

**FACTORS AFFECTING NON ISO STATE CORPORATIONS IN  
ADOPTION OF ISO 9000 MANAGEMENT SYSTEM  
CERTIFICATION**

**BY**

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## DECLARATION

This management research project is my original work and has not been presented for examinations in any other university.

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This management research project has been submitted for examinations with my approval as university supervisor.

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I also wish to thank my father for the invaluable support in my studies. Dad you wanted the best for me.

## DEDICATION

This project is dedicated to my wife, Irene Mwihaki. Were it not for your constant reminders my project would still be work in progress.

## ABSTRACT

Many national standards bodies in developing countries are operating in a background where the lack of appreciation of the role of standardization in the orderly growth of industry and trade is hampering their development. Developing countries may see the need to develop strong standards and conformity assessment infrastructure. However, the evidence suggests that such programs are not being implemented.

The ISO 9000 standards are produced by an international consensus of countries with the aim of creating global standards of product and service quality. These sets of standards form a quality management system and are applicable to any organization regardless of product, service, organizational size, or whether it is a public or private company. ISO's main objective is to facilitate international trade by providing a single set of standards of systematic and international orientation.

In an effort to have a lasting and sustainable change in the way services are offered and manage performance in the public sector, the government introduced ISO certification policy requirement as a measure of quality standards in all corporations as for improvement on service delivery to Kenyans.

The study was set to answer the question, why are there still some state corporations that have not adopted ISO certification. The objective of the study was to establish factors affecting non ISO State Corporation in Kenya in adoption of ISO 9000 management system certification. The study would help state corporations lessen dependency on key individuals as an ISO 9000 Management System Would distributes responsibility and accountability across the work force. This study would benefit the academicians in the field of quality assurance and quality audit.

The study was a descriptive study, primary data was collected using questionnaire and data was analyzed using descriptive measures and factor analysis. The study indentified the following as having large extent on reasons for not adopting ISO 9000 management

system certification, investments cost and management reluctance to change. It was also noted that benefits derived from being ISO certified were well known to the respondents.

In view of the results findings, the study recommended that top management of these state corporations be trained on the benefits of a corporation being ISO certified and where necessary include in their performance contracts a target of leading the corporation through the process of being ISO certified. These should be supported by budget allocation of the process as it is found that cost of carry out the process is a major reason as to why they have not adopted ISO 9000 Management System Certification

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## CHAPTER ONE: INTRODUCTION

### 1.1 Background to the Study

International standards are standards developed by international standards organizations. International standards are available for consideration and use, worldwide. The most prominent organization is the International Organization for Standardization (ISO). As trade liberalization and globalization gain ground, the need for well-developed international and national infrastructures in the areas of standards and related matters is more evident than ever. This phenomenon dictates that developing economies are expected to compete and become better integrated in the world economy. However, many of these economies do not have fully developed infrastructures in the areas of standards and related matters such as technical regulations, conformity assessment, quality and metrology (Eicher, 2001). Accordingly, Eicher (2001), the weakness of the standards infrastructure represents a serious handicap for the economic players in the countries concerned. Whether they are manufacturers or traders, exporters or importers, regulators or consumers, they find it more difficult to produce exchange or consume safe products of good quality in the absence of standards, regulations and conformity assessment infrastructures.

Developed or major trading countries have long been aware of the importance of International Standards. Unfortunately, “most interested parties in developing countries know little of standardization: they are not aware of the opportunities provided by standardization and conformity assessment activities at the national and international levels; often they do not even realize the value of their own national standard bodies within international activities” (Tabari, 2002). This scenario holds true for most state corporations in the country. According to statistics from the ISO Twelfth Cycle Survey, in December 2008, there were 982,832 state corporations worldwide with ISO 9000 2000 management quality systems certification. Only 257 of those certified organizations are Kenyan with about 35 being state corporations.

### 1.1.1 ISO Certification

An ISO certification is a document stating that a particular product, service or process complies with international standards, as defined by International Organization for standardization (ISO)

An ISO certificate is a document stating that a particular product, service or process complies with international standards, as defined by International Organization for Standardization (ISO). Networking 161 countries worldwide, ISO is the largest developer and publisher of international standards: the organization has one member per country, and the system is coordinated in Geneva's Central Secretariat. Although ISO by itself is a non-governmental organization, its member institutes may be either public or private organizations, an arrangement which enables ISO to develop standards that benefit all segments of society.

When a business entity complies with predefined standards set for its industry, it is eligible for ISO certification. Products, processes and systems, machinery and devices are required to meet standards to ensure quality, minimize environmental effects, and enhance reliability, safety, efficiency and compatibility. The developed standards for an industry strive to ensure that all active businesses manufacture their goods or services with these desirable characteristics. When certified by ISO, it means that a business's operations re approved by the world's largest and most trusted standards body, and gives confidence to the business's customers and partners.

The certification follows a fifteen step process outlined in appendix 2.

### **1.1.2 ISO 9000 Management System**

ISO 9000 Quality Management System can be described as the objectives and processes of a company designed to focus the company toward quality and customer satisfaction. The QMS consists of written documents that address the ISO 9000 standard. ISO 9000 QMS can be expressed as the organizational structure, procedures, processes and resources needed to implement quality management. The International Organization for Standardization's ISO 9001:2008 series describes standards for a QMS addressing the principles and processes surrounding the design, development and delivery of a general product or service.

Organizations can participate in a continuing certification process to ISO 9001:2000 to demonstrate their compliance with the standard, which includes a requirement for continual (i.e. planned) improvement of the QMS.

### **1.1.3 State Corporations in Kenya**

State Corporations were formed soon after independence under the State Corporations Act (Cap 446 Laws of Kenya) and were created with various mandates such as accelerating development, increasing the public's participation in the economy, redress regional economic imbalances, promote foreign investments through joint ventures (GOK Sessional Paper No. 10 of 1965) on African Socialism and its application to planning in Kenya and promoting indigenous entrepreneurship where the government committed itself to elimination of hunger, diseases, ignorance and poverty (GOK Circular Sessional Paper No. 10 1995). Some of the services provided by the state corporations include: transport, financial, communications, energy, agricultural as well as industrial among other services.

Initial performance of these institutions was encouraging however with the implementation of economic reforms, discontinuation of price controls and liberalisation in the early 1990s, performance of some of the state corporations spiralled downwards. In an effort to address these challenges resulting from poor and declining performance,

the government undertook a number of initiatives such as staff rationalisation programmes in the state corporations, civil service and statutory bodies, rationalisation of functions and structures of ministries, development of strategic plans and performance improvement programmes (Performance Contracts Steering Committee, 2005). In an effort to have a lasting and sustainable change in the way services are offered and manage performance in the public sector, the government introduced ISO certification policy requirement as a measure of quality standards in all corporations as for improvement on service delivery to Kenyans.

## **1.2 Statement of the Problem**

In pursuit of the goal of performance improvement within the public sector, New Public Management (NPM) emphasizes on the adoption of private sector practices in public institutions (Balogun, 2003). NPM models have therefore been invariably seen through the public service reform initiatives in many developing countries as the solution to reversing falling service delivery. In quest of this same goal, Kenya introduced performance contracting not only to improve service delivery but also to refocus the mind set of public service away from a culture of inward looking towards a culture of business as focused on customer and results. One the key focuses of these NPM models has been the attainment of ISO 9000 certification.

According to T. Mezher (1999) companies usually face the following in their endeavors to attain ISO 9000 Certification; Management Attitude and Purpose, non flexibility of ISO 9000 consultant, ISO 9000 Management Representative without the power to make real changes, politicization and poor corporate governance and Weak supervisory mechanism. It is crucial for the success of the ISO 9000 implementation that management allocates enough time, as well as financial resources.

According to Mutasa (2003), Standardization is an excellent means of technology transfer to developing countries, assisting them in overcoming technology gaps and in becoming better integrated into the global economy. International standards are the key



to improving developing countries access to global markets. Through standardization, developing countries can reduce poverty, realize economic growth, reduce economic dependence on developed countries and improve welfare through health and safety (ISO Bulletin, September 2003).

Whereas much has been studied and written about the problems faced by state corporations in Kenya and about a number of new management techniques and programs the government has tried to introduce in order to reverse the underperformance of state corporations, the area of ISO certification is still a new phenomenon in state corporations, that is, most of the corporations have been certified in the last three years when the government introduced ISO certification as quality standard policy in state corporations. It on this basis that the study seeks to answer the question, why are there still some state corporations that have not adopted ISO certification?

### **1.3 Objective of the study**

To establish factors affecting non ISO State Corporation in Kenya in adoption of ISO 9000 management system certification

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

The study will help:

State corporations to lessen dependency on key individuals. An ISO management system distributes responsibility and accountability across the work force. More people share more information and accountability for key quality tasks. Result: tasks or processes don't collapse just because one person leaves or changes jobs. Each person carries his or her small share of the load. This is a key weakness for many state corporations who rely on key individuals, usually the Managing Directors to drive their performance

State corporations with a blueprint for controlled, disciplined growth. Some organizations see ISO 9000 / ISO 9001 management systems as a way to organize the business, systematize practices, and ensure management accountability as the organization

expands. Most corporations in Kenya suffer from political patronage and this has been a key hindrance to growth.

Scholars will find it important as the study will increase to the body of knowledge in this less studied area.

## CHAPTER TWO: LITERATURE REVIEW

### 2.1 Introduction

Many national standards bodies in developing countries are operating in a background where the lack of appreciation of the role of standardization in the orderly growth of industry and trade is hampering their development (Eicher 2001). This phenomenon is especially acute. According to Gene Hutchinson (1998), Former Chairman of ISO Committee on Developing Country matters: At this time, the world is witnessing an unprecedented thrust to trade liberalization and globalization of markets. Whereas manufacturers used to be secured in the knowledge that their products would have to meet competition only from the plant around the corner, now competition is just as likely to come from the Far East, or a village in the Amazon Basin or an island in the Caribbean. Therefore, most developing countries should now realize that in order to prosper in the present economic situation, they need to implement more international standards (especially, in these days, standards for management systems such as ISO 9000 and ISO 14000), and participate in internationally conformity assessment (CA) arrangements”.

Developing countries may see the need to develop strong standards (ST) and conformity assessment (CA) infrastructure. However, the evidence suggests that such programs are not being implemented. In spite of the assurance that their local industries will become competitive in the global market place and foreign investors are more likely to choose their countries for new production facilities and high-tech products, these countries are still experiencing significant challenges in building ST and CA infrastructure. Hutchinson (1998) outlined the following reasons for such difficulties. The benefits of standardization are not immediately apparent and often political leaders, decision-makers, industrialists and the general public are not sufficiently aware of the importance of ST and CA for the smooth operation of the economy.

Building, modernizing, and maintaining the ST and CA infrastructure (accreditation of certification bodies, laboratory accreditation, ISO 9000 and 14000 certification) on a

national scale is slow and costly, and frequently, the locally available expertise in this area is deemed not adequate in numbers and quality.

## 2.2 ISO 9000 Overview

ISO is a network of national standards institutes of over 140 countries, on the basis of one member per country. The Central Secretariat in Geneva, Switzerland, coordinates the system. ISO is a non-governmental organization: its members are not, as is the case in the United Nations system, delegations of national governments. Nevertheless, within the United Nations, ISO occupies a special position between the public and private sectors (ISO, 2003).

The International Organization for Standardization took a unique approach in adopting the "ISO" prefix in naming the organization and standards. ISO is not the acronym for the International Organization for Standardization. It is the worldwide federation of national standards bodies of countries and economies. Since "International Organization for Standardization" would have different abbreviations in different languages ("IOS" in English, "OIN" in French for *Organisation internationale de normalisation*), it was decided at the outset to use a word derived from the Greek isos, meaning "equal". Therefore, whatever the country or language, the short form of the organization's name is always ISO (ISO, 2003).

The ISO 9000 standards are produced by an international consensus of countries with the aim of creating global standards of product and service quality. These sets of standards form a quality management system and are applicable to any organization regardless of product, service, organizational size, or whether it is a public or private company. ISO's main objective is to facilitate international trade by providing a single set of standards of systematic and international orientation. ISO covers all technical fields and is not limited to any particular discipline. It does not, however, cover electrical or electronic engineering, which are the responsibility of the IEC. A joint ISO/IEC technical committee performs the responsibility for information technology (ISO, 2003).

ISO 9000 defines standards as “documented agreements containing technical specifications or other precise criteria to be used consistently as rules, guidelines, or definitions of characteristics, to ensure that materials, products, processes, and services are fit for their purpose” (Evans and Lindsey, 2000, p. 132). The standards were created to meet five objectives, which were; Achieve, maintain, and seek to continuously improve product quality (including services) in relationship to requirements, Improve the quality of operations to continually meet customers’ and stakeholders’ stated and implied needs, Provide confidence to internal management and other employees that quality requirements are being fulfilled and that improvement is taking place, Provide confidence to customers and other stakeholders that quality requirements are being achieved in the delivered product and to provide confidence that quality system requirements are fulfilled (Evans and Lindsay, 2000, p. 132 –133).

### **2.3 The Benefits of ISO 9000 Certification**

**Increased Efficiency:** Companies that go through the ISO 9001:2000 Quality Management Standards certification process have given a lot of thought to their processes and how to maximize quality and efficiency. Once certified for QMS, the processes are established and guidelines in place for anyone to follow easily, making training, transitions, and trouble-shooting easier.

**Increased Revenue:** Studies have shown that ISO QMS certified companies experience increased productivity and improved financial performance, compared to uncertified companies and **Employee Morale:** Defined roles and responsibilities, accountability of management, established training systems and a clear picture of how their roles affect quality and the overall success of the company, all contribute to more satisfied and motivated staff.

**International Recognition:** The International Organization for Standardization (ISO) is recognized worldwide as the authority on quality management.

**Factual Approach to Decision Making:** The ISO 9001:2000 QMS standard sets out clear instructions for audits and process reviews that facilitate information gathering and decision making based on the data.

**Supplier Relationships:** Mutually beneficial supplier relationships are one of the key attractions to ISO certification. Following the processes for documentation and testing ensure quality raw materials go into your production system. The process also requires thorough evaluation of new suppliers before a change is made and/or consistency with respect to how and where orders are placed.

**Documentation:** The ISO QMS standard requires documentation of all processes and any changes, errors and discrepancies. This ensures consistency throughout production and accountability of all staff. This also guarantees traceable records are available in case of non-compliant products or raw materials.

**Consistency:** One of the foundations of ISO; All processes from research and development, to production, to shipping, are defined, outlined and documented, minimizing room for error. Even the process of making changes to a process is documented, ensuring that changes are well planned and implemented in the best possible way to maximize efficiency. Recommendations in the biotech industry to use XML authoring or similar software format for data collection, reports, and product labelling, minimizes the risk of obsolete documents/labels being mistakenly used.

**Customer Satisfaction:** Client confidence is gained because of the universal acceptance of the ISO standards. Customer satisfaction is ensured because of the benefits of ISO 9001:2000 QMS to company efficiency, consistency and dedication to quality service.

**Improvement Processes:** The ISO 9001:2000 QMS outlines audit processes, management review and improvement processes based on collected data. Improvements are carefully planned and implemented based on facts, using a system of documentation and analysis, to ensure the best decisions are made for your company.

## **2.4 ISO 9000 Quality Management System Registration Process**

There are various different approaches to the ISO 9000 registration process. Hutchins (1995) and TASC, Inc. (1999) both proposed a ten-step process, thought from different perspective. While TASC Inc. approach is process centered, Hutchins approach is a holistic organization development process. Goetsch and Davis (2002), however, provide some middle ground in advocating their fifteen-step process as follows (see appendix 21):

## **2.5 Current Standards Initiatives and Institutions**

The Kenya Bureau of Standards (KEBS) was established by an Act of parliament, THE STANDARD ACT, and chapter 496 of the Laws of Kenya. It started its operations in July 1974.

The Kenya Bureau of Standards (KEBS) was established in 1974 with the objective of protecting Kenyan consumers against substandard goods. Since its inception, KEBS has coordinated the development of over 4,000 Kenya Standards, which have created confidence on the quality of Kenyan goods.

Kenya Standards are formulated by technical committees constituted from experts representing various interests such as producers, consumers, technologists, research organizations and testing organizations, in both the private and public sectors.

Beside its primary function of regulation, KEBS is a trade facilitator. The aims and objectives of KEBS include preparation of standards relating to products (measurements, materials, processes...), and their promotion at national, regional and international levels. KEBS assists in the implementation of quality management systems in the industry and commerce by certifying industrial products, assisting in the production of quality goods, inspecting the quality of imports at ports of entry, improving the measurement accuracies and disseminating information relating to standards. KEBS also provides its clients with training and consultancy services in standardization of goods or services.

KEBS provides both product and management system international certification, such as ISO 9001 (Quality Management Systems), ISO 14000 (Environmental Management System), HACCP (Hazard Analysis Critical Control Point) and OHSAS (Occupational Health and Safety). KEBS has also developed the Diamond Mark of Quality Scheme,

which assures consumers that the products bearing the Mark have been tested and certified and may be purchased with assurance of quality.

Over the past two years, KEBS has undergone a major restructuring process. The Bureau has revamped its vision, developed a new strategic plan, streamlined its structure, and refocused on its core functions for better efficiency and improved customer service.

KEBS has opened new regional offices, established a service standards department to develop standards for the service sector, opened a counterfeit office, increased the volume of standards developed, and worked on the harmonization of standards at the East African Community, COMESA, and international levels. Last but not least, the Bureau has established a Kenya National Accreditation third party service, to ensure national benchmarking of Kenyan conformity assessment service providers (laboratories, inspection bodies, calibration) and management systems certification services, to facilitate acceptance of Kenyan exports internationally.

In July 2005, KEBS started undertaking Pre-Shipment Verification of Conformity to Standards (PVoC) for all imports at the Country of origin to ensure the quality of goods entering Kenyan markets.

## **2.6 Other Certifying Bodies**

Kenya Bureau of Standards is not the only ISO certifying body in Kenya. Others include SGS, BVQI, and CVA. However during this research we shall not go into details about them as state corporations in Kenya normally acquire their certification through Kenya Bureau of Standards.



## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

This chapter covered the design of the study, the target population and sample of study, data collection method, data quality, measurement of variables used in analyzing the data, statistical technique to be used for data analysis , and the software used in analysis.

### **3.2 Research Design**

A descriptive research design was used. This approach allowed for analysis of opinion of respondents in providing insight into factors affecting non ISO State Corporation in adoption of ISO 9000 management system certification

### **3.3 Population**

The target population was all the companies non ISO certified state corporations in Kenya listed by the controller of state corporations in the office of the Prime Minister.

### **3.4 Data collection**

Primary data was collected through a questionnaire administered by the researcher. The target respondents were strategic development managers, change managers and quality managers. Information collected included general information about the respondent and the firm they represents

### **3.5 Data Quality**

The questionnaire validity was tested through a pilot survey. Three questionnaires were administered and the findings analysed before the rest of the respondents was involved in the study. The outcomes of the pilot test were used to redesign the questionnaire.

### 3.6. Data Analysis

Completed questionnaires were edited for completeness and consistency. The data was then be coded and checked for any errors and omissions. Descriptive statistics was used to analyze data collected. The descriptive statistics used will include frequency distributions illustrated through bar graph, measures of central tendency (mean) and measure of variation (standard deviation). Factor analysis technique was used to reduce the data into fewer and common factors. The software tools for data analysis were Excel/SPSS computer package.

## CHAPTER FOUR: DATA ANALYSIS AND INTERPRETATION OF RESULTS

### 4.1: Introduction

This chapter presents the analysis and findings of the study. Data was collected from ... state corporations. The findings are presented in percentages, frequency distributions, pie charts, bar graphs, Scree plots, mean and standard deviations.

### 4.2: Profiles of the respondents

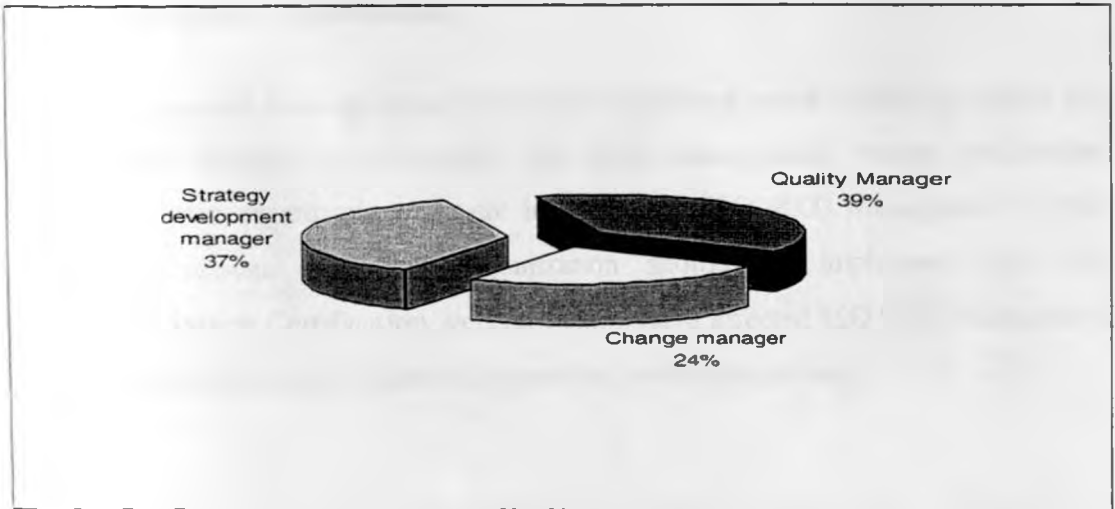
#### 4.2.1: Response rate

A total of forty five questionnaires were issued out. The completed questionnaires were edited for completeness and consistency. Of the forty five questionnaires used in the sample, only thirty five were returned. The returned questionnaires' represented a response rate of 78%, which the study considered adequate for analysis.

#### 4.2.2 Distribution of respondents by designation

As can be observed, in Figure 1, the respondents were made up of 39% quality managers, 37% strategy development managers and 24% change managers..

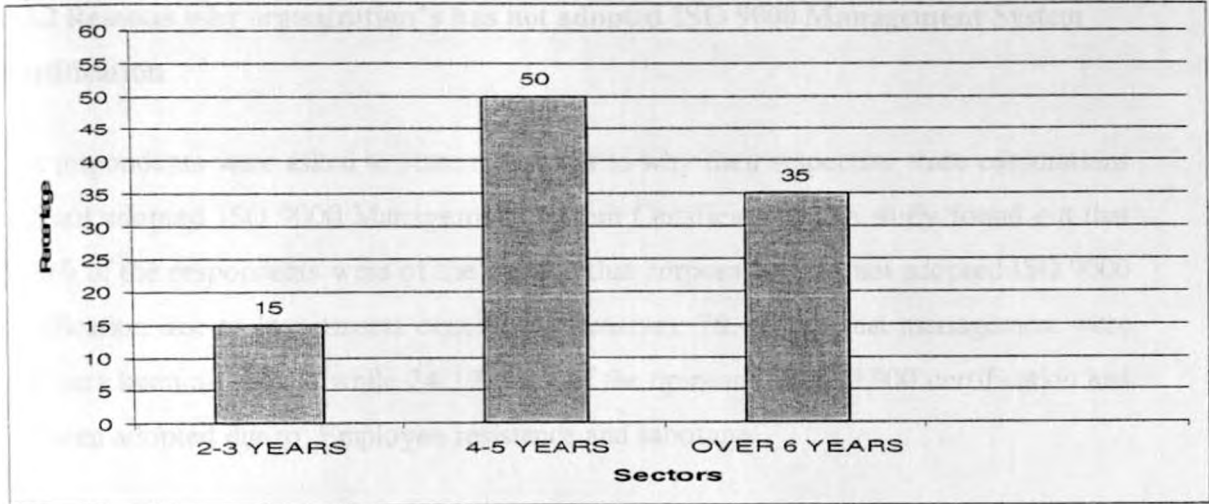
Figure 1: Gender Composition



### 4.2.3 Distribution of respondents by length of service with organization (years)

Most of the respondents , (50 %) have been with the organization for 4 to 5 years. 35% have been in the organization for over six years while 15% have been in the organizations for a period of two to three years.

Figure 2: Length of Service with organisation (years)



### 4.3 Factors Affecting Non ISO State Corporation in Adoption of ISO 9000 Management System Certification

This section covered findings from the specific questions posed to the respondent's to determine the existence of adaptation ISO 9000 management system certification, reasons why your organization has not implemented ISO 9000 Management System Certification, reasons why your organization should for implement ISO 9000 Management System Certification, general factors have affected ISO 9000 Management System Certification in your organization and any recommendations

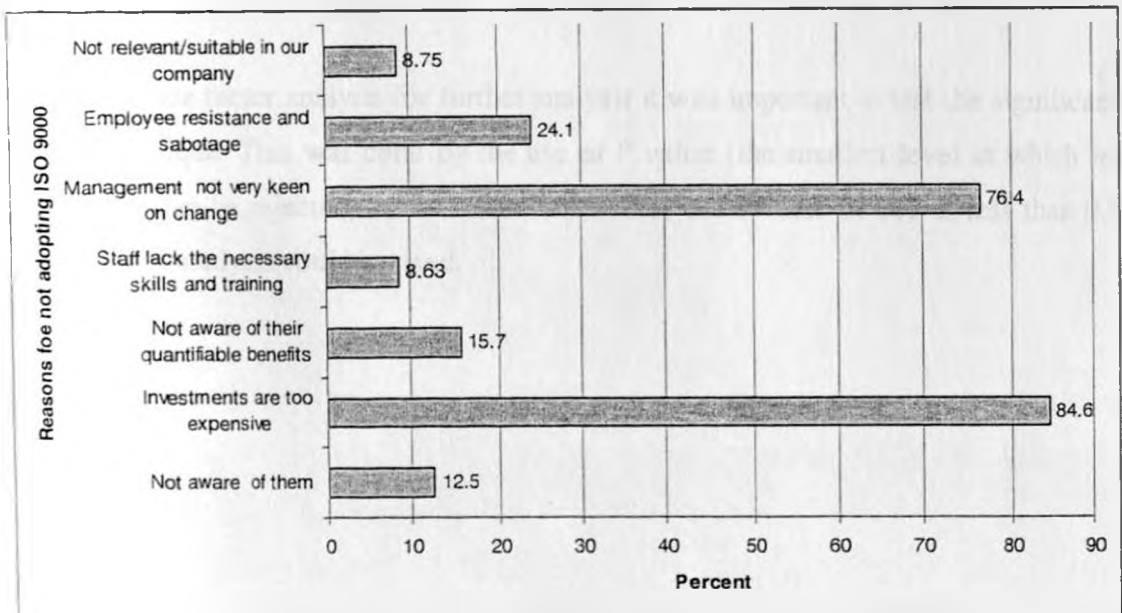
### 4.3.1: Adoption of ISO 9000 Management System Certification

Quality Management Standards certification process focuses on processes and how to maximize quality and efficiency. The respondent's unanimously agreed (100%) that all of there state corporations had not adopted ISO 9000 Management System Certification.

### 4.3.2 Reasons why organization's has not adopted ISO 9000 Management System Certification

The respondents were asked to state reasons as to why their respective state corporations had not adopted ISO 9000 Management System Certification. The study found out that 84.6% of the respondents were of the opinion that corporation had not adopted ISO 9000 certification due to Investments cost (too expensive), 76.4% felt that management were not very keen on change while 24.1% were of the opinion that ISO 900 certification had not been adopted due to Employee resistance and sabotage.

Figure 3 Reasons why organization's has not adopted ISO 9000 Management System Certification



### 4.3.3 Reasons why State Corporation should adopt ISO 9000 Management System Certification

The respondents were asked to Reasons why their corporations should adopt ISO 9000 Management System Certification. Factor analysis has been used because of the concern of decomposing the information content in a set of variables into information about an inherent set of latent components/factors. This assisted in reducing a number of variables into fewer factors which are of similar characteristics. The analysis was carried out and the results have been presented in terms of: KMO and Bartlett's Test, Total Variance Explained /Eigen values, and Rotated Component Matrix (Varimax)

**Table 4.3.1: KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.413
Bartlett's Test of Sphericity	Approx. Chi-Square	1395.524
	df	190
	Sig.	.000

In order to use factor analysis for further analysis it was important to test the significance of the technique. This was done by the use of P value (the smallest level at which null hypothesis can be rejected) as shown in table 4.3.1, the P-value of 000 is less than 0.05 hence factor analysis could be used.

**Table 4.3.2: Total Variance Explain**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.425	37.127	37.127	7.425	37.127	37.127
2	4.440	22.201	59.328	4.440	22.201	59.328
3	2.071	10.356	69.684	2.071	10.356	69.684
4	1.412	7.059	76.743	1.412	7.059	76.743
5	1.069	5.347	82.090	1.069	5.347	82.090
6	.910	4.551	86.642			
7	.826	4.132	90.774			
8	.623	3.115	93.888			
9	.350	1.752	95.640			
10	.295	1.477	97.117			
11	.201	1.006	98.123			
12	.173	.867	98.990			
13	.085	.424	99.414			
14	.058	.292	99.707			
15	.021	.104	99.810			
16	.018	.091	99.901			
17	.014	.069	99.970			
18	.004	.019	99.989			
19	.002	.009	99.999			
20	.000	.001	100.000			

Extraction Method: Principal Component Analysis.

From the total variance explained table/Eigen values (a measure of the variance explained by factors). factor extraction was done to determine the factors using Eigen values greater than 1. Factors with Eigen values less than 1.00 were not used because they account for less than the variation explained by a single variable.

The result indicates that 20 variables were reduced into 5 factors. The five factors explain 82.1% (Cumulative percentage) of the total variation, the remaining 15 factors together account for 17.9% of the variance. The explained variation 82.1% is greater than 70% and therefore, Factor Analysis can be used for further analysis. The model with 5 factors may be adequate to represent the data

**Table 4.3.3: Rotated Component Matrix**

Variables		Component				
		1	2	3	4	5
Reduce customers expected lead time	X <sub>1</sub>	<b>.734</b>	.293	-.464	-.004	.225
Improve output per worker	X <sub>2</sub>	<b>.705</b>	.092	.393	.295	-.272
Reduced employee dependence	X <sub>3</sub>	<b>.948</b>	-.012	-.062	.090	-.203
Increased customer satisfaction	X <sub>4</sub>	<b>.879</b>	.055	-.126	.002	-.384
Increased staff participation	X <sub>5</sub>	<b>.938</b>	-.004	.157	.234	.097
Improved corporation competitiveness	X <sub>6</sub>	<b>.737</b>	-.097	-.144	.411	.140
Improved product quality	X <sub>7</sub>	.288	.182	.021	<b>.901</b>	-.156
Reduction in inventory	X <sub>8</sub>	<b>.729</b>	.036	-.188	.377	-.140
Improved time-to-market	X <sub>9</sub>	.402	.122	-.255	<b>.818</b>	-.033
Reduce lead time	X <sub>10</sub>	<b>.770</b>	.196	-.309	.224	-.069
Improve input per worker	X <sub>11</sub>	.301	<b>.655</b>	-.015	.145	.375
Increase equipment utilization	X <sub>12</sub>	.156	<b>.727</b>	-.446	.331	.125
Reduced employee supervision	X <sub>13</sub>	.329	<b>.778</b>	.347	.068	-.030
Reduce time taken to note errors and their correction	X <sub>14</sub>	-.190	.031	.006	-.098	<b>.541</b>
Increased customer satisfaction	X <sub>15</sub>	-.149	<b>.817</b>	.300	.200	.041
Increased staff morale	X <sub>16</sub>	-.029	.420	.310	.041	<b>.717</b>
Reduced waste	X <sub>17</sub>	-.093	<b>.860</b>	.241	-.274	.127
Improved product quality	X <sub>18</sub>	-.097	.220	<b>.892</b>	.080	.181
Improved staff competitiveness	X <sub>19</sub>	-.073	.210	<b>.557</b>	-.266	.379
Reduced product cost	X <sub>20</sub>	-.181	.306	<b>.765</b>	-.439	-.044

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 6 iterations.

The rotated component matrix is to transform the complicated matrix (initial matrix into simpler one). The purpose of rotation is to achieve a simple structure i.e. we would like each factor to have non zero loading for only some of the variable so that we can easily interpret the factors. A factor loading of 0.5 has been used to determine the variable belonging to each factor.



Factor one is made up of the following variables; reduce customers expected lead time, Improve output per worker, reduced employee dependence, increased customer satisfaction, increased staff participation, improved corporation competitiveness, reduction in inventory and reduce lead time.

Mathematically factor one is represented as follows.

$$F_1 = 0.734X_1 + 0.705X_2 + 0.948X_3 + 0.879X_4 + 0.938X_5 + 0.737X_6 + 0.729X_8 + 0.770X_{10}$$

Factor two is made up of the following variables; improved input per worker, increase equipment utilization, reduced employee supervision, increased customer satisfaction and reduced waste.

Mathematically factor two is represented as follows.

$$F_2 = 0.655X_{11} + 0.727X_{12} + 0.778X_{13} + 0.817X_{15} + 0.860X_{17}$$

Factor three is made up of the following variables; improved product quality, Improved staff competitiveness and reduced product cost.

Mathematically factor two is represented as follows.

$$F_3 = 0.892X_{18} + 0.557X_{19} + 0.765X_{20}$$

Factor four is made up of the following variables; improved product quality and improved time-to-market.

Mathematically factor two is represented as follows.

$$F_4 = 0.901X_7 + 0.818X_9$$

Factor five is made up of the following variables; Reduce time taken to note errors and their correction and Increased staff morale

Mathematically factor two is represented as follows.

$$F_3 = 0.541X_{14} + 0.717X_{16}$$

All the variables were significant in the factor analysis; that is all the variables were classified into one of the five factors.

#### 4.3.4 How general factors have affected ISO 9000 Management System Certification in your corporation

The respondents were to rate the extent to which following general factors has affected ISO 9000 Management System Certification in their corporation in a five point Likert scale. The range was 'to a very great extent (5)' to 'not at all' (1). The scores of 'not at all' and 'to a little extent' have been taken to present a variable which had an impact to a small extent (S.E) (equivalent to mean score of 0 to 2.5 on the continuous Likert scale : $(0 \leq S.E < 2.4)$ ). The scores of 'to a moderate extent' have been taken to represent a variable that had an impact to a moderate extent (M.E.) (equivalent to a mean score of 2.5 to 3.4 pm the continuous Likert scale:  $2.5 \leq M.E. < 3.4$ ). The score of both 'to a great extent' and 'to a very great extent' have been taken to represent a variable which had an impact to a large extent (L.E.) (equivalent to a mean score of 3.5 to 5.0 on a continuous Likert scale;  $3.5 \leq L.E. < 5.0$ ). A standard deviation of  $>1.5$  implies a significant difference on the impact of the variable among respondents.

**Table 4.3.4 How general factors have affected ISO 9000 Management System Certification in your corporation**

	Mean	Std. Dev
Company culture	2.5882	1.98659
Cost of investment	3.7586	2.04408
Attitude of staff	3.0588	1.81227
Lack of proper understanding to the approaches	3.6294	2.00734

From the findings to a large extent: Cost of investment (mean of 3.7586) and Lack of proper understanding to the approaches (mean of 3.6294). While on a moderate extent: Attitude of staff (mean of 3.0586) and Company culture (mean of 2.5882)

## CHAPTER FIVE: SUMMARY, CONCLUSION, RECOMMENDATIONS

### 5.0: Introduction

In this section we discuss the main findings, draw conclusions and make recommendations.

### 5.1 Summary

The objective of the study was to establish factors affecting non ISO State Corporation in Kenya in adoption of ISO 9000 management system certification. The respondents unanimously stated that their respective state corporations had not adopted ISO 9000 Management System Certification.

It was noted that the main reasons as to why state corporations had not adopted ISO 9000 Management System Certification were investments cost being considered to be too expensive and also that management were not very keen on change.

Though these state corporations had not adopted ISO 9000 Management System Certification, the study noted that the respondents were aware of the benefits their corporations would enjoy after the adoption of the same. More specific factor reduced the possible twenty benefits predetermined before to five key benefits. The five benefits accounted for 82.1% of the cumulative variation hence the models were significant. These factors were made up of the following benefits; Factor one(reduce customers expected lead time, Improve output per worker, reduced employee dependence, increased customer satisfaction, increased staff participation, improved corporation competitiveness, reduction in inventory and reduce lead time), Factor two (improved input per worker, increase equipment utilization, reduced employee supervision, increased customer satisfaction and reduced waste), Factor three (improved product quality, Improved staff competitiveness and reduced product cost), Factor four (improved product quality and improved time-to-market) and Factor five (Reduce time taken to note errors and their correction and Increased staff morale).

The respondents were in agreement that cost of investment and Lack of proper understanding to the approaches were of large extent the general factors which affected ISO 9000 Management System Certification in their corporation while Attitude of staff and Company culture affected the adaptation on a moderate extent.

## **5.2: Conclusion**

The study concluded that ISO certification is relevant to all state corporations in Kenya. This is supported by the respondents identifications of benefits their respective corporations would enjoy as a result of being ISO certified. The study also found that the key hindrance to adaptation of ISO 9000 certification were investments cost management reluctance to change

The study also concluded that: employees were aware of ISO 9000 Management System Certification not a major threat to its adoption however the organization culture should be dealt with as corporations embark on the process of ISO 9000 Management System Certification

## **5.3: Recommendations**

The following recommendations are given to both the policy makers in the public corporations and researchers:

### **5.3.1. Recommendations to Policy Makers in public corporations**

In view of the results findings, it is recommended that top management of these state corporations should be trained on the benefits of a corporation being ISO certified and where necessary the process of their corporations being ISO certified be included in their performance contracts with the parent ministry so as to remove the reluctance they current attached to this process. These should also be supported by budget allocation of

the process as it is found that cost of carry out the process is a major reason as to why they have not adopted ISO 9000 Management System Certification

### **5.3.2. Recommendations for Further Research**

The study confined state corporations which had not adopted ISO 9000 Management System Certification. This research therefore should be replicated in other organization which servicing the public and the results be compared so as to establish whether there is consistency in reasons why organizations do not adopt ISO 9000 Management System Certification.

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## APPENDICES

### APPENDIX I: INTRODUCTION LETTER

MOSES GICHOHI  
C/O MBA OFFICE  
SCHOOL OF BUSINESS  
UNIVERSITY OF NAIROBI  
P O BOX 30197 NAIROBI

SEPTEMBER, 2010

Dear Respondent,

#### **REF: REQUEST FOR RESEARCH DATA**

I am a post graduate student in the School of Business, University of Nairobi pursuing a Master of Business Administration degree. As part of the degree requirement I am undertaking a Management research project titled: **Factors Affecting Non ISO State Corporations in Adoption of ISO 9000 Management System Certification**

In order to carry out the research project, your company has been selected to form part of the study. The purpose of this letter is to kindly request to the attached questionnaire. The information provided will be treated with utmost confidentiality and will only be used for academic purposes. At no time will your name or that of your organization be used or referred to in the final report.

A copy of the findings will be availed to you upon request. For any clarifications regarding this I can be reached on 0722 831826 or email at [mosesgichohi@yahoo.com](mailto:mosesgichohi@yahoo.com).

You can also contact my supervisor Dr. John Yabs on 0722 871738.

Sincerely

**MOSES GICHOHI**

MBA UNIVERSITY OF NAIROBI

## APPENDIX 2: QUESTIONNAIRE

1. Name of Organization \_\_\_\_\_

2. What is your designation?

Strategy development manager       Quality Manager   
 Change manager

3. For how many years have you worked for your current organisation

Below 1 year       2-3 years       4-5 years   
 Over 6 years

### PART B: Factors Affecting Non ISO State Corporation in Adoption of ISO 9000

#### Management System Certification

4. Has your organization implemented any of the World Class Manufacturing/process improvement practices (More so ISO 9000)?

Yes       NO

5. If no, Please identify the reasons why your organization has not implemented ISO 9000 Management System Certification (please tick)

Not aware of them	
Investments are too expensive	
Not aware of their quantifiable benefits	
Staff lack the necessary skills and training	
Management very not keen of change	
Employee resistance and sabotage	
Not relevant/suitable in our company	

6. On a scale of 1-5 rank the reasons why your organization should for implement ISO 9000 Management System Certification. Where 1 means not at all important while 5 means very important.

	1	2	3	4	5
Reduce customers expected lead time					
Improve input per worker					
Reduced employee supervision					
Increased customer satisfaction					
Increased staff morale					
Improved competitiveness					
Improved product quality					
Reduction in inventory					
Improved time-to-market					
Reduce lead time					
Improve input per worker					
Increase equipment utilisation					
Reduced employee supervision					
Reduce time taken to note errors and their correction					
Increased customer satisfaction					
Increased staff morale					
Reduced waste					
Improved product quality					
Improved competitiveness					
Reduced product cost					

7. On a scale of 1-5 rank how these general factors have affected ISO 9000 Management System Certification in your organization. **1 means least affected while 5 means most affected**

	1	2	3	4	5
Company culture					
Cost of investment					
Attitude of staff					
Lack of proper understanding to the approaches					
Existence of multinational sites					
Existence of multiple locations					

8. What recommendations would you make on ISO 9000 Management System Certification in your organization?

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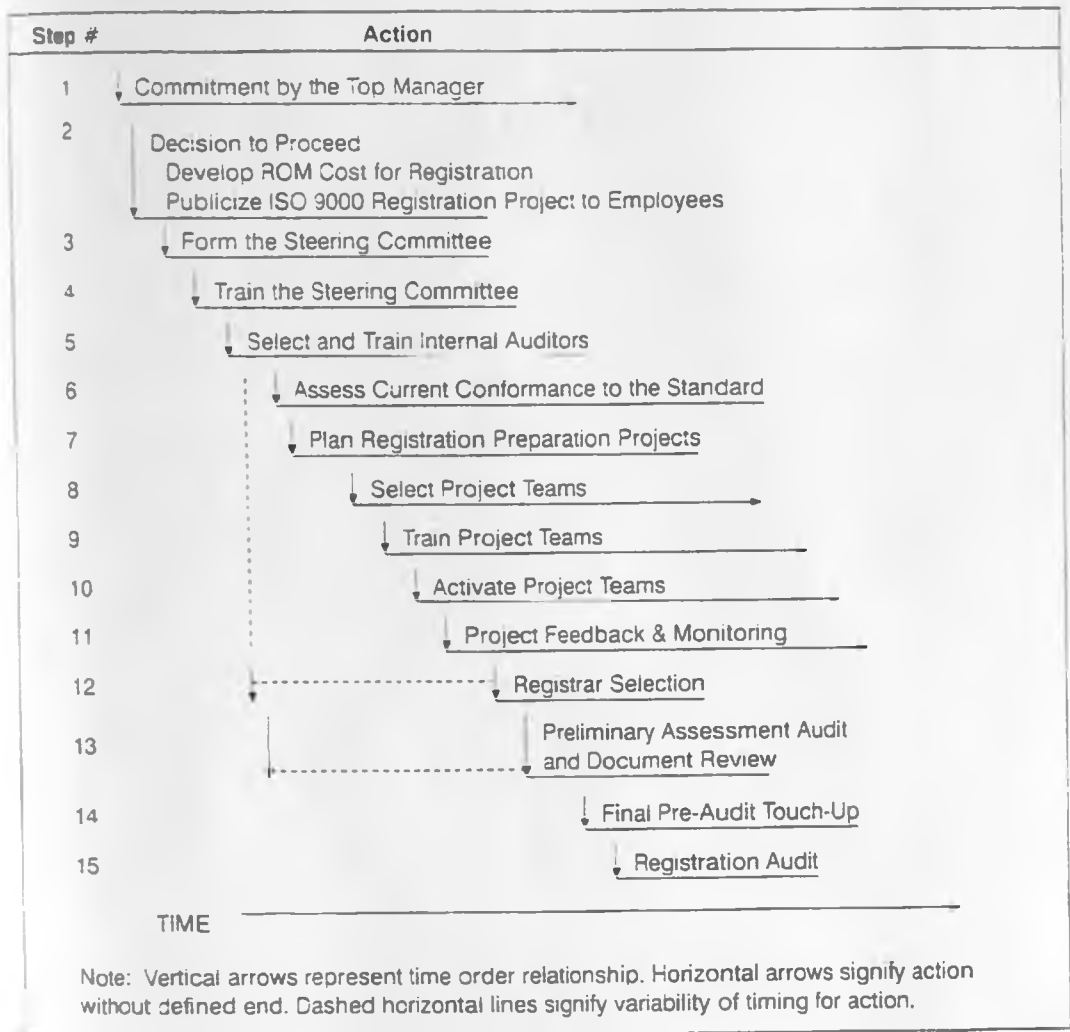
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**THANK YOU**

**APPENDIX 3: Figure 2.1: Fifteen Steps to ISO 9000 Registration**



(Source: Goetsch and Davis, 2002, p. 295)

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