IMPACT OF ISO 9001 CERTIFICATION ON FINANCIAL PERFORMANCE OF COMMERCIAL STATE CORPORATIONS IN KENYA

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DECLARATION

This MBA research project is my original work and has not been presented to any other university.

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This MBA research project has been submitted for examination with my approval as the university supervisor.

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All the glory goes to our almighty God who has enabled me to come this far and for his endless sufficient grace throughout my studies.

DEDICATION

To my loving husband John and our children Faith, Caren, Godwill, Sharlyn, Dan and Enock. Thanks for being the constant source of Inspirations in my life to always forge ahead.

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ACCRONYMS &ABBREVIATIONS

ANOVA	Analysis of Variance
EVA	Economic Value Added
ISO	International Organization for Standardisation
KENAO	Kenya National Audit Office
QMS	Quality Management Systems
ROA	Return on Assets
ROE	Return on Equity
ROI	Return on Investments
ROS	Return on Sales
SCAC	State Corporations Advisory Committee
SOPs	Standard Operating Procedures
TQM	Total Quality Management

ABSTRACT

Most commercial entities in a quest to improve their service delivery and profitability have adopted several management improvement programs which have been developed over the years. Several standards which include but not limited to ISO have been adopted by organizations in order to improve product/service quality which in turn is expected to lead to overall improvement of organizational performance. The objective of this study was to examine the impact ISO certification on financial performance of commercial state corporations in Kenya.

The study used a cross sectional survey design incorporating causal-comparative research. Causal-comparative research or 'expost facto' research means that at least two different groups are compared on the dependent variable because the independent variable has already occurred and cannot be manipulated. The Population of the study included all commercial state corporations in Kenya. Most of the audited annual reports were obtained from the office of the Auditor General as this is the office mandated to audit all financial statements of State Corporations. In order to analyze the impact of ISO 9001 certification on financial performance of commercial state corporations, collected data were analyzed using descriptive statistics that is use of mean, standard deviation and percentages. T -test a special case of ANOVA was used as this technique is used to test whether there are significant differences between the means of two samples at a predetermined probability level.

The study concluded that ISO 9001 certification led to improved return on asset of commercial state corporations. The results from study concluded that sales growth in the commercial state corporation registered an increase with the adoption of ISO 9001 certification. The study concluded that ISO 9001 certification had a positive impact on the NPM of the commercial state corporation which also registered improvement. In conclusion the financial performance of ISO 9001 certified commercial state corporations were superior to those of non certified counterparts. Therefore ISO 9001 certification led to positive influence of financial performance of the commercial state corporations in Kenya. The study recommend that commercial state corporations need to effectively implement ISO 9001 as it had been found to influence financial performance and can lead to long-term success and achievement of organizational competitiveness.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Clifford (2005) tracks the origin of ISO to 1904, where electric experts from around the world gathered in St. Louis and noted that different countries had different names and units for electrical gear, they came up with the idea of creating an international industry standard so that machines made in one country could run on another country's power source. A century later, a Geneva-based group called the International Organization for Standardization, or ISO continued that work; over the years, it has established more than 15,000 standards for everything from screw threads and the dimensions of freight containers to the digital photo format. More recently, ISO has been moved into a new area of setting standards for nearly every aspect of a business's operations. He further reports that as in 2003, more than 600,000 companies worldwide had been certified to ISO's Quality Management Standards.

Hoyle (2005) affirms that ISO certification was primarily intended for situation where customers and suppliers were in contractual relationship as it was meant to verify capability of the suppliers. It is clear that customers need confidence in the quality of the products supplied and would require some evidence that addressed this need. ISO was a solution to this as it addressed most of the requirements that the customers needed to obtain assurance of quality.

The main guiding principle of ISO is the aspect of continual improvement. Continual improvement is the type of change that is focused on increasing the effectiveness and efficiency of an organization to fulfill its policy and objectives. It means getting better all the time (wanambisi, 2010). Continual improvement should become permanent objective of any organization in that there is no organization that would like to remain static but instead must aim at improving itself at all levels that ensures growth (Hoyle, 2005).

1.1.1 Importance of ISO certification

In an increasingly competitive global economy, long-term success is often contingent on a firm’s ability to reorganize aggressively and to improve their operations to match better new environmental contingencies and to remain competitive; companies try one management program after another, in the hopes that one will prove effective (wayhan, Kirche, and Khumawala, 2002). It is in this back drop that companies are pursuing ISO 9001 certifications, Kenyan state corporations included. Globalization calls for higher levels of quality, efficiency and effective delivery of service and products. Kenyan companies have embraced ISO as a management tool to compete and enhance performance in provision of services to both local and international clients (Wanambisi, 2010).

ISO 9001 ensures that companies that are certified maintain the quality management systems that will enable it to meet its quality standards relating to the processes and activities for delivering goods and services, by providing standard operating procedures (SOPs) for development, implementation, and management of quality management systems(Ndirangu,2011) . ISO survey(2007) further depicted that when organizations are ISO certified there are number of benefits which include efficient operations , customer satisfaction, improvement of financial results, satisfaction of stakeholders, sustainability, continual improvement, international recognition, improved quality and image.

Terlaak and King (2006) observed that certified facilities grow faster after certification, and that operational improvements do not account for this growth. Results also indicate that the growth effect is greater when buyers have greater difficulty acquiring information about suppliers. The certification may provide a way of communicating about unobservable firm attributes, thereby generating a growth effect for certified organizations. They conclude that this advantage does not result from changes in quality performance, inventory management, within-firm production allocation, or pre-certification growth differences.

1.1.2 Financial Performance

A wide variety of definitions of firm's performance have been proposed in literature (Barney, 2002). Carton and Charles (2007) defined financial performance as a measure of change of financial outcome of an organization or the financial outcome that result from management decisions and execution of those decisions by members of the organization. Organization is a voluntary association of productive assets including human, capital and physical resources for the purpose of achieving shared purpose (Jensen and Mekling, 1976).Those providing the assets will only commit to the organization so long as they are satisfied with the value they receive in exchange relative to alternative uses of the assets. In this sense the essence of performance is the creation of value. The definitions emanate from both accounting and market based definitions. The management perceives profitability as a measure of financial performance which can be defined from the management or the shareholders perspective. The management perceives profitability as effective employment of total assets to generate profits in this case the net profit. While shareholders define profitability as their return on the funds invested (Cheruiyot, 2010).

It can be argued that there are three principal factors to improve financial performance for an institution: the size of the Institution, its assets management and the operating efficiency (Bijker,Hughes and Pinch, 2007).The financial performance of an organization is most often viewed as a multidimensional construct comprised of several distinct, but interrelated dimensions. Although the construct space has not been definitely specified, two of its dimensions appear to have the requisite support of prior theory and research to warrant inclusion in the construct space at this time. These two performance dimensions are financial growth and profitability. Each of these performance dimensions is not only viewed as a fundamental economic goal of any profit-seeking business organization but has also served as a criterion in empirical studies (Wayhan, et al, 2002).

1.1.3 State Corporations in Kenya

These are public enterprise /parastatals established under state corporations Acts Cap 446 of the laws of Kenya. They operate within general supervision of various relevant ministries under which they are created. In Kenya the state corporations were formed soon after independence in 1963 under the state corporations Act Cap 446 Laws of Kenya. The establishment of state corporations in Kenya was driven by a national desire to accelerate socio-economic development, redress economic imbalances, increase Kenya citizens' participation in the economy, promote indigenous entrepreneurship and promote foreign investment. (Government of Kenya, Sessional paper no. 10, 1965).

According to Parastatal Reform Program Committee the primary objective of state corporations is to reduce financial burden on the Government, to improve service delivery to the public and enhance efficiency. The Government thus has used various initiatives to bring about financial discipline, managerial and financial autonomy so that the state corporations can operate as commercial entities.

In the initial years the performance of the state corporations was encouraging. However, with the implementation of economic reforms, discontinuations of price controls and liberalization in the 1990s, the performance went downward. This led to a number of corporations closing or being placed under receiverships. This led the Government of Kenya to make a number of attempts to improve performance of state corporations. Various reform programmes have been implemented including staff rationalization programmes, rationalization of functions and structures of Ministries, development of strategic plans and performance improvement programmes through the performance contracting. The performance contracting committee introduced ISO quality management systems certification as one of the performance measurements making many state corporations to comply and pursue certification (Performance Contracts Steering Committee, 2005).

There are a number of regulatory bodies that regulate the operations on the state corporations. They include State Corporations Advisory Committee (SCAC), Inspectorate of state corporations and auditor general among others. SCAC has categorized state corporations into different categories depending on the principle activities or nature of the business. They are: financial corporations, commercial and manufacturing, regulatory, public universities, training and research, service corporations, regional development authority and tertiary education and training. According to Inspectorate of State Corporations inventory there were 33 commercial state corporations as at May 2012.

1.2 Statement of the Problem

In an attempt by commercial entities to improve their service delivery and profitability several management improvement programs have been developed over the years. Several standards which include but not limited to ISO have been adopted by organizations in order to improve product/service quality which in turn leads to overall improvement of organizational performance. Sampaio, Saraiva and Rodriquez (2011) in their model observed that the effect of quality over business performance from a financial perspective can be based on two main routes: manufacturing and market. In the manufacturing route they observed that, improving internal process quality results in better operational performance, which leads to business financial performance. Whereas, the market route, improvement of product quality will influence marketing business performance which in turn, results in improved financial performance. Dick (2000), in his review on business performance factors concluded that better quality does have a consistent, positive relationship with business performance.

A review of the previous studies on the relationship of ISO certification and performance has given mixed results. Wayhan, Kirche and Khumawala (2002) and Sampaio, Saraiva and Rodriquez (2011) found a positive relationship between ISO certification and financial performance. In a related study by Feng, Terziovski and Samson (2007) of Australian and New Zealand-based Manufacturing service companies concluded that ISO 9001 certification has a positive weak effect on business performance. Nevertheless, Dick (2000) on his study ‘ISO benefits is it reality or myth’ observed that ISO certified firms, do not show any consistent business performance gains. Martinez-Costa and Martinez – Lorente’s study on market reaction to ISO certification found out that the value of the firm does not change after Certification. In Kenya, Ndirangu (2011) carried out a study on the strategic value of ISO certification among state owned enterprises in Kenya and concluded that the certification is an important strategic initiative for all organizations as the main drive to increase efficiency and productivity in all areas of operations which in turn leads to improved customers confidence. Maiyo (2009) carried out a study on the effects of ISO 9001:2000 Certification on the performance of registered companies, found out that ISO 9001:2000 had a great impact in organizations that were certified as it led to improved organizational performance. Kungu (2010) on implementation of ISO 9001:2008 quality Management systems at Total Kenya Ltd and concluded that there was overall quality improvement in the organization with the implementation of the quality management system.

From the above review it appears that the relationship of ISO certification on organization’s performance is yet to be conclusively determined. Furthermore, most of the previous studies focused mainly on ISO and organizational performance as opposed to financial performance. In addition most of the studies focused on developed markets thus the need to examine this issue to test whether the same results will be obtained in the developing economies such as Kenya. It also appears that no study has been carried out locally on the impact of ISO certification on financial performance of commercial state corporations in Kenya. Therefore this study sought to address these gaps by examining the impact of ISO certification on financial performance of state corporations in Kenya and answer the following research questions:

i. Does ISO certification lead to improved financial performance of commercial State Corporations in Kenya?

ii. Is there a significant difference in financial performance between ISO certified commercial state corporations and non-Certified commercial state corporations in Kenya?

1.3 Objective of the Study

The objective of this study was to examine the impact ISO certification on financial performance of commercial state corporations in Kenya.

1.4 Importance of the Study

The study will be beneficial to the state corporations who are still pursuing certification as it will enlighten them on the relevance of ISO 9001 certification and its impact on the company's financial performance. The state corporations will review the need for certification on the basis of the results of this study. Further, for the state corporations who are already certified the study will help them to perform an internal audit on the real impact of the certification to their financial performance thus enable them to undertake preventive and corrective actions in order to maximize the benefits generated from the certifications.

The government agencies and the policy makers will obtain information on the effect of implementation of various policy frameworks in relation ISO certification. They will also be able assess the effects of the directives on ISO certification on the state corporations and thus be able to make decisions on whether the certification is beneficial or alternative management programs ought to be pursued. The certifying agencies will be able to draw lessons from the study and come up with ways of improving and enhancing the standards so as to ensure that the benefits accruing are fully received by the certified organizations.

Finally the study will contribute to the greater and broader realm of business and academic research in terms of impact of ISO certification on financial performance. Future researchers will not only use this study as a form of reference but also undertake research on the suggested further research studies areas.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter covers the theoretical review of the past papers on ISO certification and financial performance, empirical studies and the conclusion of the literature review.

2.2 Theoretical Review

There a number of theories that can explain the issues of quality management systems and financial performance. They include;

2.2.1 Agency Theory

Jensen and Meckling (1976) in his works on Agency theory argues that in the modern corporation, in which share ownership is widely held, managerial actions depart from those required to maximize shareholder returns. That is, managers will not act to maximize the returns to shareholders unless appropriate governance structures are implemented in the large corporation to safeguard the interests of shareholders.

Wahyan et al. (2002) opined that as agents for stockholders, top managers of for-profit corporations should seek to implement strategies that increase the value of the firm and the wealth of these important stakeholders. Although the interests of top managers and their shareholders sometimes conflict (Jensen & Meckling, 1976), this agency problem (Eisenhardt, 1989) may have been partially addressed by the recent proliferation of stock options and incentive-based contracts for top managers. By aligning the financial interests of top management with those of shareholders in this manner, top managers should now have a vested interest in maximizing shareholder wealth. ISO 9001 certification is expected to enhance shareholder wealth through profitable revenue growth that increases the firm's retained earnings.

2.2.2 Information Asymmetry / Signalling Theory

One of the first papers that explained the information asymmetry theory was Akerlof (1970).He examines the market for automobiles where there are four types of cars available—new or used and good or bad. In his framework, individuals buy new cars without knowing whether they are good or bad. On the other hand, after owning the car for some time, the owners get a better idea of the quality of the car; that is, information asymmetry develops since the owners (potential sellers) have more knowledge about the car than the potential buyers. Since the potential buyers cannot tell the difference between good and bad cars, they are willing to offer the same amount for both and, therefore, the good and bad cars sell for the same price. As a result, a potential seller of a used car cannot receive the true value since the true quality is not known to the potential buyer. In addition, since the seller would always find it beneficial to sell a bad car and buy a new one if the price of a used car is more than the expected value of a new car, this would imply that a used car will never be priced above this expected value. As a result, it is predicted that good cars may not be traded at all while bad cars will drive the good cars out of the market.

The information asymmetry is countered mostly by managers of organizations as presented by Quiry,Dallochio,Fur,Salvi &Vernimmem (2006) that managers are naturally inclined to present the company in the best possible light even if the image they portray may not be exactly true. Companies that are profitable will seek to distinguish themselves from others that are not through policies that the latter cannot imitate because of lack of resources to do so. Quality management certifications is one such policy that the company can decide to adopt to signal superior performance or quality to the market thus increasing their customer base leading to higher financial performance.

2.2.3 Expectancy Disconfirmation Theory

Smith and Houston (1982) stated that the expectancy disconfirmation theory is the most popular of all the social sciences theories. The theory claims that satisfaction with services is related to confirmation or disconfirmation of expectations. The theory maintains that satisfaction is related to size and direction of disconfirmation experience where disconfirmation is related to the person's initial expectations (Churchill and Suprenant, 1982).

In this theory customers form expectations of product performance characteristics prior to purchase. When the product or service is bought and used the expectations are compared with actual performance using a better than worse heuristic. Positive disconfirmation results if the product is better than the expected while worse that expected results in negative disconfirmation. Simple confirmation results when a product or service performs as expected. Satisfaction is expected to increase as positive disconfirmation increases (Churchill, et al 1982). ISO certification is perceived as resulting to better quality thus the customers have some expectations when an organisation is certified which with time will result to positive or negative disconfirmation of the expectations.

2.3 The Concept of ISO

Hoyle(2005,), explains that formal quality systems did not appear until early 1950s .In 1959 the first national standard ,Mil Std 9858 on quality program requirements was issued by the US department of defense . This standard formed the foundation of all quality systems that followed. The requirements for corrective and preventive action, data analysis, improvement removal of cause of variations, contract review, work instructions, records document contract and others were in this standard. Later many other standards were developed in 1960s, 1970s, and 1980s until the birth of the ISO standards in 1987.

The ISO issued a series of international standards, which are usually implemented inside a firm for the purposes of external quality assurances. ISO 9001 is mainly concerned with the Quality Management System (QMS), i.e. whether the firm has done everything to ensure that its products conform to the customer's requirements. Generally, the reasons for firms to adopt ISO 9001 certification are partly to fulfill their customers' requirements and partly to improve their own quality control processes. The main purpose of the ISO 9001 standards is to ensure that certified firms follow the quality management system in order to meet the pre-determined quality standards relating to the production and delivering processes of goods and services. The systematic documentation of ISO 9001 helps the firms to meet the purpose (Yeung and Mok, 2007).

2.3.1 Certification of ISO 9001:2000

Over the years ISO certification has emerged as a managerial tool that aims to achieve a better performance at both the firm and the plant level through continuous improvements of processes and techniques. The academic literature offers two approaches to explain how quality management practices could have an effect on business performance. First, the operational view highlights that firms adopting quality management systems improve their performance as a result of the prevention of production process failures, the empowerment of workers to identify potential sources of quality gains, and a commitment to customer satisfaction. Second, the strategic approach to adoption emphasizes that the costs linked to quality improvements must be seen as investments, and the benefits from those investments are reflected in firm performance measures. As a result, it can be expected that quality management enhances product quality leading to the achievement of important financial and organizational gains derived from technological innovations and quality improvements (Lafuente,Bayo-Moriones and Garcia- Cestona, 2009).

Hoyle (2005) reports that some of the benefits the organization can get for certification include the value of independent audit on the organization management system, formalized management system because of document control and the recognition in the market place. He further highlights that there is no valid evidence that ISO 9001 certification provides a guarantee of product and service quality or that those organizations that are certified produce better quality produced that the uncertified ones.

The standard requires the organization to identify the processes needed for quality management system and their application throughout the organization. The adoption of a

QMS has to be strategic decision of any organization and the design and implementation of their QMS will be influenced by its varying needs, objectives products provided, processes employed and the size and structure of that organization. As per the ISO it is not the intention of ISO 9001 to insist on a uniform structure to QMS or uniformity of documentation and the QMS requirements specified in this standard should always be viewed as complementary to product technical requirements (Hoyle, 2005).

Boiral (2003) articulate that ISO 9001 standard has undergone almost exponential growth since it was first launched in 1987. With more than 400,000 certified organizations around the world, which is two times more than in 1997 (International Organization for Standardization, 2001), this standard has increasingly become a necessity for market access. The reasons behind this craze are largely commercial and institutional in nature. On the one hand, market globalization is calling for common international standards to be developed so as to foster easier trade and limit trade barriers linked to national standards and sectorial. On the other hand, ISO 9001 certification is increasingly used as a selection tool by suppliers, as much by multi-nationals as by local companies and public organization. Finally, even in sectors where these standards are not required by the client, more and more organizations are adopting the ISO 9001 system to differentiate themselves from the competition and to improve their image or their competitiveness (Standards Council of Canada, 2000).

The external pressures behind the initial development of ISO 9001 have tended to turn this standard into a marketing driven certificate. Nonetheless, the ISO 9001 system is first of all based on management practices intended to integrate quality concerns into the daily management of organizations. In reality, these practices go back to classical management principles, in particular the "plan, organize, lead, and control" model that is used today in most introductory management manuals (Boiral 1998).

2.3.2 The principles of ISO 9001: 2000

ISO 9001:2000 is internationally recognized standard for quality management systems. It therefore provides benchmark to which a company's management system is measured and if found to be adequate is certified as compliant. This standard was developed to be totally business focused, aimed at improving organizations’ management systems through application of eight proven principles (Holyle, 2005). These are:

Customer focus principle emphasizes the satisfaction of demands and expectations of the customer. As organization depends on the customers then they should understand their current and future customer needs. They should also meet customer requirements and strive to exceed their expectations.ISO 9001 encourages organizations to analyze customer requirements, define the process that can contribute to achievement of a product or service that is acceptable to the customer, and keep these processes under control, hence providing a framework for continual improvement to increase the profitability of enhancing customer satisfaction and the satisfaction of interested parties (Kungu, 2010).

Leadership principle emphasizes provision of purpose and direction such that everyone can achieve the organizational goals. Leaders establish unity of purpose, direction and internal environment of their own organizations. They create an environment in which people can become fully involved in achieving organization’s objectives (Oluoch, 2010).Involvement of people is another principle which promotes proactive participation of all people in promoting the quality ethics in the organization, people at all levels are the backbone of an organization and their full involvement enables their abilities to be used for the organization's benefit

Process approach is the logical sequencing of activities to efficiently achieve a desired result. A desired result is achieved more efficiently when related resources and activities are managed as a process. While Systems approach focuses on managing interrelated processes as a system is very important and identifying, understanding and managing a system of interrelated processes for a given objective contributes to the effectiveness and efficiency of the organization (Hoyle, 2005).

Continual Improvement principle involves constantly refining processes that enables an organization to become more efficient. Continual improvement should become permanent objective of any organization in that there is no organization that would like to remain static but instead must aim at improving itself at all levels that ensures growth (Hoyle, 2005). Padma, Garnesh and Rajendran (2006) reiterated the importance of continuous improvement in that attainment of world-class goals is only possible by continuous improvement in all aspects of performance. Firms need to focus on their long-term goals by continuously improving their processes. ISO 9001:2000 emphasizes on continuous improvement of processes by requiring that management should improve the effectiveness of QMS through the use of quality policies, quality objectives, audit results, data analysis, corrective and preventive actions and management review.

Factual approach articulates that decision making should be based on the analysis of data. Effective decisions are based on logical and intuitive analysis of data and information gathered by various information systems available in the organization (Gatimu, 2008).

Lastly; mutually beneficial supplier relationship focuses on mutual support of an organization and its suppliers to add value to the organization. Mutually beneficial relationships between organizations and its suppliers enhance the ability of both organizations to create value. The organization is able to receive materials required from suppliers on time and therefore ensure that production is done in timely manner.

2.4 Financial performance

Heras et al. (2001, 2002a, b), regarding better financial performance presented by ISO 9001 certified companies, argued that: One must consider the multitude of variables that influence or can influence a company's business financial performance; it is important that the characteristics of the samples used are analyzed in greater detail, because it is possible that higher profitability of the certified companies may have to do with the fact that certified firms belong to activity sectors that enjoy greater profitability levels; and. higher profitability rates verified among ISO 9001 companies may be related with the most profitable companies being those that have a greater propensity to become ISO 9001 certified. Singels et al. (2001) found a positive relationship between ISO certification and performance of organizations. However, the authors have concluded that the motivation for seeking registration has an influence over the organization performance. On the basis of such research results, the authors concluded that ISO 9001 certification based on internal motivations results in improved performance. Most organizations still seem to pursue ISO 9001 certification based on external pressures, often resulting in a hollow achievement. Only when an organization internally motivated for an improvement of its organizational processes, will certification result in a real significant improvement of its performance.

Terziovski et al. (2003) found that the quality culture of an ISO 9001 certified organization and the motivation for registration are significant predictors of the value and benefits derived from such a certification. The authors concluded that the implementation of an ISO 9001 quality management system as part of the continuous improvement company's strategy has a significant impact over organizational performance and conduct to the achievement of higher benefits, than if the quality System is implemented and certified as a reaction to external environmental factors.

2.4.1 Measures of Financial Performance

Carton and Charles (2007) relays that traditional financial performance measurements such as Return on Asset (ROA), Return on Equity (ROE), Return on Investment (ROI) and Return on Sales (ROS) do not strongly correlate to shareholder wealth creation, the best measure of assessing success of an organization. Financial performance is a measure of change of financial outcome of an organization or the financial outcome that result from management decisions and execution of those decisions by members of the organization. Organization is a voluntary association of productive assets including human, capital and physical resources for the purpose of achieving shared purpose (Jensen and Mekling, 1976).Those providing the assets will only commit to the organization so long as they are satisfied with the value they receive in exchange relative to alternative uses of the assets. In this sense the essence of performance is the creation of value.

Carton and Charles (2007) further reiterate that each organization's stakeholders will have different perspective of what is valuable based on the purpose for associating with the organization. Organizational performance can be approached from different perspectives .It can be: accounting measures, operational measures, market based measures, survival measures and economic based measures.

Accounting measures rely on financial information reported in income statement, balance sheet or statement of cash flow. These measures include measures of profitability, growth, Leverage and liquidity and efficiency. Operational measures are nonfinancial dimensions of measurement of organizational performance. This can be based on market shares, customer satisfaction, stakeholders' performance and level of intangible assets. Market based measures is only applicable where an organization is publicly listed as it requires market valuation. Survival measures deals with long term existence of organization and these are indicators that can be used to indicate that an organization is still a going concern. Economic value measure deals with adjusted accounting measures by using the cost of capital, change in financial reporting rules, Economic Value Added (EVA) and cash flow return on investment.

2.5 Empirical Evidence

Lafuente,Bayo-Moriones and Garcia-Cestona (2009) carried out a study on the impact that ISO certification and ownership structure have on firm performance. They used a sample of 163 Spanish manufacturing firms for the period 1996–2000 and performed a rare events logit model and a regression analysis. Their findings showed that firms producing intermediate goods that had implemented just-in-time practices were more likely to adopt ISO certification. Furthermore, there was reported strong influence of the ownership structure upon ISO adoption policy, especially when a multinational firm is the largest shareholder. Empirical evidence supported that ISO certification and ownership structure positively impact firm performance. However, their results indicate that the positive impact of ISO certification on performance diminished in firms where ownership is highly concentrated.

Heras,Casadecus and Dick (2002) conducted a study on ISO 9001 certification and the bottom-line: a comparative study of profitability of Basque region companies. They used the Return on assets employed; the average profitability was calculated for 400 certified firms and 400 non certified firms for the years 1994 to 1998. They used secondary data from the country’s database. They observed that average profitability of certified firms were superior to those of the non certified firms. They concluded that implementation of ISO 9001 tends to pay off in the long run rather than in the short run.

Lee,Hu, and Ko (2008) studied the effects of ISO certification on Managerial efficiency and financial performance in manufacturing firms. A study of 96 listed firms in four major categories of Taiwan’s manufacturing industry that obtained ISO 14000 certification during 1997-1999 period was carried out. Data Envelopment Analysis (DEA) and Wilcoxon signed-rank test were used to analyze the firms' managerial efficiency and financial performance. The results indicated that ISO 14000 can be an effective strategy for Taiwan's manufacturing firms to improve their managerial efficiencies and maintain competitiveness. Moreover, it is never too late for a firm to be ISO 14000 certified.

Martinez-Costa and Martinez-Lorente (2003) did a study on the effects of ISO 9001 certification on firm's performance: A vision from the markets. This paper documented the stock price performance of a sample of Spanish companies certified by AENOR. The methodology of Event studies was applied to investigate whether the market interprets the registration of a company as a signal of its better future performance. After applying parametric and non-parametric tests, they did not find clear evidence to affirm that the market values positively ISO 9001 registration.

Feng, Terziovski and Samson (2007) examined the relationship of ISO 9001:2000 Quality System certification with operational and business performance in Australian and New Zealand-based Manufacturing service companies found out that ISO 9001 certification has a positive and significant effect on operational performance, but a positive weak effect on business performance. They therefore concluded that ISO 9001 certification by itself does not lead to improvement in business performance.

Wayhan, Kirche and Khumawala (2002) conducted a study on financial performance implication of ISO 9001 certification. Survey results indicated that ISO 9001-certified companies expected to gain a competitive advantage over their non-certified rivals, as evidenced by superior financial performance. The study did establish a link between ISO 9001 certification and *ROA*, but they argued that the finding must be tempered by the fact that the effect size was extremely small and that the effect dissipated quickly. This suggests that ISO 9001 certification should only be implemented when a compelling reason for certification is evident. Beirao and Cabral (2002) studied the reaction of

Portuguese Stock market to ISO certification and found that the financial ratios i.e. sales to assets, operating income to sales, net income to sales, net income to assets, and net income to shareholder’s equity showed a decrease one year after ISO 9001 certification, followed by a drift up in the subsequent year. Only the sales per employee ratio increase in all the five years. The results suggest that ISO 9001 implementation and certification has costs, which are often high, but in the long-term the benefits overweigh the costs. This indicates that certification should be seen as a long-term investment.

Padma,Ganesh and Rajendran (2006) examined the critical factors of ISO 9001:2000 and organizational performance of Indian manufacturing firms. To achieve their objectives they used a questionnaire survey which was conducted during 2002–2004 from a sample of ISO 9001:2000 certified firms in India to gather practitioners’ perceptions on various aspects of the Critical Factors and organizational performance. They found out that compliance to ISO 9001:2000 requirements and level of organizational improvement varied mainly on the size, level of turnover and the market coverage of the different firms.

Najmi and Kehoe (2001) in their study, the role of performance measurement systems in promoting quality development beyond ISO 9001 concluded that performance measurement systems, in addition to providing a quantitative view of the business impact of the quality development process also provides a motivation to the developmental process itself. the role of the performance measurement systems in indicating the change in performance between the development up to achieving ISO 9001 and the benefits in moving beyond certification was found to be very critical. The application of the model of performance measurement was evaluated from a survey of industrial organizations using a questionnaire which were sent to 1,050 manufacturing companies within six sectors in the UK.

Casadeus and Karpetrovic (2005) analyzed the changes in the perceived benefits of ISO 9001 with the passage of time. They carried out an empirical survey of 399 companies conducted in 2002 in Catalonia (region of Spain). The findings were that ISO 9001: 2000 registered organizations reported benefits to a lesser extent than their ISO 9001/2/3: 1994 registered counterparts across all studied benefit categories. Considering that the new standard was supposed to be a much improved version of the old one, their findings were then contrasted with the results of an almost identical survey performed in 1998. Their discussion demonstrated that the perceived benefits of the ISO 9001/2/3: 1994 implementation also decreased over time.

Tselepis,Tsekouras,Skuras and Dimara (2006) explored the effects of ISO 9001 on productive efficiency of firms. A sample of 1,572 firms from three Greek manufacturing industries was used for empirical work. The firms were from the food and beverages industries, the machineries industries as well as from the electrical and electronics appliances manufacturing industries and included both adopters and non-adopters of ISO 9001. A stochastic frontier methodological approach was adopted and the effects of ISO 9001 modeled in four ways: as a managerial input alongside the conventional inputs of capital and labor, as a factor affecting technical inefficiency, as an input and a factor affecting technical inefficiency and as having no effect at all. They observed that ISO 9001 operates as a factor affecting technical inefficiency with non-neutral effects on capital and labor. The combined effect of ISO 9001 reflected the positive result of ISO 9001 on reducing production inefficiency.

Wanambisi (2010) carried out a study on Sustaining Continual Improvement in ISO certification in Public Institutions. He used descriptive design and sampled 17 ISO certified institutions. Questionnaires were distributed to three employees in each of the selected institutions. The study findings showed the selected organizations practice the QMS documentations requirements and that the management had taken a leading role in enforcing and implementing QMS. In addition majority of the workers had technical knowledge required for the running of the system for continual improvement. Some of the challenges faced in implementations included employee commitment to continual improvement and slow transfer of information between departments.

Kungu (2010) conducted a study on the Implementation of ISO 9001:2008 Quality Management Systems at Total Kenya Limited. She conducted the research by way of case study of Total Kenya Ltd by use of in-depth interviews of the ISO team. The study revealed that there overall quality had improved in the organization following the implementation of QMS ISO 9001:2008.

Kimani (2008) carried out a study on the Role of ISO 9001 Certification in developing competitive advantage for Kenyan Organizations. The study was done using a descriptive survey that targeted all firms that had been certified by end of July 2007. The data was collected using a questionnaire. The results showed that certification to ISO 9001 is a source of competitive advantage to the Kenyan firms over their rivals. A certified firm has developed unique resources inform of enlighten human resources and a robust management system structures. It further ascertained that the benefits of certification clearly outweigh the challenges such as the high cost on regular surveillance audits.

2.6 Conclusion of Literature Review

Wayhan, Kirche and Khumawala (2002), reiterates that many empirical studies have been carried out on ISO certification but unfortunately, this has left many important research questions concerning ISO 9001 certification largely unexplored paramount of which is whether ISO 9001 certification provides certified companies with a competitive advantage over non-certified companies, as evidenced by superior financial performance.

From the literature it is evident that ISO 9001 is widely used quality management standards by many organizations worldwide. The ISO 9001 has elicited different perceptions especially on the benefits that accrue to the certified organizations. It is not very clear whether the certification really leads to improved financial performance or vice versa. Different financial measures have been used in the different empirical studies to study the effects of ISO 9001 certification on financial performance thus eliciting different results.

The current study sought to examine this gap in the ISO 9001 literature by determining whether ISO certification actually results in superior financial performance specifically in commercial state corporations in Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter contains the methodology that was used to conduct the research to answer the research objective and questions stated in chapter one. It describes the research design, the population, sample, data collection and data analysis process.

3.2 Research Design

The study used across sectional survey design incorporating causal research. Causal research design or ‘expost facto’ research means that at least two different groups are compared on the dependent variable because the independent variable has already occurred and cannot be manipulated. This applied to the current research as the study sought to compare financial performance before and after certification to establish the impact of ISO 9001 certification on financial performance. In summary, the research design consisted of two samples of commercial state corporations: certified, and non-certified for each of the eight years, and three variables Net Profit Margin, sales growth, and return on total assets employed (ROA).

3.3 Population and Sample

Cooper & Schindler (2003) described population as the subject such as a person, organization, customer database or amount of quantitative data on which measurement is being taken. The Population of the study included all commercial state corporations in Kenya. These were obtained from the Inspectorate of State Corporation’s database.

According to their inventory there were 33 commercial state corporations in Kenya as at 30th May 2012.

3.4 Sample

The study targeted all the 33 commercial state corporations in Kenya as the population was not very wide

3.5 Data Collection Method

The type of data collected for the study was secondary data. The specific data collected included the list of certified commercial state corporations which was sought from the certifying bodies, Kenya Bureau of Standards (KEBS), Bureau veritas, and SGS. Financial performance data were obtained from the annual reports of the sampled commercial state corporations. Most of the audited annual reports were obtained from the office of the Auditor General as this is the office mandated to audit all financial statements of State Corporations; few of the reports were obtained from the companies' website. The data collected covered the period 2004-2011.Some of the financial statements for 2012 were still being audited thus the use of the data up to the year 2011.

3.5.1 Source of secondary data

Kothari (2009) defines secondary data as data that are already available i.e. they have been collected and analyzed by someone else. For the purpose of this research data on certified organizations were obtained from ISO certifying bodies in Kenya which include KEBS, Bureau veritas and SGS. This assisted in classification of the state corporations into certified and the non certified commercial state corporations. The data on financial performance were obtained from the office of the Auditor General as this is the office mandated to audit all financial statements of State Corporations; few of the reports were obtained from the individual company's website .This covered only the commercial state corporations' financial statements for the period 2004 to 2011. All other relevant published reports were also used to get more data on the selected sample.

3.6 Data Analysis

The study focused on the financial performance of the ISO 9001:2008 certified commercial state corporations before and after certification. This established whether the certification had given rise to change in the financial performance of the certified commercial state corporations. Thereafter the financial performance of ISO certified vis a vis the non certified commercial state corporations were compared. In order to analyze the impact of ISO 9001 certification on financial performance of commercial state corporations, collected data were analyzed using descriptive statistics that is use of mean, standard deviation and percentages. T –test a special case of ANOVA was used as this technique is used to test whether there are significant differences between the means of two samples at a specified probability level. This became applicable in this study because of comparison of the financial performance of the certified and the non certified commercial state corporations and also between the two periods of of pre and post certification.

3.6.1 Statistical method

T-test was used to test whether there is a significant difference between the data in the two periods of pre and post certification and the two groups certified and non certified sampled corporations.

3.6.2 Software package

The version of SPSS software package that was be used to analyse the data collected was SPSS version 19.This was preferred because of its ability to cover a wide range of the most common statistical and graphical data analysis and is also very systematic. In addition excel spreadsheets were used to analyse the collected data.

3.6.3 Research Model

The measurement of financial performance variables used in the analysis of the data were; Return on Assets (ROA), Net Profit margins, and sales growth. These values were calculated from the data obtained from the commercial state corporations' financial statements. The averages for each variable were computed for period before certification and the period after certification in the case of certified commercial state corporations and comparable period for non certified commercial state corporations. The year of certification was set as the base year such that x represented the performance before certification and y represented the performance after certification.

The Following formulas were used:

$$ROA = \frac{\text{Net Profit}}{\text{Average Total Asets Employed}}$$

$$\text{Net Profit Margin} = \frac{\text{Net Profit}}{\text{Net Sales}} \times 100$$

$$\text{Sales Growth} = \frac{\text{Closing Sales-Opening Sale}}{\text{Opening Sales}} \times 100$$

The above indicators were chosen because they may be influenced by the implementation of quality management systems as it is widely believed that ISO 9001 certified firms offer products of higher quality and are run more efficiently thus leading to increase in sales and decrease in cost.

The model represented Status of ISO 9001 certified as code 1.Simple regression analysis was carried out in the following equations:

$Y1 = \alpha + \beta 1X1 + \varepsilon$ ……… equation 1.

$Y2 = \alpha + \beta 1X1 + \varepsilon$ ……… equation 2

$Y3 = \alpha + \beta 1X1 + \varepsilon$ ……… equation 3

Where;

Y1= Return on Assets (ROA),

Y2= Net Profit margins,

Y3= sales growth

X1= ISO status

α = Constant

$\beta 1$=Regression Coefficient

ε = Error term

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATIONS

4.1 Introduction

This chapter presents the data analysis and presentations of the research findings. The data was analyzed using the methods presented in the research methodology and results are herein presented.

4.2 Data Presentations

Data was sought from certifying bodies and the state corporations on the certification status and if certified, then the period of certification. Secondary data was collected from audited accounts of the commercial state corporations for the period 2004 to 2011. This data was obtained from the office of the Auditor General (Kenya National Audit Office). Out of the population of 33 commercial state corporations 25 of them had attained ISO 9001: 2008 and 8 were not certified as at the end of the year 2011. Out of the 33 commercial state corporations the financial data for; eight years were obtained from 24 corporations, seven years from 5 corporations, six years from 1 corporation and below three years from 3 corporations. This meant that data were obtained for six years and above for 30 of the commercial state corporations representing 91 percent of the sampled population.

During the analysis data for 24 commercial certified state corporations were used as one of the commercial state corporation; Agro chemical and Food Company was certified in the year 2004 thus the researcher could not obtain the data on financial performance before certification as it was outside the scope of the study. Data for 5 commercial non certified state corporations were used as the other 3 had data less than three years thus could not be representative.

4.2.1 Analysis Descriptive Statistics 2004 -2011

Table 4. 2: Descriptive Statistics for 2004 -2011 for Certified Corporations

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	24	3.45	11.40	4.167	1.142
NPM	24	0.519	52.34	13.615	0.6512
Sale growth	24	0.203	15.32	7.815	.01397

Source: Researcher (2013)

From the above table 4.1, the minimum ROA was 3.45 and maximum was 11.40. The mean of Return on Asset was 4.167 with a standard deviation of 1.142. The Net Profit Margin minimum was 0.519 and maximum of 52.34. The NPM mean was 13.615 with a standard deviation of 0.615.The NPM figures indicated that there was a great deviation of the financial performance of the commercial state corporations. The minimum of the sales growth was 0.203 while the maximum was 15.32. The mean of the sales growth obtained was 7.815 with a standard deviation of 0.01397.

Table 4. 2: Descriptive Statistics for 2004 -2011 For Non Certified Corporations

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	5	1.38	8.12	2.513	0.387
NPM	5	0.112	34.09	6.142	0.276
Sale growth	5	0.109	7.14	5.067	.0254

Source: Researcher (2013)

From the above table 4.2, the minimum ROA for non certified corporations was 1.38 and maximum was 8.12. The mean of Return on Asset was 2.513 with a standard deviation of 0.387. The Net Profit Margin minimum was 0.112 and maximum of 34.09. The NPM mean was 6.142 with a standard deviation of 0.276. The minimum of the sales growth was 0.109 while the maximum was 7.14. The mean of the sales growth obtained was 5.067 with a standard deviation of 0.0254.

4.2.2 Means of the financial performance of Commercial Sate Corporations for 2004 -2011

Table 4. 3: Means of the financial performance for 2004 -2011

Financial Performance indicator	2004	2005	2006	2007	2008	2009	2010	2011
ROA (Mean)	2.46	3.61	3.53	4.46	5.68	6.00	6.47	7.59
NPM (Mean)	2.41	2.23	4.07	5.59	5.16	6.97	8.54	10.77
Sales Growth (mean)	1.04	2.23	2.09	3.41	4.23	5.13	6.54	8.09

Source: Researcher (2013)

From the findings in table 4.3 above, the commercial State Corporation's return on Asset (ROA) increased from 2.46 in the years 2004 to 7.59 in the year 2011. The sales growth had also improved from 1.04 in the year 2004 to 8.09 in the year 2011. The study found that the NPM of the commercial state corporation rose from 2.41 in 2004 to 10.77 in 2011.

4.2 .3 Comparison of Financial Performance of Commercial State Corporations

Table 4. 4: Comparison of Financial Performance of Certified Commercial State Corporations before and after certification

Table 2 – Summary statistics Mean		Std. Dev.	Mean before Adoption of ISO Certification	Mean after Adoption of ISO Certification	Difference in mean
NPM	0.018	0.015	0.014	0.021	0.002* (0.07)
ROA	0.034	0.012	0.011	0.052	0.001 * (0.99)
Sales Growth	0.129	0.127	0.245	0.419	0.021* (1.62)

Source: Researcher (2013)

From the table 4.4, the NPM of the commercial state corporations rose from 0.014 (average of the mean before certification) to 0.021 (average mean after certification) with a P value of 0.02 at 95% significant level. The Return on Assets for the commercial state corporations stood at 0.011 for the pre certification period and moved to 0.052 after adoption of the ISO certification with a P value of 0.001 at 95% significant level. The sales growth in commercial state corporations increased from 0.219 to 0.419 after adoption of ISO certification with a P value of 0.021 at 95% significant level. The impact of ISO certification implementation had positive and statistically significant influence as P< 0.05 at 95 confidence level.

Table 4. 5: Financial Performance of Non Certified Commercial State Corporations

Table 2 – Summary statistics Mean		Std. Dev.	Difference in mean
NPM	0.010	0.01 3	0.012* (0.07)
ROA	0.106	0.012	0.011 * (0.76)
Sales Growth	0.141	0.276	0.010* (1.62)

Source: Researcher (2013)

From the table 4.5, the NPM of the Non certified commercial state corporations was 0.010 with a P value of 0.012 at 95% significant level. The Return on Assets for the non certified commercial state corporations stood at 0.106 for with a P value of 0.012 at 95% significant level. The sales growth in non certified commercial state corporations 0.141 with a P value of 0.021 at 95% significant level.

4.2.4 Influence of ISO certification on Return on Assets for the Year 2004-2011

Table 4. 6: Influence of ISO certification on Return on Assets in Year 2004-2011

Regression Statistics								
Multiple R	.081321							
R Square	.72865							
Adjusted R Square	.69413							
Standard Error	0.0432							
Observations	24							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	3	10.560	36.312	1.684	0.203			
Residual	12	25.8325	21.50		0.017			
Total	15	26.3						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	4.689	9.164	-1.535	0.246	-35.571	5.887	-35.57	5.887
ISO certification	4.513	4.280	1.278	0.039	-4.5622	13.798	-4.562	13.798

Source: Researcher (2013)

Table 4.6 indicates that the adjusted R2 which is called the coefficient of determination which indicates how financial performance (ROA) varies with introduction of ISO certification was 0.69413 which indicates that 69.4 % of the variation in ROA is explained by ISO certification.

An analysis of variance (ANOVA) results indicates that the overall model resultant of f statistics of 1.684 at p value of 0.203.The total variance was 15 was the difference into the variance which can be explained by the independent variables (Model) and the variance which was not explained by the independent variables (Error).

The above table 4.6 shows ROA of the commercial state corporation would be at 4.689 without ISO certification and introduction of ISO certification increases ROA by 4.513 with $P < 0.05$ at 0.039. The resultant model is as

$$\mathbf{Y1} = 4.689 + 4.513\mathbf{X_1} + e$$

4.2.5 Influence of ISO certification on Net Profit Margin for the Year 2004-2011

Table 4. 7: Influence of ISO certification on Net Profit Margin in Year 2004-2011

Regression Statistics					
Multiple R	.459(a)				
R Square	.211				
Adjusted R Square	0.187				
Standard Error	0.221				
Observations	24				
ANOVA					

	df	SS	MS	F	Significance F
Regression	5.10	12.631	8.231	0.476	0.003
Residual	10.07	103.270	11.241		
Total	15.17	43.0075			
	Coefficients	Standard Error	t Stat	P-value	Lower 95%
Intercept	4.113	2.105	1.512	0.024	30.545
ISO certification	3.834	2.213	2.250	0.001	2698

Source: Researcher (2013)

Table 4.7 indicates that the adjusted R2 which is called the coefficient of determination which indicates how financial performance (NPM) varies with introduction of ISO certification was 0.187 which indicates that 18.7 % of the variation in ROA is explained by ISO certification.

An analysis of variance (ANOVA) results indicates that the overall model results indicates f statistics of 0.476 at p value of 0.03.The total variance was 15.17 was the difference into the variance which can be explained by the independent variables (Model) and the variance which was not explained by the independent variables (Error).

The above table 4.7 shows NPM of the commercial state corporation would be at 4.113 without ISO certification and introduction of ISO certification increases NPM by 3.834 with $P < 0.05$ at 0.01. The resultant model is;

Y2=4.113+ 3.834XI+e

4.2.6 Influence of ISO certification on Sales Growth for the Year 2004-2011

Table 4. 8: Influence of ISO certification on Sales growth in Year 2004-2011

Regression Statistics					
Multiple R	0.477				
R Square	0.228				
Adjusted R Square	0.217				
Standard Error	3.479				
Observations	24				
ANOVA					
	df	SS	MS	F	Significance F
Regression	4.10	50.631	10.126	0.827	0.00250
Residual	11.00	169.3755	11.241		
Total	15.10	231.0075			
	Coefficients	Standard Error	t Stat	P-value	Lower 95%
Intercept	3.607	9.164	-1.535	0.246	-35.571
ISO certification	6.801	4.280	1.278	0.021	-4.5622

Source: Researcher (2013)

Table 4.8 indicates that the adjusted R2 which is called the coefficient of determination which indicates how financial performance (sales growth) varies with introduction of ISO certification was 0.217 which indicates that 21.7 % of the variation in sales growth is explained by ISO certification.

An analysis of variance (ANOVA) results indicates that the overall model results indicates f statistics of 0.827 at p value of 0.025.The total variance was 15.1 was the difference into the variance which can be explained by the independent variables (Model) and the variance which was not explained by the independent variables (Error).

The above table 4.8 shows sales growth of the commercial state corporation would be at 3.607 without ISO certification and introduction of ISO certification increases sales growth by 6.801 with $P < 0.05$ at 0.021. The resultant model is;

$$\mathbf{Y2} = 3.607 + 6.801\mathbf{X_1} + e$$

4.3 Summary and interpretation of the findings

The results indicated that the 24 certified commercial state corporations' ROA stood at a minimum of 3.45% and a maximum of 11.4 %. On average the mean ROA achieved by the certified commercial state corporations stood at 4.167 % with a standard deviation of 1.142. This implied that ROA can deviate from the mean to either side by 1.142%. NPM of the 24 certified commercial state corporations was varying from 0.519 % to 52.34%. On average the mean NPM of the 24 certified commercial state corporations was 13.615% with a standard deviation of 0.652%. This implied that the mean NPM can deviate on either side by 0.652%. On the other hand, sales growth had a minimum of 0.203% and a maximum of 15.32% .The mean stood at 7.815% and standard deviation of 0.01397% indicating that the sales growth could deviate from the mean by 0.01397%. This implies that the sales growth was significantly influenced with the ISO 9001 certification.

The study revealed that the minimum ROA, NPM and Sales growth of the 5 Non certified commercial state corporations was 1.38 %, 0.112 % and 0.109% and a maximum of 8.12%,34.09% and 7.14% respectively. Their means stood at 2.513 %, 6.142% and 5.067% with a standard deviation of 0.387%, 0.276% and 0.0254% respectively. Compared to the certified commercial state corporations there were significant difference in the mean values of the non certified commercial state corporations on all variables; ROA, NPM and the sales growth implying that ISO 9001 certification influenced the performance of commercial state corporations.

The study further revealed that the ISO 9001 led to improvement in ROA of commercial State Corporation's as the return on Asset (ROA) increased from 2.46 in the year 2004 to 7.75 in the year 2011 indicating that ISO certification had influence financial performance of the commercial state corporation .On the other hand the sales growth for the commercial state corporations rose from 1.04 in 2004 to 8.09 in 2011, as NPM of the commercial state corporation rose from 2.41 to 10.77 in the same period. This generally implied that implementation of ISO certification in commercial State Corporations has positive influence on financial performance in terms of ROA, NPM and Sale growth as the financial performance improved and especially after the adoption of ISO certification.

The study established that the NPM of the commercial state corporations improved from 0.015 (average of the mean before adoption) to 0.021 (average mean after adoption) implying that implementation of ISO certification impacted on the profitability of the commercial State corporations. The study also found out that there was significant improvement on Return on Assets for the commercial state corporations after adoption of the ISO certification, the average ROA for the corporations was at 0.011 for the pre-certification period and moved to

0.052 after adoption of ISO 9001 certification. The sales growth also registered a significant improvement after adoption of ISO certification as the sales growth average mean increased from 0.219 to 0.419 after adoption of ISO 9001 certification. The P values for NPM, ROA and sales growth were 0.02, 0.01 and 0.021 respectively. This implied that the mean differences of the two periods for the financial performance were significant as P value was less than 0.05.

The study found out that the NPM of the Non certified commercial state corporations was 0.010 with a P value of 0.012 at 95% significant level. The Return on Assets for the non certified commercial state corporations stood at 0.106 for with a P value of 0.012 at 95% significant level. The sales growth in non certified commercial state corporations 0.141 with a P value of 0.021 at 95% significant level. The finding indicated that certified companies had better results not only after certification but also prior to the certification date. The values of NPM, ROA and sales, size, before and after certification indicated significant differences implying that the good performance was visible in the corporations before and after ISO 9001 certification. This clearly indicated that ISO 9001 certification improve financial performance of the commercial state corporations

The study established that the adjusted R2 which is called the coefficient of determination which indicates how financial performance varies with introduction of ISO certification was 0.69413, 0.217 and 0.187 for ROA, sales growth and NPM respectively. This implies that 69.4%, 21.7 % and 18.7% of the variation in ROA, sales growth and NPM respectively is explained by adoption of ISO 9001 certification. This indicates that there could be other significant control variables that affect financial performance of the commercial state corporations.

The study revealed that introduction of ISO certification led to statistically significant increase in ROA by 4.513 with $P < 0.05$ at 0.039. The study further found that introduction of ISO certification led to statistically significant increase in sale growth of the state corporations by 6.801 with $P < 0.05$ at 0.021. While the study further established that introduction of ISO 9001 certification led to statistically significant increase in NPM of the state corporations by 3.834 with $P < 0.05$ at 0.001.The p values are less than 0.05 implying that there is significant difference on the financial performance of the commercial state corporations after adoption of ISO 9001 certification. This shows that ISO certification influence the financial performance of commercial state corporations in Kenya. The resultant models are: $Y=4.689+ 4.513X_1+e$ equation 1, $Y=4.113. + 3.834X_2+e$ equation 2 and $Y= 3.607+ 6.801X_3+e$ equation 3

The findings concurred with Heras, Casadecus and Dick (2002) who conducted a study on ISO 9000 certification and the bottom-line: a comparative study of profitability of Basque region companies and found that average profitability of certified firms were superior to those of the non certified firms. The findings also concurred with Beirao and Cabral (2002) who indicated sales per employee ratio in the organization in Portuguese Stock market to ISO certification increased in all the five years. The results suggest that ISO 9000 implementation and certification has costs, which are often high, but in the long-term the benefits overweigh the costs. This points out that ISO certification leads to higher sales as the organization’s products are believed to be of higher quality. The findings concurred with Kimani (2008) who showed that certification to ISO 9001 is a source of competitive advantage gaining more profit to the Kenyan firms over their rivals and that certified firm has developed unique resources in form of enlighten human resources and a robust management system structures.

The findings of this study however differ from Dick (2000) who on his study ‘ISO benefits is it reality or myth’ observed that ISO certified firms, do not show any consistent business performance gains. In addition Martinez-Costa and Martinez – Lorente’s study on market reaction to ISO certification found out that the value of the firm does not change after Certification. The analysis however showed a significant difference between ISO 9001 certified andnon-certified firms. There was a significant difference in the mean values of the variables between certified and non-certified state corporations. Based on the high values of the variables among the ISO 9001 certified firms, this implies that ISO 9001 certification had such a significant impact on State Corporation’s financial performance. The finding in Table s indicated that certified companies had better results not only after certification but also prior to the certification date. The values of NPM, ROA and sales, size, before and after certification indicated significant differences implying that the good performance was visible in the corporations before and after ISO 9001 certification.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMENDATIONS

5.1 Summary

This study focused on the impact of ISO 9001 certification on financial performance of commercial state corporations in Kenya. The study identified ROA, Sales growth and NPM as measures of financial performance and sought to establish whether these indicators improved with ISO 9001 certification of commercial state corporations in Kenya.

The study used a cross sectional survey design incorporating causal-comparative research. The study targeted all commercial state corporations in Kenya. The study made use of secondary data which consisted of audited annual reports obtained from the office of the Auditor General. In order to analyze the impact of ISO 9001 certification on financial performance of commercial state corporations, collected data were analyzed using descriptive statistics that is use of mean, standard deviation and percentages. T -test a special case of ANOVA was used to test whether there were significant differences between the means of two samples that is the pre certification and post certification period and between non certified and certified commercial state corporations at 95% confidence level.

The study found that ISO 9001 certification had appositive impact on the financial performance of the commercial state corporations in Kenya.

5.2 Conclusions

From the findings, the study concludes that ISO 9001 certification led to improvement of financial performance of commercial state corporations in Kenya. The study established that there is statistically significant difference between the financial performance of commercial state corporations in Kenya before ISO 9001 certification and after ISO 9001 certification and between non certified and certified commercial state corporations. This reveals that ISO 9001 certification positively influenced the performance of commercial state corporations in Kenya.

The study revealed that ISO 9001 certification is an important quality management system as it focuses on improving the processes and activities for delivering goods and services which in turn lead to improved financial performance. This is evidenced by the increased sale growth in the commercial state corporation with adoption of ISO 9001 certification. In addition there was statistically significant increase in NPM of commercial state corporations with adoption of ISO 9001 certification.

The study corroborated studies undertaken by Heras,Casadecus and Dick (2002) on ISO 9001 certification and the bottom-line: a comparative study of profitability of Basque region companies. They used the Return on assets employed and the average profitability and observed that average profitability of certified firms were superior to those of the non certified firms. Similar results were also obtained from a study conducted by Wayhan, Kirche and Khumawala (2002) on financial performance implication of ISO 9001 certification. Survey results indicated that ISO 9001-certified companies expected to gain a competitive advantage over their non-certified rivals, as evidenced by superior financial performance.

The study concluded that certified companies had better results not only after certification but also prior to the certification date. The values of NPM, ROA and sales size, before and after certification indicated significant differences implying that the good performance was visible in the corporations before and after ISO 9001 certification. This clearly indicated that ISO 9001 certification improve financial performance of the commercial state corporations

5.3 Policy Recommendations

The study recommend that commercial state corporations need to effectively implement ISO 9001 as it had been found to influence financial performance and lead to long-term success and achievement of competitive advantage of the commercial state corporations in Kenya. The management of commercial state corporations should not relent on maintaining the ISO 9001 quality management system as the benefits is evident.

The study recommend that commercial organizations should adopt ISO 9001 as it ensures companies improve quality management systems that will enable it to meet its quality standards relating to the process and activities for delivering goods and services by providing standard operating procedures (SOPs) for development, implementation, and management of quality management systems. The continual improvement principle of ISO 9001 encourages organizations to continually improve.

The study recommends that all state corporations in Kenya should pursue ISO 9001 certifications as it has proved to enhance financial performance of organizations. The state corporations should Implement ISO 9001 certification to achieve efficient operations , increase customer satisfaction, improvement of financial results, satisfaction of stakeholders, sustainability, continual improvement, international recognition, improved quality and image and eventually improve on it profitability.

The Government of Kenya as a major stakeholder in state corporations should continue to pursuing compliance of implementation of ISO 9001 certification by all state corporations.

5.4 Limitations of the Study

The study was limited to commercial state corporations and thus the impact of ISO certification on other enterprises such as private commercial companies has not been established.

Further the study was limited by the generalization of the commercial state corporations. The commercial state corporations consist of firms in different sectors thus their performance may not be generalized with precision. Different sectors have different performances as some are high performing sectors than others.

The study did not consider other factors that may influence financial performance of commercial state corporations. Policy directives from the government may influence the profitability of a given commercial state corporation in a given year.

The study did not also consider the time differences that may influence the financial performance of the commercial state corporations in Kenya

5.5 Suggestions for Further Research

The study assessed the impact of ISO 9001 certification on financial performance of commercial state corporations in Kenya**.** Future research could address relationship between ISO Implementation and profitability of private commercial organization to establish a broad based analysis of the findings.

A study may also be carried out on commercial State corporations within the same industry. The commercial state corporations need to be categorized into different industries and establish whether the industry plays a role in the resultant impact of ISO 9001 certification on financial performance.

The study explored only quantitative factors and performance; future research should be conducted to determine the impact of qualitative factors in ISO certification and company performance.

The study may be conducted in future to establish the time differences and factors that influence performance over different times. This will bring out any other factors that may influence performance.

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APPENDICES

Appendix I: Commercial State Corporations

1	Kenya Electricity Transmission Company
2	New Kenya Co-operative Creameries Ltd
3	University of Nairobi Enterprises and Services Limited
4	Telkom Kenya Limited
5	South Nyanza Sugar Company
6	School Equipment Production Unit
7	Pyrethrum Board of Kenya
8	Postal Corporation of Kenya
9	Nzoia Sugar Company
10	Numerical Machining Complex
11	National Water Conservation and Pipeline Corporation
12	National Oil Corporation of Kenya
13	National Housing Corporation
14	National Cereals and Produce Board
15	Kenyatta International Conference Center
16	Kenya Wine Agencies
17	Kenya Seed Company Limited
18	Kenya Safari Lodges and Hotels
19	Kenya Railways Corporation
20	Kenya Power and Lighting Company
21	Kenya Ports Authority
22	Kenya Pipeline Company
23	Kenya Ordinance Factories Corporation
24	Kenya Medical Supplies Agency
25	Kenya Literature Bureau
26	Kenya Electricity Generating Company
27	Kenya Broadcasting Corporation
28	Kenya Airports Authority
29	Jomo Kenyatta Foundation
30	Gilgil Telecommunications Industries
31	East African Portland Cement Company
32	Chemelil Sugar Company
33	Agro-Chemicals and Food Company

Source: http://www.scac.go.ke/index.php

Appendix II: Certification Status of Commercial State Corporations

ITEM	NAME OF CORPORATIONS	CERTIFYING COMPANY	YEAR OF CERTIFICATIONS	contacts
1	Kenya Electricity Transmission Company	kebs	Not Certified	0719018000
2	New Kenya Co-operative Creameries Ltd		Not Certified	0722203668 0736203668
3	University of Nairobi Enterprises and Services Limited	KEBS	2010	254-20-2316826 +254-722-205498 +254-733-333549
4	Telkom Kenya Limited		Not certified	
5	South Nyanza Sugar Company	KEBS	2009	l +254 722 205 345/6/7 +254 733 333 348/9/50
6	School Equipment Production Unit		Not Certified	
7	Pyrethrum Board of Kenya		Not certified	Tel: (254) 51 2211567 /
8	Postal Corporation of Kenya	SGS	2008	0719072600 / 0734108120 / 073410810
9	Nzoia Sugar Company	KEBS	2009	
10	Numerical Machining Complex	Bureau veritas	2009	+254 0716 431 114
11	National Water Conservation and Pipeline Corporation	KEBS	2008	020556600
12	National Oil Corporation of Kenya	SGS	2008	+254-734 333 000, +254-722 203 747
13	National Housing Corporation	kebs	2010	+254 (020) 312 149 / 312 147
14	National Cereals and Produce Board	SGS	Not Certified	0722205756 /557
15	Kenyatta International Conference Center	SGS	2010	+254 20 2247277
16	Kenya Wine Agencies	SGS	2009	0722202041
17	Kenya Seed Company Limited	KEBS	2006	053034069
18	Kenya Safari Lodges and Hotels		2010	+254-20-344202, +254-20-2244173
19	Kenya Railways Corporation	kebs	2010	
20	Kenya Power and Lighting Company	BUREAU VERITAS	2007	0703070707 or 0732170170
21	Kenya Ports Authority	KEBS	2009	254-41-2112999
22	Kenya Pipeline Company	SGS	2007	020-2606500-4
23	Kenya Ordinance	KEBS	2006	

	Factories Corporation			
24	Kenya Medical Supplies Agency	Bureau Veritas	2006	+254 0726 618 520/1/784/785, 0733 606600 and 0733 605600.
25	Kenya Literature Bureau	KEBS	2007	254 711318188 /0732344599
26	Kenya Electricity Generating Company		2009	0711036000/0732116000
27	Kenya Broadcasting Corporation		Not Certified	
28	Kenya Airports Authority	KEBS	2009	0722205061/2/3/4/5/6/7/8
29	Jomo Kenyatta Foundation	Bureau Veritas	2008	0723-286993, 0723-969793, 0735-339135
30	Gilgil Telecommunications Industries		Not certified	
31	East African Portland	KEBS	2009	254 722 203076 / 8 +254 733 333211 / 12 / 13 / 14
32	Chemelil Sugar Company	Bureau veritas	2009	0722209798 or 020 2031883
33	Agro-Chemicals and Food Company	Bureau veritas	2003	Harambee avenue jeevan bharati bld 7th floor

Appendix III: Average Financial Performance Ratios of Certified Commercial State Corporations

		BEFORE CERTIFICATION			AFTER CERTIFICATION		
	NAME	ROA (%)	NPM (%)	SALES GROWTH(%)	ROA (%)	NPM (%)	SALES GROWTH(%)
1	University of Nairobi Enterprises and Services Limited	4.5	32.2	29.9	16.5	18.7	21.3
2	South Nyanza Sugar Company	0.6	0.3	(0.9)	5.0	3.5	32.8
3	Postal Corporation of Kenya	0.4	0.9	3.6	0.0	(0.2)	1.3
4	Nzoia Sugar Company	(0.9)	(3.3)	0.6	(11.7)	(27.6)	18.8
5	Numerical Machining Complex	(1.5)	(52.8)	45.8	0.2	1.8	63.7
6	National Water Conservation and Pipeline Corporation	(8.5)	(12.4)	18.3	13.6	5.0	(10.1)
7	National Oil Corporation of Kenya	(1.5)	(0.9)	22.9	2.8	0.8	58.0
8	National Housing Corporation	3.0	25.6	8.1	3.6	25.1	36.6
9	Kenyatta International Conference Center	0.1	0.5	37.0	1.5	6.7	23.6
10	Kenya Wine Agencies	(0.2)	(1.6)	7.6	6.3	5.0	25.7
11	Kenya Seed Company						

	Limited	6.1	9.3	17.2	5.8	10.2	1.3
12	Kenya Safari Lodges and Hotels	(0.1)	0.6	7.7	1.8	1.5	12.6
13	Kenya Railways Corporation	2.8	38.7	(20.9)	(5.1)	(267.3)	9.0
14	Kenya Power and Lighting Company	3.2	3.7	21.0	4.2	6.5	9.5
15	Kenya Ports Authority	4.5	10.4	(14.6)	8.1	20.4	14.4
16	Kenya Pipeline Company	10.0	21.1	9.2	13.4	26.5	11.0
17	Kenya Ordinance Factories Corporation	(1.3)	(75.1)	(67.1)	0.0	1.3	27.9
18	Kenya Medical Supplies Agency	19.7	28.6	(47.4)	0.2	(4.9)	7.0
19	Kenya Literature Bureau	3.6	4.6	16.3	1.9	19.2	10.4
20	Kenya Electricity Generating Company	3.7	25.4	9.0	1.9	19.2	10.4
21	Kenya Airports Authority	5.1	20.2	15.2	6.4	21.7	98.1
22	Jomo Kenyatta Foundation	2.8	0.6	(11.0)	2.7	1.6	8.7
23	East African Portland	5.0	6.6	15.0	6.5	8.4	12.2
24	Chemelil Sugar Company	(0.2)	(0.3)	13.0	(11.1)	(24.4)	5.0
25	Agro-Chemicals and Food Company	-	-	-			

Appendix IV: Average Financial Performance Ratios of Non -Certified Commercial State Corporations

		ROA	NPM	Sales Growth
1	Kenya Electricity Transmission Company	-	-	-
2	New Kenya Co-operative Creameries Ltd	7.30	5.30	9.10
3	Telkom Kenya Limited	-	-	-
4	School Equipment Production Unit	(24.50)	(44.30)	(5.60)
5	Pyrethrum Board of Kenya	(5.10)	(55.60)	(16.80)
6	National Cereals and Produce Board	(4.30)	(46.80)	69.50
7	Kenya Broadcasting Corporation	(31.80)	(165.30)	22.20
8	Gilgil Telecommunications Industries	-	-	-