

**ISO QUALITY MANAGEMENT SYSTEM CERTIFICATION AND  
CUSTOMER SATISFACTION IN KENYAN AVIATION INDUSTRY**

**BY**

**SOLOMON KIRIMI RUKARIA**

**A RESEARCH PROJECT PRESENTED IN PARTIAL  
FULFILLMENT OF THE AWARD OF MASTERS DEGREE IN  
BUSINESS ADMINISTRATION, SCHOOL OF BUSINESS,  
UNIVERSITY OF NAIROBI.**

**OCTOBER 2014**

## DECLARATION

I, the undersigned, declare that this is my original work and has not been submitted to any other College, Institution or University for the award of any degree.

**Signed:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Rukaria, Solomon Kirimi

D61/60891/2013

This Research project has been submitted for examination with my approval as a university supervisor.

**Signed:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Dr.Owino, Agaya Okwiri

Lecturer, School of Business,

Department of Management Science,

University of Nairobi

## **ACKNOWLEDGEMENT**

I acknowledge the almighty God for the grace and favor throughout the process of this project. My sincere thanks go to my supervisor Dr. Okwiri for his remarkable guidance, commitment and consistency. I also appreciate my wife Grace, my children Emmanuel, Mark and Joy for the moral support. Special regards also to my friends and colleagues for their team work spirit. The workmates who allowed me to attend class and concentrate on this project are heroes to me.

## **DEDICATION**

I dedicate this research project to my sons and daughter Emmanuel, Mark and Joy.

## TABLE OF CONTENTS

DECLARATION .....	ii
ACKNOWLEDGEMENT .....	iii
DEDICATION .....	iv
TABLE OF CONTENTS .....	v
LIST OF TABLES .....	vii
LIST OF FIGURES .....	viii
ABSTRACT .....	ix
CHAPTER ONE: INTRODUCTION .....	1
1.1 Background of the study .....	1
1.1.1 ISO 9001:2008 Quality Management System standard. ....	2
1.1.2 Customer satisfaction .....	4
1.1.3 Relationship between ISO 9001 Quality Management System and Customer Satisfaction. ....	6
1.1.4 The Aviation industry in Kenya .....	7
1.2 Research problem.....	9
1.3 Research objectives.....	10
1.4 Significance of the study.....	10
CHAPTER TWO: LITERATURE REVIEW .....	12
2.1 Introduction.....	12
2.2 ISO 9001:2008 Certification and Operational performance .....	12
2.3 Customer satisfaction as an operational performance measure .....	15
2.5 ISO 9001:2008 Certification, Customer satisfaction and Customer orientation of service personnel.....	19
2.6 Research Gap .....	19
CHAPTER THREE: RESEARCH METHODOLOGY .....	24

3.1 Introduction.....	24
3.2 Research Design.....	24
3.3 Population .....	24
3.4 Data Collection Method.....	24
3.5 Data Analysis .....	25
CHAPTER FOUR: RESULTS AND DATA ANALYSIS.....	26
4.1 Introduction.....	26
4.2 Results.....	26
4.3 Correlations of the variables .....	28
CHAPTER FIVE: FINDINGS, DISCUSSION AND CONCLUSION.....	30
5.1 Introduction.....	30
5.2 Findings.....	30
5.2.1 ISO 9001 Certification and customer satisfaction .....	30
5.2.2 ISO 9001 Certification status and employee customer orientation .....	31
5.2.3 ISO 9001 Certification status and employee empowerment.....	31
5.2.4 ISO 9001 Certification status and cross functional relationships .....	32
5.4 Discussions .....	32
5.5 Conclusion .....	33
5.6 Recommendations.....	33
5.6.1 Suggestions for further research.....	34
REFERENCES .....	35
APPENDIX 1: QUESTIONNAIRE .....	38

## LIST OF TABLES

Table 2.1 Summary of literature review .....	21
Table 4.1 ISO 9001 Certification status and employee customer orientation .....	27
Table 4.2 ISO 9001 Certification status and employee empowerment .....	27
Table 4.3 ISO 9001 Certification status and cross functional relationships .....	28
Table 4.4 ISO 9001 Certification status and Customer satisfaction .....	28
Table 4.5 Correlations Matrix.....	29

## LIST OF FIGURES

Figure 2.1 The Conceptual framework .....	23
Figure 4.1 ISO 9001 Certification status .....	26



## **ABSTRACT**

The purpose of this study was to establish the relationship between ISO 9001 Quality Management System Certification and customer satisfaction in the Kenyan Aviation industry. The study had three objectives to achieve: To determine ISO 9001:2008 Certification status of firms within the aviation sector in Kenya; determine customer satisfaction for firms in the Kenyan aviation sector and to determine the relationship between ISO Certification and customer satisfaction in the aviation sector. The study took the form of a cross-sectional research design targeting managers and the employees of thirty organizations in the Kenyan Aviation industry. Stratified sampling was used to select 120 respondents who took part in the study. A questionnaire was used to collect primary data from the respondents. The data collected was analyzed using descriptive statistics and correlation analysis. The findings were presented in tables and figures. The study established that 74% of the organizations in the Aviation industry in Kenya are ISO 9001 certified and 26% Non-ISO 9001 Certified. ISO 9001 certification was found not to have a significant relationship with customer satisfaction. The study found out that the employees customer orientation, and cross functional relationships within the organizations were factors influencing the relationship between ISO 9001 Certification and customer satisfaction. The aspects of employees' customer orientation were found to be training, motivation and employees customer focus.

# CHAPTER ONE: INTRODUCTION

## 1.1 Background of the study

Quality management is a management approach based on fundamental Principles of Customer focus, Leadership, People involvement, System approach, Process approach, Continuous improvement, Fact-based decision making and beneficial supplier relationship(Okwiri, 2012). The consensus among a wide range of literature is that the principles are applied to the value chain through actions within the organizational infrastructure described as management practices. In the context of an organization, practices are described as the activities that occur within the organization's infrastructure so as to achieve the organization's goals (Okwiri, 2014).

Models to ensure the practices in organizations are consistent with these principles have been developed. One such model is Quality management system models. ISO 9000 family of quality management system standards are meant to enable organizations to set up effective management systems with which they can meet the needs of interested parties and assure sustained success. It provides a set of requirements to operate a quality management system and represents international best practices for managing quality.

ISO 9001:2008 standard, titled, 'Quality management systems' requirements, is designed for use internally for customer-supplier contract purposes or externally by third party certification. Third party certification follows an evaluation of the quality system against specified context-neutral audit criteria.

### **1.1.1 ISO 9001:2008 Quality Management System standard.**

The standard requires organizations to establish, document, implement and maintain a quality management system and continually improve its effectiveness in accordance with the standard. It requires the organization to determine the processes needed for the quality management system and their application throughout the organization; determine the sequence and interaction of the processes; determine criteria and methods needed to ensure that both the operations and control of these processes are effective; ensure the availability of resources and information necessary to support the operation and monitoring of these processes; monitor, measure where applicable, and analyze these processes and implement actions necessary to achieve planned results and continual improvement for these processes (ISO 9001:2008 standard).

The standard requires the organization to establish and maintain a quality manual (4.2.2); documents required by the quality management system shall be controlled (4.2.3). It requires top management to provide evidence of its commitment to the development and implementation of the quality management system and continually improving its effectiveness (5.1). The top management is also required to ensure that customer requirements are determined and are met with the aim of enhancing customer satisfaction (5.2); there is an elaborate quality policy (5.3); quality objectives are established at relevant functions and levels within the organization (5.4.1); quality management planning (5.4.2); and also to ensure that responsibilities and authorities are defined and communicated within the organization (5.5.1). The ISO 9001:2008 standard requires the top management to appoint a management representative (5.5.2); ensure that appropriate communication processes are established within the organization (5.5.3); and review the

organization's quality management system at planned intervals to ensure its continuing suitability, adequacy and effectiveness (5.6). The organization shall provide the resources needed (6.1); plan and develop the processes needed for product realization( 7.1); determination of the requirements related to the product( 7.2); review the requirements related to the product(7.2.2); determine and implement effective customer communication(7.2.3); product design and development planning(7.3.1); purchasing(7.4); product and service provision(7.5); and control of monitoring and measuring equipment(7.6). The organization shall plan and implement the monitoring, measurement, analysis and improvement processes needed (8.1).

Quality infrastructures are a composition of the physical facilities and the interrelated systems of organizations, structures and people that help organizations to implement quality practices and improve performance. The infrastructure comprises of various parts including; regulations, standards, conformity assessment and accreditation, economic operators and their collective representation and consumers. Standards facilitate the other areas by facilitating production of documentary standards; providing the basis for trade policy negotiations, mutual acceptance and recognition of accreditation, certification and audit results. In order to be certified, an organization will need to develop and implement a quality management system (QMS) that meets the requirements identified in ISO 9001:2008 Standard. This involves identifying the organization's goals, the process of achieving them and the means of evaluating success. The procedures will need to be documented. It is presumed that an organization that has acquired such certification will achieve greater customer satisfaction.

### **1.1.2 Customer satisfaction**

Kotler (1996) defined customer satisfaction as “the level of a person’s felt state resulting from comparing a product’s perceived performance or outcome in violation to his/her own expectations”. It is also defined as the levels of service quality performances that meet user’s expectation. Customer satisfaction is measured by the following four indicators namely; customer compliments, number of repeat customers, customer retention rate and the level of customer satisfaction (Bruce, 2007)

Parasuraman et al. (1995) defined service quality as “the global evaluation or attitude of overall excellence of service”. Service quality is the difference between customers’ expectation and perception of services delivered by service organizations. Service quality perceived by the customer is not necessarily the same as quality of service delivered. The quality of service delivered is an internal quality concept that is measured by comparing what is delivered with the standards set. ISO 9000:2000 defines quality as the degree to which inherent characteristics fulfils requirements. The service system quality has three components; the technical standards of service quality, the employees and the information technology. The service quality model has five dimensions; the tangible dimension, reliability, responsiveness, assurance and empathy. There has been some recent research which has sought to identify some of the determinants of satisfaction or dissatisfaction. Attempts to increase satisfaction rather than the removal of dissatisfaction maybe has been the downfall of much quality improvement or so –called TQM programmes. Some such programmes have focused on the activities of the front office staff- smile campaigns, for example, without getting to grips with the , albeit more difficult, issues of dissatisfaction removal. Without a strategy that includes both

dissatisfaction removal and satisfaction increase, or at least dissatisfaction removal first, staff and, indeed, customers could become justly cynical of the organization's attempt to improve service quality (Johnston, 1995).

A variety of authors agree that measures of service quality may either be hard or soft. Hard measures are those that are said to be quantifiable or objective. Soft measures are those which are more likely to be qualitative, judgmental, subjective, and based on perceptual data for example customer's satisfaction with the speed of service or managers' assessment of staff attitude towards customers (Ross, 1993). Soft measures of service quality are particularly relevant to the measurement of the quality of intangible aspects of service.

Service quality can be gathered from internal or external data sources. Internal data are those generated by the staff or management inside an organization, enabling an organization to ensure that it is meeting its own internal specifications of service quality. Service organizations may measure service quality not only on the basis of their own internal data but also by using external data, by monitoring customer satisfaction. The key to providing a good service is to understand that a service is not the actions and behavior themselves but the way in which guests perceive and interpret these actions (Ross, 1993).

In pursuit of achieving customer satisfaction, regardless of whether providing goods or services, organizations recognize that satisfied customers are the key to their success. Achieving high level of customer satisfaction requires that organizations continually monitor and examine the experiences, opinions and suggestions of their customers and

people who are potential customers. Improving service quality to meet customer's standards is an ongoing part of doing business. Organizations act to attract and satisfy customers and at the same time customers exercise ultimate influence. Their satisfaction depends on both their expectations and their treatment. Customers determine which organizations survive and thrive, what goods and services are available and how they are provided (Johnston, 1995).

### **1.1.3 Relationship between ISO 9001 Quality Management System and Customer Satisfaction.**

ISO 9001:2008 certifications are expected to bring about improvement of performance through customer satisfaction. Service organizations may measure service quality not only on the basis of their own internal data but also by using external data, by monitoring customer satisfaction. The key to providing a good service is to understand that a service is not the actions and behavior themselves but the way in which guests perceive and interpret these actions (Ross, 1993).

The ISO 9000 family addresses various aspects of quality management and contains some of ISO's best known standards. The standards provide guidance and tools for companies and organizations who want to ensure that their products and services consistently meet customer's requirements, and that quality is consistently improved. Achieving high level of customer satisfaction requires that organizations continually monitor and examine the experiences, opinions and suggestions of their customers and people who are potential customers. Improving service quality to meet customer's standards is an ongoing part of doing business. The organizations shall monitor

information relating to customer perceptions as to whether the organization has met customer requirements as one of the measures of the performance of the quality management system (ISO 9001:2008 Standard).

#### **1.1.4 The Aviation industry in Kenya**

The service sector is one of the fastest growing sectors of the world economy. It includes education, finance, communications, health care, utilities, wholesale and retail trade, and aviation. Producing these services as a whole tend to require less natural capital and more human capital. Globally, the service sector accounts for 20 per cent of the economy, while the industry in Kenya currently stands at 60 per cent of GDP, with a corresponding 68 per cent of employment creation. The aviation industry is the global transportation network that carries goods and passengers by air. It also provides essential services to numerous other industries, from medicine, national defense, tourism and sports

.The Aviation sector in Kenya is comprised of two distinct types of activities. They include the airlines and the ground based infrastructure. The airlines provide the services of transporting people and freight. The ground- based infrastructure includes the airport facilities, the services provided for passengers on-site at airports, such as baggage handling, ticketing and retail and catering services, together with essential services provided off –site such as air navigation and air regulation (Oxford economics,2011).

There are seventy licensed airlines operating in the country, some operating international scheduled flights, domestic scheduled flights and charter services both locally and internationally (<http://www.standardmedia.co.ke/business/article//all-airlines>. Fifteen out of the seventy are registered in Kenya ([http://en.wikipedia.org/wiki/List\\_of\\_airlines\\_of\\_Kenya](http://en.wikipedia.org/wiki/List_of_airlines_of_Kenya)).There are thirteen ground handling companies in the industry



([http://www.airlineupdate.com/content\\_subscription/gha/index/kenya.htm](http://www.airlineupdate.com/content_subscription/gha/index/kenya.htm). Industry trends are affected by factors such as technological innovation, the price of fuel, environmental regulations and safety requirements. It's inevitable to establishing a safe, secure, cost efficient, available and reliable air transport network in Kenya.

Various key players in the Kenyan aviation industry are ISO 9000 certified. Kenya Airways Company was first issued with ISO certification in 1999. This accreditation was a key indicator of technical competence and a mark of quality. Phoenix aviation is a private executive air charter company operating from Wilson Airport in Nairobi, Kenya. The company is ISO 9001:2008 certified which implies that the company offers a superior maintenance of fleet and training of pilots. Kenya Airports Authority (KAA) provides facilitative infrastructure for aviation services between Kenya and the outside world. The organization is ISO certified and focuses on greater efficiency, superior quality service and increased capacity in all the Kenyan Airports. The Kenya Civil Aviation Authority (KCAA) primary functions includes; Regulation and oversight of Aviation Safety and Security; Economic regulation of Air Services and development of Civil Aviation; Provision of Air Navigation Services, and Training of Aviation personnel. The organization is also ISO 9000 certified. Swissport International Ltd. provides ground services. The company is focused on consolidating and strengthening its market position to ensure constantly driving industry innovation in key areas such as service, quality and reliability.

In order for the players in the Kenyan aviation industry to survive and remain competitive, there will be a need for effective regulatory frameworks, safety & security

oversight systems and meeting the established International Civil Aviation Organization (ICAO) standards (Charles e. schlumberger, 2010).

## **1.2 Research problem**

ISO 9001:2008 certifications are expected to bring about improvement of performance through customer satisfaction. A Quality management system monitors feedback on customer perception and requirements. Customer satisfaction depends on how they perceive their expectations are met. Customers determine which organizations survive and thrive, what goods and services are available and how they are provided.

The aviation industry is competitive requiring cost and quality in performance. The industry has changing demands with characteristics of simultaneity in production and consumption. This makes it difficult to maintain quality measures. Certification is considered a mark of quality at its cost. Organizations incur high capital outlays to achieve the certification.

Studies focusing on ISO 9001:2008 standard certification and customer satisfaction have been reported, but few in Kenya. A study in America, university of Rhode Island (Bruce, 2007) reveals that obtaining ISO 9000 certification will not by itself guarantee customer satisfaction and/ or improve firm's competitiveness. Okwiri (2013) focused on the relationship between customer satisfaction and ISO 9001 certification and suggested it is not significant. The study will seek to find out if there is a consistency with the earlier studies.

Managers are faced with the dilemma between best fit versus best practices, work ethics and strategy resource links. How to empower employees, maximize on service quality and motivation of workers are issues for managers to resolve. This study seeks to test the standard position by seeking an answer to the question; does ISO 9001 certification lead to customer satisfaction?

### **1.3 Research objectives**

To answer the research question above, the following objectives have to be achieved:

- i. Determine ISO 9001:2008 Certification status of firms within the aviation sector in Kenya.
- ii. Determine customer satisfaction for firms in the Kenyan aviation sector.
- iii. Determine the relationship between certification and customer satisfaction in the aviation sector.

### **1.4 Significance of the study**

The study will provide helpful information to managers of organizations in the aviation service sector on decision making and resource allocation. It will also contribute to the body of knowledge which will be very beneficial to scholars in the field of ISO 9001 certification and how it affects customer satisfaction in organizations. The information can also be used by organizations that would wish to improve their performance through customer satisfaction strategy.

The stakeholders of in the study includes; the academicians. Students doing research on the area of ISO 9001 Quality Management Systems will find the study of benefit in their work. Organizations that are contemplating becoming ISO 9001 certified in order to

improve their performance through customer satisfaction will also benefit from the study. The context of the study is the Aviation Industry in Kenya and therefore the players in the industry will find the study of help to them. The industry player includes the airport authorities, the Ground handling companies in airports, the Air Navigation Services Providers and also the Air regulation agencies within the industry.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

Literature is reviewed in two themes; ISO 9001 certification and operational performance relationship and customer satisfaction as a quality management system performance measurement. This literature is summarized and a conceptual framework developed.

### **2.2 ISO 9001:2008 Certification and Operational performance**

Studies on ISO 9001:2008 certification and operational performance have returned inconsistent findings. The question of whether ISO 9001 certified organizations perform better than non-ISO 9001 certified ones has not been exhaustively answered by the existing studies.

Bruce and Shaw (2007) was an empirical study conducted in America about the impact of ISO 9001 on TQM and business performance. The aim of the study was to assist in explaining and predicting the relationship between ISO certification, TQM practices, organizational competitiveness, customer satisfaction and business performance. The methodology used was survey where firms with ISO 9000 certification were identified. ISO 9000 champions were determined as the most appropriate respondents since they were the most familiar with the firm's quality practices and its impact on the firm's business performance. In the study, Crobach's coefficient Alpha was used to assess reliability.

The findings indicate that profit and market share is the two indicators that often measure a firm's business performance. The study revealed that ISO 9001 certification has no significant direct positive relationship with the business performance. The study was on business performance and not operational performance. It was done in two manufacturing industries in the United States with little emphasis on service industries. Furthermore the research study was done in geographical and socio-cultural backgrounds different from that in Kenya.

An empirical study carried out in East Africa, Kenya by Okwiri (2013) sought to investigate the relationship between a successful pre- ISO 9001 certification audit and effectiveness of an organization. The purpose of the study was to investigate the relationship between a successful pre- ISO 9001 certified audit and effectiveness of an organization. The methodology adopted was a cross-sectional, statistical study to be able to generalize the findings. The issues involved concerned organizational practices, their outcomes, operational performance and the extent of change when ISO 9001 quality management system standard prescribed methodologies are put in practice. The measure of performance was customer satisfaction. A Pearson correlation matrix was used in the study for data analysis.

The study found that ISO 9001 certification does not significantly influence the probability of an organization being a high performer as compared to the non-certified ones. The study was carried out in a public service corporation whereas this study is being conducted in the aviation industry. The study reveals that employees in an ISO 9001 certified organization are likely to perceive the organization's performance as high compared to the non-certified organizations. This according to study was not confirmed

from perception of the customers themselves. The customers' perception was that the ISO certification was probably not going to significantly influence the probability of an organization being a high performer relative to the non-certified ones. It would appear that there was a gap between what the customers perceived and what the employees of the participating organization thought.

These findings are inconsistent with those from the study by Chua, Goh and Wan, (2003) conducted in Singapore on whether ISO 9001 certification improves business performance. The study was a general paper with a purpose of seeking to ascertain if certification has indeed improved the performance for listed and non-listed companies. The methodology used was sampling and the Cronbach's alpha reliability coefficient was used in the data analysis.

Findings from the study shows that ISO 9000 certification allows a firm to experience better internal processes through clearer working instructions or procedures, better bottom line through greater profitability, and stronger export through expansion into international markets. The study concludes that certification leads to better overall financial performance, non-listed certified firms experience better documentation procedures, higher perceived quality of products or services, and more effective communication among employees than listed certified firms.

A sample of 150 firms was drawn from those listed on the Singapore Stock Exchange. The results may vary in a case where a different sample is used. The study was conducted in Singapore which is a different geographical location from Kenya. Two ISO 9001 certified organizations are not necessarily the same, Okwiri (2013). The study will be

carried out in the aviation industry. Other factors internal to the organization like the technical skills of employees, social skills, motivation and empowerment to decision making could be in play.

### **2.3 Customer satisfaction as an operational performance measure**

Customer satisfaction is one of the quality management system performance measurements. Organizations shall monitor information relating to customer perception as to whether the organization has met customer requirements (ISO 9001:2008 Standard). Organizations have a number of goals they need to fulfill. Performance measures indicate the success of management in the fulfillment of those goals. Organizational systems goals such as longevity and growth, and stakeholders' goals such as employee and customer satisfaction, are being recognized as legitimate (Walters, 1999).

Walters, (1999) was a case study of a project undertaken for the Estates Management Department of the Mass Transit Railway Corporation of Hong Kong. The purpose of the study was to discuss the problems for facilities managers in measuring the contribution of property towards the primary task, taking into account the different goals of the various stakeholders within the organization. The methodology used was Customer satisfaction surveys including questions on the reliability of building services and responsiveness of the estates management department to tenants' needs. The questionnaires used a five-point scale to record satisfaction, ranging from very dissatisfied, through to very satisfied, with a sixth category for no comment.



The study found out that performance measure, other than those that were purely financial, were more suitable to demonstrate the effectiveness of the property strategy at meeting organizational objectives. Such measures included customer satisfaction. The study concluded that in order to reflect the culture of different goals of the various stakeholders, it was necessary that facilities managers should consider a wider range of performance measures, in particular those not readily associated with the management of property like customer satisfaction.

The study was conducted in Hong Kong. The geographical and socio-cultural backgrounds may be different from that in Kenya. The study is somehow consistent with another study by

Campbell and Finch, (2004) carried out in the United Kingdom. The study was a research paper that applied organizational justice theory to facilities management with the aim of increasing customer satisfaction with the service received. Both interviews and observations were made in the cross-functional decision-making forum to provide support for the theoretical framework.

Findings from the research paper reveals that although there is strong theoretical support for participative decision making, in practice it often leads to conflict and delays. Two-way communication appears to represent the most effective form. The study point out that achieving high level of customer satisfaction is contingent not only upon delivery of end products and services, but also upon the management processes that support them. The development of a customer-focused working environment will require facilities managers to reposition themselves as customer representatives, and also to include in

their teams individuals with specific expertise in the areas of customer relations and service. The study concludes that the delivery of services and developing appropriate quantitative measures of customer satisfaction will help to quantify and understand the benefits of the proposed approach and to fine tune the procedural justice techniques that will facilitate increased customer satisfaction.

The study reveals that participative decision making over-complicates the service delivery process and causes delays without adding great value to either the quality of the decisions made or customer satisfaction. It was conducted in the U.K., and the geographical context may vary from that of Kenya.

#### **2.4 Customer orientation of service personnel.**

With the performance of service personnel often constituting a major element of a service *per se*, the customer orientation of service personnel is often regarded as a main determinant of service firms' success (Thorsten Hennig-Thurau, 2004). Conceptualization of the customer orientation of service personnel consists of employees' technical skills, social skills, motivation, and decision-making power.

Thorsten Hennig-Thurau, (2004) was a research paper on Customer orientation of service employees and its impact on customer satisfaction, commitment, and retention. The study was carried out in Germany with an aim of testing the impact of Customer orientation of service employees on the way customers assess transactions with service employees or their relationship with the service provider as a whole. The methodology involved filling online questionnaire with the selection of respondents based on a quota sample, with age

and gender as quota criteria. The reliability of the Customer orientation of service employees was analyzed descriptive statistics and correlations.

The findings of the study show that in the case of high-interaction services (i.e. travel agencies), the direct impact of customer satisfaction on retention is clearly stronger than in the case of less individualized and personal services such as media retailers. Customers base their choice of a travel agent primarily on the previously experienced satisfaction with the agent while in media retailing satisfaction is partly edged out by situational factors (e.g. location of store). For travel agencies, the employees' technical skills play an outstanding role in building commitment, while it is dominantly the employees' decision-making power that initiates commitment-building processes in the case of media retailers. The study concludes that as a result of the intangible and interactive nature of services, customers often rely on the behavior of service employees when judging the quality of a service. Consequently, the employees' level of customer orientation is considered an important leverage for service firms' economic success.

The study was carried out in Germany, which is known as an “outright service desert” (Witkowski and Wolfinbarger, 2002) and whose retailing employees are considered to be “notoriously unfriendly to consumers”. There may be a gap in the findings if the research is conducted in Kenya due to the differences in geographical and socio-cultural backgrounds.

## **2.5 ISO 9001:2008 Certification, Customer satisfaction and Customer orientation of service personnel**

ISO 9000 family of standards provide guidance and tools for companies and organizations who want to ensure that their products and services consistently meet customer's requirements, and that quality is consistently improved. ISO 9001:2008 certifications are expected to bring about improvement of performance through customer satisfaction. Customer satisfaction is one of the quality management system performance measurements. In pursuit of achieving customer satisfaction, regardless of whether providing goods or services, organizations recognize that satisfied customers are the key to their success. Achieving high level of customer satisfaction requires that organizations continually monitor and examine the experiences, opinions and suggestions of their customers and people who are potential customers. The performance of service personnel often constitutes a major element of a service and thus influences the level of customer satisfaction. Conceptualization of the customer orientation of service personnel consists of employees' technical skills, social skills, motivation, and decision-making power (Thorsten Hennig-Thurau, 2004). Employees will be empowered through training and their social skills will determine how they interact and relate with employees of other departments.

## **2.6 Research Gap**

The literature reviewed in this chapter is summarized and the research gap indicated. Nowadays, many countries and organizations have either embraced ISO 9000 or used it as the basis of their quality certification systems. The International Organization of

Standardization (ISO), a global federation of 130 national standard bodies, seeks to promote standardization and the development of related activities worldwide in order to facilitate the international exchange of goods and services, and cooperation in the spheres of intellectual, scientific, technological and economic activities. The ISO 9000 standards series is now widely accepted as a minimum standard for a quality system for companies (Chua, Goh and Wan, 2003). Customer satisfaction has been found to be vital for the productivity and performance of an organization.

Various research findings exist with variation in the research designs used. Some studies adopted survey designs without providing in depth analysis. Prior studies have been conducted in countries with different geographical, socio-cultural and economic status, and do not reflect the situation as it is in Kenya.

**TABLE 2.1 Summary of literature review**

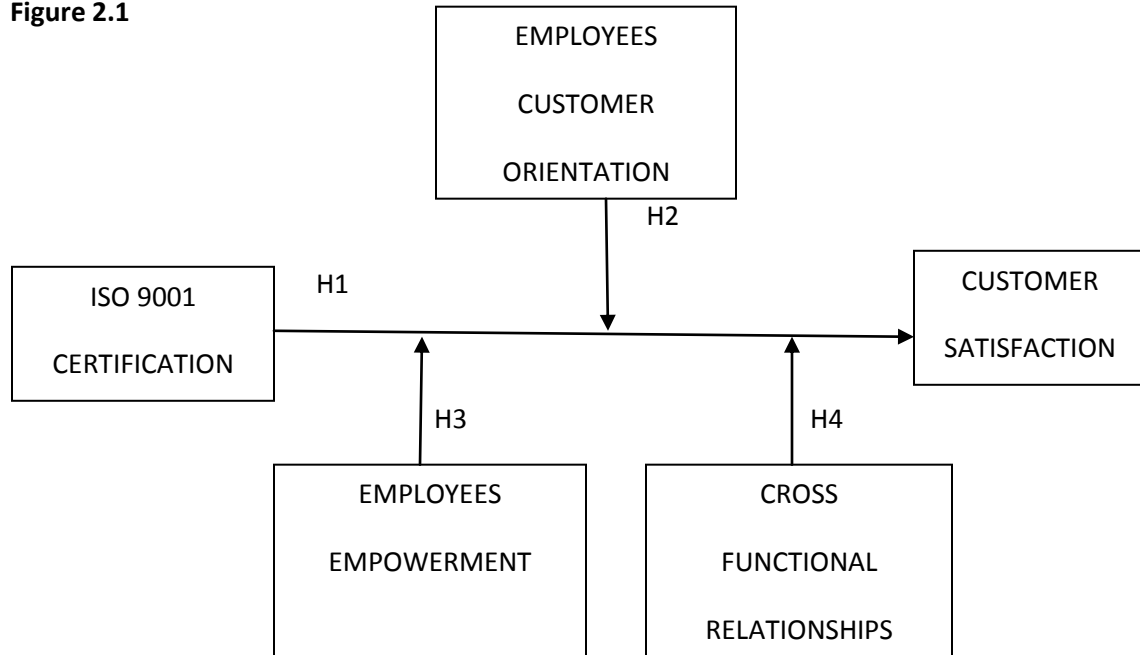
Study	Type of study	Findings	Gaps	Issues examined in the study
Bruce and Shaw (2007)	Empirical study	ISO 9001 certification has no significant direct positive relationship with the business performance	The study was done in two manufacturing industries in the United States with little emphasis on service industries.	The study conducted in Kenya with emphasis on service industry, the aviation industry.
Okwiri (2013)	Empirical study	ISO 9001 certification does not significantly influence the probability of an organization being a high performer as compared to the non-certified ones.	The participating organizations operated in different sectors, were different in sizes and were at different levels in terms of organizational evolution.	The participating organizations in the study operate in the same service sector in the aviation industry.
Chua, Goh, and Wan, (2003)	General review	ISO 9000 certification allows a firm to experience better internal processes	The study was conducted in Singapore which is a different geographical location from Kenya.	The study conducted in Kenya

Walters, (1999)	Case study	Performance measures e.g customer satisfaction were more suitable to demonstrate the effectiveness of the property strategy at meeting organizational objectives.	The geographical and socio-cultural backgrounds different from that in Kenya.	The study conducted in Kenya
Campbell and Finch, (2004)	Research paper	Achieving high level of customer satisfaction is contingent not only upon delivery of end products and services, but also upon the management processes that support them.	Conducted in the U.K., and the geographical context may vary from that of Kenya.	The study conducted in Kenya
Thorsten Hennig-Thu rau, (2004)	Research paper	customers often rely on the behavior of service employees when judging the quality of a service	Geographical and socio-cultural backgrounds.	The study conducted in Kenya

## 2.6 The Conceptual framework

The identified variables and their relationships are conceptualized by the framework below;

Figure 2.1



Source: Author (2014)

The framework can be examined by testing the following hypothesis;-

**H<sub>1</sub>** ISO 9001 certification has a positive influence on customer satisfaction in the aviation industry.

**H<sub>2</sub>** Customer orientation of service personnel has a moderating influence on the relationship between ISO 9001 certification and customer satisfaction.

**H<sub>3</sub>** Employee empowerment has a moderating influence on the relationship between ISO 9001 certification and customer satisfaction.

**H<sub>4</sub>** Cross functional relationships has a moderating influence on the relationship between ISO 9001 certification and customer satisfaction



## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

This chapter deals with the research methodology. It considers the research design, the population, data collection and data analysis method.

### **3.2 Research Design**

The research was an empirical study and was conducted using a cross-sectional research design. This design was appropriate because the given study was largely descriptive and sought to determine the status at a given point in time. Okwiri, (2013) had used this design in a similar study.

### **3.3 Population**

The target population was made up of thirty organizations in the Kenyan aviation industry. The organizations represented the key distinct activities involved in the aviation industry namely; airlines operations and ground based operations which include; airports authority activities, ground handling activities and the air navigation & regulations in the industry. The airlines registered in Kenya had 6000 employees and the Ground based operations had employed 7000 workers (Oxford economics, 2011).

### **3.4 Data Collection Method**

Managers or supervisors of the operations departments of the target population and the employees of the organizations provided the information. Perceptual data was obtained using a structured questionnaire which was developed in line with the objectives of the study. For the variable, customer satisfaction, indicators have been derived from Bruce (2007), and they include; customer compliments, number of repeat customers, customer

retention rate and the level of customer satisfaction. The variable of Customer orientation of service personnel has its indicators as employees' technical skills, social skills, motivation, and decision-making power and was derived from (Thorsten Hennig-Thurau, 2004). Stratified sampling was done for the employee respondents. The sample size was obtained by  $n = p(1-p) (Z^2 / E^2)$ . The questionnaire was divided into three parts. The first part focused on the ISO 9001:2008 certification status of organizations within the Kenyan Aviation industry. The second part focused on the customer satisfaction as an operational performance measure. Finally, customer orientation aspects indicators as perceived by employees. The questionnaire was administered through drop and pick method.

### **3.5 Data Analysis**

The data collected was largely quantitative, therefore descriptive method of analysis was used to analyze it. The mean and standard deviation was used to represent the variables. Partial Correlation analysis was applied to achieve the objectives of the study. This was because of the mediating effect of the customer orientation of service personnel. The partial correlation was computed at 95% confidence level. The correlation coefficient (R) was used to test the null hypothesis. The results of the study was interpreted as follows; When  $R = 0$ , then we accept the null hypothesis and when  $R \neq 0$  then we reject the null hypothesis. As R tends to -1 or +1, this was interpreted that there is an increasing negative or positive relationship between the variables.

# CHAPTER FOUR: RESULTS AND DATA ANALYSIS

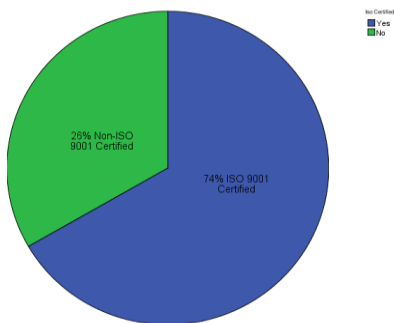
## 4.1 Introduction

In this chapter, data is presented in form of tables and figures. Aggregate values of multi-item variables have been computed. The means, medians and standard deviations have been indicated in the aggregate results table for preliminary analysis.

## 4.2 Results

The data was collected in line with the objectives of the study. Out of the 120 questionnaires distributed in 30 organizations in the Kenyan Aviation industry, 82 were successfully completed and returned translating to a response rate of 68.3%. Twelve organizations had more than one respondent. An aggregate of the multiple respondents was done to each of these organizations to obtain a mean and a standard deviation in situations with attitudinal constructs. Out of the 30 organizations in the Kenyan Aviation industry, 74% of them are ISO Certified while 26% are not ISO Certified as represented in the figure below.

**Figure 4.1 ISO 9001 Certification status**



The table below presents the mean, median and the standard deviation of the ISO 9001 certification status and employee customer orientation within the organizations.

**Table 4.1 ISO 9001 Certification status and employee customer orientation**  
Employee Customer Orientation

ISO 9001 Certification status	Mean	Std. Deviation	Median
ISO Certified	4.2909	.80137	4.6667
Non-ISO Certified	4.1728	.81843	4.3333
Mean	4.2520	.80390	4.6667

The ISO Certified organizations had a mean of 4.2909, a standard deviation of 0.8137 and a median of 4.6667. For the Non –ISO Certified organizations, the mean was 4.1728; the standard deviation was 0.81843 and a median of 4.3333.

The table below presents the mean, median and the standard deviation of the ISO 9001 certification status and employee empowerment within the organizations.

**Table 4.2 ISO 9001 Certification status and employee empowerment**  
Employee Empowerment

ISO 9001 Certification status	Mean	Std. Deviation	Median
ISO Certified	3.6727	.99482	3.6667
Non-ISO Certified	3.5556	1.07814	3.6667
Mean	3.6341	1.01782	3.6667

The ISO Certified organizations had a mean of 3.6727, a standard deviation of 0.9948 and a median of 3.6667. For the Non –ISO Certified organizations, the mean was 3.5556; the standard deviation was 1.0781 and a median of 3.6667.

The table below presents the mean, median and the standard deviation of the ISO 9001 certification status and cross functional relationships within the organization.

**Table 4.3 ISO 9001 Certification status and cross functional relationships**

Cross Functional Relationships

ISO 9001 Certification status	Mean	Std. Deviation	Median
ISO Certified	4.4182	1.09190	5.0000
Non-ISO Certified	4.4444	.73815	4.5000
Mean	4.4268	.98483	5.0000

The ISO Certified organizations had a mean of 4.4182, a standard deviation of 1.0919 and a median of 5.0. For the Non –ISO Certified organizations, the mean was 4.4444; the standard deviation was 0.7381 and a median of 4.5.

The table below presents the means, median and the standard deviation of the ISO 9001 certification status and customer satisfaction.

**Table 4.4 ISO 9001 Certification status and Customer satisfaction**

Customer Satisfaction

ISO 9001 Certification status	Mean	Std. Deviation	Median
ISO Certified	4.2667	.79258	4.5000
Non-ISO Certified	4.1914	.86812	4.5000
Mean	4.2419	.81362	4.5000

The ISO Certified organizations had a mean of 4.2667, a standard deviation of 0.7925 and a median of 4.5. For the Non –ISO Certified organizations, the mean was 4.1914; the standard deviation was 0.86812 and a median of 4.5.

### 4.3 Correlations of the variables

The correlations matrix in the table below indicates the possible linkages between the different variables.

**Table 4.5 Correlations Matrix**

	ISO 9001 Certification	Employee Customer Orientation	Employee Empowerment	Cross Functional Relationship	Customer Satisfaction
ISO 9001 Certification	1	-.069	-.054	.013	-.044
Employee Customer Orientation	-.069	1	.521**	.447**	.456**
Employee Empowerment	-.054	.521**	1	.525**	.611**
Cross Functional Relationship	.013	.447**	.525**	1	.590**
Customer Satisfaction	-.044	.456**	.611**	.590**	1

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

The table for the correlations above shows that there was no significant correlation between ISO Certification and any of the other variables namely; employee customer orientation, employee empowerment, cross functional relationships and customer satisfaction. However there is a significant correlation between employee customer orientation, employee empowerment, cross functional relationships and customer satisfaction.

## CHAPTER FIVE: FINDINGS, DISCUSSION AND CONCLUSION

### 5.1 Introduction

This chapter presents the test for statistical significance of the results presented in chapter 4 in terms of relationships and critical values. This is done by testing the hypothesis, stating and describing the results in summary. Recommendations have been made and suggestions provided for further research to address research gaps.

### 5.2 Findings

#### 5.2.1 ISO 9001 Certification and customer satisfaction

Two of the objectives of this study were to determine customer satisfaction of firms that were ISO 9001 certified within the Kenyan Aviation industry and to determine the relationship between ISO 9001 Certification and customer satisfaction within the same industry.

The results in table 4.4 show the means of customer satisfaction levels in the ISO Certified organizations as 4.266 and a standard deviation of 0.79. The mean of customer satisfaction of Non-ISO Certified organizations was 4.191 and a standard deviation of 0.868. The null hypothesis  $H_0$  that the two means are not significantly different is tested using the formula;

$$Z = \frac{\mu - \text{median}}{\sigma}$$

Where  $\mu$  - is the aggregate mean of ISO 9001 Certified organizations (**4.266**)

$\sigma$  – is the aggregate std deviation of ISO 9001 Certified organizations (**0.792**)

Z – is the score calculated

Median =4.5

The results showed a Z-score value of (0.3859). This was compared with the table value at 95% confidence level, which was (0.9750). The computed Z value was observed to be lower than the table Z value thus accepting the null hypothesis above and rejecting the alternative hypothesis. This implies that the two means are significantly different and therefore the hypothesis  $H_1$  that ISO 9001 Certification has a positive influence on customer satisfaction is rejected.

Table 4.5 shows the correlations between ISO 9001 Certification and customer satisfaction to be -0.44. Correlation is significant at 0.01 and therefore there is no significant correlation between the two variables.

### **5.2.2 ISO 9001 Certification status and employee customer orientation**

The results in table 4.1 show the employee customer orientation mean for ISO Certified organizations was 4.29. The standard deviation was 0.801 and the median was 4.666. The null hypothesis  $H_0$  that the mean is significantly greater than the median is rejected and the alternative hypothesis accepted. This implies that the mean is lower than the median and therefore the hypothesis  $H_2$  that customer orientation of service personnel has a moderating influence on the relationship between ISO 9001 Certification and customer satisfaction is accepted.

### **5.2.3 ISO 9001 Certification status and employee empowerment**

The results in table 4.2 show the employee customer empowerment mean for ISO Certified organizations was 3.67 and the median was 3.67. The null hypothesis  $H_0$  that the mean is significantly greater than the median is rejected and the alternative hypothesis



accepted. The results show that the mean and the median are the same and therefore the influence is not significant either to the positive or to the negative.

#### **5.2.4 ISO 9001 Certification status and cross functional relationships**

The results in table 4.3 show the cross functional relationships mean for ISO Certified organizations was 4.418 and the median was 5.0. The null hypothesis  $H_0$  that the mean is significantly greater than the median is rejected and the alternative hypothesis accepted. This implies that the mean is lower than the median and therefore the hypothesis  $H_4$  that cross functional relationships has a moderating influence on the relationship between ISO 9001 Certification and customer satisfaction is accepted.

#### **5.4 Discussions**

The findings presented after the statistical analysis indicate that ISO 9001 Certification has no influence on customer satisfaction in an organization. This finding is consistent with the literature reviewed. In the literature review, Okwiri, (2013) found out that ISO 9001 certification did not significantly influence the probability of an organization being a high performer as compared to the non certified organizations. The measure of performance was customer satisfaction. Another study by Bruce and Shaw (2007) found out that ISO 9001 Certification had no significant direct positive relationship with customer satisfaction and business performance. The study has found out that customer orientation of service personnel has a moderating influence on the relationship between ISO Certification and customer satisfaction. The findings are consistent with those of a study conducted by Thorsten Henning-Thurau, (2004) which concluded that as a result of the intangible and interactive nature of services, customers often rely on the behavior of service employees when judging the quality of service.

## **5.5 Conclusion**

Customer satisfaction in organizations within the Kenyan Aviation industry is manifested through customer compliments of quality of service, the rate of customer complains customer loyalty to the organization and the ability of the organizations to retain internal and external customers. ISO 9001:2008 Certification of organizations within the industry has no significant relationship with customer satisfaction. The certification ensures that the practices within the organization are consistent with the principles developed but not necessarily to ensure customer satisfaction.

The customer orientation aspects of employees such as training, motivation, decision making and employees customer focus has an influence on the relationship between ISO 9001 certification and customer satisfaction within the industry. Customers will have confidence with well trained employees, motivated and empowered to make decisions and this influences their satisfaction. They will feel valued and recognized by being served by employees who are interacting well with them. The interdependence between employees in different departments within the industry has an influence on customer satisfaction. Considering employees from other departments as important and interacting well with them has a positive effect on external customers.

## **5.6 Recommendations**

ISO 9001 certification is an expensive exercise and therefore the study recommends organizations not to pursue ISO 9001 certification for the purposes of customer satisfaction. However, ISO 9001 Certification provides a set of requirements to operate a quality management system and represents international best practices for managing

quality. The study further recommends organizations to consider training, motivating and empowering employees better in order to ensure customer satisfaction.

### **5.6.1 Suggestions for further research**

Due to the limitation of time and resources, the study focused on the managers and employees of the organizations in the Kenyan Aviation industry as the respondents. A further research can be carried out with the target population being the external customers of these organizations. The external customers will give a wider picture of the customer satisfaction levels within the industry.

## REFERENCES

- Airlines update.com (2013). Aircraft ground handling in Kenya. Retrieved 14<sup>th</sup> Aug 2014 from [http://www.airlineupdate.com/content\\_subscription/gha/index/kenya.htm](http://www.airlineupdate.com/content_subscription/gha/index/kenya.htm).  
Aircraft Ground Handling in Kenya
- Bruce, S.N. and K.C. Shaw.(2007). The impact of ISO 9001 on TQM and Business Performance. *Journal of business and economic studies*, vol. 13, no 2.
- Clare Chow-Chua, Mark Goh, Tan Boon Wan, (2003) "Does ISO 9000 certification improve business performance?", *International Journal of Quality & Reliability Management*, Vol. 20 Iss: 8, pp.936 - 953
- Charles e. schlumberger (2010). *Open Skies for Africa – Implementing the Yamoussoukro Decision*
- Glenn F. Ross.(1993). Service Quality and Management: Perceptions of hospitality employees. *The journal of tourism studies* Vol.4, No. 2
- Hoseong Jeon, Beomjoon Choi, (2012) "The relationship between employee satisfaction and customer satisfaction", *Journal of Services Marketing*, Vol. 26 Iss: 5, pp.332 - 341
- ISO (2013) Certification. ISO certification bodies. Retrieved 13th Aug 2014 from <http://www.iso.org/iso/home/standards/certification.htm>. ISO certification bodies.
- ISO 9001:2008. Quality Management System- Requirements. Geneva: The international organization of standardization.

- Lisa Campbell, Edward Finch, (2004) "Customer satisfaction and organisational justice", *Facilities*, Vol. 22 Iss: 7/8, pp.178 - 189
- Megan Walters, (1999) "Performance measurement systems - a case study of customer satisfaction", *Facilities*, Vol. 17 Iss: 3/4, pp.97 - 104
- Margee Hume, Gillian Sullivan Mort, (2008) "Satisfaction in performing arts: the role of value?", *European Journal of Marketing*, Vol. 42 Iss: 3/4, pp.311 - 326
- Oxford economics,2011, economic benefits from air transport in Kenya.
- Oxford Economics(2011). Economic Benefits from Air transport in Kenya. Kenya Country Report.
- Oakland, J. (2004). *Oakland on Quality Management*. Burlington, England: Elsevier.
- Okwiri, O. (2012). Quality Management Core Practices: A participatory Action-Based Case Research on Non-Integrated Implementation. *DBA Africa Management Review*, vol. 2, No 1, 24-41
- Okwiri, O. (2014). Quality Management as an Outcome of Management Field Evolution: A Review Volume 3, issue 1, pp1-9
- Okwiri, O. (2013). ISO 9001 Quality Management System audit as an organizational effectiveness evaluation tool. *International journal of information technology and business management* Vol. 20 No.1
- Robert Johnston(1995). The determinants of service quality: satisfiers and dissatisfies. University of Warwick, Coventry, UK.
- Standard media (May 5, 2014). Aviation-regulator .Retrieved 12<sup>th</sup> Aug 2014 from <http://www.standardmedia.co.ke/business/article/2000111010/all-airlines-operating-within-the-law-says-aviation-regulator>

- Thorsten Hennig-Thurau, (2004) "Customer orientation of service employees: Its impact on customer satisfaction, commitment, and retention", International Journal of Service Industry Management, Vol. 15 Iss: 5, pp.460 – 478
- The World Bank group (2011). Air transport. Open skies for Africa. Retrieved 14<sup>th</sup> Aug 2014 from <http://go.worldbank.org/UCOV9Z3ZJ0>
- Wang I.M and C.J. Shieh. (2006). The relationship between service quality and customer satisfaction: Journal of information and optimization sciences Vol, 27, No. 1 pp 193-239
- Wikipedia (2013). List of airlines of Kenya. Retrieved 14<sup>th</sup> Aug 2014 from [http://en.wikipedia.org/wiki/List\\_of\\_airlines\\_of\\_Kenya](http://en.wikipedia.org/wiki/List_of_airlines_of_Kenya)

**APPENDIX 1: QUESTIONNAIRE**

The study is about an important management topic. You have information that can be useful in the area of management research. The research is being conducted for academic purpose only. The data or information given will be treated with confidentiality and the results will be analyzed and reported in summary. You are not required to give your name or any form of personal identification.

**DEMOGRAPHIC FACTORS:**

Organization .....  
Department.....  
Position/title.....  
Ref. No.....

**Please tick as appropriate.**

**1. Our organization is ISO 9001:2008 Certified.**

Yes [ ] No [ ]

**To what extent do you perceive the following statements to be true;-**

**1. In our organization, customers compliment our quality of service**

Extremely untrue       somewhat untrue       I do not know   
Somewhat true       Very true

**2. In our organization, customers rarely complain of our services**

Extremely untrue       somewhat untrue       I do not know   
Somewhat true       Very true

**3. Our customers keep coming back for our services.**

Extremely untrue       Somewhat untrue       I do not know   
Somewhat true       Very true

**4. Our services march the expectations of our customers.**

Extremely untrue       Somewhat untrue       I do not know   
Somewhat true       Very true

**5. In our organization, every employee is empowered to make immediate decisions to satisfy our customers**

Extremely untrue       Somewhat untrue       I do not know   
Somewhat true       Very true

**6. Our organization ensures that customers are retained.**

Extremely untrue       Somewhat untrue       I do not know   
Somewhat true       Very true

**7. Our organization responds to customer complaints quickly and satisfactorily.**

Extremely untrue       Somewhat untrue       I do not know   
Somewhat true       Very true

**8. We consider employees from other departments as important internal customers.**

Extremely untrue       Somewhat untrue       I do not know   
Somewhat true       Very true

**9. Our relationship with employees from other departments has a positive effect on our external customers.**

Extremely untrue       Somewhat untrue       I do not know   
Somewhat true       Very true



Please indicate to what extent you agree with the following statements by ticking in the appropriate box.

		Extremely untrue	Somewhat untrue	I do not know	Somewhat true	Extremely true
1	In our department , employees have the required technical skills					
2	In our department, employees interact well with the internal and external customers.					
3	Employees in our department are well motivated.					
4	In our department, employees are empowered to make decisions to meet the customer needs.					
5	In our department, customers are not affected by how the employees offer the services.					

**END.**

Thank you for taking time to participate in this interview. You will have contributed to the development of effective management practice.

**APPENDIX 2: RESULTS**

<b>Organiz ation</b>	<b>ISO 9000 Certification status</b>	<b>Customer Satisfaction</b>		<b>Employee Customer orientation</b>		<b>Employee empowerme nt</b>		<b>Cross- functional Relationship s</b>	
		<b>Mea n</b>	<b>Std</b>	<b>Mean</b>	<b>Std</b>	<b>Mea n</b>	<b>Std</b>	<b>Mea n</b>	<b>Std</b>
<b>A</b>	<b>Certified</b>	<b>4.53</b>	<b>0.706</b>	<b>4.592</b>	<b>0.591</b>	<b>4.61</b>	<b>0.513</b>	<b>4.66</b>	<b>0.583</b>
<b>B</b>	<b>Certified</b>	<b>3.96</b>	<b>1.036</b>	<b>3.814</b>	<b>0.913</b>	<b>3.69</b>	<b>1.299</b>	<b>4.41</b>	<b>0.906</b>
<b>C</b>	<b>Certified</b>	<b>4.26</b>	<b>0.968</b>	<b>4.453</b>	<b>0.742</b>	<b>4.01</b>	<b>1.512</b>	<b>4.1</b>	<b>1.659</b>
<b>D</b>	<b>Not Certified</b>	<b>4.4</b>	<b>0</b>	<b>4.5</b>	<b>0.235</b>	<b>4</b>	<b>0</b>	<b>5</b>	<b>0</b>
<b>E</b>	<b>Not Certified</b>	<b>4</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>5</b>	<b>0</b>
<b>F</b>	<b>Not Certified</b>	<b>4.8</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>0</b>
<b>G</b>	<b>Not Certified</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>0</b>
<b>H</b>	<b>Certified</b>	<b>4.8</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>0</b>
<b>H</b>	<b>Certified</b>	<b>4.8</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>0</b>
<b>J</b>	<b>Certified</b>	<b>4.2</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>0</b>
<b>K</b>	<b>Certified</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>0</b>
<b>L</b>	<b>Certified</b>	<b>4.8</b>	<b>0.282</b>	<b>4.833</b>	<b>0.235</b>	<b>4.5</b>	<b>0.707</b>	<b>4.75</b>	<b>0.353</b>
<b>M</b>	<b>Certified</b>	<b>4.8</b>	<b>0.282</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>0</b>
<b>N</b>	<b>Not Certified</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>0</b>
<b>O</b>	<b>Certified</b>	<b>3.4</b>	<b>0</b>	<b>2.166</b>	<b>1.649</b>	<b>1.5</b>	<b>0.707</b>	<b>2.5</b>	<b>2.121</b>
<b>P</b>	<b>Certified</b>	<b>5</b>	<b>0</b>	<b>4.333</b>	<b>0</b>	<b>3.5</b>	<b>0</b>	<b>4</b>	<b>0</b>

<b>Q</b>	<b>Certified</b>	<b>3.4</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>4.5</b>	<b>0</b>	<b>5</b>	<b>0</b>
<b>R</b>	<b>Certified</b>	<b>5</b>	<b>0</b>	<b>4.666</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>3.5</b>	<b>0</b>
<b>S</b>	<b>Certified</b>	<b>4.2</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>0</b>
<b>T</b>	<b>Not Certified</b>	<b>4</b>	<b>0</b>	<b>3.333</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>0</b>
<b>U</b>	<b>Certified</b>	<b>5</b>	<b>0</b>	<b>4.333</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>0</b>
<b>V</b>	<b>Certified</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>4.5</b>	<b>0</b>	<b>5</b>	<b>0</b>
<b>W</b>	<b>Certified</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>0</b>
<b>X</b>	<b>Not Certified</b>	<b>3.8</b>	<b>0</b>	<b>4.666</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>0</b>
<b>Y</b>	<b>Not Certified</b>	<b>4.6</b>	<b>0</b>	<b>4.666</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>4.5</b>	<b>0</b>
<b>Z</b>	<b>Certified</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>0</b>
<b>AA</b>	<b>Certified</b>	<b>4.73</b>	<b>0.115</b>	<b>4.222</b>	<b>0.894</b>	<b>4.66</b>	<b>0.288</b>	<b>4.83</b>	<b>0.288</b>
<b>BB</b>	<b>Certified</b>	<b>4.95</b>	<b>0.1</b>	<b>4.25</b>	<b>0.930</b>	<b>4.25</b>	<b>0.995</b>	<b>4.37</b>	<b>1.25</b>
<b>CC</b>	<b>Not Certified</b>	<b>4.65</b>	<b>0.3</b>	<b>3.75</b>	<b>0.910</b>	<b>3.62</b>	<b>1.185</b>	<b>4.37</b>	<b>0.658</b>
<b>DD</b>	<b>Not Certified</b>	<b>4.16</b>	<b>0.924</b>	<b>3.733</b>	<b>1.416</b>	<b>3.2</b>	<b>1.782</b>	<b>4.3</b>	<b>1.168</b>