ensure employees are updated with current relevant information. They should also endeavor to strengthen employer-employee relationship as well as employee-employee relationship as a way of enhancing strategic quality management practices.

## **5.4.2 Policy Recommendations**

Since strategic quality management practices relate positively with organizational performance, policy makers should create a quality framework that is geared towards improving performance and ensure it is adhered to by all stakeholders in the manufacturing firms in Kenya. Quality improvement activities emerge from a systematic and organized framework for improvement. This framework, will be adopted by the firm's management, understood, accepted and utilized throughout the organization, as a result of continuous education and involvement of staff at all levels in performance improvement.

Strategic suppliers' relations practices positively influence organizational performance. Policy makers should establish explicit standard guidelines for supplier relationships that are based on quality so as to encourage long-term maintenance of quality-based relationships with suppliers. Policy makers should put in place mechanisms to ensure that top managers encourage information sharing with their supply chain members. Top managers can achieve this by linking the company's information systems with their clients. Information systems linkage created enables the company to share the production, delivery schedules and performance metrics of the company across the company's supply chain and they can track the order fulfillment and shipment status of the company across supply chain. Policy makers should provide policy guidelines to ensure that companies that embrace strategic quality management practices source suppliers who also embrace quality practices and regularly update them on the quality management system requirements in their bid to continuously improve on quality since this will ensure that the company gets timely, reliable quality information from suppliers and build a strong relationship with suppliers based on mutual understanding and mutual goals. Companies' top management should also ensure that they have clear-cut and support frameworks that enable their companies to be learning organization. In this regard the steel manufacturing companies should create, acquire and transfer knowledge as well as modify their culture in order to reflect new knowledge and insights that are related to strategic quality management within the context of their overall performance management.



## **5.5 Areas for Further Research**

The study carried out research on the effects of strategic quality management practices on organizational performance in the steel manufacturing sector in Kenya. A study on the effects of strategic quality management practices on organizational performance in other sectors such as in the Fast Moving Consumer Goods is recommended as well as in industries that are allied to steel manufacturing such as those engaged in vehicles' body building. This study focused on a few quality management practices. Further studies should be done on other quality management practices. This study only focused on the steel manufacturers in Kenya listed in the Kenyan Business Directory 2015. This may not be an actual representation of other manufacturers. Further studies could be conducted on effects of strategic quality management practices on organizational performance of medium and small scale firms in the manufacturing sector. Further studies could be conducted on effects of strategic quality management practices on organizational performance of the steel manufacturing sector listed in the Kenya Association of Manufacturers (KAM) directory. This will enable complete generalization of the relationship that existed. In addition, comparative studies should be done between nations; for example between a semi-controlled environment such as Ethiopia and fully liberalized economy such as Kenya.

Further studies could be on the relationship between organizational citizenship behavior, which is employee's voluntary commitment within an organization and quality management in the listed companies in Kenya. This would investigate the extent to which employees commit themselves to strategic quality management as a matter of personal commitment and whether there is a conflict of approach between organizational citizenship behavior and quality management. The study further proposes a comparative survey between those companies with a policy on organizational learning and those without and its influence on strategic quality management.

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## APPENDICES

### Appendix I: Introduction Letter

Chief Executive Officer

P.O. Box.....

.....

10<sup>th</sup> September 2015

Dear Sir/Madam,

#### **RE: ACADEMIC RESEARCH**

I am a student at Jomo Kenyatta University of Agriculture and Technology pursuing PhD in Business Administration and doing a thesis in partial fulfillment of my course. The title of my thesis is '**Effect of strategic quality management practices on organizational performance of the steel manufacturing sector in Kenya**'. Given that your organization is listed in the Business Directory as one of the companies in the steel manufacturing sector, you have been identified as one of the target respondents. I am therefore requesting that you allow me obtain data from the organization for the above purposes. Please spare some few minutes to fill the attached questionnaire to enable me complete my thesis. You can as well delegate this to a member in the top management. Your honesty as you fill this questionnaire will contribute towards the accuracy of the findings. The information provided will be treated with utmost confidentiality and will be used for academic purposes only. You do not have to indicate your name anywhere on the questionnaire.

Thanking you in advance.

Yours faithfully,

Wahome Rureri

## Appendix II: Questionnaire

This questionnaire is designed to collect data from steel manufacturing companies in Kenya on the effects of strategic quality management practices on organizational performance. The data shall be used for academic purposes only and will be treated with strict confidence. Your participation in facilitating the study is highly appreciated.

NAME OF ORGANIZATION-----

ADDRESS AND LOCATION-----

### SECTION A: Strategic Customer Relations Practices

1. The following statements are descriptive of strategic customer relations practices. Please indicate your level of agreement with the following statements by ticking (√) in the appropriate box.

**Key:** Strongly Agree (SA), Agree (A) Disagree (D) Undecided (U)  
Strongly Disagree (SD)

Statement	SA	A	D	U	SD
Our company seriously investigates and fixes all customer complaints.					
Our company knows our external customers' current and future requirements.					
In our company, customers' requirements are effectively distributed throughout the workforce.					
In our company, customers' requirements are effectively understood throughout the workforce.					
In designing new products our company uses					

the requirements of domestic customers.					
Our company regularly measures customer satisfaction.					
Achievement of ISO 9001:2008 certification has made our institution create value for our customers.					
Our customer care office in its strategic location has acted as a valuable instrument for introducing a client focus in our institution.					
ISO certification has been instrumental in helping our organization introduce instruments like accessible complaint reporting and resolution, and conducting customer satisfaction surveys to monitor client satisfaction.					
Customer complaints have decreased over the last three years.					
Customer satisfaction level index have been going up in the last three years.					
Quality management and customer satisfaction are integrated in organizational plans.					

2. Do you have a customer care office or its equivalent? YES [ ] NO [ ]

3. What was your customer satisfaction index in your last customer satisfaction survey?

Less than 20% [ ] 20-40% [ ] 41-60% [ ] More than 60% [ ]



**SECTION B: Strategic Top Management Support Practices**

4. The following statements are descriptive of strategic top management support practices. Please indicate your level of agreement with the following statements by ticking (√) in the appropriate box.

**Key:** Strongly Agree (SA), Agree (A) Disagree (D) Undecided (U)  
Strongly Disagree (SD)

Statement	SA	A	D	U	SD
Top management in our company considers quality as their top priority.					
Top management in our company actively encourage implementation of strategic quality management practices.					
Top management in our company actively encourage involvement and commitment in moving towards 'Best Practice'.					
Top management in our company considers quality improvement as a way to increase profits.					
Top management in our company allocates adequate resources towards effort to improve quality.					
Our company has clear quality goals identified by top management.					
Internal process improvement in the organization has lead to externally observable improvements.					
Top management strongly encourages Employee relations in the production process.					

5. To whom does the person normally responsible for quality management report to?

CEO [ ] Head of Department [ ] Production Manager [ ]

Others; Specify [ ] \_\_\_\_\_

**SECTION C: Strategic Quality Performance Measurement Practices**

6. The following statements are descriptive of strategic quality performance measurement practices. Please indicate your level of agreement with the following statements by ticking (√) in the appropriate box.

**Key:** Strongly Agree (SA), Agree (A) Disagree (D) Undecided (U)  
Strongly Disagree (SD)

Statement	SA	A	D	U	SD
The top priority in evaluating organization's management is quality measurement.					
Our company believes that getting registered/certified is NOT an end in itself but a starting point to introducing other quality initiatives.					
Our company evaluates and improves business process continuously.					
Our organization has nurtured a culture of quality.					
Our company carries out regular Internal and External audits to keep checking and improving on our systems.					
Our company takes preventive actions to ensure product conformance.					
In our company we believe that what gets measured gets done.					

We believe that all employees take quality as their responsibility.					
In our company, everyone participates in improving the quality of our products /processes.					
The processes for designing new products in our company ensure quality.					
Preventing defective products from occurring is our strong attitude in our company.					
Our company has a quick feedback from manufacturing to design and engineering.					
Quality is the number one criterion used by customers in selecting our products.					
Our company emphasizes use of control systems for monitoring performance.					

7. On average, how many times per year does your company carry out quality management audits?

Less than 3 [ ]    3-6 [ ]    7-10 [ ]    More than 10 [ ]

8. On average, how many times per year does your company carry out employee satisfaction surveys?

Less than 3 [ ]    3-6 [ ]    7-10 [ ]    More than 10 [ ]

9. Please give any comment with regard to quality measurement in your organization.

**SECTION D: Strategic Suppliers' Relations Practices**

10. The following statements are descriptive of strategic suppliers' relations practices. Please indicate your level of agreement with the following statements by ticking (√) in the appropriate box.

**Key:** Strongly Agree (SA), Agree (A) Disagree (D) Undecided (U) Strongly Disagree (SD)

Statement	SA	A	D	U	SD
Our company has good relationship with major suppliers.					
Organization/company requires their major suppliers to be ISO certified.					
Our company has a criteria for supplier selection					
Our company maintains long term relationship with suppliers					
Our suppliers are made aware of our quality policy.					

11. Please give any comment with regard to suppliers' relations in your organization.

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**SECTION E: Strategic Employee Relations Practices**

12. The following statements are descriptive of strategic employee relations practices. Please indicate your level of agreement with the following statements by ticking (√) in the appropriate box.

**Key:** Strongly Agree (SA), Agree (A) Disagree (D) Undecided (U) Strongly Disagree (SD)

Statement	SA	A	D	U	SD
Our company always involves employees on high level decision-making.					
Our company is employee-friendly.					
Our organization acknowledges and encourages employee suggestions.					
Our company has installed quality improvement teams.					
Quality improvement teams meet quite frequently to exchange ideas.					
The organization puts a lot of emphasis on teamwork and team building.					
In our company employees satisfaction is regularly measured					
In our organization, quality circles are recognized as one of the platforms where employees get involved in the continuous improvement in the organization.					

13. On average, how many times per year does your company go for team building activities?

Less than 3 [ ]      3-6 [ ]      7-10 [ ]      More than 10 [ ]

14. Please give any comment with regard to employee relations in your organization.

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**SECTION F: Organization Learning**

15. The following statements are descriptive of organization learning. Please indicate your level

of agreement with the following statements by ticking (√) in the appropriate box.

**Key:** Strongly Agree (SA), Agree (A) Disagree (D) Undecided (U)

Strongly Disagree (SD)

Statement	SA	A	D	U	SD
Our company encourages the discussion among the employees and team learning.					
Our company offers good learning environment to facilitate innovation.					
Our company considers employee learning capability as one of the key factors to improve the company's performance.					
Experiences and ideas provided by external sources (e.g., advisors, customers, training companies, etc) are considered a useful instrument for this company's improvement.					
Sensitizations and awareness creation is always done in our company to keep everyone conscious of our quality systems.					
Our company has wide training and development process, including career path planning, for all our employees					
I am well conversant with the organization's quality policy					
The company continuously trains our staff on quality					

16. On average, how many quality training sessions per year does your company carry out?

Less than 3 [ ]      3-6 [ ]      7-10 [ ]      More than 10 [ ]

17. In your own opinion, does organization learning in any way influence the relationship between strategic quality management practices and organizational performance?

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**SECTION G: Organizational Performance**

18. The following statements are descriptive of organizational performance. Please indicate your level of agreement with the following statements by ticking (√) in the appropriate box.

**Key:**            Strongly Agree (SA), Agree (A) Disagree (D) Undecided (U)  
                          Strongly Disagree (SD)

Statement	SA	A	D	U	SD
For the last three years, our products have conformed to market requirements.					
For the last three years, there has been an improvement in terms of return on investment.					
Unit costs of operations have reduced over the last three years.					
Wastage of resources has decreased over the last three years.					



For the last three years, the company has had an improvement on the after tax profit.					
Our company's image has improved over the last three years.					
Our company's revenue base has increased over the last three years.					
For the last three years, there has been an improvement in terms of efficiency.					

19. Kindly give the approximate percentage increment in organization turn over for the last 3 years.

<5 [ ]      5-15 [ ]      16-30 [ ]      31 and above [ ]

20. In your own opinion, what motivated the organization to implement strategic quality management practices?

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### Appendix III: Sampling Frame

	<b>COMPANY NAME</b>	<b>CONTACTS</b>	<b>ADDRESS</b>
1	<b>CANON ALUMINUM</b>	Tel: 254 208 262 92 Tel: 254 208 262 93 Fax: 254 208 213 50	P.O. Box 30781-00100 Nairobi, Kenya
2	<b>ASL LTD</b> (Ramco Group Industrial Park Mombasa Rd)	Tel: 254 208 091 077 Tel: 254 202 054 137 Fax: 254 208 213 50	P.O Box 18639 Nairobi, Kenya
3	<b>ATHI RIVER MINING</b> (Rhino House Chiromo Road Westlands)	Tel: 254 202 667 675 Tel: 254 202 667 676 Fax: 254 202 667 677	P.O. Box 40104 Nairobi, Kenya
4	<b>BROLLO KENYA LTD</b>	Tel: 254 412 312 123 Tel: 254 412 312 124 Fax: 254 412 314 553	P.O. Box 90651-80100 Mombasa, Kenya
5	<b>COOK `N LITE LTD</b>	Tel: 254 412 491 401 Tel: 254 412 491 403 Fax: 254 412 495 099	P.O. Box 83934 Mombasa, Kenya
6	<b>DEVKI STEEL MILLS LTD</b> (Athi River Near KMC and Ruiru Town)	Tel: 254 202 511 902 Tel: 254 202 511 902 Fax: 254 202 028 169	P.O. Box 33319-00600 Nairobi, Kenya
7	<b>THE DOSHI GROUP</b>	Tel: 254 206 823 401 Tel: 254 206 823 409 Fax: 254 202 743 111	P.O. Box 40671-00100 Nairobi, Kenya
8	<b>ELITE TOOLS LTD</b> (Addis Ababa Road Industrial Area off Enterprise road)	Tel: 254 205 578 70 Tel: 254 205 584 72 Fax: 254 205 574 24	P.O. Box 64466-00620 Nairobi, Kenya
9	<b>FARM ENGINEERING INDUSTRIES LTD</b>	Tel: 254 205 357 4 Tel: 254 205 361 52 Fax: 254 205 366 04	P.O. Box 1326-4010 Nairobi, Kenya
10	<b>FRIENDSHIP CONTAINER MANUFACTURERS LIMITED</b> (Lunga Lunga Road Industrial Area)	Tel: 254 206 525 11 Tel: 254 000 000 000 Fax: 254 000 000 000	P.O. Box 42785-00100 Nairobi, Kenya
11	<b>IN STEEL LTD</b> (Ol Kalou Road Industrial Area)	Tel: 254 205 550 99 Tel: 254 205 550 92 Fax: 254 203 577 270	P.O. Box 78161-00507 Nairobi, Kenya
12	<b>KENS METAL INDUSTRIES</b>	Tel: 254 206 511 64 Tel: 254 206 511 67	P.O. Box 18583-00500

		Fax: 254 205 587 30	Nairobi, Kenya
13	<b>NAPRO INDUSTRIES LTD</b> (Makungi Road off Lunga Lunga Road Industrial Area)	Tel: 254 205 331 66 Tel: 254 724 257 027 Fax: 254 206 504 27	P.O. Box 392-00606 Nairobi, Kenya
14	<b>ORBIT ENGINEERING LTD</b> (Lusaka close)	Tel: 254 202 512 584 Tel: 254 739 173 478 Fax: 254 000 000 000	P.O. Box Nairobi, Kenya
15	<b>SPECIALISED ENGINEERING COMPANY (E.A) LIMITED</b> (Secol house, Athi River Road off Addis Ababa Road Industrial Area)	Tel: 254 206 536 720	P.O. Box 18564-00500 Nairobi, Kenya
16	<b>STEEL STRUCTURES LTD</b>	Tel: 254 207 781 479 Tel: 254 202 405 448 Fax: 254 000 000 000	P.O. Box 49862-00100 Nairobi, Kenya
17	<b>STEEL WOOL (AFRICA) LTD</b>	Tel: 254 202 017 719 Tel: 254 202 017 72 Fax: 254 000 000 000	P.O. Box 10105-00100 Nairobi, Kenya
18	<b>WELD ALLOYS</b> ( Migwari Road Off Enterprise Road Industrial Area)	Tel: 254 206 533 290 Tel: 254 000 000 000 Fax: 254 205 327 15	P.O. Box 78055-00507 Nairobi, Kenya
19	<b>ALLIANCE STEEL WORKS</b>	(+254) 20 54 17 96 (+254) 20 54 58 31	P.O.BOX 72377 - NAIROBI, Kenya
20	<b>APEX STEEL</b>	(+254) 20 35 01 01 (+254) 20 54 04 56 apexsteel@form-net.com	P.O.BOX 18441 - NAIROBI, Kenya
21	<b>ASSOCIATED STEEL</b>	(+254) 20 53 04 92 (+254) 20 54 33 38 asl@ramco-group.com	P.O.BOX 18639 - NAIROBI, Kenya
22	<b>BHAMBRA STEEL</b>	(+254) 07 22 52 61 46 (+254) 20 55 95 75 daljeetb@hotmail.com	P.O.BOX 39829 - NAIROBI, Kenya
23	<b>CIVICON</b>	(+254) 41 49 31 83 (+254) 41 49 31 63 civicon@africaonline.co.ke	P.O.BOX 99491 - MOMBASA

24	<b>DAVID ENGINEERING</b>	(+254) 20 35 06 05 (+254) 20 37 11 88 info@rotomoulders.com	P.O.BOX 27722 - NAIROBI
25	<b>DESBRO ENGINEERING</b>	(+254) 20 53 61 34 (+254)20 53 77 27 desbro@desbro.org www.desbro.org	P.O.BOX 42469 - NAIROBI, Kenya
26	<b>DOSHI IRONMONGERS</b>	(+254) 41 43 23 04 (+254) 41 43 38 16 dim-msa@africaonline.co.ke	P.O.BOX 82077 - MOMBASA
27	<b>EAST AFRICAN FOUNDRY WORKS</b>	(+254) 20 80 26 04 (+254) 20 86 12 63 eafw@alloysteel.com	P.O.BOX 48624 - NAIROBI, Kenya
28	<b>FERO METAL FORWARDERS</b>	(+254) 41 31 61 52 (+254) 41 43 43 35	P.O.BOX 90550 - MOMBASA
29	<b>IRON ART</b>	(+254) 20 375 21 62 (+254) 20 375 21 61 ironart@mitsuminet.com	P.O.BOX 27335 - NAIROBI, Kenya
30	<b>JITAN STEEL</b>	(+254) 45 205 17 (+254) 45 221 86 jitansteel@mitsuminet.com	P.O.BOX 286 - ATHI RIVER
31	<b>KAMCO STAINLESS</b>	(+254) 20 53 69 91 (+254) 20 54 25 11 kamco@pmail.net	P.O.BOX 41212 - NAIROBI, Kenya
32	<b>KENYA UNITED STEEL</b>	(+254) 41 22 52 58 (+254) 41 22 35 54	P.O.BOX 90550 - MOMBASA
33	<b>KHETSHI DHARAMSHI &amp; CO</b>	(+254) 20 53 26 85 (+254) 20 54 39 29 kdwire@net2000ke.com	P.O.BOX 43702 - NAIROBI, Kenya
34	<b>MABATI ROLLING MILLS</b>	(+254) 20 54 04 30 (+254) 20 54 16 91 nairobi@mabati.com www.mabati.com	P.O.BOX 78162 - NAIROBI, Kenya
35	<b>MILD STEEL</b>	(+254) 20 53 34 70	P.O.BOX 78117 - NAIROBI, Kenya
36	<b>NOVUS ENGINEERING</b>	(+254) 20 24 10 79 (+254) 20 374 10 79	P.O.BOX 11894 - NAIROBI, Kenya
37	<b>RLCO STEEL FABRICATORS</b>	(+254) 20 53 00 86 (+254) 20 53 00 88	P.O.BOX 32138 - NAIROBI,

		arvo@arcc.co.ke	Kenya
38	<b>RLCO STEEL FABRICATORS</b>	(+254) 41 49 34 91 (+254) 41 49 34 92 arvo@arcc.co.ke	P.O.BOX 85876 - MOMBASA
39	<b>SANDVIK KENYA</b>	(+254) 20 53 28 66 (+254) 20 53 28 77 sandvik@africaonline.co.ke	P.O.BOX 18264 - NAIROBI, Kenya
40	<b>SARANG STEEL</b>	(+254) 20 76 69 87 (+254) 20 76 69 88	P.O.BOX 30609 - NAIROBI, Kenya
41	<b>SCAN STEEL</b>	(+254) 20 21 74 23 (+254) 20 21 74 07 scan@iconnect.co.ke	P.O.BOX 48247 - NAIROBI, Kenya
42	<b>SECOL</b>	(+254) 20 53 67 20 (+254) 20 53 62 38 secol@wananchi.com	P.O.BOX 18564 - NAIROBI, Kenya
43	<b>STEEL AFRICA</b>	(+254) 20 33 19 90 steelafrica@net2000ke.com	P.O.BOX 46934 - NAIROBI, Kenya
44	<b>STEEL AFRICA</b>	(+254) 41 43 30 11 (+254) 41 43 38 35 steelafrica@net2000ke.com	P.O.BOX 81827 - MOMBASA
45	<b>STEELMAKERS</b>	(+254) 20 82 17 90 (+254) 20 82 17 96 nbo@steelmakers.com	P.O.BOX 44574 - NAIROBI, Kenya
46	<b>TECHNOSTEEL INDUSTRIES</b>	(+254) 20 55 50 96 (+254) 20 55 11 25 technosteel@africaonline.co.ke	P.O.BOX 17512 - NAIROBI, Kenya

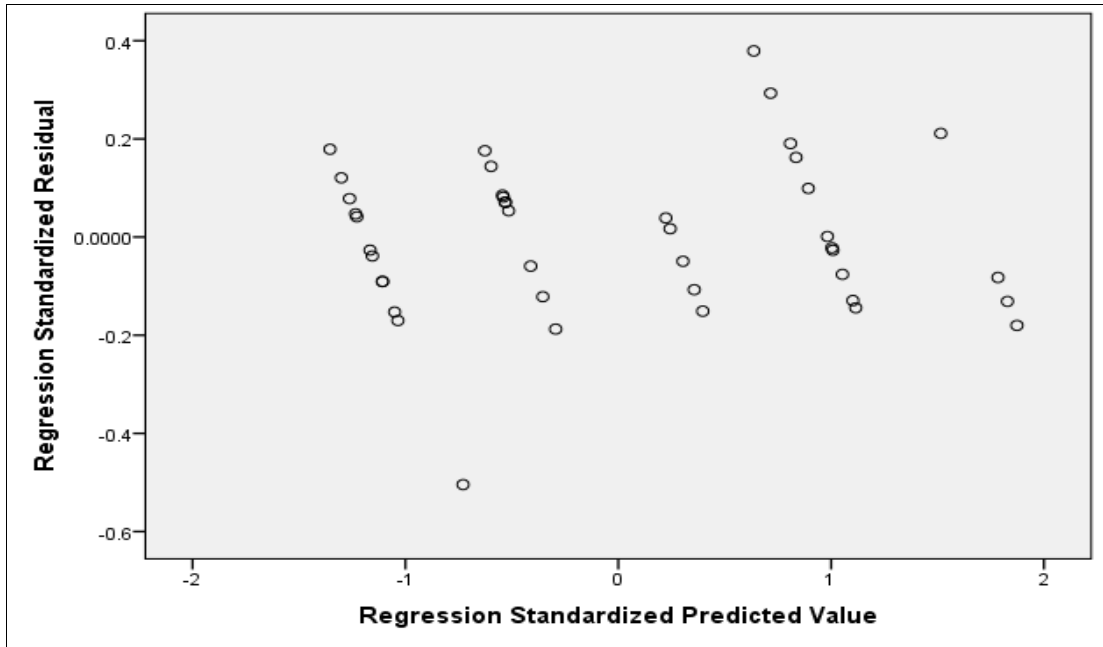
*Source: Kenya Business Directory for Metal Manufacturing Companies (2015)*

**Appendix IV: Krejcie and Morgan's Sample Size Table**

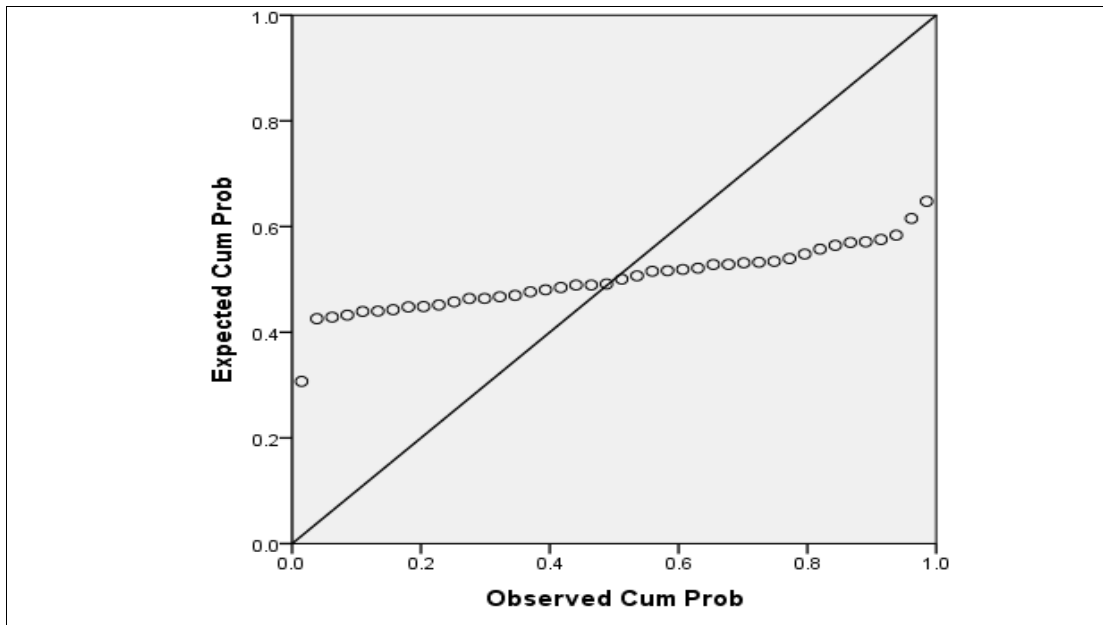
<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	100000	384

## Appendix V: Scatter Plot

Dependent Variable: Organizational Performance



Dependent Variable – Organizational Performance



Normal P-P Plot of Regression Standardized Residue