

**THE EFFECT OF ISO CERTIFICATION ON THE FINANCIAL
PERFORMANCE OF PUBLIC SECTOR INSTITUTIONS**

BY

ODUOR CHARLES OKOTH

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DECLARATION

This research project is my original work and has not been presented for any other Degree/diploma in any other university.

Signature ----- Date-----

Name: Oduor Charles Okoth

D63/81014/2012

Supervisors

This project has been submitted for examination with my approval as the University Supervisor

Signature ----- Date-----

Dr. J. O Aduda

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DEDICATION

I dedicate this project to my father the Late John Oduor Opondo without whom I would not be. I also dedicate it to my late brother and sister George Otieno Oduor and Hellen Adhiambo Oduor for their encouragement to pursue further studies.

ABSTRACT

The Government of Kenya is expressing dissatisfaction with the performance of its institutions especially financial performance, which would prevent it from achieving any sustainable development despite having in place very effective policies. The poor public financial performance is attributable to lack of adoption of ISO certification, according to academic literature, studies and other journals. There is scanty information linking ISO certification to public financial performance in Kenya, which caused this study to be conducted with an objective of evaluating the effects of ISO certification on financial performance of public sector institutions in Kenya. This study used a descriptive survey in soliciting information in the area of research and its target population was selected from 70 public sector institutions, which were operational between 2008 and 2012. Data was collected from secondary sources and analyzed using both descriptive and inferential statistics. This study revealed that the ISO certification Status affects the financial performance of public sector institutions positively. It was found that an increase in the period after ISO certification enhances the financial performance of public sector institutions and vice versa. The study recommends that the Government of Kenya review its standards and audit policies to ensure that all its institutions are compelled by regulations to adopt ISO certification and design policies to ensure that the firms that have adopted receive support during the ISO continuous improvements. There was a significant relationship between ISO certification status (p -value=.029) and period after ISO certification (p -value = .004) and financial performance of the public sector institutions.

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ABBREVIATIONS

ANOVA	Analysis of Variance
FY	Financial Year
GoK	Government of Kenya
ISO	International Standard Organization
KMTC	Kenya Medical Training College
KNBS	Kenya National Bureau of Statistics
KPLC	Kenya Powered and Lighting Company
RBV	Resource Based View
SPSS	Statistical Package for Social Science

CHAPTER ONE

INTRODUCTION

1.0 Background of the Study

The rapid growth of International Organization for Standardization (ISO) certification is branding ISO as the most important quality standards globally (ISO, 2008). In fact, many African countries including Kenya have adopted ISO standards ((Emeka et al., 2008); Raphael, 2010). According to Morris (2006), the ISO certification is applicable to any type of organization, including the public sector since it drives performance improvement and covers all aspects of the activities in an organization (Chow-Chua, Goh, & Wan, 2003). KPMG (2011) indicates that the public sector, globally, is being pushed by unprecedented change, challenge in efficient and effective quality products and services provision and complexity in quality products and services provision to adoption of ISO certification (Arauz and Suzuki, 2004; Klefsjo, Bergquist & Edgerman, 2006). There are pressures on the government institutions to; give more choice to consumers; ensure compulsory competitive tendering; counter cost restraint; ensure value for money; and satisfy more demanding customer requirements; hence the need for quality management (Warnack, 2003). Whether they like it or not the government institutions (the public sector) must improve their product and service quality their disposal to very high levels (Pollitt, 2005).

1.1.1 ISO certification

The public sector in many countries is widely adopting ISO certification to enhance; focus on results (Macharia, 2010; Muthaura, 2010), ensure effective and efficient service delivery (Kariuki & Kasomi, 2011; Amwayi, 2012), and improve public sector

performance (Macharia, 2010). The certification provides guidelines to public sector (Morris, 2006) to drive performance improvement (Clare *et al.*, 2003; Grajek, 2004). Considering that the public sector provides very essential services and products (Muthaura, 2010) and is the backbone of country's economy and well being (Kenya National Bureau of Statistics [KNBS], 2012), the demand for ISO certification to ensure quality management is very high (KPMG, 2011; Koimett, 2012). For instance in Kenya alone 150 public sector bodies in Kenya have obtained ISO certification and many more are on the pipeline (KNBS, 2013). In fact public universities, government ministries, parastatals and government regulatory bodies are increasingly acquiring ISO certification to improve their performance (Macharia, 2010).

1.1.2 Public Sector Institutions Financial Performance

The agency theory explains that the welfare of agents and principal should be maximized as a result of financial decisions taken by government (Bowie & Norman, 2008). The desired financial performance outputs are assured when that performance meets the needs of the citizens. According to Foss (2007), when a public officer chooses to manipulate the financial results through managerial activity and that activity maximizes the return to that person rather than financial return to the country then there is an agency problem. When applied in public financial performance, the agency theory regards citizens who are the taxpayers as the principal(s) and finance office as agents who must deliver to the citizens. Gailmard and Patty (2007) states that, the principal-agent theory has proven to be a flexible and useful approach for interpreting effects of institutional arrangements on accountability of public decision makers and public policy. However, financial performance of most Public sector

institutions is very ineffective and very wanting characterized by; costing heavily to the government, poor service delivery, financial losses, and poor public image.

1.1.3 ISO certification and Public Sector Institutions Financial Performance

ISO certification has been argued out as influencing the organizational performance, and more specifically, the financial performance (Deming, 1982; Buttle, 1997; Gavin *et al.*, 2008). According to Corbett *et al.* (2004), firms that have obtained this certification display strongly significant abnormal financial performance. Journal literature, studies and theories have shown that ISO certification factors; ISO implementation, and ISO continuous improvement influence the financial performance of organizations. ISO implementation activities include, “including identifying its key processes, defining roles and responsibilities, policies, objectives and documentation requirements” (Kyalo, 2013). The ISO certification requires increased communication and accordingly the documentation becomes the reference point to assuring that communication (Morris, 2006). In fact documentation ensures better processes due to greater communication throughout the organization (Joubert, 1998).

As per the words of Deming (1982), this leads to reduction in costs and an increase in quality. Further the ISO certification provides a platform that ensures continuous improvement in the processes carried out and products manufactures (Vouzaz & Gotzmani, 2005). Such ensures that that the quality management system has procedures, policies and requirements which ensure that customer satisfaction is consistently achieved (Bhuiyan & Alam, 2005), which largely affects the financial performance. A systematic approach to quality improvement results in; generating

greater value for customers, building market share and revenues; lowers costs, increasing financial performance (George, 2002).

1.1.4 Public Sector Institutions in Kenya

Between July and December 2013, Kenya had 46 Ministries and Accounting Departments, 178 State Corporations, 175 Local Authorities and 69 Tertiary Institutions in the Ministries of Education and Higher Education, Science and Technology. This is a total of 468 Government agencies. Over the last seven years of implementation of performance contracts by public agencies, there is sufficient evidence to conclude that the agencies have embraced the performance contracting strategy as shown by improved performance. Further, the implementation of the strategy has also enhanced service delivery. From the results, it is clear that sustained application of the performance contracting strategy is a necessary prerequisite for streamlining the management and operations of the public service to improve efficiency. However, for the Strategy to be fully integrated and become effective, it is imperative that it is extended to all institutions within the three arms of Government and cascaded to all levels, including the County level (Office of the Prime Minister, 2012).

1.2 Research Problem

The key drivers ISO certification in the public sector in its efforts to ensure financial performance improvement are; public sector financial management has always by passed those in the private sector; skills deficit and retention issues; losses and waste in the public sector (Corbett *et al.* 2005), accountability and transparency over public spending for the general public and tax payer, weak resource allocation, and serious deficiencies in financial data and budget reporting. Other drivers include; weak

accounting and auditing systems, compliance with internationally accepted accounting practice, the need to strengthen governance in a developing country, the need to improve efficiencies and effectiveness in service delivery, and weak legislative framework (The Association of Chartered Certified Accountants, 2010).

Further, the public sector institutions are under pressure due (Pradhan, 2010) to; changing global environment, trade liberalization; choice to consumers; compulsory competitive tendering; cost restraint; value for money; and customer requirements, to adopt quality management and especially ISO certification (Gotzaman *et al.*, 2007; Muthaura, 2010). Adoption of such certification is intended to ensure; facing competition, acquiring public acceptability, receiving a stamp of quality and improved organizational performance (ISO Survey, 2008). In Kenya public sector is being compelled by prevailing circumstance to join ISO certification train (Lee, To, & Yu; 2011). However, some public sector institutions in Kenya are still lagging behind showing no sign of immediate ISO certification as other certified organization still register poor quality processes, products and services (Simmons, 1999). In this respect, the Government of Kenya (GoK) is expressing dissatisfaction with the performance of such institutions (GOK, 2003) owing to the poor performance especially financial performance (Magutu *et al.*, 2011).

When this status of affair is not addresses urgently; achieving Vision 2030 to completeness will be a nightmare and poverty eradication initiatives will just be myriad of imaginations. In fact, in this status the government would not be able to achieve any sustainable development despite having in place very effective policies. The failure to achieve public financial performance is attributable to lack of proper ISO certification. Studies and other journals have shown ISO adoption (Kirsch and

Corbett, 2002; Magd and Nabulsi, 2007; Cagnazzo *et al.* 2010) and the length of time the institutions has been certified - continuous improvement (Vouzas & Gotzmani, 2005; ; Cagnazzo *et al.* 2010) ISO certification as factors that influence the public financial performance

Various studies have been done on the effect of ISO certification on public financial performance globally (such as by; Magd and Nabulsi, 2007; Hesham and Magd, 2007; Luz and Maria, 2011), regionally (such as by Mung'ara, 2010), and locally (such as by Kyalo's, 2013; Kagumba and Gongera, 2013). Most of these focused on effects of ISO certification on business and operational performance and avoided showing how the public financial performance fared in ISO certification. More precisely, there is scanty information showing the ISO certification (ISO adoption status, and the length of time the institutions has been certified) as determinants of the financial performance of public sector institutions. It is against this background that the researcher conducted this study.

1.3 Objectives of the Study

The objective of the study was to evaluate the effects of ISO certification on financial performance of public sector institutions in Kenya.

1.4 Value of the Study

The findings of the study provided information on effects of ISO certification on public sector financial performance in Kenya. Information from the study would be useful to Government of Kenya in ensuring effectiveness and efficiency of service delivery in the public sector. The government would benefit in strengthening ISO certification considerations in its institutions, which would improve financial

performance and effectiveness in these organizations. The public would also benefit in obtaining effective and efficient services as delivered to them, which would lead to their satisfaction and trust. The public sector would be able to compete with the private on equal standings in that public image of the government institutions would have drastically improved. The efficiency in financial management in the public sector would improve considerably. The study would be an eye opener to the ISO certification and public finance performance in Kenya, making the study useful to researcher in this field. Lastly, the study added knowledge to the ISO certification and public finance performance, making the study useful to academicians and scholars.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of literature pertinent to the study as presented by various researchers, scholars', analysts and authors. It summarizes literature that has been reviewed for the purpose of the study with regards to ISO certification and financial performance. The literature covers an empirical review, which is an overview of the literature of past studies, findings and recommendation showing the research gap to be filled. It also has a review of theoretical literature (theoretical framework). Lastly, the conceptual framework of the study and summary is provided.

2.2 Theoretical Review on ISO Certification and Financial Performance

The present study reviewed various theories related to ISO certification and financial performance with a view of obtaining a conceptual model for the study. The main point concern was explained by resource based view theory, Internal Improvement theory, and External Improvement theory

2.2.1 Resource Based View Theory (RBV)

According to Martinez-Costa et al., 2008), the resource based view theory is theory, which has become one of the most widely used theoretical frameworks in the strategic management (Newbert 2007), holds that “a company’s success is based on the resources and capabilities it holds in control which may become a source of competitive advantage. Scholars have always related dynamic capabilities to Resource Based View (RBV) and in the process defined it as the key strategic and

organizational routine used by the managers to alter their resource bases to generate new value-creating strategies (Helfat and Peteraf, 2003). Dynamic capabilities are the buffer between resources of the firm and the shifting business environment, which enhance sustainability of its competitive advantage (Protogerou et al 2008; Ambrosini et al, 2009). This a sentiment that was held firmly onto by Barney (1991), who posits that for a resource to yield competitive advantage, it must be valuable, rare among competitors, imperfectly imitable, and should not be substitutable by competitors. According to Fahy (2002), the role of company managers is crucial to firm-level competitiveness, since their perceptions of the circumstances dictate the selection of resources to be exploited, developed and protected (Sirmon *et al.*, 2007).

As regards ISO certification, the adoption is based on internal factors to enhance efficiency and improve processes, the knowledge and expertise gained (Somsuk, 2010), which actually creates opportunities for real competitive advantage (Alcina & Inaki, 2013). An organization adopting ISO certification would acquire improved performance as compared to before certification. However, if the motivation for adoption of the standard is solely external, the organization would implement the standard to meet the external pressures and might not improve performance (Martinez-Costa *et al.*, 2008). The financial performance measures are used as the indicators to assess the success of a firm in achieving stated strategies, objectives and critical success factors (Hass et al. 2005).

According to (Grant 1991), to create a competitive advantage, which is the degree to which a firm outperforms its competitors in the performance measures chosen to be benchmarked (Villalonga 2004), it is important to focus on those firm-specific resources that are valuable, rare, imperfectly imitable and not substitutable (VRIN)

(Barney, 1991). As such, a temporary competitive advantage is built on the resources that add value to a company and that are not heterogeneously distributed across competing firms. In order to create a sustained competitive advantage, a firm must also possess imperfectly mobile resources (e.g., Mata et al. 1995). The application of financial statement information in assessing the drivers of the competitive advantage assumed by the RBV is not entirely straightforward, since the existing accounting and reporting systems do not recognize in the financial statements the whole value of the intangible resources and capabilities possessed by firms (e.g., Powell 2003).

2.2.2 Contingency Theory

Contingency Theory, arising from leadership factors and treats them as function of different variables within the organization is defined through a combination of ideas: there is only one way to well manage an organization - drawing a model related to the environment; so, effective organizations have an adequate adjustment to it and to its subsystems; the needs of the organization are better satisfied as they think best; at last the management model should be appropriate both to the tasks to be performed and to the nature of the group work (Somsuk, 2010).

2.2.3 Institutional theory

It considers the more intrinsic aspects (norms, rules, regulations procedures and routines) of the structure of the organization (Scott, 1995). The guiding elements of institutional theory are: the basis of compliance, the mechanisms of action, the logic of operation, the indicators of the performance framework and the legitimacy. Depending on the type of organization concerned - regulatory, normative or cognitive - the predominant features are defined. Regulator means that the indicators of action are based on existing laws and regulations associated with a punishment regime.

Normative type means that certification will constitute the guiding principles. Cognitive type has to do with indicators provided by a comparison to others or to different environments, and may be the case of mimetic isomorphism. Companies many times seek legitimacy through processes of isomorphism - similarity between the internal characteristics of the organization and its environment. Firms are open systems with communication processes that interact with other organizations and they are a direct output of its institutional environment (Levitt and Nass, 1989; Lowrey, 2005). The mimetic isomorphism supposes that the organization has a tendency to imitate other similar and successful organizations (Levitt and Nass, 1989; Leiter, 2005) considered as a model (O'Connor et al., 2004). The coercive isomorphism is a form of coercion by a third party (State, Trade Unions, clients or suppliers) and can reveal itself through the existence of regulations (Levitt and Nass, 1989; Chua and Petty, 1999; Lowrey, 2005; Leiter, 2005). The normative isomorphism stems from the widespread applicability of standards across classes of professionals and recognizes that this class has an important role in disseminating certain kind of orientation (Levitt and Nass, 1989; Chua and Petty, 1999; Lowrey, 2005; Leiter, 2005).

2.3 Determinants of Financial Performance of Public Sector Institutions

The study proposes that financial performance of public sector institutions is determined by; the status of ISO certification, and the period the organization has been certified. This is adopted from Pinar, et al., (2003); Corbett, et al. (2004); Aslanertik and Tabak (2006), Hesham and Magd (2007), Lamport et al., (2010), Anyango and Wanjau, (2011) and Kagumba and Gongera (2013). In this case, the status of ISO certification, and the period the organization has been certified are the independent variables and the financial performance of public sector institutions is

dependent variable. The financial performance of public sector institutions is indicated by; budget compliance and reduction of recurrent costs.

However, there are other variable which might influence the financial performance of public sector institutions such as; inflation, organizational commitment, and financial crisis. The study considers these as intervening variable, which have moderating effects on the financial performance of public sector institutions. These intervening variables would have moderate the cause effect relationship between the dependent and independent variables in the study. For instance, Bill (2003) suggests that different beliefs and value systems inform people's attitudes towards ISO certification. How an individual perceives the ISO certification, is critical to whether the individual will eventually adopt the ISO certification.

Increased inflation rate and the weakening of the Kenyan shilling has contributed to the widening of the current account deficit (KNBS, 2012). Organizational commitment means identifying with one's employing organization. Managers who participate in the ISO certification process become more satisfied with their working environment. They develop higher organizational commitment which leads to improved financial performance (Yahya *et al.*, 2008). Thus, stronger and more generalized commitment may enhance financial performance, organizational development, growth and survival. When commitment is high, it means that an employee's values are aligned with the organization and that the employee wants to do what is best for the organization.

Financial crisis in the world would affect several banks and other financial institutions around the world, including the public sector. Hence, financial crisis has been included to the model as a moderating variable. For instance, global financial crisis

creates insufficient foreign exchange reserves resulted in devaluation and increased interest rates. It has effects on public finance by Governments due to the bailout actions (may lead to serious budget deficits). Financial markets (stock exchanges and derivative markets notably) where it developed into a bear run. Therefore the need for the Government to shield the economy from the adverse effects of the global financial crisis (Capital Markets Authority, 2008). The study mitigated these variables appropriately.

2.4 Empirical Review

The present study reviewed various global, regional, and local studies on ISO certification and how it relates to financial performance of different organizations. The study evaluated the past studies and showed how they related by; identifying the benefits from the past studies and research gaps that would be filled. For instance, the global study by Gupta (2000) found that ISO 9001 certified companies performed better than the non-certified. Although Gupta's (2000) study considered; technological management, quality management control, causes of poor quality and quality control techniques used, it failed to show how the financial performance fared as regards to this certification (gap that the present study will fill). Romano's (2000) study found that there was statistically significant influence of ISO certification on improvements after certification. That study was concerned with quality performance in production, reliability of the production system, and external quality performances but lacked sufficient information on how the financial performance was affected by the certification (although it showed that non-quality costs diminished significantly after certification). The study by Romano (2000) did not provide enough grounds to

comprehend that financial performance were affected by the ISO certification in anyway, which the present study did.

A study by Dick, Gallimore and Brown, J. (2002) found that ISO certification made significant difference in the ways quality is perceived and measured but was not particular on the influence that this certification had on public financial performance. The study by Heras, et al. (2002) established that ISO certification significantly influenced the sales and profitability to the extent that certified companies performed better than the non-certified. Although Heras, et al. (2002) touched lightly on finances, it did not sufficiently show how public financial performance was affected by this certification. The studies by Dick et al. (2002) and Heras, et al. (2002) did not explicitly explain how the ISO certification related to public financial performance, which was done by the present study. Sousa and Voss (2002) conducted a study which found that; quality management practices such as ISO certification, significantly influenced on quality and operational performance, which supported the current study in considering financial performance as the dependent variable. However, the study by Sousa and Voss (2002) was not specific on how the public financial performance relate to ISO certification, a gap the present study will fill.

Kirsch and Corbett' (2002) study found that ISO certified companies improved their financial performance while the non-certified ones experienced substantial deterioration. According to the findings, the ISO certification significantly increased performance of the certified companies. The study noted that the implementation of the ISO certification play a significant role to the firm's performance. These findings were very useful in regarding the ISO implementation as an independent variable. The study by Kirsch and Corbett' (2002) evaluated publicly-traded firms listed in the New

York Stock Exchange where they considered firm's return on assets (ROA), which is not the case with public financial performance. On noting this, the present study considered public financial performance to fill the identified gap.

Pinar, et al. (2003) study examined some ISO certified and other non-certified firms listed in the Istanbul Stock Exchange Market (ISE) over various time periods and established that for all time periods; the certified firms had higher mean returns; certified firms had reduced stock returns volatility; certification seemed to reduce risk; certified firms had increases in revenue; certified firms were able to access new markets and had increase production volume. It was very clear from these findings that the ISO certification significantly influenced the firm's performance (financial performance included) and position in the market. This was very helpful to the present study in regarding financial performance as the dependent variable. The failure by the study explains how far this affected the public financial performance raised many questions, which were answered by the present study.

Corbett, Montes-Sancho and Kirsch (2004) showed that ISO certification achieves internal benefits; quality, productivity improvements, increases in market share, or both; as it evaluated the financial performance of certified manufacturing firms. The study found that ISO certification preceded significant abnormal improvements in financial performance. The study findings encouraged the present study to regard financial performance as the dependent variable. The study Corbett, *et al.* (2004) showed that ISO certification significantly improved the financial performance but sidelined the public financial performance as it evaluated the private financial performance. After noticing this, the present study assessed how ISO certification influences public financial performance.

A study by Terlaak and King (2005) using panel data on certified manufacturing firms found that ISO certification enhanced competitive advantage of these firms. The study found that certified firms; grew faster after certification, which was not as a result of operational improvements. Although the study showed the strong relationship between ISO certification and firms' performance, it did not consider the role of volume, value, and criticality to explain more fully the conditions under which certification with ISO certification generates a competitive advantage. Further, the study did not explain how this is applicable in the public sector and more specifically on public financial performance, which is what the present study will achieve. In Saudi Arabia, Magd (2005) study found that ISO certification; improved efficiency, yielded better documentation procedures, and increased quality awareness in the firm adapting it. This is to say that ISO certification improved the firms' performance. The study findings helped the current study identify crucial variables and indicators. Since the study failed to show the role played by ISO certification on public financial performance, the current study did it.

The study by Aslanertik and Tabak (2006) investigated the "impact of customer satisfaction, cost reduction, and integration with suppliers on the financial performance of the certified companies" and found that ISO implementation significantly improved performance of certified companies. Singh *et al.*, (2006) conducted a study to analyze the benefits of adoption of ISO and established that there was improvement in processes and operations in the sector after adoption. The studies by Aslanertik and Tabak (2006) and Singh *et al.*, (2006) simply showed that ISO certification company's performance (financial performance included) but did not extent the search to the influence of the same on the public financial performance, leaving a wide gap to be fill. The present study therefore filled this gap.

Magd and Nabulsi (2007) conducted a study on ISO implementation and certification, which found that internal benefits of ISO exceeded the external benefits of the certified organizations. These findings were further confirmed by the study by Lee *et al.* (2009) which found that ISO certification improved the quality of public service delivery to all service consumers; internal and external. The study by Hesham and Magd (2007) conducted evaluated ISO implementations to identify the critical success factors contributing to the success of the standards. The study found that the challenges to successful ISO implementation included; management commitment; system changeover, and workers resistance. The study by Cagnazzo *et al.* (2010), which found that ISO implementation impacted on the performance of the company, agreed to that of Hesham and Magd (2007) in all ways. The information thus obtained from the studies by Magd and Nabulsi (2007), Hesham and Magd (2007), Lee *et al.* (2009) Cagnazzo *et al.* (2010 was very useful in regarding the ISO implementation as an independent variable and to identify training as crucial item for overcoming resistant to change. Although the studies did not explain how ISO certification influenced public financial performance, it provided information to build the case in the present study.

Papadimitriou and Westerheijden (2010) study found that those institutions which engaged in quality assurance voluntarily had higher improvement in their performance than those which were just complying with government-initiated policies. Since most government institutions are usually driven by government-initiated policies, it would be vital to assess how the ISO certification related public financial performance in such a scenario.

Fard and Abbasi (2010) study explains and reported that ISO certification standards were not applicable to the public sector which, mainly, provides services. Lamport et al. (2010) study differed with the findings in the Fard and Abbasi (2010) study and showed that ISO certification improved business performance and profitability. Lamport et al. (2010) study revealed that there is an association between ISO certification and the overall financial performance of companies. This was in agreement with the study by Mung'ara (2010) which found that established ISO certification ensured improved efficiency, streamlined operations, customer satisfaction, reduced waste and improved business performance in the insurance industry in Kenya. A comparative study by Heras-Saizarbitoriam, Molina-Azorín, and Dick (2010) ISO certification and financial performance established that there was no evidence that improvements in performance followed certification but ISO certification caused improved financial performance. The study by Olouch (2010) showed that ISO certification enhanced quality at Kenya Medical Training College (KMTC). Considering the findings and debates by; Owino (2010), Lamport et al. (2010), Fard and Abbasi (2010), Mung'ara (2010), Heras-Saizarbitoriam, *et al.*, (2010), and Olouch (2010), it was clear that as there was a gap in the effects ISO certification on public financial performance. This motivated the present study to research on this topic.

Luz and Maria (2011) study established that there was a positive relationship between ISO certification and quality results. The study by ISAI-Najjar and Jawad (2011) revealed the main factors that would hinder the implementation of the standards is lack of top management commitment. The study findings were useful to regarding management review as an indicator in ISO implementation. Daniel *et al.*, (2012) study

established that ISO implementation was positively related to all the three aspects of supply chain management.

Locally, Magutu, *et al.*, (2010) study was conducted to assess how quality management practices, such as ISO certification, influenced academic services at the University of Nairobi. The study concluded that the University of Nairobi has applied quality management and to a very great extent has ensured that the Quality Management Policy is appropriate to its purpose. They recommended that public universities should remove the status quo to be supportive to any formulation of new ideas in order to respond to an ever-changing environment in higher education. However, the study by Magutu, *et al.*, (2010) did not determine how Quality management through the ISO certification can contribute to organizational financial performance, which would be done by the present study.

The study by Owino (2010) established ISO certification ensured improved operational performance within government agencies. A local study by Mungara (2010) established that ISO certification would lead to benefits such as; improved efficiency, streamlined operations, customer satisfaction, reduced waste and improved business performance. The study by Macharia, (2010) established that there was high rate of ISO certification acquisition in the Kenyan public sector aimed at improving public sector performance. Although the studies by Owino (2010), Mungara (2010) and Macharia, (2010) found that the ISO certification would lead to business performance, they fell short of explaining how the public financial performance was influenced by the same.

The study by Okibo and Kamau (2012) found out that there is generally low compliance with quality assurance standards among most internal audit units in state

owned corporations in Kenya due to; lack of awareness of standards; non-membership with standards body; non adoption; age and experience of the internal audit department and understanding of the quality assurance standards. The findings in Okibo and Kamau (2012) study are raising loud alarm over the ISO Certification status in the public sector. The status affairs may cause the private sector to over ride the public sector in quality service assurance. This highly motivated the present to evaluate the financial benefit of ISO Certification in the public sector.

A study by Anyango and Wanjau (2011) on certified manufacturing firms in Nairobi established that ISO certification significantly increased performance by improving quality, improving the corporate image, competitive advantage, and increasing market share. The study found that ISO certification positively impacted on; financial resource management, customer satisfaction, human resource management and control measures. From these findings it was shown that ISO certification had an impact on financial area but it was not clear how this played in public financial performance, which engineered the study to regard public financial performance as the dependent variable.

Kyalo's (2013) study sought to establish; whether Kenya Powered and Lighting Company (KPLC) achieved process quality improvements after ISO certification; the impact of the certification on process interactions. The study findings revealed that there were significant improvements in process quality after ISO certification. However, the study failed to establish other dimensions of process quality apart from service delivery time, such as public financial performance.

The study by Wanjau, *et al.* (2013) confirmed that the success of quality adoption appears to rely more on management commitment, among other factors. Mangula's

(2013) study revealed that ISO certification improved organizational performance through; improvement of quality of products, volume (quantity). The study failed to show the role played by; top management committed, regular training as well adhering to team work approach. To fill this gap, the present study regarded all these omitted factors as indicators of the independent variables.

Kagumba and Gongera (2013) conducted a study to establish the effectiveness of ISO certification on customer satisfaction, employee productivity, inflow of revenue and internal procedures and processes at Kenyatta University. The study found that appreciation and participation in ISO certification increased performance through; improved customer satisfaction, improved organizational outcomes and increased the revenue inflows for development. The internal processes have also been greatly enhanced by university management. However, the study did not consider non-compliant universities and conduct a comparative study of both private and public universities to find out which side ISO certification has greater impact.

2.5 Summary of Literature Review

The study reviewed various literature on theories relate to ISO certification as well past studies which were found helpful to the present study. The theory review established that certain theories were useful in developing a conceptual frame work adopted form; Pinar, *et al.*, (2003); Corbett, *et al.* (2004); Aslanertik and Tabak (2006), Hesham and Magd (2007), Lampion *et al.*, (2010), Anyango and Wanjau, (2011) and Kagumba and Gongera (2013). On reviewing the empirical studies, it was found that various studies have been done on the effect of ISO certification on public financial performance globally (such as by; Magd and Nabulsi, 2007; Hesham and Magd, 2007; Luz and Maria, 2011), regionally (such as by Mung'ara, 2010), and

locally (such as by Kyalo's, 2013; Kagumba and Gongera, 2013). However, there is scanty information linking the public financial performance of public sector institutions to; the level of ISO certification, and the period the organization has been certified. The present study filled this gap.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter provides an explanation of the research design and the methodology that was applied in carrying out the research study and justification for using a particular research design. It also describes the characteristic of the population which was used in the study, detailed description of sampling methods to be used, procedures, data collection instruments and the procedure of data collection and finally describes the appropriate data analysis methods.

3.2 Research Design

Orodho (2003) defines research design as the scheme, outline or plan that is used to generate answers to research problems. A research design can be regarded as an arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance with the research purpose. The study adapted descriptive research design since it describes the state of affairs as it is. Descriptive design is used when collecting information about people's attitudes, opinions, habits and other possible behavior (Orodho and kombo, 2005). The study aimed at describing the state of affairs of ISO certification and public financial performance as it is and therefore descriptive research design was considered as the most appropriate for this study

3.3 Target Population

Target population refers to the entire group of individuals or objects to which a researcher is interested in generalizing the results of the study and having observable

same characteristics (Mugenda & Mugenda, 2003). The target population was all the government institutions as at the year 2012.

Table 1: Classification of Government Institutions in the year 2012

Category	Total
Government ministries	46
state corporations	178
local governments	175
tertiary institutions	69
Total	468

Source: Office of the Prime Minister (2013)

3.4 Sampling Design and Procedures

Samples are always subsets or small parts of the total number that could be studied (Orodho and Kombo 2002). The study will use a sample population of 70 (which is 15% of the target population). This choice of the sample size of 15% was guided by the Mugenda and Mugenda (2003) who advised that a sample size of 10% is good enough for a survey research. Further, Kombo and Tromp (2006) indicated that in a descriptive the sample population should at least be 30 elements to obtain favorable results. The study therefore had a sample well above 10% and meets the threshold of 30 for a descriptive study. Half the sample (35) included the government institutions that obtained ISO certification before the year 2008 and the remaining 35 were institutions that have not yet adopted ISO certification by the year 2008. This was to allow the study to observe how these institutions performed before, during and after certification and thereby obtained accurate results. It should be noted that the performance contracting data is only available for that period (2006 and 2012).

3.5 Data Collection Instruments and Procedures

Data was collected from secondary sources using desk checking method. The main source of secondary information was published guides, journals, reports and information from internal sources. Secondary data was also be obtained from existing documents such as financial statements and journals.

3.6 Data Analysis

Data Sampling, classification and analysis was done in order to come up with clear, understandable, up-to-date, genuine and reliable information aimed at achieving objectives of the research study. The collected data was thoroughly examined and checked for errors and tabulated accordingly. The study used descriptive statistics to analyze the data to establish patterns, trends and relationships. The various methods for analyzing data that used included: bar graphs and pie charts, tables, and narrative.

The study used bivariate analysis to assess the degree/strength of relationship that exists between the factors of ISO certification (Independent variables) and the financial performance (dependent variable). The study used the Pearson's Product Moment Method to determine the strength of the relationship (Wuensch, 2009). Where the correlation was weak or none those variables was ignored in further analysis. Thereafter, multiple regressions was done to estimate a model that explains the dependent variable in terms of the independent. The multiple regression analysis was carried out to determine how the independent variables (predictor) best describe the financial performance (response) using ANOVA (Analysis of Variance) (Ho, 2006) using the study model; $PFM = \beta_0 + \beta_1 STAT + \beta_2 PERIOD + \varepsilon$

Where

β_0 is a constant, which is the value of dependent variable when all the independent variables are 0

β_1 , β_4 Regression coefficients of independent Variables or change induced by IIM, and ICI

ε - Error of prediction

PFM – Public finance Performance which is the dependent variable. It was measured using the indicators; Budget compliance and Reduction of Recurrent Costs.

STAT – ISO certification adoption status, which is the level of certification, can be 1 for ISO certified or 0 for non-certified.

PERIOD – Period (length of time) the institutions has been certified measured in using 0 for those firms not yet complied or complied in less than a year or 1 for those complied for over a year.

The values for status of certification, and period of certification were regressed against the Financial Performance to estimate the study model.

The study used IBM Statistical Package for Social Science (SPSS) ver. 20.0 software to analyze descriptive data.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter contains data analysis, results, and discussions from the analysis of the collected data. The results from analysis were presented using tables and interpretation in form of narratives. The study analysed the data using descriptive statistics and thereafter inferential analysis. Further, the chapter contains discussions of the research findings. When discussing the results, the study referenced the literature reviewed in chapter two, which was both theoretical literature and empirical studies.

4.1.1 Study Response

The study chose to use 35 ISO certified government institutions and 35 non certified institutions as the sample population, which translated to sample population of 70 respondents. The study analyzed the actual response based on the sample population and the results are in Table 2.

Table 2: Analysis by Response Rate

Category	Sample Population	Response	% Response
ISO CERTIFIED	35	26	74.29
ISO NON-CERTIFIED	35	26	74.29
Total	70	52	74.29

Source: Research Data (2014)

Table 2 shows that the total response rate was 74.29%, which the same for each category of the respondents. The response rate was also 74.29% for both ISO certified

respondents and the ISO non-certified. The response was very high from the words of Mugenda and Mugenda (2003), who classified response variously; according to Mugenda and Mugenda (2003), a response rate of 50% is adequate, any response not exceeding 60% and greater than 50% is good, and response rate above 69% is very high. The response of 74.29% means that 25.71% did not participate in the study the reason being these were government institutions that were only existent in the period 2008 and 2012, after which they closed down. These institutions did not have sufficient data to use in the study

4.2 Descriptive Analysis

The study used the study objective to analyze the data and considered three variables, ISO certification status (Independent variable) and the period the institutions had been certified by 2008 (Independent variable). The study objective was to evaluate the effects of ISO certification on financial performance of public sector institutions in Kenya. First, the study analyzed the data using descriptive statistics. The study could not obtain data for 2012/2013 because there was change of hand in the government, the ministries were collapsed, and others merged even before the end of the financial year. It was not possible to get adequate data from collapsed and merged institutions.

4.2.1 Effects of ISO certification status on financial performance

The study first assessed ISO certification Status with respect to the financial performance in effort to establish, the dependent variable, ISO certification Status affected the financial performance of public sector institutions. The study analysed the budget non-compliance data for both the certified and non-certified institutions for each financial year (FY); 2008/2009, 2009/2010, and 2010/2011. The study also obtained the average non-compliance. The non-compliance was expressed as

percentage of the estimates for the year (budget estimates). Non Compliance = (Gross Estimates -Approved Gross Expend)/Gross Estimates for each year. This was later expressed a percentage to simplify for interpretation. The results were recorded in Table 3.

Table 3: Analysis on Effects of ISO certification on financial performance

certification Status	NON-COMPLIANCE			AVERAGE
	2008/2009	2009/2010	2010/2011	
ISO CERTIFIED	8.46%	6.85%	9.19%	8.17%
ISO NON-CERTIFIED	49.04%	32.00%	19.31%	33.45%
AVERAGE	28.75%	19.43%	14.25%	20.81%

Source: Research Data (2014)

Table 3 showed that the average non-compliance to the budget by the ISO certified institutions within the study period was 8.17%. From these results it was also shown that that ISO certified institutions indicated that the Non-compliance decreased from 8.46% in 2008/2009 FY to 6.85% in 2009/2010 FY, and slightly increased to 9.19% in the year 2010/2011. The average non-compliance to the budget for all institutions was 28.75% in 2008/2009, which then decreased to 19.43% in 2009/2010 FY, and then decrease to 14.25% in 2011/2012 FY. From these results, it would be seen that the companies with ISO certification had very non-compliance percentages, an indication that ISO certification influenced the financial performance of public sector institutions. For instance, when ISO certified had non-compliance of 8.46% in 2008/2009, the ISO non certified had non-compliance to the budget of 49.04%, in the FY 2009/2010, ISO certified had non-compliance of 6.85% as the ISO non-certified had non-compliance of 32.00%. in the year 2010/2011, ISO certified had non-compliance of 9.19% as the ISO non-certified had non-compliance of 19.31%. Further, the average non-compliance of ISO certified was 8.17% and that of ISO

certified was 33.45%.. The results in Table 3 indicate that the ISO certification implementation considerably affects the financial performance of public sector institutions.

The results also indicated that non-compliance negatively influenced the financial performance by allowing high non-compliance to operate freely. The values of non-compliance were well above 20%, which was considered by the present study as substantially poor performance. In 2008/2009 there non-compliance was 49.04%, which decreased to 32.00% in 2009/2010, and then to 19.31% in 2010/2011 FY. The average non-compliance stood at 33.45%.

The ISO certification significantly increased performance of the certified companies, and the implementation of the ISO certification play a significant role to the firm's performance. It can further be observed that the non-compliance of non-certified was decreasing over time, which was attributable to these institutions adopting some quality standards within the period.

4.2.2 Effects of Period of ISO certification status on financial performance

The other Independent Variable in the study was period of ISO certification. The study analyzed its data to establish the ISO certification Status affected the financial performance of public sector institutions, using descriptive statistics. The results obtained were captured in Table 5. The table contains results on period and non-compliance level of various periods.

Table 4: Effects of Period of certification on financial performance

Period Certified	Frequency	Percent	NON-COMPLIANCE			
			2008/2009	2009/2010	2010/2011	Average
1	12	46.15	93.08%	9.25%	7.25%	36.53%
2	8	30.77	8.37%	5.75%	3.88%	6.00%
3	6	23.08	13.50%	3.50%	2.02%	6.34%
Total	26	100.00	38.32%	6.17%	4.38%	16.29%

Source: Research Data (2014)

The results in Table 4 the yearly Non-compliance of the various years decreased with time. In 2008/2009 FY it was 38.32%, which reduced to 6.17% in 2009/2010 and then 4.38%. Those institutions which had been certified in the year 2008 had their non-compliance reduced from 93.08% in the year 2008/2009 to 9.25% in FY 2009/2010 and then 7.25% in 2010/2011. The Institutions which had been certified for 2 years had their non-compliance reduce form 8.37% in 2008/2009 FY to 5.75% in 2009/2010, and then reduce to 3.88%. The institutions that had been certified for 3 years had their non-compliance reduced from 13.50% in 2008/2009, which reduced to 3.50% in 2009/2010 FY and then 2.02% in 2010/2011.

4.3 Correlation Analysis

A correlation analysis was carried out on the study variables to establish whether there existed any significant relationship between the dependent variable and the independent variables using 0.05 level of significance tests. The study made the proposal that ISO certification on public sector institutions affected financial performance in Kenya and the factors leading to this were ISO certification status and period after ISO certification. The study assessed whether that there was a statistically significant relationship between ISO certification status and period after ISO certification and the Dependent Variable used in the study. The data was analysed

using the Pearson's product method correlating the Dependent Variable to all Independent variables, ISO certification status, and period after ISO certification. The result on Table 5 illustrates these relationships.

Table 5: Correlations Statistics of Independent and Dependent Variables

		ISO certification status	period after ISO certification
financial performance	Pearson Correlation	.583**	.702**
	Sig. (2-tailed)	0	0.006
	N	52	52

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

Source: Research Data (2014)

The study analyzed the correlations as computed in Pearson correlation. The results in table 6 show that under the Pearson correlation, all the Independent Variables; ISO certification status and period after ISO certification were statically significant to financial performance. From the results; ISO certification status and; period after ISO certification ($r = .702$, $p = .006$). For each Independent Variables (IV), the p-value was less than .05. In fact for each Independent Variables, $p < .01 < .05$. This made the relationship very significant. Period after ISO certification had a very high relationship ($r = .702$), Followed by ISO certification status ($r = .582$). In short, all the Independent Variables can be used to explain financial performance of government institutions, which allowed for further analysis to establish the regression model.

4.4 Regression Analysis

The independent variables were tested to establish whether they were determinants of dependent variable using multiple regressions. 0.05 level of significance test was assumed. The regressions tests were carried out on the independent variables; ISO

certification status and period after ISO certification against the dependent variable; financial performance and thereby estimated the model:

$$PFM = \beta_0 + \beta_1 STAT + \beta_2 PERIOD + \varepsilon$$

Where

β_0 is a constant

β_1 . β_4 Regression coefficients of independent Variables or change induced by IIM, and ICI

ε - Error of prediction

PFM – Public finance Performance which is the dependent variable.

STAT – ISO certification adoption status, which is the level of certification, can be 1 for ISO certified or 0 for non-certified.

PERIOD – Period (length of time) the institutions have been certified measured using 0 for those firms not certified or certified in less than a year and 1 for those certified for over a year.

The values for status of certification, and period of certification were regressed against the mean for Financial Performance to estimate the study model.

Table 6: ANOVA for financial performance

Model	Sum of Squares	Df	Mean Square	F	p-value
Regression	17.895	4	5.965	23.668	.000
Residual	9.325	43	.252		
Total	27.220	47			

Source: Research data (2014)

The study designed hypotheses to test the model based on 0.05 level of significance.

These were;

$H_0: \beta_1 = \beta_2 = \beta_3 = \beta_4 = 0$ (i.e. the coefficient of ISO certification status and period after ISO certification are all zero)

H_a : At least one $\beta_i \neq 0$

H_0 is accepted if p-value $>.05$ (at 5% level of significance)

H_0 is reject if p-value $\leq .05$ (at 5% level of significance) H_a : and is accepted

From Table 6, it can observed that p-value = .000. Since p-value $<.001 < .05$ (F=23.668, P-value=.000), then we reject then null hypothesis and accepted the alternative hypothesis. So, at the 5% significance level (i.e $\alpha=0.05$, level of significance), there exists enough evidence to conclude that at least one of the predictors; ISO certification status and period after ISO certification, is useful in predicting the financial performance. Therefore the model is useful.

Table 7: Coefficients for Study Model

Model	Un-standardized		Standardized	t	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
(Constant)	4.713	.634		6.775	.000
ISO certification status	.186	.278	.714	2.404	.029
period after ISO certification	.974	.325	1.565	4.588	.004

Source: Research data

From the results in Table 7, the p-value for ISO certification status is .029, and period after ISO certification is .004. Since the p-value for each predictor variable was less than 0.05, there is an indication that there was a significant relationship between each independent variable and the dependent variable. This is to say that all the predictor variable; ISO certification status and period after ISO certification could be used to measure (estimate) the dependent variable, financial performance. The coefficient for ISO certification status is .186, and period after ISO certification is 2.193. Further, the adjusted R^2 was 0.513, which means that 51.30% of change in financial performance is explained by the independent variables; ISO certification status and period after ISO certification. This is shown in Table 8, which indicates that the coefficient of determination was .513, implying that a variation in ISO certification status and period after ISO certification cause an increase of 51.3% of financial performance. The model was therefore fitted as;

$$PFM = 4.713 + .186STAT + .974PERIOD$$

Table 8: Model Summary

Model	R	R ² Square	Adjusted R ²	Std. Error of the Estimate	Change Statistics				
					R ² Change	F Change	df ₁	df ₂	Sig. F Change
1	.830 ^a	.611	.513	.30499	.611	9.377	4	23	.000

a. Predictors: (Constant), i ISO certification status and period after ISO certification

Source: Research Data (2014)

It should also be noted that all the predictor variable; ISO certification status and period after ISO certification β -values were positive. This was an indication that ISO certification status and period after ISO certification were directly proportional to financial performance in the public service., in which case an increase in any of; ISO

certification status and period after ISO certification caused an increase (improvement) in financial performance in the public service.

4.5 Summary and Interpretation of Findings

The non-compliance to budget of the ISO certified institutions decreased from 8.46% in 2008/2009 FY to 6.85% in 2009/2010 FY, and slightly increased to 9.19% in the year 2010/2011. The average non-compliance for all institutions was 28.75% in 2008/2009, which then decreased to 19.43% in 2009/2010 FY, and then decrease to 14.25% in 2011/2012 FY. From these results, it would be seen that the companies with ISO certification had very low non-compliance to budget percentages, an indication that ISO certification influenced the financial performance of public sector institutions. For instance, when ISO certified had noncompliance of 8.46% in 2008/2009, the ISO non certified had noncompliance of 49.04%, in the FY 2009/2010, ISO certified had noncompliance of 6.85% as the ISO non-certified had non-compliance of 32.00%. in the year 2010/2011, ISO certified had noncompliance of 9.19% as the ISO non-certified had noncompliance of 19.31%. Further, the average non-compliance of ISO certified was 8.17% and that of ISO certified was 33.45%.

The adoption of ISO certification therefore considerably affects the financial performance of public sector institutions. These findings are the same as those of the study Gupta (2000) which found that ISO certified companies performed better than the non-certified. The same was experienced in the studies by Sousa and Voss (2002) and Kirsch and Corbett' (2002) which found that ISO certified companies improved

their financial performance while the non-certified ones experienced substantial deterioration.

The ISO certification significantly increased performance of the certified companies, and the implementation of the ISO certification play a significant role to the firm's performance. According to the findings, the ISO certification significantly increased performance of the certified companies which is what the study by Dick *et al.*, (2002) found. The present study findings show that where there was certification, the institutions experienced considerable reduction of the non-compliance to budget, an indication of improvement in financial performance. Corbett *et al.* (2004) study agreed to the findings in the present study. Corbett *et al.* (2004) found that ISO certification preceded significant abnormal improvements in financial performance and the present study also confirmed this. Other studies with the findings that conformed to the present study include studies by; Cagnazzo et al. (2010), Hesham and Magd (2007). The findings from the studies .agreed that ISO implementation impacted on the financial performance of the company which was supported by Magd and Nabulsi (2007) and Lee *et al.* (2009) studies.

Lamport *et al.* (2010) study revealed that there is an association between ISO certification and the overall financial performance of companies, which was a confirmation of the study by Mung'ara (2010) which established that ISO certification ensured improved financial performance and business performance (Heras-Saizarbitoriam *et al.* (2010). Mangula's (2013) study revealed that ISO certification improved organizational performance and Kagumba and Gongera (2013) study found that appreciation and participation in ISO certification increased financial performance. All the studies were the foundation to the findings in the present study,

which revealed that the ISO certification Status affected the financial performance of public sector institutions.

These findings also agreed to those in the study by Kirsch and Corbett' (2002) which found that ISO certified companies improved their financial performance while the non-certified ones experienced substantial deterioration. The ISO certification significantly increased performance of the certified companies, and the implementation of the ISO certification play a significant role to the firm's performance.

Romano's (2000) study that found that there was statistically significant influence of ISO certification on improvements after certification and the present indicated that Okibo and Kamau (2012) found out that there is generally low compliance with non-certification. Lastly, Anyango and Wanjau (2011) established that ISO certification significantly increased performance. The present with confident indicates that ISO certification Status affected the financial performance of public sector institutions. It can further be observed that the non-compliance of non-certified was decreasing over time, which was attributable to these institutions adopting some quality standards within the period. The non-compliance of non-certified was decreasing over time, which was attributable to these institutions adopting some quality standards within the period. The results also indicated that non-compliance negatively influenced the financial performance by allowing high non-compliance to operate freely just as the study by Okibo and Kamau (2012) established. The values of noncompliance were well above 20%, which was considered by the present study as substantially poor performance. In 2008/2009 there noncompliance was 49.04%, which decreased to 32.00% in 2009/2010, and then to 19.31% in 2010/2011 FY. The average non-

compliance stood at 33.45%. These findings agree to those in the study by Kirsch and Corbett' (2002) which found that ISO certified companies improved their financial performance while the non-certified ones experienced substantial deterioration. The ISO certification significantly increased performance of the certified companies, and the implementation of the ISO certification play a significant role to the firm's performance.

The study found that the yearly non-compliance to the budget of the various years decreased with time. In 2008/2009 FY it was 38.32%, which reduced to 6.17% in 2009/2010 and then 4.38%. Those institutions which had been ISO certified in the year 2008 had their non-compliance to the budget reduced from 93.08% in the year 2008/2009 to 9.25% in FY 2009/2010 and then 7.25% in 2010/2011. The Institutions which had been certified for 2 years had their non-compliance reduce form 8.37% in 2008/2009 FY to 5.75% in 2009/2010, and then reduce to 3.88%. The institutions that had been certified for 3 years had their non-compliance reduced from 13.50% in 2008/2009, which reduced to 3.50% in 2009/2010 FY and then 2.02% in 2010/2011 (Corbett, 2002; Okibo and Kamau, 2012).

Non-compliance of the various years decreased with time (2008/2009 FY it was 38.32%, which reduced to 6.17% in 2009/2010 and then 4.38 %.) Those institutions which had been certified in the year 2008 had their non-compliance reduced from 93.08% in the year 2008/2009 to 9.25% in FY 2009/2010 and then 7.25% in 2010/2011. The Institutions which had been certified for 2 years had their non-compliance reduce form 8.37% in 2008/2009 FY to 5.75% in 2009/2010, and then reduce to 3.88%. The institutions that had been certified for 3 years had their non-compliance reduced from 13.50% in 2008/2009, which reduced to 3.50% in

2009/2010 FY and then 2.02% in 2010/2011. The results also show that as the period progresses, the non-compliance decreases', an indication after certification, the institutions underwent through successful ISO continuous improvement. After ISO certification affected the financial performance of public sector institutions. The period after ISO certification was useful for improvements and further increased the financial performance of the firm.

As the period progresses, the non-compliance decreases', an indication after certification, the institutions underwent through successful ISO continuous improvement. The period of ISO certification therefore significantly influenced the financial performance and the time after certification also influenced the firm performance. The present study found that the period after certification was very important increasing the financial performance of the firm, where it was revealed that the period after ISO certification affected the financial performance of public sector institutions. The period after ISO certification was useful for improvements and further increased the financial performance of the firm.

The results also show that as the period progresses, the non-compliance decreases', an indication after certification, the institutions underwent through successful ISO continuous improvement. This was in complaint to findings in the study by Pinar *et al.* (2003) which established that for all time periods; the certified firms had higher financial performance and; certification seemed to reduce risk; certified firms had increases in revenue. It was very clear from these findings in the study by Pinar *et al.* (2003) that the ISO certification significantly influenced the firm's performance (financial performance included) and the time after certification also influenced the firm performance.

The present study found that the period after certification was very important increasing the financial performance of the firm, where it was revealed that the period after ISO certification affected the financial performance of public sector institutions. These findings agrees to the findings in the study by Terlaak and King (2005) which found that ISO certification enhanced competitive advantage of these firms and that certified firms; grew faster after certification, which was not as a result of operational improvements. The findings in the present were also in support of those in Kyalo's (2013) study, which revealed that improvements after ISO certification led to improved public financial performance. In a summary, the period after ISO certification was useful for improvements and further increased the financial performance of the firm.

ISO certification status and period after ISO certification are predictors of financial performance in the public sector, since there was a significant relationship between ISO certification status ($p\text{-value}=.029$) and period after ISO certification ($p\text{-value} = .004$) and financial performance. Note that the $p\text{-value}$ for each predictor variable was less than 0.05. it was found that an increase in either ISO certification status and/or period after ISO certification led to an increase in financial performance and vice versa. It was found that 51.30% of variation in financial performance is explained by the ISO certification status and period after ISO certification. The coefficient for ISO certification status is .186, and period after ISO certification is 2.193, which indicated that an increase in either ISO certification status and/or period after ISO certification led to an increase in financial performance and vice versa.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

The objective of the study was to evaluate the effects of ISO certification on financial performance of public sector institutions in Kenya using; ISO certification Status and period after ISO certification as the independent variables and financial performance as the dependent variable. The aim of the study was to establish whether the ISO certification influenced the financial performance of public sector institutions through assessment of the ISO certification Status and period after ISO certification with respect to the financial performance (measured using compliance of the budget).

The study found that the adoption of ISO certification considerably influences the financial performance of public sector institutions positively, such that adoption of ISO certification increases financial performance. ISO non-certification negatively influenced the financial performance, where it reduced the compliance to budget hence poor financial performance of the institution. The period after certification played a significant role in enhancing financial performance of the institutions.

The study also found out that as the period after progresses, the non-compliance to budget by ISO certified institutions decreased an indication after certification public sector institutions experienced an increase in financial performance. The study therefore found that institutions that underwent through successful ISO certification, ensured continuous improvement, which continuously increased the financial performance of the institution.

There was a significant relationship between ISO certification status (p-value = .029) and period after ISO certification (p-value = .004) and financial performance of the public sectors institutions, since the p-value for each predictor variable was less than 0.05. It was found that 51.30% of variation in financial performance is explained by the ISO certification status and period after ISO certification. The study therefore found that ISO certification of public sector institutions in Kenya was associated to their financial performance and had a positive influence.

5.2 Conclusions

Based on the study findings, this study revealed that the ISO certification Status affects the financial performance of public sector institutions considerably. It makes the public sector institutions to reduce their budget non-compliance status and ensure better compliance results. An ISO certified public sector institution had less non-compliance than a non-certified institution, meaning that ISO certification has pronounced financial performance effect than the non-certified. The study concludes that the ISO certification positively influences the financial performance of public sector institutions

It was established that the period after ISO certification affected the financial performance of public sector institutions. The government institutions ensure that they enhance the ISO continuous improvements during the period after ISO certification which enhances the financial performance of public sector institutions as the period increase, the financial performance becomes better. The study concludes that the period after ISO certification influences the financial performance positively and is used for ISO continuous improvement of the ISO certification process, increasing the financial performance of the government institutions as time goes by.

There was a significant relationship between ISO certification status (p-value=.029) and period after ISO certification (p-value = .004) and financial performance of the public sectors institutions, since the p-value for each predictor variable was less than 0.05. An increase in either ISO certification status and/or period after ISO certification led to an increase in financial performance and vice versa. It was found that 51.30% of variation in financial performance is explained by the ISO certification status and period after ISO certification. So the two factors; ISO certification status and/or period after ISO certification are good predictors of financial performance of the public sectors institutions in Kenya.

5.3 Policy Recommendations

The study recommends that the Government of Kenya review its standards and audit policies to ensure that all its institutions are compelled by regulations to adopt ISO certification and other total quality management and assurance standards. There should be structured ISO certification quality management standards, which would make ISO certification and other quality management a necessity to these institutions. The free hand operated by ISO certification firms should be tightened to ensure that all government institutions have access to certification services. The regulation and policies governing certification should be relaxed enough to allow all access to this vital resource. The other stakeholders should increase their public awareness campaigns to ensure that the consumers get the right information.

Next, the government of Kenya should design policies to ensure that the firms that have adopted ISO certification receive support during the period after ISO for continuous improvements.

5.4 Limitations of the Study

Various limitations challenged the study. For instance it was very difficult to obtain the study due to reluctance and un-cooperativeness of the respondents, who felt that they were being disturbed and would even fail to explain some technical terms. The researcher and research assistant struggled to get meaning of these data and values. However the researcher explained that the data that was to be obtained was for academic purpose only. Further, the study used 60 respondents to obtain the desired results, which limited the precision of the data, considering that Kenya has many agencies in the rural and urban areas that would give more data to arrive at better results. The study also faced the challenge of limited time for data collection and other processes. To overcome this challenge, the study the researcher employed the services of a research assistant to assist in collecting data and analysis. Lastly, the study was limited to the honesty of respondents. The respondents might have given inaccurate and incorrect information but the researcher first conducted a meeting with the respondents to explain that the purpose of the study was purely academic. The study model was also limited as it showed that 51.30% variation of financial performance was caused by change in ISO certification status and period after ISO certification. This means that there are other factors that account for the remaining 48.70%.

5.5 Recommendations for further study

The study embarked on collecting data from Nairobi, headquarters of the government ministries and agencies. However, this isolated other agencies operating in other areas, which limited the applicability of the results to Nairobi only. In Nairobi people are very responsive to innovations and new process as opposed to rural areas. So other

studies should be done to assess the effects of ISO certification of financial performance in the rural government offices.

The study found that 51.30% variation of financial performance was caused by change in ISO certification status and period after ISO certification. This means that there are other factors that account for the remaining 48.70%. from these findings it clear that there are other variables which affect the financial performance of public sector institutions, thus should be identified. The present study therefore recommends that studies should be conducted to assess the other factors contributing the remaining 48.70%. The present study revealed that both the ISO certification Status and period after ISO certification affect the financial performance of public sector institutions but fell short of exposing the other factors of certification that affects financial performance of public sector institutions as indicated in the model.

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APPENDICES

Appendix I: Reliability and Validity Testing

The study will conduct a pilot test of the study on data collection instrument (institutional Assessment tool) before administering it. The pilot tests will; identify possible problems; clarify on the instrument and appropriateness of the language during the main study, assess the relevance of the research objectives and then 'debug' the instrument accordingly (Kvale, 2007). The pilot survey will also assess how long it will take to complete the instrument so as to fit that element into the data collection phase timetable. Other to be issues addressed in the pre-testing testing will include; wording and format of questions (Cooper and Schindler, 2008). The pilot study will be conducted on five (5) private firms that have ISO certification. These companies will not be allowed participate in the study. The study will test the institutional Assessment tool for validity and reliability.

Validity of instrument, which is the accuracy and meaningfulness of inferences, will be measured using content validity test. Content validity measures the degree to which data collected using a particular instrument represents a specific domain of indicators or content of particular concept. The assessment of content validity of a measure will be carried by two professional experts; quality management experts and a financial management consultant. The quality management expert will determine whether the sets of items can accurately measure the ISO certification. The financial management consultant will assess the tools to establish what financial concept the instrument is trying to measure.

Reliability will be conducted to a measure of the degree to which instrument yield consistent results (Mugenda and Mugenda, 2003; Cooper and Schindler, 2008) and to establish issues such as data sources, methods of data collection, time of collection, presence of any biasness and the level of accuracy. The test for reliability will establish the extent to which results will be consistent over time. The researcher will improve the instrument by reviewing or deleting inconsistent items from the instrument. The study will test for reliability using the internal consistency techniques based on the Cronbach Alpha method.

Appendix II: Government Institutions Considered for the Study Data

1. Min. of state for Provincial Admin. & Int. Security
2. State House
3. Min. of State for Public Service
4. Min. of Foreign Affairs
5. OVP and Min. of Home Affairs
6. Min. of Planning & National Devt. and Vision 2030
7. Min. of Finance
8. Min. of State for Defence
9. Min. of Regional Development Authorities
10. Min. of Agriculture
11. Min. of Medical Services
12. Office of DPM and Min. of Local Government
13. Min. of Roads
14. Min. of Transport
15. Min. of Labour & Human Resource Devt. /Min. of Labour
16. Office of DPM and Min. of Trade
17. Min. of Justice, National Cohesion & Constitutional Affairs
18. Min of Gender and Children Development
19. Min. of Livestock Development
20. Min. of Water & Irrigation
21. Min. of Environment & Mineral Res.
22. Min. of Co-operative Devt. & Mktng
23. Cabinet Office
24. Min. of East African Community

25. State Law Office
26. Judicial Department
27. Public Service Commission
28. Kenya National Audit Office
29. National Assembly
30. Min. of Energy
31. Min. of Education
32. Min. of Information & Comm.
33. Electoral Commission of Kenya
34. Kenya Anti Corruption Commission
35. Min. of State for Special Programmes
36. Min. of Lands
37. Min. of State for Immigration & Registration of Persons
38. Min. of State for National Heritage and Culture
39. Min. of State for Youth Affairs and Sports
40. Min Higher Education, Science and Tech.
41. Min. of Housing
42. National Security Intelligence Service 8,158.62
43. Min. of Tourism
44. Office of the Prime Minister
45. Min. of Public Health and Sanitation
46. Min. of Forestry and Wildlife
47. Min. of Fisheries Dept
48. Min. of Nairobi Metropolitan Devt
49. Min of Devt of Northern Kenya and Other Arid Lands

50. Min. of Public Works
51. Min. of Industrialisation
52. Interim Independent Boundaries Review Commission
53. Directorate of Public Prosecutions
54. Human Rights and Equality Commission
55. Commission for the Implementation of the Constitution
56. The Commission on Revenue Allocation
57. Local Authorities Provident Fund
58. The Teachers Service Commission
59. Office of the President
60. The State Law Office
61. Judiciary
62. Kenyatta University
63. Rural Electrification Authority
64. Nyayo Tea Zones Development Corporation
65. Municipal Council of Machakos
66. Kenya Technical Teachers College
67. Kenya Railways Corporation
68. National Campaign Against Drug Abuse Authority
69. Pwani University College
70. Co-operative College of Kenya

Appendix III: Non-Compliance after Certification

Type of Non-Compliance	2008/2009	2009/2010	2010/2011
Certified for 1 Year			
SPENT LESS	58.30	58.30	16.70
OVERSPENT	33.30	41.70	75.00
COMPLIED	8.30	0.00	8.30
Total	100.00	100.00	100.00
Certified for 2 Years			
SPENT LESS	37.50	37.50	37.50
OVERSPENT	62.50	37.50	50.00
COMPLIED	0	25.00	12.50
Total	100.00	100.00	100.00
Certified for 3 Years			
SPENT LESS	50.00	50.00	33.30
OVERSPENT	33.30	16.70	50.00
COMPLIED	16.70	33.30	16.70
Total	100.00	100.00	100.00

Appendix IV: Compliance- levels

certification Status	2008/2009	NON-COMPLIANCE		
		2009/2010	2010/2011	AVERAGE
ISO CERTIFIED	8.46%	6.85%	9.19%	8.17%
ISO NON-CERTIFIED	49.04%	32.00%	19.31%	33.45%
AVERAGE NON COMPLIANCE	28.75%	19.43%	14.25%	20.81%