E-PURCHASING PRACTICES AND OPERATIONAL PERFORMANCE OF COMMERCIAL STATE CORPORATIONS IN KENYA

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D61/61086/2013

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF MASTER OF BUSINESS ADMINISTRATION OF UNIVERSITY OF NAIROBI.

NOVEMBER, 2014

DECLARATION

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

…… Date……

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The research project has been submitted for examination with my approval as University Supervisor.

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ACKNOWLEDGEMENTS

I acknowledge the almighty God the giver of knowledge and wisdom for enabling me to complete my studies. Also for giving me the good health and understanding in during my study.

I am heartily grateful to my supervisor, Dr. Peterson Obara Magutu for his tremendous support and guidance through my project process. I am also thankful to the lecturers and the entire Masters of Business Administration staff for their constant assistance. To all of you, God bless you.

DEDICATION

This work is dedicated to my beloved mother Roseline Okubo for her spiritual and moral support throughout my study. I also dedicate this work to my beloved uncles Francis Okubo and John Paul Okubo for their constant guidance and support towards my study. Lastly to my beloved aunt Lilian Okubo for her warm hearted contribution to my study period. Their contribution has been of major impact towards my successful completion of my study project.

ABSTRACT

The importance of use of e-purchasing practices in the modern business has been highly recognized. The e-purchasing practices have gained visibility in procurement management strategic planning in most organization. The researcher in this study, sought to find out if commercial state corporations use e-purchasing practices and its effect on operational performance. The study was guided by two objectives: to assess the level of e-purchasing implementation among Commercial State Corporations in Kenya and to establish the relationship between e-purchasing practices and operational performance of Commercial State Corporations in Kenya. The study used descriptive research design in analyzing the variables. A sample frame of 30 commercial state corporations was selected from a population of 197. The primary data was collected using a self administered questionnaire. The data was analysis using SPSS. The study found out that e-purchasing practice which included e-reverse auctioning, e- collaboration, e-sourcing, e-administration and e-tendering was used by commercial State Corporations at a moderate extent. The study established that there is e-purchasing practiced and operational performance had a positive relation of up to 61% of variability. The researcher of the study recommended that commercial state corporation should increase to very great extent the enhancement use of e-purchasing practices in their procurement operations. The researcher recommended further research should be done involving the government ministry and establishes to what extent they are using e-purchasing practices and establishing why the uptake use of e-purchasing practices is slow in commercial State Corporation in Kenya.

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ABBREVIATIONS AND ACRONYMS

CSC	Commercial State Corporations
EPP	Electronic Purchasing Practices
PP	Public Procurement
PPDA	Public Procurement and Disposal Act
PPDR	Public Procurement and Disposal Regulations
PPOA	Public Procurement Oversight Authority
RFP	Request for Proposals
RFQ	Request for Quotations
UK	United Kingdom

CHAPTER ONE: INTRODUCTION

1.1 Background of the study

Traditionally procurement or purchasing has not been of significant to management in business operations as compared to other areas such as marketing, operations and accounting. Transmit (1999) report indicated that in the UK and throughout Europe, adoption of e-purchasing practices is low, with less than fifty companies adopting this concept and this has tremendously affected the operational performance of firms. A Price Water House Cooper survey of 400 senior European business leaders indicated that security concerns and lack of faith in trading partners are most significant factors holding adoption of e-purchasing practices (Potter, 2000). Before use of technologies in procurement department, purchasing process in the organizations has been done manually in decades.

The e-Purchasing Practices (EPP) are important in developing strategies of the organization towards achievement of its operational performance goals. There has been an increase in implementation of e-purchasing which has altered the operational performance of supply chain networks, leading to reduction in purchasing cost, reduced transaction cost and improved flexibility, quality, dependability, customer-focus and improved efficiency in service delivery (Johnson, 2007; Slack, 2011). EP system enables the organization to collect data on performance and analyses are done on the performance level contributing to attaining of performance objectives (Beckman and Rosenfield, 2008).

In Africa, since 1990s, organizations are aggressively moving towards reducing cost involved in their operations. This is achieved through ensuring the organizations operation performance is done effectively and efficiently to enhance profitability. E-purchasing has been the cornerstone of reduced procurement cost and improved operational performance throughout organizations. Consequently, the emphasis on good interdepartmental and inter-organizational relationships has gained attention as they provide potential great opportunities (Cavinato, 1992). Over the years, Kenya has embraced technology and the concept of e-purchasing in their operational activities improving their performance. The Commercial State Corporations (CSC) in Kenya has made strides towards implementation of EPP in their procurement process, transaction and service delivery though its implementation is faced with challenges.

1.1.1 E-Purchasing Practices

The e-purchasing practices is a term used to describe the various ways an organization use an integrated web-based systems or network communication technologies employed across all or part of an organization's purchasing process (Croom and Brandon-Jones, 2007). EP should be directed towards improving the performance of the five rights of procurement (Baily, 1994) which involve sourcing of goods or services at the right price, delivered at the right time, of the right quality, quantity and from the right source. EP involve the use of related products such as e-sourcing, contract life-cycle management, automated spend analyses, accounts payable management, supplier risk management systems (Bartel, 2010).

According to Conspectus (2006) the benefits of e-purchasing practices approach include reduced costs, improve services efficiency, enhances greater responsiveness, improve supplier relationships and better collaborations with suppliers. Some of other e-purchasing practices benefits in an organization include; increased working capital management, streamlined process, optimized payments and settlement procedures, accelerated reconciliations, administer procurement data which will be used to consolidate suppliers, negotiation for better terms among others (Maedler, Liao and Done, 2011). As firms weigh opportunities to invest in different technologies, they should assess the positive changes that will be brought to their organizations in terms of supply base, business processes and increased understanding of how to maximize on the potential benefits (Johnson *et al.*, 2007). Implementation of EP in organization is capital intensive; it requires planning and budgeting to ensure its success. EP practices have major impact on the operations performance of procurement department and different associated department in the organization. The e-purchasing are supported by the use of technologies to ensure purchasing functions are achieved. The e-purchasing practices in organizations involve: e-reverse auctioning, e-collaboration, e-sourcing, e-administration, e-tendering.

1.1.2 Operational Performance

Performance is defined as the measure of level to which the organization operation achieves the five generic objectives of dependability, speed, quality, cost and flexibility. According to business dictionary performance is the achievement of a given task measured against set standards of accuracy, completeness, cost and speed. Procurement

performance involves measuring and evaluating; quality, efficiency and effectiveness by using input and output indicators.

Operational performance is very crucial for the success of any organization. It is important to measure performance because it enables the organization to evaluate itself and make corrective decisions where necessary. Firm's performance provides important information on decision making on the management and control of the firm activities for maximization of effectiveness, rewards, discipline and as lever towards alignment of organizational goals and objectives (Drunker, 1985). To determine the effectiveness and efficiency of the organization, performance measurements should be established.

Performance measurement involves regular data collection and analysis to evaluate whether correct processes are being performed and desired objectives or results are being achieved. The performance of the organizations operation is assumed to be derived from actions or decision taken by the organization management team. The performance of the human capital also affects significantly operational performance. The e-purchasing performance measures contain a variety of measures. Most of these falls under two broad categories; effectiveness and efficiency. According to Kotler (1978) efficiency is measure of the extent to which, by choosing a certain cause of action, management can meet a previously established goals or standards while, effectiveness is the measure of how the relationship between planned and actual sacrifices related inputs to performance and achievement of its desired output. The performance measures can be further be categorized into; price performance measures , cost-effective measures, Quality

measures, administration and efficiency measures, customer satisfaction measures, time measure among others. In some organizations, performance will be measured in terms defects per unit, level of customer complaints, scrap level, mean time between failures, lateness complaints, customer query time, order lead time, throughput time, time to market, product range, transaction costs, labour productivity and machine efficiency (Nigel, Stuart and Robert, 2010). The researcher will use price performance measures, cost-effective measures, customer satisfaction measures, administrative efficiency measures and time measures.

1.1.3 Commercial State Corporation in Kenya

A commercial state corporation is defined as a state- sponsored body which is completely owned by government as majority shareholders, they are established with the mandate of delivery of services citizens (Wamalwa, 2003). Commercial State Corporation (CSC) has various meanings. First, it may be a corporate body established by or under an Act of parliament. Second, the president may by order establish a CSC as a corporate body to perform the functions specified in the order. Third, it also represents a bank, a financial institution licensed under banking Act, other company incorporated under the company Act whose shares, or majority of whose shares are owned by the government or by another state corporation (Wamalwa, 2003). In Kenya, State Corporation is under State Corporation Act Cap 446 (1987). Majority of the main state corporations that exist today were formed after independence in 1960s and 1970s.

Commercial State Corporations plays a major role in the economy and development of the country. The roles of State Corporation involves but not limited to; protect the public against monopolistic pricing, to amend market failure, control abuse of market power in the market and ensure ethical business conducts(Wamalwa, 2003). It also provides collective goods and service to the public. State Corporations forms a major fabric to the social-economic being of the citizens of the country, thus there governance and operations are very crucial.

The Public Procurement Oversight Authority (PPOA) has the responsibility of supervision and regulation of all public procurements in Kenya. Procurement in state corporations in Kenya is governed by Public Procurement and Disposal Act 2005 (PPDA) and Public Procurement Disposal Regulation 2006 (PPDR) which enable the creation of a level playground in procurement activities in all entities in Kenya through the use of public Procurement and Disposal Manual, 2009.

Commercial State Corporations in Kenya have been facing a number of problems. Among these problems identified involve poor governance, corruption, inefficiency, budgetary burdens and provision of poor products and services. This has formed the basis of research in this sector to identify measures that are being put in place to address these problems.

1.2 Research Problem

In spite the use of technology in various sectors in conducting business, implementation of e-purchasing practices is at a snail pace in most organizations thus hampering achieving of objectives of enhancing efficiency and effectiveness in operational performance (Croom and Brandon-Jone, 2007). The importance of enhancing e-purchasing practices in the procurement department in terms of operation performance of the organization can no longer be ignored (Oanda, 2003). If the procurement department bought all that is required in the organization at the right time, price, place, quantity and quality then operation of the organization will be effective, increasing performance and enabling customers to be served better (Snider and Rendon, 2001).

The commercial state corporations are struggling in the implementation of e-purchasing practices. Lack of proper implementation of e-purchasing practices has created a weak spot which cartels use to swindle taxpayers money during the procurement process (Mithamo, Iravo & Mbithi, 2013). Over 50% of public entities in Kenya do not follow procurement regulation and have not automated their procurement process (Price Water House Coopers, 2009). According to Oanda (2013) over 90% of cases being investigated by EACC are procurement related.

Gioconda (2010) found out that the use of electronic procurement technologies has a positive impact on the managers' perceptions of both procurement practice and procurement performance. However study did not focus on e-purchasing practices and thus living a knowledge gap. Maedler, Done and Lias (2011) reveled that e-purchasing

automation led to efficiency in the organization through collaboration with other variables. The limitation of the study was that it did not focus on e-purchasing and operational performance showing their relationship in enhancing efficiency. Brandon-Jones (2013) argue that there are a few direct effects of e-purchasing tools on the operational performance, the researcher noted that operational performance is only enhanced when e-purchasing tools interacts with other factors such as manager and buyer competencies. However the study did not focus on the e-purchasing practices and operational performance.

Mauti (2012) established that most of large manufacturing firms have adopted e-procurement practices included: online advertisement of tenders, receiving online submission of proposals for the tenders and short listing suppliers online but the study did not focus on e-purchasing practices. Magutu (2013) found out that e-procurement can led to efficiency in operations but the study did not focus on e-purchasing practices. Nyangweso (2013) demonstrated that commercial state corporations have adopted various collaborative public procurement practices to enhance their competitiveness. The study fails to establish if the procurement stakeholders' collaboration was done through the use of electronic procurement systems or traditional method. The researcher did not focus on the e-purchasing practices and operational performance.

Through review of past studies, it is evident that there are limited studies done on e-purchasing practices and operational performance of commercial state corporations in Kenya. This study therefore seeks to answer the following questions: What is the level of

e-purchasing implementation among commercial state corporations in Kenya?; Is there any relationship between e-purchasing practices and operational performance of commercial state corporations in Kenya?

1.3 Research Objectives

The objectives of the study involve the following:

i. To assess the level of e-purchasing implementation among Commercial State Corporations in Kenya.
ii. To establish the relationship between e-purchasing practices and operational performance of Commercial State Corporations in Kenya.

1.4 Value of the Study

The study will be of significance to the managers and officers of SC as they will gain knowledge on the importance of e-purchasing automation and its impact on the operational performance of their corporations. The managers will use the information in designing procurement strategies. The study will also give knowledge on the approach the government can use to reduce operational costs related to purchasing and improve service delivery through use of e-purchasing. The study will give theoretical contribution to students, researchers and scholars giving insights on e-purchasing and recommendation on areas that need more research in e-purchasing. The study will be of value to procurement practitioners as they will learn how best they can perform their duties using e-purchasing.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

In this chapter, the researcher is going to review other literatures done on e-purchasing practices. The literature review therefore will cover relevant research on the subject.

2.2 The Theoretical Framework

The researcher used two theories behind the e-purchasing practices in the organization. These theories will involve; Theory of Planned Behaviour and Innovation Diffusion Theory.

2.2.1 Theory of Planned Behaviour

Previous literatures have used theory of the planned behaviour or acceptance model theory in consideration of the implementation of new technology. The theory of planned behaviour is among theoretical models which have been used to understand the use of technology by firms (Armitage and Conner, 2001). This theory tries to explain the general structure of human being and their beliefs and predictions (Fishbein and Ajzen, 1975). The theory illustrate that individual exhibit certain behaviour which is brought about by individual's attitude towards an outcome on a perceived subjective norm. An attitude, behaviour and personal belief towards a certain outcome leads to individual making a decision towards a certain outcome and personal appraisal towards the outcome. The more there is a positive attitude towards an outcome, the more the intention to implement the outcome. The other determinate is the individual beliefs to the extent to

which the outcome is of the impact to the social environment, and this will involve workmates, friends, authority, and society.

According to Croom and Brandon-Jones (2007) this theory assists in understanding the critical factor that determines the implementation of e-purchasing practices. A research done in UK identified key themes in adoption of technology in the firms. These are organisation characteristics, the management support, change in total acquisitions and change to the governance structure of the firm. The theory explains that the major limitation of e-purchasing practices implementation of the in public entities is the due to complexities of policies and bureaucracy within the government (Croom and Brandon-Jones, 2007).

2.2.2 Innovation Diffusion Theory

According to Rogers (1995) adoption of technology in conducting business can be as a result of certain determinates. This first category of group put their energy on the perceived attributes of the technology to the organization. These involve the relative merits such as the technology improvement, compatibility and simplicity of the technology to the user. Rogers (1995) argues that there is another group of determinates which focus on the impact of such innovation to the organization. These will include the adopting firm's managerial decision style, organizational characteristic and cultural preference. In some organization adoption of technology can be through vote while others it can be through an authoritative decision making. Rogers (1995) describe communication channel as a critical contributor to the success of adoption of new

innovation in the organization. As an effective communication channel create prior awareness of the new technology. The trading partners need to work together to ensure the success of e-purchasing technologies. This will be determined by the inter-connected industry the organization is in and how influential that organization is to its trading partners (Lundblad, 2003).

The model though falls short of explaining the importance of the capability and the dynamics of different inter-connected trading partners and the influence of power between trading partners (Hart and Saunders, 1997). According to Lundblad (2003) the inclusion of different inter-organization partner is very critical in the success of the adoption of the innovation systems and their applicability.

2.3 The E-Purchasing practices

E-purchasing practices involve the use of internet based systems to manage the whole purchasing process. The following are some of e-purchasing practices: e-reverse auctioning, e-collaboration, e-sourcing, e-administration and e-tendering.

2.3.1 E-Reverse Auctioning Practices

This is the process of receiving, evaluating offers, and purchasing of goods through internet based programs which is not part of e-tendering system. It is also referred as online reverse auction or down price auctions. It provides an online platform where a pool of qualified suppliers can place bid in real time for the buyer's goods or services request. Reverse auction prices descend compared to traditional auction where price

ascend (Emiliani and Stec, 2004b). The supplier is to respond only once with their bids which is kept confidential with the buyer organization (Hartley, 2004). The e-reverse auctioning mostly last for 30 minutes to one hour (Emiliani, 2000).

The e-Reverse Auctioning has benefits to both the buyer and seller. For the buyer ERA has advantages such as reduced time cycles, reduced prices, create standardization, increase geographical coverage and it promotes transparency and accountability of the bidding process. The internet plays a major role in transmitting relevant and critical information needed for the process (Your essential guide to doing business on the web, 2000). Another advantage is that it draws a large pool of qualified suppliers worldwide. The buyer firm can collect and analyse the data on suppliers all over the world, selecting suppliers strategically (Hartley *et al.*, 2004). It creates competitiveness among suppliers which is beneficial to the buyer, this allows for the buyer to source suppliers who meet the company's budget (Jap, 2000). According to Smeltzer and Carr (2001) , organization achieving its strategic sourcing is important in the whole ERA process.

The e-Reverse auctioning is also beneficial to the supplier as each supplier involved in the bidding process is able to view market price thus reviewing bidding strategy (Emiliani, 2000). It also enable the supplier to review their prices with the market price when that they realize losing out to competitors. The e-Reverse Auctioning creates a platform for suppliers to access new customers and new markets (Emiliani and Stec, 2004b). The e-Reverse Auctioning creates a level playing ground where both large and small firm can negotiate for the product or service of the buyer (Porter, 2000). The use of

e-Reverse Auction in the organization is a practice that is beneficial and which increase efficiency on operational performance of the organization.

2.3.2 E-Collaboration Practices

E-Collaboration is a partnership between two or more individuals or organization using electronic technologies to achieve a common goal or objective (Kock and D'Arcy, 2002). The e-collaboration concept has captured basic element which involve: e-collaboration technology, the collaboration task, the individual involved in the collaboration task, the expertise of individual and social environment (Kock, 2005).

The e-collaboration system in an organization involves the use of computer softwares which are created to assist the users to undertake technical operations effectively and efficiently. E-Collaboration assist in collection and updating of information of the buying organization in terms of tenders, requests for bids and bonds, auctions provided to the supplier through the company's intranet or extranet. It also involves the use of e-collaboration tools such as virtual meetings, shared management systems among others (Dyer, 2001). E-Collaboration system allow for electronic meetings enabling managers and suppliers to make critical decision on procurement issues while in different place all over the world. The electronic meetings can take different types: Video teleconferencing; this is close to face to face whereby the buyer and supplier can negotiate using live camera feed: Real-time conferencing; it allows buyers and suppliers to interact at their workstation via a centralized portal. The e-collaboration system also provide a groupware where a member of a group working together on a task can communicate, coordinate and

collaborate in their decision making process. Groupware allows sharing of information trough groupware tools such as e-mails, video conferencing, chat applications and database sharing. The team working together to accomplish task and make crucial decision need e-collaboration technologies which has the following capabilities: which can give audio, video and computer conferencing services, be able to allow access to database, members to use online chat, allow members to brainstorming among others capabilities.

A virtual organization can be able to undertake there operations from different regions thus no need to emphasis on having a centralized office. It can serve their partners effectively through the use of e-collaboration system. The advantages of e-collaboration in a virtual organization are: (Klein, 1994): each company involved can focus on their core mandate improving customer satisfaction; due to sharing skills among participating firms, the labour cost is reduced; due to specialization of participants organization, the response to customers quick; the time cycle of new product development is reduced.

2.3.3 E-Sourcing Practices

It is the process of identifying new supplier to deliver goods or services in a specified category through electronic means. It is an internet based application which enables a collaborative technology in the full life-cycle of the procurement process between the buyer and supplier. The e-sourcing is one of the best e-purchasing practices that organisations are employing to reduce costs (Kock, 2005). Presently, e-sourcing applications offers two main functions which are; online request for quotations (RFQ),

this whereby of identifying the needs, the buyer ask possible suppliers to send their quotation of the product or service which is then evaluated through the application. The second one is online auctions; this is whereby buyers are invited to bid for the contracts being offered. The lowest bidder is usually the one given the contract to supply needed goods or services.

With today business environment which focus mostly on efficiency and customer satisfaction, e-sourcing has played a major role in business achieving its objective. The use of e-sourcing benefits the in the following ways: Cost saving; sourcing enhances visibility on expenditures and economies of scale through bulk buying. (Evans and Wurster, 2001; De Boer, 2002). The organisation can save money through the implementation of e-sourcing practices in the procurement department. Reduce sourcing cycle time; e- sourcing has tremendously reduces the time take from identifying the supplier, negotiation and contract signing. As survey by SAP found out that organisation that has adopted use of e-sourcing applications their cycle time reduced between 30% and 75%. The e-sourcing creates a collaborative environment for buyers and suppliers by providing a centralised portal where they can share information effectively. Rink and Fox (1999) argued that supplier contact is part of the sourcing process thus it needs to be established.

2.3.3 E-Administration Practices

E-Administration is the gathering and distribution of data for both internal and external users, tracking the progress of goods, accepting goods that meet the specifications and

payment of goods using internet based program. Documentation is core to administrative role and they have to meet standards in terms of confidentiality, authenticity and for future reference. Recently companies are using electronic documents such as e-mails, use of website and technical device for e-documentation. The e-tools such as intranet, optical scanners, e-forms submission are used to improve efficiency in their service delivery and achieve their goals (Gil-García and Martinez-Moyano, 2007; Irani, 2007). New technology has given rise to new ways of conducting business and improving operational performance. The use of technology has led to increased performance, efficiency and improved service (Contini and Lanzara, 2009). Currently organizations are digitizing their systems. The system provides tender documents and other procurement related documents online thus shorter time is taken in service delivery and operational cost is reduced. The employees in organizations are forced to create new routine and develop new skills and capacity in terms of innovation in their work (Melin and Axelsson, 2009). The e-administration has enabled the tracing of all procurement documents online increasing transparency and accountability. This has led to new ways and modes of production in the procurement department generating new work practices (Burris, 1998; Freeman and Louca, 2001; Webster, 2002).

The e-administration practice faces challenges especially in terms of document management. At a technical level, document processing include, capturing information, storage of information and ability to retrieve and manipulate information content. The e-documentation involve major segment of information database with different functions. An effective should meet the needs of management, the workers and clients of the

organization. A good e-documentation management system should involve, indexing, retrieval and ease access of the document. Electronic system should allow different version of the documents (Bannan, 1997).

2.3.5 E –Tendering Practices

This is whereby organization advertises through e-tender notices or e-requests, by sending request for information, receiving bids and offers from suppliers, and informing suppliers on the award of contracts through the use of internet based data interchange. Data exchanged through e-tendering is more concerned with product and services. The system allows the screening and selecting of suppliers. Currently organizations are practicing e-tendering as one of the mechanisms to cut costs. Through e-tendering the organization generates wealth through electronics business (Amit and Zott, 2001). The use of technology in conducting procurement process has brought substantial benefit to organizations which practice e-tendering (Neef, 2001). The procurement department needs to work in collaboration with other department and suppliers to achieve procurement strategies in the organization (Watts, 1995). The e-purchasing practices are the fundamentals in formulation of the procurement strategies in terms of e-tenders (Narasimhan and Carter, 1998). There is need for procurement department to align e-purchasing practices with the departmental strategies.

The use of e-tendering in the purchasing process has several advantages. The screening and selection of qualified suppliers is automated reducing the lead time, price, improving flexibility, quality among others.

2.4 Operational Performance

The operational performance is the degree at which the different departments of the organization achieve their goals and objective. Operational performance in procurement has received a lot of attention due to increasing competition in the world of business. To measure the operational performance, the organization should establish a performance measurement system. This is done due to increasing diversity in organization variety in production of goods and service and for the organization to gain competitive advantage in the market (Gunasekaran, 2004). The SCOR model is the mostly used in assessing the operational performance in procurement performance (Gunasekaran and Kobu, 2007). The SCOR model groups the procurement process in to sages; plan, source, make, deliver and return. The performance measures using the SCOR models are categorized into Cost, Quality, Time, Flexibility, and Innovation dimensions (Shepherd and Gunter, 2006).

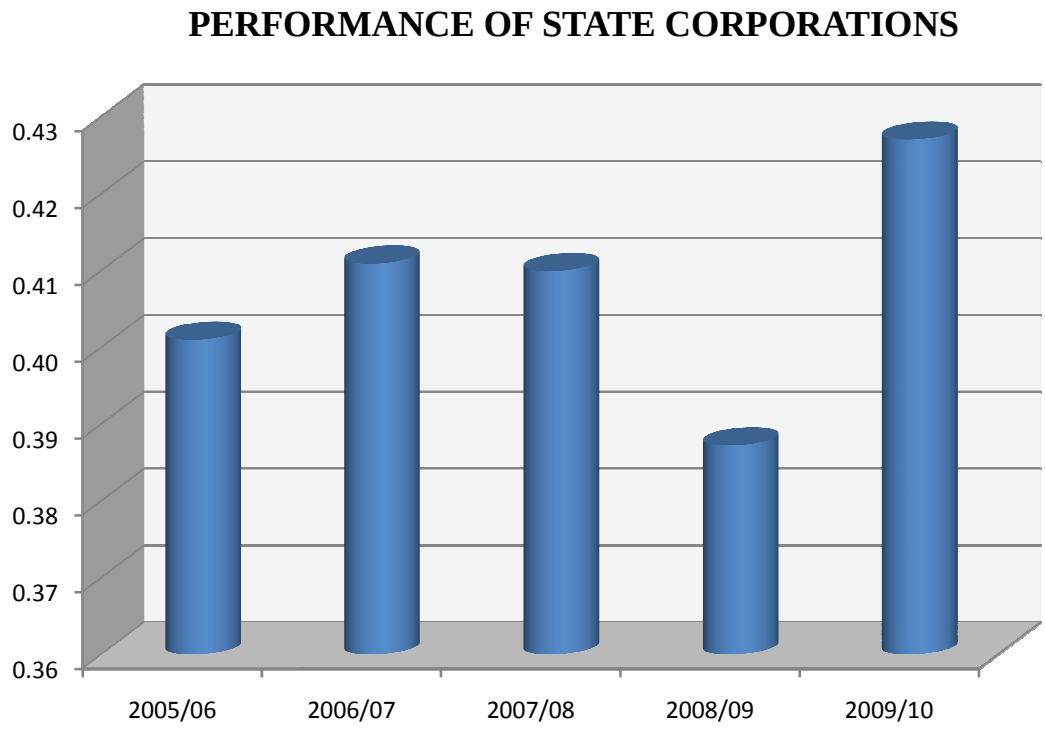
To stay competitive in the Industry, organizations are forced to evaluate effectively and keenly the procurement function as there is increasing complexity in the management of the operational performance of the procurement department. It has thus become imperative that managers identify the key performance indicators to achieve the high performance in the organization through using tools which are objective in terms of measuring performance (Chae, 2009). An organization with a good procurement performance system, enhance the SCOR model measures in terms of reduction in cost, time and improve on quality, flexibility and innovation in the organization thus gaining competitive advantage.

In commercial state corporations in Kenya evaluation is done based on the comparison between the actual targets and target signed or agreed during contract signing. The operational performance indicators are set by different corporation suiting their respective industries (GoK, 2004). The performance criterion for measuring the performance in commercial State Corporation is as shown below.

Table 2.4 Performance Criteria.

Performance	**Criteria**
Excellent	Achievement between 30 and 100% above target
Very Good	Achievement of target
Good	Achievement below target but above previous year
Fair	Achievement equal to previous year
Poor	Achievement below previous year

The performance of state corporations in Kenya has been tremendously been increasing over the years (GoK, 2004).



Source: Government of Kenya (2004)

2.4.1 Operationalisation of Variables

To operationalize the variables, the likert scale will be used by the researcher. The likert scale will involve a scale of 1-5 (1 = No Extent at all, 2 = Small Extent, 3 = Moderate Extent, 4 = Great Extent, 5 = Very Great Extent). The operational performance will be measured as shown in the table below.

Table 2.4.1 Operationalisation of Variables

Variables	Indicators	Measure	Scale	Instrument
e-Reverse auctioning Practices	• Value for Money • Online Competition • Equal Treatment	Likert	5 point Scale	Questionnaire
e-Collaboration Practices	• Online Supplier Performance Management • Online Supplier relationship management • Resource Sharing	Likert	5 point Scale	Questionnaire
e-Sourcing Practices	• Online Supplier selection • Reduced Time • Procurement Methods	Likert	5 point Scale	Questionnaire
e-Administration Practices	• Online documentation • Online Communication • Staff with skills and adequate capacity	Likert	5 point Scale	Questionnaire
e-Tendering Practices	• Online tender notices • Online Screening • Record Management	Likert	5 point Scale	Questionnaire

2.5 The e-Purchasing Practices and Operational Performance.

The main objective of procurement department officers is to ensure purchasing of goods and services at the right time, price, source, quality and quantity for the organization. This process involves different stages, and it is important that organization ensure the process is conducted in an efficient manner which involves; it should be done within the shortest time possible, at the lowest cost, product to be obtained from the right supplier, generate highest quality product or service as possible. EPP in an organization has direct positive impacts on the operational performance as it improves efficiency and effectiveness leading to achievement of procurement objectives. The operational performance of the organization is mostly dependant on the level of implementation of EPP of both buyer and supplier organization (Sanders, 2007).

E-purchasing practices in the organization ensure effectiveness and efficiency in the operational improving performance. This practices involve, e-sourcing which is an internet based application that enable an integrated technology in the full life-cycle of the procurement process between the buyer and supplier. E- Sourcing increases the visibility of suppliers, enabling buyers to choose from a pool of qualified suppliers and selection of the lowest bidder to supply goods and service (Ronchi, 2005). E-sourcing improves the operational performance of the procurement department by reducing the price cost by 10 and 15 per cent (Croom and Brandon-Jones, 2005). Much of saving of e-sourcing comes from procurement which is usually done in bulk. E-process is a web-based e-purchasing which enables a complete order cycle within the host or buyer organization (Croom, 2000). This system enable user to manage orders from the initial stage to final stage

electronically. Much attention and emphasis has been made in control of procurement trough e-tools. Members of the organizations find it difficult to dodge standard procedures when undertaking procurement process (Karjalainen *et al.*, 2009). This efficiency has led to ensure correct orders are made. E-transaction on the other hand, is e-purchasing which enables external communication between the organization and suppliers through an electronic platform. This enables instate transfers of purchasing orders to suppliers within the shortest time and at a reduced cost.

These e-purchasing practices have a direct impact on the operational performance of the procurement department. Procurement process can negatively affect the operational performance of the organization if the e-purchasing practices are not fully implemented. Traditional purchasing method can cause a company loss of millions which is incurred in terms of procurement costs and fraudulent dealings within the supply chain.

2.6 The Research Gap

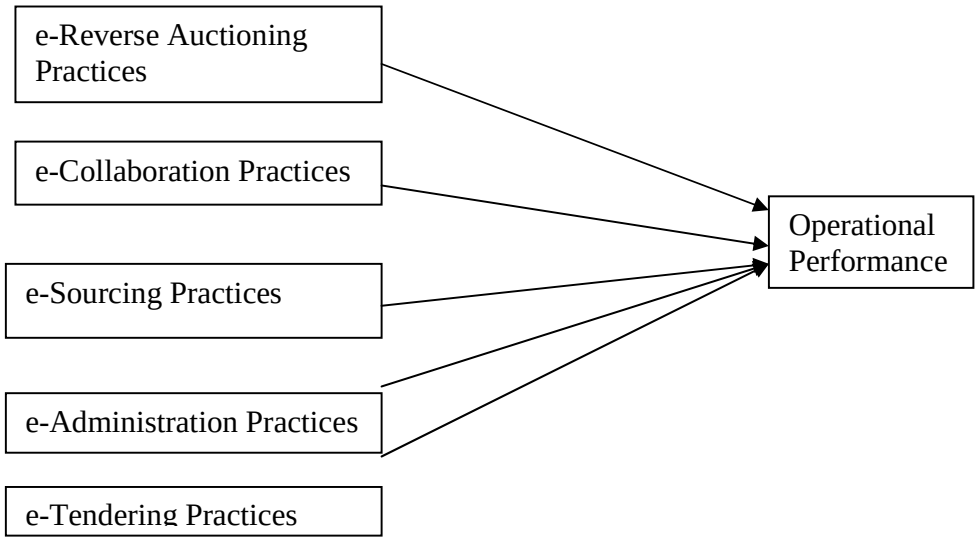
The empirical literature reviews shows that, although many studies have been done on e-procurement, there is no known study that has been on e-purchasing practices and operational performance in commercial state corporations in Kenya. Njoroge (2010) on factors influencing e-procurement practices in construction industry in Kenya and Mburu (2011) on the role of e-procurement in enhancing efficiency in telecommunication industry (a case study of Safaricom limited company-Kenya) Abdi (2012) did a study on electronic procurement and organizational performance among commercial state corporations. However these studies did not address e-purchasing practices and

operational performance. In Conclusion, there is lack of enough research studies which has left a research gap that this study intends to fill by establishing e-purchasing practices and operational performance in commercial state corporations in Kenya.

2.7 Conceptual Framework

The conceptual framework indicates the relationship between independent variables and dependant variables. The independent variable inn this research include: e-Reverse auctioning Practices, e-Collaboration Practices, e-Sourcing Practices, e-Administration Practices and e-Tendering Practices. The dependent variable is the Operational Performance.

Figure.1.1 Conceptual Framework



Source: Researcher (2014)

Independent Variables **Dependent Variables**

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the methods that will be used in the collection of data pertinent in answering the research questions. It will contain research design, population and sample size, data collection and data analysis methods.

3.2 Research Design

This researcher studied e-purchasing practices and operational performance in state corporations in Kenya. The study used a descriptive research. This enabled the researcher to obtain sizeable and substantial data from the population. This was done through the use of a questionnaire, which was economical, effective and easy way to obtain and analyzing data (Saunders, 2002).

3.3 Population of the Study

The population constituted all commercial state corporations in Kenya. The sample frame will include 197 commercial state corporations in Kenya obtained from Inspectorate of State Corporations.

3.4 Sample Frame

The sample size of 30 commercial state corporations was selected. This sample size gave adequate representation of the population. The actual respondents involved procurement managers and/or procurement Officers of commercial state corporations. The study concentrated on commercial state corporations with their headquarters in Nairobi area. The choice of Nairobi as a study area was due to the fact that it's convenient in terms of accessibility and due to time constrains.

3.5 Data Collection

The source of data was both primary and secondary data. Primary data was obtained using a questionnaire. The questionnaire was divided into two parts. The first part will be on the background information about the respondent and the commercial state corporations, while the second part was on e-purchasing practices and operational performance of commercial state corporations in Kenya. The questionnaire was given to the selected respondents and collected later.

3.6 Data Analysis.

Data analysis is the process through which primary data is arranged and organized in to make sense giving required information (Gall, Gall & Borg, 2007). Before proceeding, the data collected was examined to check completeness, consistency and comprehensiveness. Descriptive statistic was used to describe and analyzed data through the use of statistical package for social science (SPSS). This program assisted in interpreting information. The regression was used to measure the second objective.

$Y= B_0+B_1X_1+B_2X_2+B_3X_3+B_4X_4+ B_5X_5 +\varepsilon$ Where:

Y = Operational Performance

X_1 = E- Reverse Auctioning Practice

X_2 = E-Collaboration Practices

X_3 = E-Sourcing Practices

X_4 = E-Administration Practices

X_5 = E-Tendering Practices

B_0 = Constant of Regression

ε = Error Term

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter shows the data analysis, presentation and interpretation of the findings from the data collected using self administered questionnaire. It focuses on the objectives of the study which is to establish the e-purchasing practices and operational performance in commercial state corporations in Kenya. The questions were based on five independent variables: e- auctioning practices, e-collaboration, e-sourcing, e- administration and e-tendering. Data analysis was done using SPSS program. The results are summarized and presented in tables.

4.2 Response rate

The research questionnaire was administered to 30 procurement managers of commercial state corporations in Kenya. The questionnaires were checked for completeness, the response which was obtained 80.0%. Mugenda and Mugeda argues that a response rate of 50% is enough for analysis and reporting; a rate of 60% is good and response rate of 70% and over is excellent.

4.3 Background Information

In the background information, the respondents were required to give their personal information which included their gender, age, highest level of education they have obtained and years of work experience.

4.3.1 Gender

The respondents were appealed to indicate their gender. The table below shows the response.

Table.4.1: Respondent Gender.

Gender	Frequency	Percentage
Male	13	54.2
Female	11	45.8
Total	24	100.0

Source: Researcher (2014)

From the table 4.1, the majority of respondents 54.2% were men while 45.8% of the respondents were female. The table indicates nearly equal distribution in terms of gender in the procurement profession.

4.3.2 Respondent age in years.

The respondents were appealed to give information about their age. The table below presents the findings.

Table 4.2 Respondents Age in years

Age in years	Frequency	Percentage
31-40	3	12.5
41-50	6	25.0
51-60	15	62.5
Total	24	100.0

Source: Researcher (2014)

From the above table 4.2 above, it indicates that majority of person holding procurement management position 62.5% are of the age between (51-60 years). They are followed with by individuals of within the age bracket (41-50 years) at 25%. Significantly only 12.5% are respondents of age (31-40).

4.3.3 Highest education level

The respondents indicated their highest level of education. The following response where obtained as presented in the table below.

Table 4.3 Highest Education level

Education Level	Frequency	Percentage
College level	2	8.3
University level	6	25.0
Post Graduate	4	16.7
Professional Qualification	12	50.0
Total	24	100.0

Source: Research data (2014)

From the table 4.3 above, majority of respondent (50.0%) had professional qualification. They were followed with 25.0%% who had undergraduate level of education and 16.7% postgraduate. Only 8.3% constituted respondents who had college level education.

4.3.4 Working Experience in years

The respondents indicate their years of working experience in the procurement profession. The following results were obtained as indicated in the table below.

Table 4.3.4 Working Experience

Years	Frequency	Percentage
Less than 5	1	4.2
6-10	3	12.5
11-15	4	16.7
16 years and above	16	66.7
Total	24	100.0

Source: Researcher (2014)

From the above table 4.3.4, indicates that majority of respondent have with a composition of 66.7% working experience (16 years and above). The table also indicates those with (11-15 year) of work experience with a composition of 16.7% of the respondents, then those with experience of (6-10 years) having 12.5%. A small composition of 4.2% of respondents with less than 5 years of experience.

4.3.5 Year of e-purchasing practices introduced.

The respondents were requested to indicate the year when the e-purchasing practices were first introduced to their corporation. The responses are presented in the table below.

Table 4.3.5 Year of e-purchasing practices introduced.

Years	Frequency	Percentage
1990-1999	2	8.3
2000-2009	4	16.7
2010- to date	18	75.0
Total	24	100.0

Source: Researcher (2014)

From the table 4.3.5 above, the major introduction of e-procurement practices 75% was done during (2010- to-date). A few commercial state corporations adopted e-purchasing practices at 20% from (2000-2009). In (1900-1999) only a slightly 8.3% of state corporation introduced e-purchasing practices. This is a great indication that commercial state corporations are making effort embracing technology and use of e-purchasing practices.

4.4 E-Purchasing practices.

The researcher sought to find out the extent to which the following e-purchasing practices are used in commercial state corporations in Kenya**.**

4.4.1 E- reverses auctioning Practices.

The researcher wanted to establish to what extent the e-reverse auctioning practices was being used in commercial state corporations. The respondent were required to answer the questions by indicating to which extent they use e-reverse auctioning practices in their

procurement function using a likert scale (1= No Extent at all; 2 = Small Extent; 3= Moderate Extent; 4= Great Extent 5= Very Great Extent). The following is the response obtained on different questions.

Table 4.4 E-Reverse Auctioning Practices

E-reverse auctioning practices	**N**	**Mean**	**Standard Deviation**
The commercial state corporation has online platform for a pool of qualified supplier for real time requests which improve operational performance	24	2.91	.910
The commercial state corporation receives and evaluate offers from suppliers using an internet based program	24	2.45	1.125
The commercial state corporation uses online data to price its goods improving procurement performance	24	2.70	1.212
The Commercial State Corporation purchase goods at a descending price	24	2.75	1.092
The Commercial State Corporation use an online system where supplier respond once when bidding	24	2.66	1.222
The Commercial State Corporation use 30 minutes to one hour during bidding process	24	2.55	1.225
The Commercial State Corporation increase their suppliers geographical coverage in bidding process through online platform	24	2.50	1.191

The Commercial State Corporation use e-reverse auction to achieve its strategic sourcing	24	2.56	1.398
The Commercial State Corporation has an online bidding platform where suppliers can compare their prices with others	24	2.50	1.191

Source: Researcher (2014)

From the above table 4.4, the commercial state corporations in Kenya have Moderate Extent (Mean $\geq$ 2.5, with major standard deviation) having online platform for qualified suppliers, receives and evaluate offers from suppliers, uses online data to price, increase their suppliers geographical coverage, use e-reverse auction to achieve its strategic sourcing, online bidding platform where suppliers. This shows an indication that commercial state corporation in Kenya are using e-reverse auctioning practice at a small extent in their procurement function.

4.4.2 E- Collaboration Practices.

The researcher wanted to find out to what extent the e- collaboration practices were being used in commercial state corporations. The respondent were required to answer the questions by indicating to which extent they use e-collaboration practices in their procurement function using a likert scale (1= No Extent at all; 2 = Small Extent; 3= Moderate Extent; 4= Great Extent 5= Very Great Extent). The following is the response obtained on different questions.

Table 4.5 E-Collaboration Practices

E-collaboration practices	N	Mean	Standard Deviation
The commercial state corporation has electronic based platform where buyers and suppliers exchange and access information.	24	3.41	1.010
The commercial state corporation use computers to enhance efficiency and effectiveness in their operational performance.	24	3.45	1.256
The commercial state corporation use intranet and extranet to collect data on the suppliers	24	3.90	1.235
The commercial state corporation allows for electronic meeting with their suppliers using videoconferencing.	24	3.00	1.624
The Commercial State Corporation allows buyers and suppliers to interact at their work station via centralized portal	24	3.56	1.128
The Commercial State Corporation has a system where members of a group working together on a task can communicate, coordinate, collaborate in decision making	24	3.05	1.452

The Commercial State Corporation disseminate information through electronic system tools such as e-mails, chats application and database sharing	24	3.90	1.125
The Commercial State Corporation allows members to use online portal to brainstorm among them.	24	3.36	1.342
The Commercial State Corporation has can undertake different operations from different regions through electronic platform.	24	3.40	1.125
The commercial state corporation has electronic based platform where buyers and suppliers exchange and access information.	24	3.62	0.256
The commercial state corporation use computers to enhance efficiency and effectiveness in their operational performance.	24	3.75	1.256

Source: Researcher (2014)

From above table 4.5, indicates that commercial state corporations in Kenya have a Moderate extent (Mean $\geq$ 3.0) in some of its e-collaboration practices in procurement. This involves electronic based platform where buyers and suppliers exchange and access information, use computers to enhance efficiency and effectiveness, use of electronic meeting with their suppliers using videoconferencing, allows members to use online portal to brainstorm among them.

On the other hand, the table above 4.5, indicate that the commercial state corporations in Kenya have are in Great extent (Mean ≥ 3.6) use e-collaboration practices in procurement activities such as use intranet and extranet to collect data on the suppliers, allows buyers and suppliers to interact at their work station via centralized portal, disseminate information through electronic system tools such as e-mails, chats application and database sharing, electronic based platform where buyers and suppliers exchange and access information, use computers to enhance efficiency and effectiveness in their operational performance. This is an indication that commercial corporation is working together with suppliers using internet based platform.

4.4.3 E- Sourcing Practices.

The researcher sought to ascertain to what extent the e- sourcing practices were being used in commercial state corporations. The respondent were required to answer the questions by indicating to which extent they use e-sourcing practices in their procurement function using a likert scale (1= No Extent at all; 2 = Small Extent; 3= Moderate Extent; 4= Great Extent 5= Very Great Extent). The following is the response obtained on different questions.

Table 4.6 E-Sourcing Practices

E- sourcing practices	**N**	**Mean**	**Standard Deviation**
The commercial state corporations identify new suppliers using internet based system.	24	3.25	1.920

The commercial state corporation use e-sourcing to reduce cost and improve efficiency in procurement process.	24	3.33	1.256
The commercial state has corporation online request for quotation reducing lead time.	24	3.00	1.235
The Commercial State Corporation and their suppliers use internet based application in the whole procurement process	24	2.10	1.624
The Commercial State Corporation uses e-sourcing to reduce the production cost.	24	3.38	1.128
The Commercial State Corporation has internet based for evaluation of suppliers.	24	3.09	1.452
The Commercial State Corporation has an application which enables for online bidding	24	2.45	1.125
The Commercial State Corporation has online platform where buyer and suppliers work together.	24	3.14	1.342
The Commercial State Corporation use e-sourcing to save on cost and enhance visibility on expenditure	24	3.20	1.125
The commercial state corporations identify new suppliers using internet based system.	24	3.06	0.256

Source: Researcher (2014)

From the above table 4.6, it indicates that corporations in has a Moderate extent (Mean ≥ 3.0) in some of its e- sourcing functions. Among the function are identify new suppliers using internet based system, use e-sourcing to reduce cost and improve efficiency in procurement process, online request for quotation reducing lead time, uses e-sourcing to reduce the production cost, internet based for evaluation of suppliers, online platform where buyer and suppliers work together, use e-sourcing to save on cost and enhance visibility on expenditure, use e-sourcing to reduce cost and improve efficiency in procurement process. Indicate that in a moderate extent the commercials state corporation does use e-sourcing practices.

Significantly, from the table above 4.6, indicates that commercial state corporation small extent (Mean ≥ 2.0) has an application which enables for online bidding and electronic ally collaboration with their suppliers use internet based application in the whole procurement process.

4.4.4 E- Administration Practices.

The researcher sought to find out to what extent the e- administration practices was being used in commercial state corporations. The respondent were requested to answers to the questions by indicating to which extent they use e-administration practices in their procurement function using a likert scale (1= No Extent at all; 2 = Small Extent; 3= Moderate Extent; 4= Great Extent 5= Very Great Extent). The following is the response obtained on different questions.

Table 4.7 E-Administration Practices

E- Administration practices	N	Mean	Standard Deviation
The commercial state corporation use internet based program in tracking goods, accepting goods and payment of goods	24	2.502	1.562
The commercial state corporation uses electronic documents such as e-mails, e-forms for administrative functions	24	4.40	0.452
The commercial state corporation provide tender, request for quotation documents and other procurement documents online	24	3.52	1.335
The commercial state corporation trains its staff and develop their capacity and skills on e-administration	24	3.50	1.425
The Commercial State Corporation has electronic documents management system which has different categories documents providing different information database	24	2.78	1.925
The Commercial State Corporation has an electronic system which allows for different document version.	24	4.29	0.358

The Commercial State Corporation online documents met standards in terms of confidentiality and authenticity	24	2.95	1.178
The Commercial State Corporation use internet based program in tracing all procurement processes and documents increasing accountability and transparency	24	2.62	1.635
The Commercial State Corporation manage documents using an internet based application for easy access and retrieval	24	4.31	0.358
The commercial state corporation uses electronic documents such as e-mails, e-forms for administrative functions	24	4.55	0.256

Source: Researcher (2014)

From the above table 4.7, it indicates that Kenya commercial state corporations in has a great extent (Mean $\geq$ 4.0) in some of its e- administration functions. Among the function which were identified include the uses electronic documents such as e-mails, e-forms for administrative functions, provide tender, request for quotation documents and other procurement documents online, trains its staff and develop their capacity and skills on e-administration, manage documents using an internet based application for easy access and retrieval and uses electronic documents such as e-mails, e-forms for administrative functions. These procurement activities are mostly done electronically.

It is also important to note that in table 4.7, that some procurement activities are conducted at moderate extent (Mean ≥ 3.0). Among the procurement functions the use of electronic documents management system which has different categories documents providing different information database, use of online documents met standards in terms of confidentiality and authenticity, use internet based program in tracing all procurement processes and documents increasing accountability and transparency, use internet based program in tracking goods, accepting goods and payment of goods.

Significantly a commercial state corporation uses electronic documents such as e-mails, e-forms for administrative functions in a very great extent (Mean 4.55). This indicates that corporations are working towards fully automation of its administrative work to increase procurement efficiency.

4.4.5 E- Tendering Practices.

The researcher wanted to find out to what extent the e- tendering practices were being used in commercial state corporations. The respondent were required to answer the questions by indicating to which extent they use e-tendering practices in their procurement function using a likert scale (1= No Extent at all; 2 = Small Extent; 3= Moderate Extent; 4= Great Extent 5= Very Great Extent). The following is the response obtained on different questions.

Table 4.8 E-Tendering Practices

E- Tendering practices	N	Mean	Standard Deviation
The commercial state corporation advertise, receive bids and offers from suppliers using internet based program	24	2.55	1.256
The commercial state corporation use an electronics based platform for screening and selection of suppliers	24	2.21	1.256
The commercial state corporation use e-tendering to reduce cost, lead time, improve quality and flexibility.	24	3.41	1.235
The Commercial State Corporation exchange data with a main focus on the products and service delivery.	24	3.10	1.985
The Commercial State Corporation work together with suppliers to ensure success of then tendering process	24	3.48	0.054
The Commercial State Corporation manage the whole tendering process from the initial stage to final stage electronically	24	2.12	1.412
The Commercial State Corporation use electronic transaction to ensure the laws, rules, policies and procedures are not faulted	24	2.25	1.125

Source: Researcher (2014)

From the above table 4.7, it indicates that commercial state corporations in has in Moderate Extent (Mean ≥ 3.0) involve some of e-tendering practices in procurement functions. Among the function, the use e-tendering to reduce cost, lead time, improve quality and flexibility, the exchange of data with a main focus on the products and service delivery and work together with suppliers to ensure success of then tendering process. This shows a great indication that e-tendering is being used in commercial state corporations.

On the other hand, from the table 4.8 above, the corporations' are also practicing e-tendering at a small extent (Mean ≥ 2.0) in its procurement functions. The procurement activities undertake at in this extent include advertise, receive bids and offers from suppliers using internet based program, use an electronics based platform for screening and selection of suppliers, manage the whole tendering process from the initial stage to final stage electronically and use electronic transaction to ensure the laws, rules, policies and procedures are not faulted. This is an indication that more needs to be done to ensure more of e-tendering practices are adopted in commercial state corporations.

4.5 Relationships between e-purchasing practices and operational performance

The research study tried to find out the relationship between the e-purchasing practices and the operational performance among commercial state corporations. A regression was used with the dependent variables which involve, e-auctioning practice, e- sourcing

practices, e-administration, e-collaboration and e-tendering while dependent variable include operational performance. The results are shown below.

Table 4.5.1 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.762	.610	.615	.50102

Source: Researcher (2014)

From the table 4.5.1, the coefficient of determination was found out to be .610 indications that e-purchasing practices contributes to 61% of variability of operational performance. This is a good fit since the R-square is .7 which is generally accepted as the threshold of good fit.

4.7.1 Analysis of Variance

Table 4.7.1 ANOVA

Model		**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
	Regression	0.274	5	3.5423	10.1215	.001
	Residual	1.332	42	.03325		
	Total	1.603	47			

From the table 4.5.1 above, the F-statistic is 10.1215 and p-value = .001. This shows that there is a statistically significant in the model use and e-purchasing practices have a significant relationship with effective operational performance in procurement functions.

Table 4.5.2 Test for Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.924	0.132		2.10	.002
	E- Reverse Auctioning Practices	.321	.455	.201	.249	.003
	E-Collaboration Practices	.543	.102	.102	-.245	.004
	E-Sourcing Practices	.521	.104	.417	.109	.001
	E- Administration Practices	.991	.110	.691	.131	.005
	E- Tendering Practices	.869	.125	.256	.354	.003
Independent Variable: Operational Performance						

Source: Research data (2014)

From the above table 4.5.2, the above regression model indicated the following findings below:

$Y=0.924+ -.321*X_1+543X_2 +.521* X_3 +.991* X_4 +.869* X_5$

Where:

Y = Operational Performance

X_1 = E- Reverse Auctioning Practice

X_2 = E-Collaboration Practices

X_3 = E-Sourcing Practices

X_4 = E-Administration Practices

X_5 = E-Tendering Practices

From the above table 4.7, the e- reverse auctioning practices (β = .321), e-collaboration practices (β = .543),, e- sourcing practices(β = .521), e-administration practices (β = .991), e-tendering practices(β = .869) had a positive and statistical significant relation to the operational performance of the procurement function ($p > .05$).

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

In this chapter, the researcher seeks to present forth the findings, conclusions and recommendation from the study. The research will first summaries the findings in relation to research objectives and then draws conclusions from the findings. Finally the researcher will give the recommendation and suggest areas of further study.

5.2 Summary of Findings

The research wanted to establish the extent to which e-purchasing practices are being used in commercial state corporations in Kenya. In relation to e- reverse auctioning practice, the study found out that commercial state corporation is using e-reverse auction at a moderate extent, which also applies e- collaboration practices and e-sourcing practices in its procurement functions. On e-administration, the study found out that majority of commercial state corporations in great extent are using e-administration practices in their procurement operational.

Through analysis of the independent variables, the researcher established that there is a statistical significant positive relationship between the e-reverse auctioning practices, e-collaboration practices, e-sourcing practices, e- administration practices and e-tendering practices with operational performance in commercial state corporations in Kenya. The

researcher found out that these variables accounts for 61% of the operational performance of procurement functions.

5.3 Conclusion

From the findings obtained above the researcher made the following conclusion. The commercial state corporations in Kenya are using e-purchasing practices at a moderate extent in their procurement functions.

This is an indication that more need to be done to ensure that the corporations use e-purchasing practices in their whole procurement operations. It was also established that e-purchasing practices have are assist the reduction of operational cost, reduce the lead-time and in the same measure increase flexibility, efficiency and effectiveness, increase profitability and enhance operational performance.

5.4 Recommendations

By analyzing the above conclusion the researcher made the following recommendations: the commercial state corporation should increase to very great extent the enhancement of e-purchasing practices in their procurement performances. The corporation should focus in the reduction of operational cost the well established use of e-purchasing practices.

5.5 Suggestions for Further Research

Since the study focused on commercial State Corporation in Kenya, prospect researchers may consider focusing their study on the government ministry and establish to what

extent they are using e-purchasing practices. Future researchers may consider finding out why the uptake use of e-purchasing practices is slow in commercial State Corporation in Kenya.

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APPENDIX II:

RESEARCH QUESTIONNAIRE

SECTION 1: DEMOGRAPHIC INFORMATION

(Instruction - Tick where appropriate)

1. Gender

☐ Male ☐ Female

2. Age In Years

☐ Below 20 ☐ 41-50

☐ 21-30 ☐ 51-60

☐ 31-40

3. Highest Educational Level attained

☐ Secondary Level ☐ Post Graduate

☐ College level ☐ Professional Qualification

☐ University Level (Specify ……)

4. Working Experience

☐ Less than 5 years ☐ 11-15 Years

☐ 6-10Years ☐ 16 Years and above

5. Department

☐ Procurement ☐ Finance

☐ Administration ☐ Others

6. When was e-purchasing practices first introduced in your corporation?

☐ 1990-1999

☐ 2000-2009

☐ 2010 to date

SECTION 2:

1. E-Purchasing Practices and Operational Performance

To what extent has commercial State Corporation implemented the following e-purchasing practices in improving of operational performances. Using a five point scale below, Please tick appropriately against each statement. The scale stand for the following: 1 = No Extent at All; 2= Small Extent; 3= Moderate Extent; 4= Great Extent; 5= Very Great Extent

	Extent				
	No extent at	**Small Extent**	**Moderate**	**Great Extent**	**Very Great**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
1. e-Reverse Auctioning Practices					
The commercial state corporation has online platform for a pool of qualified supplier for real time requests which improve operational performance					
The commercial state corporation receives and evaluate offers from suppliers using an internet based program					
The commercial state corporation uses online data to price its goods improving procurement performance					
The Commercial State Corporation purchase goods at a					

descending price					
The Commercial State Corporation use an online system where supplier respond once when bidding					
The Commercial State Corporation use 30 minutes to one hour during bidding process					
The Commercial State Corporation increase their suppliers geographical coverage in bidding process through online platform					
The Commercial State Corporation use e-reverse auction to achieve its strategic sourcing					
The Commercial State Corporation has an online bidding platform where suppliers can compare their prices with others					
2. e-Collaboration Practices					
The commercial state corporation has electronic based platform where buyers and suppliers exchange and access information.					
The commercial state corporation use computers to enhance efficiency and effectiveness in their operational performance.					
The commercial state corporation use intranet and extranet to collect data on the suppliers					
The commercial state corporation allows for electronic meeting with their suppliers using videoconferencing.					
The Commercial State Corporation allows buyers and suppliers					

to interact at their work station via centralized portal					
The Commercial State Corporation has a system where members of a group working together on a task can communicate, coordinate, collaborate in decision making					
The Commercial State Corporation disseminate information through electronic system tools such as e-mails, chats application and database sharing					
The Commercial State Corporation allows members to use online portal to brainstorm among them.					
The Commercial State Corporation has can undertake different operations from different regions through electronic platform.					
3. e-sourcing Practices					
The commercial state corporations identify new suppliers using internet based system.					
The commercial state corporation use e-sourcing to reduce cost and improve efficiency in procurement process.					
The commercial state has corporation online request for quotation reducing lead time.					
The Commercial State Corporation and their suppliers use internet based application in the whole procurement process					
The Commercial State Corporation uses e-sourcing to reduce the					

production cost.					
The Commercial State Corporation has internet based for evaluation of suppliers.					
The Commercial State Corporation has an application which enables for online bidding					
The Commercial State Corporation has online platform where buyer and suppliers work together.					
The Commercial State Corporation use e-sourcing to save on cost and enhance visibility on expenditure					
4. e-Administration Practices					
The commercial state corporation use internet based program in tracking goods, accepting goods and payment of goods					
The commercial state corporation uses electronic documents such as e-mails, e-forms for administrative functions					
The commercial state corporation provide tender, request for quotation documents and other procurement documents online					
The commercial state corporation trains its staff and develop their capacity and skills on e-administration					
The Commercial State Corporation has electronic documents management system which has different categories documents providing different information database					

The Commercial State Corporation has an electronic system which allows for different document version.					
The Commercial State Corporation online documents met standards in terms of confidentiality and authenticity					
The Commercial State Corporation use internet based program in tracing all procurement processes and documents increasing accountability and transparency					
The Commercial State Corporation manage documents using an internet based application for easy access and retrieval					
5. e-Tendering Practices					
The commercial state corporation advertise, receive bids and offers from suppliers using internet based program					
The commercial state corporation use an electronics based platform for screening and selection of suppliers					
The commercial state corporation use e-tendering to reduce cost, lead time, improve quality and flexibility.					
The Commercial State Corporation exchange data with a main focus on the products and service delivery.					
The Commercial State Corporation work together with suppliers to ensure success of then tendering process					
The Commercial State Corporation manage the whole tendering					

process from the initial stage to final stage electronically					
The Commercial State Corporation use electronic transaction to ensure the laws, rules, policies and procedures are not faulted					
The commercial state corporation advertise, receive bids and offers from suppliers using internet based program					

APPENDIX II: LIST OF STATE CORPORATIONS

1. Agriculture Development Corporation
2. Agriculture Information Resource Center
3. Agriculture Finance Corporation
4. Agro-Chemicals and Food Company
5. Anti-Counterfeit Agency
6. Athi Water Services Board
7. Betting Control &Licensing Board
8. Brand Kenya
9. Bomas of Kenya
10. Capital Markets Authority
11. Capital Markets Tribunal
12. Catering Training and Tourism Development Levy Trustees
13. Central Water Services Board
14. Central Bank of Kenya
15. Chemelil Sugar Company
16. Chuka University College
17. Coast Development Authority
18. Coconut Development Authority
19. Coast Water Services Board
20. Coffee Board of Kenya
21. Coffee Research foundation

22. Commission for higher Education

23. Communication Commission of Kenya

24. Consolidated Bank

25. Co-operative College of Kenya

26. Council for Legal Education

27. Deposit Protection Fund Board

28. East Africa Portland Cement Company

29. Egerton University

30. Energy Regulatory Board

31. Electricity Regulatory Board

32. Ewaso Ng'iro North Development Authority

33. Ewaso Ng'iro South Development Authority

34. Export Processing Zones Authority

35. Export Processing Zones Authority

36. Export Promotion Council

37. Export Promotion Council

38. Gender Commission

39. Geothermal Development Company

40. Gilgil Telecommunications Industries

41. Higher Education Loan Board

42. Horticultural Crops Development Authority

43. Hotels & Restaurants Authority

44. Industrial and Commercial Development Corporation (ICDC)

45. Industrial Development Bank Capital Limited

46. Insurance Regulatory Authority

47. Investment Promotion Center

48. Jomo Kenyatta Foundation

49. Jomo Kenyatta University of Agriculture and technology

50. Kabianga University

51. Karatina University College

52. Kenya Accountants & Secretaries National Examinational Council

53. Kenya Agriculture Research Institute

54. Kenya Agricultural & Development Institute

55. Kenya Airports Authority

56. Kenya Broadcasting Corporation

57. Kenya Bureau of Standards

58. Kenya Bureau of Standards

59. Kenya Civil Aviation Authority

60. Kenya College of Communication Technology

61. Kenya Culture Centre

62. Kenya Copyright Board

63. Kenya Diary Board

64. Kenya Education Staff Institute

65. Kenya Electricity Generating Company

66. Kenya Electricity Transmission Company

67. Kenya Ferry Services

68. Kenya Forestry Services

69. Kenya Forestry Research Institute

70. Kenya Industrial Estates

71. .Kenya Information & Communication Technology

72. Kenya Industrial Property Institute

73. Kenya Investment Authority

74. Kenya Industrial Research and Development Institute

75. Kenya Institute of Administration

76. Kenya Institute of Education

77. Kenya Institute of public policy Research Institute

78. Kenya Literature Bureau

79. Kenya Meat Commission

80. Kenya Marine and Fisheries Research Institute

81. Kenya Medical Research Institute

82. Kenya Medical Supplies Agency

83. Kenya Medical Training College

84. Kenya National Assurance Co. (2001)

85. Kenya National Examinations Council

86. Kenya National Highways Authority

87. Kenya National Library Services

88. Kenya Ordinance Factories Corporation

89. Kenya Petroleum Refinery

90. Kenya Pipeline Corporation

91. Kenya Plant Health Inspectorate Services
92. Kenya Ports Authority
93. Kenya Post Office Savings Bank
94. Kenya Power and Lightning Co.Ltd
95. Kenya Railways Corporation
96. Kenya Re-Insurance Corporation
97. Kenya Revenue Authority
98. Kenya Roads Board
99. Kenya Rural Roads Authority
100. Kenya Urban Roads Authority
101. Kenya Safari Lodges and hotels
102. Kenya Seed Company
103. Kenya Sisal Board
104. Kenya Sugar Board
105. Kenya Sugar Research Foundation
106. Kenya Tourist Board
107. Kenya Tourist Development Corporation
108. Kenya Utalii College
109. Kenya Vetinary Board
110. Kenya Water Institute
111. Kenya Waters Towers Agency
112. Kenya Wildlife Services
113. Kenya Wine Agency

114. Kenyatta International Conference Center
115. Kenya Medical Training College
116. Kenya Medical Research Institute
117. Kenya Medical Supplies Agency
118. Kenyatta National Hospital
119. Kenya National Accreditation service
120. Kenya National Bureau of Statistics
121. Kenya National Shipping Line
122. Kenya Tourist Development Corporation
123. Kenya Tourist Board
124. Kenyatta University
125. Kericho Valley Development Authority
126. Kimathi University College
127. Kisii University College
128. Laikipia University College
129. Lake Basin Development Authority
130. Lake Victoria North Water Services Board
131. Lake Victoria South water Services Board
132. Local Authorities Provident Fund
133. Kenya Maritime Authority
134. Maseno University
135. Masinde Muliro University and Science &Technology
136. Meru Teaching and Referral Hospital

137. Moi Teaching and Referral Hospital
138. Moi University
139. Multimedia University College of Kenya
140. Nairobi Water Services Board
141. Narok University College
142. National Aids Control Council
143. National Bank of Kenya
144. National Bio-safety Authority
145. National Campaign Against Drug Abuse Advisory Board
146. National Cereals and Produce Board
147. National Council for Law Reporting
148. National Council for people with Disabilities
149. National Council for Science &Technology (NCST)
150. National Environment Management Authority
151. National Hospital Insurance Fund
152. National Housing Corporation
153. National Irrigation Board
154. National Museums of Kenya
155. National Oil Corporation of Kenya
156. National Social Security Fund
157. National Sports Stadia Management Board
158. National Tea Zones Development Authority
159. National Water Conservations & Pipeline Corporation

160. New Kenya Co-operative Creameries Ltd
161. NGO- Co0ordination Board
162. NGO- Co-ordination Bureau
163. Northern Water Services Board
164. Numerical Machining Complex
165. Nyayo Tea Zones
166. Nzoia Sugar Company
167. Pest Control Products Board
168. Postal Corporation of Kenya
169. Poverty Eradication Commission
170. Public Archives Advisory Council
171. Public Complaints Standing Committee
172. Public University College
173. Pwani University College
174. Pyrethrum Board of Kenya
175. Radiation Protection Board
176. Retirement Benefit Authority
177. Rural Electrification Authority
178. Rift Valley Water Serviced Board
179. Sacco Societies Regulatory Authority
180. School Equipment Production Unit
181. South Nyanza Sugar Company
182. Small & Microenterprises Fund

183. Tana and Athi River Development Authority
184. Tana Water services Board
185. Tea Board of Kenya
186. Tea Research Foundation
187. Teachers Services Commission
188. Technical University of Kenya
189. Telkon Kenya Ltd
190. The Mombasa Polytechnic University College
191. Transport Licensing Board
192. University of Nairobi
193. University of Nairobi Enterprises and Services Ltd
194. Water Services Management Authority
195. Water Services Regulatory Authority
196. Water Services Trust Fund
197. Youth Enterprises Development Fund