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Determinants of Procurement Performance of Commercial Banks in Mombasa County - A Case Study of Kenya Commercial Bank

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Abstract:

Procurement encompasses the whole process of acquiring property and/or services. Sound public procurement policies and practices are among the essential elements of good governance. Procurement performance is crucial in enhancing the performance of organizations because whatever gets measured gets done. The procurement function has not been given the recognition it deserves in developing countries, in most public entities. Procurement processes are very key in organization such that it determines how and what products will be produced and its qualities thereof. The study used primary data which was collected through use of questionnaires with respondents as the procurement finance and line managers of Kenya Commercial Bank. The general objective was determinants of procurement performance of commercial banks in Mombasa County. The specific objectives were to investigate the effect of e-procurement on procurement performance; to examine the influence of procurement policies on procurement performance; to examine the influence of information systems on procurement performance and to examine the influence of environmental factors on performance of commercial banks in Mombasa County. The study will examine three theories of procurement. Contingency theory is relevant in the study because one thing depends on another thing to be effective therefore for effective procurement measures the organization needs to have strategic measures put in place in procurement department. Theory of internal control is relevant to the study because it outlines the internal control policies, procedures and rules to be followed in the procurement department. Agency theory was relevant to this study because all organizations have people who explain their differences in behavior or decision by noting that two parties often have different goals and, independent of their respective goals, may have different attitudes towards risk. Stratified random sampling method was used. The study targeted 1200 employees of KCB. The sample was 120 employees of KCB working in Coast region. A modified Likert scale questionnaire was developed divided into three parts. A pilot study was carried out to refine the instrument. The quality and consistency of the study was further assessed using Cronbach's alpha. Data analysis was performed on a PC using Statistical Package for Social Science (SPSS Version 22) for Windows. Analysis was done using frequency counts, percentages, means and standard deviation, regression, correlation and the information generated will be presented in form of graphs, charts and tables. From the study findings, on company profile majority of the respondents had more than two branches. Banks have invested heavily in E-procurement and it has helped in controlling the inventory stocks. Procurement policies have helped in reduction of operating costs hence increasing profits. Information systems has helped to improve quality of services and measuring the performance of the procurement function yields benefits to organizations. Environmental factors when well controlled are beneficial to the general public and help the organization to achieve success. The study recommended that commercial banks should adopt technology in its procurement processes.

1. Introduction

1.1. Background of the Study

Performance has been described as the degree of achievement of certain effort or undertaking. It relates to the prescribed goals or objectives which form the project parameters (Chitkara, 2005). From project management perspective, it is all about meeting or exceeding stake holders' needs and expectations from a project. It invariably involves placing consideration on three major project elements i.e. time, cost and quality (Project Management Institute, 2004). Measuring performance is a perennial topic in the executive suite, in board meetings, and at meetings of management scientists. Authorities like Dr. Deming; measuring performance is good; measuring the right things is the trick executives must learn.

Today's demanding business environment requires executives to regularly evaluate how they measure their company's performance. Many CEOs spend significant time asking themselves what is the proper performance measurement process and structure, and what measures should we be using to drive business success (Minerich, 2008). For any organization to change its focus and become more competitive Amaratunga and Baldry (2002) suggest that performance is a key driver to improving quality of services while its absence or use of inappropriate means can act as a barrier to change and may lead to deterioration of the purchasing function. Organizations which do not have performance means in their processes, procedures, and plans experience lower performance and higher customer dissatisfaction and employee turnover (Artley & Stroh, 2001; Amaratunga & Baldry, 2002 and CIPS Australia, 2005). Measuring the performance of the purchasing function yields benefits to organizations such as cost reduction, enhanced profitability, assured supplies, quality improvements and competitive advantage as was noted by (Batenburg & Versendaal, (2006)).

According to CIPS Australia (2005) report, efficiency and effectiveness represent different competencies different competencies and capabilities for procurement organization. Efficiency reflects that the organization is doing things or activities right, whereas effectiveness relates to the organization doing the right thing. There is a trade-off between efficiency and effectiveness as a highly efficient organization may spend less than peers (particularly when compared to highly effective organizations), however, quality and value may suffer. Organizations focused on efficiency tend to make decisions based on cost and investment pay back likelihood; whereas effectiveness focused organizations make decisions based on quality and value rather than costs and productivity. The challenge for procurement organizations is targeting and achieving the right balance between the two.

1.1.1. Banking Sector in Kenya

The Kenyan financial sector is largely dominated by banks which control 57 percent of the total assets in the financial sector. The vital role played by commercial banks in Kenya in financing economic development brings to the fore the need to study the funding structure of commercial banks. The banking environment in Kenya has, for the past decade, undergone many regulatory and financial reforms. These reforms have brought about many structural changes in the sector and have also encouraged foreign banks to enter and expand their operations in the country (Kamau, 2009). Kenya's financial sector is largely bank-based as the capital market is still considered narrow and shallow (Ngugi, 2006). Banks dominate the financial sector in Kenya and as such the process of financial intermediation in the country depends heavily on commercial banks (Kamau, 2009). In fact, Oloo (2009) describes the banking sector in Kenya as the bond that holds the country's economy together. Sectors such as the agricultural and manufacturing virtually depend on the banking sector for their very survival and growth. The performance of the banking industry in the Kenya has improved tremendously over the last ten years, as only two banks have been put under CBK statutory management during this period compared to 37 bank-failures between 1986 and 1998 (Mwega, 2009).

The banking sector in Kenya is regulated by the Central Bank of Kenya (CBK). Commercial banks are licensed and regulated under the Banking Act cap 488; deposits taking micro finance institutions are regulated under Micro Finance Act and the Forex Bureaus under the Central Bank of Kenya Act cap 491. In Kenya, commercial banks play an important role in mobilizing financial resources for investment by extending credit to various businesses and investors. Lending represents the heart of the banking industry and loans are the dominant assets as they generate the largest share of operating income. Loans however expose the banks to the greatest level of risk. There are 41 licensed commercial banks in Kenya. The credit reference bureau, Credit Reference Bureau Africa was the first of its kind to be registered in Kenya by the Central bank of Kenya aimed at enabling commercial banks to share information about borrowers to facilitate effectiveness in credit scoring.

1.1.2. Profile of Kenya Commercial Bank

KCB is the leading financial institution in East and Central Africa with branches across the region. The bank operates in Kenya, Tanzania, Uganda, and South Sudan very recently, Burundi. The bank provides a wide range of banking services: Corporate Banking products, Retail Banking products, and Advantage Banking and Mortgage products. Each of these products are tailored for different markets i.e. Corporate market, Small and Medium Enterprise market, micro enterprise market and retail customers. The Bank has the widest network of banking outlets comprising of over 220 branches. The branches are divided into three categories: advantage, mortgage and normal branches. The bank has over 280 automated teller machine outlets spread across the East Africa Region and bank has also partnered with Pesa Point and Ken switch to provide more channels for customers to access their funds. Other channels available to customers include mobile banking (Mobi), Internet Banking and Agency Banking (KCB 2014).

1.2. Statement of the Problem

Performance measurement is crucial in enhancing the performance of organizations because whatever gets measured gets done. The procurement function has not been given the recognition it deserves in developing countries, in most public entities, regardless of the effort by the partners like the World Bank, the International Trade Organization, the United Nations Conference on Trade and Development, the World Trade Organization and, others. This could be deliberate or sheer ignorance on the value the procurement function could contribute to any organization (Telgen, Zomer, & deBoer, 2007). While functions like Human Resource (HR) and Finance can have their performance measured, this is not the case with the procurement function. The failure to establish performance of the procurement function has led to irregular and biased decisions that have costly consequences to every entity. The need to have coherent methods of performance of the procurement function in public entities, particularly in developing countries, has never been as sound as it is now.

Delaying will worsen the already deteriorating performance, loss of professionals, and organizations will continue incurring unnecessary costs (DCD/DAC, 2003). However, it is important that appropriate performances are implemented. It should not be any

performance. The issue of basing on financial performance and neglecting or ignoring non-financial performance is not helping the procurement function because only partial performance is considered (Lardenoije, Van Raaij, & Van Weele, 2005).

Local studies on the area of procurement measurement have focused on the effect of procurement process in companies. Ngugi and Mugo (2007) analyzed the effect of procurement activities on the operation and effectiveness of public sectors in Kenya; however, the study did not focus on commercial banks in Kenya. Chipiro (2009) examined the impact of E-procurement on strategic sourcing in limited banks in Zimbabwe while Heng (2008) examined the factors influencing the design and use of performance measurement systems (PMSs) in Malaysia however these studies did not focus on commercial banks in Kenya. Jackinda (2011) did an investigation into the effectiveness of the procurement performance measurement systems of large manufacturing companies in Nairobi but did not address the factors affecting procurement performance measurement in commercial banks. Rwoti (2005) did a study on procurement performance measurement systems of large manufacturing companies in Nairobi but did not address the procurement performance measurement among commercial banks in Kenya. However, there lacks conclusive studies in Kenya as majority of reviewed studies focus on developed economies. This forms the research gap. It is for this research gap that the study wished to establish: what are the factors affecting procurement measurement among Kenyan commercial banks.

1.3. Objectives

This study was guided by general and specific objectives.

1.3.1. General Objectives

The general objective is determinants of procurement performance of commercial banks in Mombasa County.

1.3.2. Specific Objectives

1. To investigate the effect of e-procurement on procurement performance of commercial banks in Mombasa County.
2. To examine the influence of procurement policies on procurement performance of commercial banks in Mombasa County
3. To examine the influence of information systems on procurement performance of commercial banks in Mombasa County
4. To examine the influence of environmental factors on procurement performance of commercial banks in Mombasa County

1.4. Hypothesis

The objective of this study was fulfilled by testing the four hypotheses stated both in terms of null (HO_1) and alternative hypotheses (HA_1).

1. Hypothesis One

HO_1 : E-procurement has no significant effect on procurement performance of commercial banks in Mombasa County.

HA_1 : E-procurement has significant effect on procurement performance of commercial banks in Mombasa County.

2. Hypothesis Two

HO_2 : Procurement policies have no significant effect on procurement performance of commercial banks in Mombasa County.

HA_2 : Procurement policies have a significant effect on procurement performance of commercial banks in Mombasa County.

3. Hypothesis Three

HO_3 : Information systems have no significant effect on procurement performance of commercial banks in Mombasa County.

HA_3 : Information systems have a significant effect on procurement performance of commercial banks in Mombasa County.

4. Hypothesis Four

HO_4 : Environmental factors have no significant effect on procurement performance of commercial banks in Mombasa County.

HA_4 : Environmental factors have a significant effect on procurement performance of commercial banks in Mombasa County.

1.5. Justification of the Study

This study will be of importance to various stakeholders among them being the management of commercial banks, procurement professionals, policy makers in both private and public sector and also scholars. Management of commercial banks will appreciate the factors affecting procurement performance measurement among the banks. For example, through the findings of this study, they will be able to understand the interplay of various operational and human factors that influence the way procurement performance is measured. It will therefore be possible for management to know the areas within their procurement functions that will require improvement for the betterment of the overall profitability of the banks.

Procurement as a profession is dynamic and is experiencing new improvements on a regular basis. The findings of this study will inform procurement professionals on areas that require their attention both at their working places and in their other professional engagements. For example, there are many aspects of procurement which will need to be included in the organizational performance metrics in order to appreciate the contribution of procurement to the overall organizational performance and effectiveness. Procurement involves many stakeholders and therefore it is driven by policy interventions. The findings of this study will inform policy makers on the areas and aspects of procurement that will require policy interventions for the purpose of improving procurement efficiency.

This study is scholarly in nature and hence will be of value to researchers and scholars both in academia and industry. The study will identify gaps that can be advanced in the interest of further scholarly discourse in the area of procurement measurement. Specifically, the findings of the will identify academic gaps that will trigger further studies on procurement measurement.

1.6. Scope of the Study

Procurement processes varies from one organization to another. This implies that nature of the firm and the nature of the business determine the size and types of procurement processes and techniques to adopt. The study is limited to procurement performance measurement in the banking industry a case study of Kenya Commercial Bank. The study is conducted within a specified time-period of one semester.

1.7. Limitations

The study used questionnaire for data collection which were left with the respondents to be collected later after they were complete. The problem associated was loss of questionnaires, incomplete questionnaires and failure to give information was overcome by organizing meeting outside working hours, seeking for the personal contacts of would be respondents and use of incentives where necessary.

The researcher used closed-ended questions which have the disadvantage of limiting responses. This avoided including as many questions as possible of each objective. Open-ended questions were used which have a tendency to provide information which does not answer the stipulated questions or objectives, these responses may be difficult to categorize and are time consuming thus resulting to varied responses which are difficult to analyze. This problem was avoided by limiting questions to the main variables of the study, giving enough time to respondents as well as including the findings in narrative form.

The researcher also anticipates a challenge of staff not willing to give full information for fear of adverse repercussions. This was averted by allowing the respondents to administer the questionnaires themselves. The researcher assured the respondents that the research was only for academic purposes and all the information obtained will be treated with outmost confidentiality.

2. Literature Review

2.1. Introduction

This chapter reviews both theoretical and empirical literature related to the study. The theories reviewed are; contingency theory, agency theory and theory of internal control. The chapter concludes by highlighting the research gaps of the study.

2.2. Theoretical Framework

Theories are formulated to explain, predict, and understand phenomena and, in many cases to challenge and extend existing knowledge within the limits of the critical bounding assumptions. The theoretical framework introduces and describes the theory which explains why the research problem under study exists. A theoretical framework consists of concepts, together with their definitions, and existing theory/theories that are used for the particular study (Sekaran, 2005).

2.2.1. Contingency Theory

Contingency theory means that one thing depends on other things, and for organizations to be effective, there must be a “goodness of fit” between their structure and the conditions in their external environment. As such the correct management approach is contingent on the organization’s situation (Daft 2001). This study accepts the notion of contingency theory, which suggests that the selected PMS design and use must conform to its contextual factors (Pugh, 2008). However, for the purpose of this study, contingency theory is used and reviewed in a narrower focus as follows. Contingency theory represents a rich blend of organizational theory such as organizational decision making perspectives and organizational structure (Lawrence and Lorsch, 2004; and Donaldson, 2001). The essence of the contingency theory paradigm is that organizational effectiveness results from fitting characteristics of the organization, (such as its cultures) to contingencies that reflect the situation of the organization (Lawrence and Lorsch, 2004). According to Donaldson (2001), organizations seek to attain the fit of organizational characteristics to contingencies which leads to high performance.

Therefore, the organization becomes shaped by the contingencies (fit) to avoid loss of performance. Contingency theory is based on the premise that there is no universally appropriate or perfect measurement system which applies equally to all organizations in all circumstances. In fact, it is suggested that particular features of an appropriate measurement system will depend upon the specific circumstances in which an organization finds itself. The study position is that contingency theory offers a useful way of conceptualizing the relationship between certain “contingency” variables and organization structure (PMS design and use). In the view of contingency theorists, the design of accounting information and control systems, i.e. one particular type of PMS, is based upon specific characteristics of the organization and its environment. Contingency theory is essentially a theoretical perspective within organizational theory that emphasizes how contingent characteristics or contextual factors (Daft, 2001) such as technology, size, environment, culture and strategy affect the design and functioning of organizations (Covaleski, Dirsmith & Samuel, 2006). This theory is relevant to the study because one thing depends on another thing to be effective hence for effective procurement measures the organization needs to have strategic measures put in place in procurement department.

2.2.2. Theory of Internal Control

A system of effective internal control is a critical component of an organization’s management and a foundation for its safe and sound operation. A system of strong internal control can help to ensure that the goals and objectives of an organization will be met, that it will achieve long-term targets and maintain reliable financial and managerial reporting. Such a system can also help to ensure that the

organization will comply with laws and regulations as well as policies, plans, internal rules and procedures, and reduce the risk of unexpected losses and damage to the organization's reputation.

The following presentations of internal control in essence cover the same ground. In USA, the Committee of Sponsoring Organizations of the Tread way Commission (COSO) issued Internal Control – Integrated Frame working 1992, which defined internal control as a process, effected by an entity's board of directors, management and other personnel, designed to provide reasonable assurance regarding the achievement of objectives in the following categories: Effectiveness and efficiency of operations; Reliability of financial reporting; Compliance with applicable laws and regulations. The Rutteman Report (1994) in UK defined internal control as the whole system of controls, financial and otherwise, established in order to provide reasonable assurance of Effective and efficient operations. The theory is relevant to the study because it outlines the internal control policies, procedures and rules to be followed in the procurement department.

2.2.3. Agency Theory

Agency theory is a concept that explains why behavior or decisions vary when exhibited by members of a group. Specifically, it describes the relationship between one party called the principal, that delegates work to another called the agent. It explains their differences in behavior or decisions by noting that the two parties often have different goals and, independent of their respective goals, may have different attitudes toward risk. The concept originated from the work of Adolf Augustus Berle and Gardiner Co it means, who were discussing the issues of the agent and principle as early as 1932. Berle and Means explored the concepts of agency and their applications toward the development of large corporations. They saw how the interests of the directors and managers of a given firm differ from those of the owner of the firm, and used the concepts of agency and principal to explain the origins of those conflicts (Murtishaw & Sathaye, 2006).

Jensen and Meckling shaped the work of Berle and Means in the context of the risk sharing research popular in the 1960s and '70s to develop agency theory as a formal concept. Jensen and Meckling formed a school of thought arguing that corporations are structured to minimize the costs of getting agents to follow the direction and interests of the principals. The theory essentially acknowledges that different parties involved in a given situation with the same given goal will have different motivations, and that these different motivations can manifest in divergent ways. It states that there will always be partial goal conflict among parties, efficiency is inseparable from effectiveness, and information will always be somewhat asymmetric between principal and agent. The theory has been successfully applied to myriad disciplines including accounting, economics, politics, finance, marketing, and sociology (Nikkinen and Sahlström, 2004). This theory is relevant to the study because all organizations have people who explain their differences in behavior or decisions by noting that the two parties often have different goals and, independent of their respective goals, may have different attitudes toward risk. Sections of organizations interact amongst themselves in exchange of key information and materials.

2.3. Conceptual Framework

Mugenda (2008) defines conceptual framework as a concise description of phenomenon under study accompanied by a graphical or visual depiction of the major variables of the study. According to Young (2009), conceptual framework is a diagrammatical representation that shows the relationship between dependent variable and independent variables. A conceptual framework shows the relationship between independent and dependent variable. In this study, the dependent variable is procurement performance measurement while the independent are information technology, ethics, staff training and internal processes. (See Fig. 1 below)

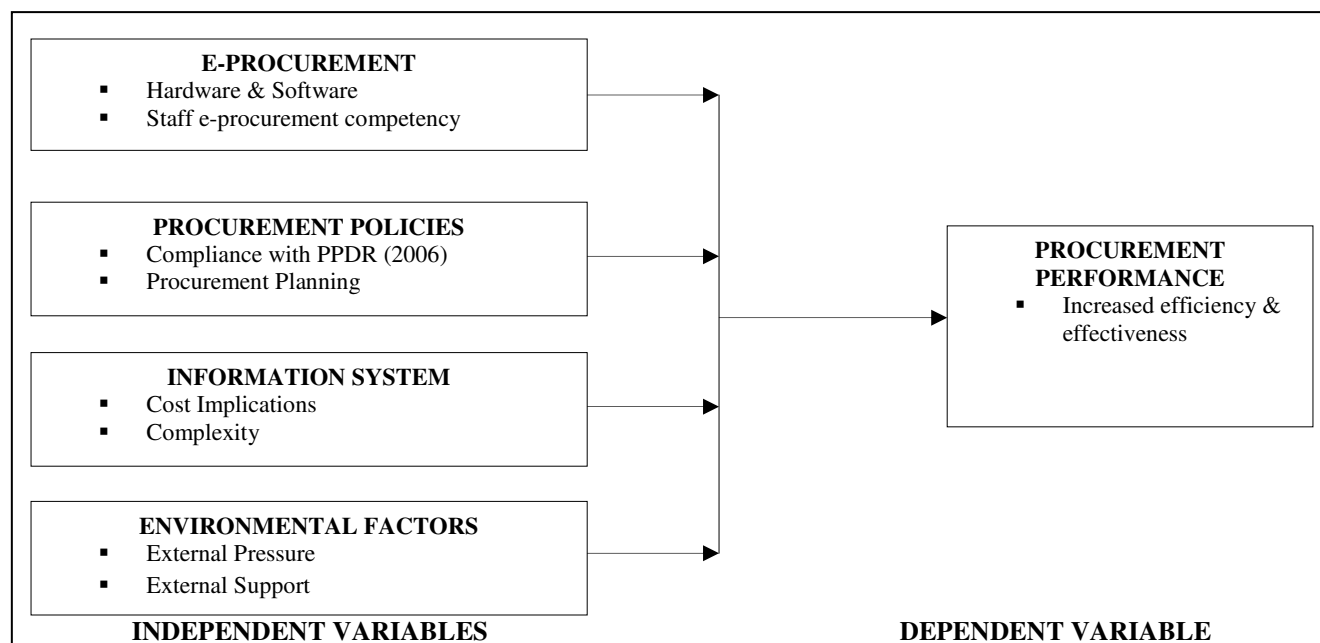


Figure 1: Conceptual framework

2.3.1. E-procurement

Saunders (1997) reckoned that personnel in procurement are, in a sense, information processors. They receive, analyses, make decisions and distribute information in order to manage the flow of goods and services in the SC. E-procurement is an enabler for information sharing which organizations in the procurement system can use for eliminating bloated inventory levels caused by cumulative effect of poor information cascading up through a SC. Daugherty, Myers and Autry (1999) averred that information integration is also a key component in many automatic replenishment programs (ARP). Initiatives such as vendor managed inventory (VMI) and collaborative planning, forecasting and replenishment (CPFR) are based on an increased level of automation in both the flow of physical materials, goods and associated information between companies to improve the efficiency in the entire system. It shortens information processing time and tremendously improves procurement performance. Process integration can enhance procurement performance. ICT provides new ways to store, process, distribute and exchange key information with customers and suppliers in the entire procurement system. Simatupang and Sridharan (2005) emphasized that information is the glue that holds organizations together and can be used to integrate procurement process activities both within a process and across multiple processes. Information on demand, forecasting and replenishment is recognized as a central component in integration of planning and control. Internal integration focuses on cross-functional processes. Externally, focus is on relationships with outside customers and suppliers. A relationship can have various intensity levels ranging from lowest open-market negotiations, cooperation and coordination to the highest collaboration level. Collaboration in procurement is based on a high degree of trust, commitment and information-sharing. It requires linking performance systems with decision making, information sharing and incentive alignment in the SC. Sriram and Stump (2004) reckoned that enterprise resource planning (ERP) systems are essential for supporting internal information sharing. Externally, inter-organizational information systems (IOIS) constituting automated information systems shared by various firms can be used to support information-sharing with customers and suppliers. E-procurement contributes to improved communications patterns, increased demand for coordination of joint activities and new organizational structures through its ability to store transmit and process information and speed up inter-organizational activities. Organizations have huge amounts of raw procurement data but are poor at converting same into market knowledge. They should strive to find trends, patterns and connections in data in order to inform and improve competitive procurement performance.

Thomas and Rainer (2005) opined that procurement systems have long been supported by ICT. With the implementation of ERP systems in the 1990s, EDI connections with suppliers were established through automation of delivery schedules by linking user materials management system with supplier systems. ICT enables organizations to decentralize operational procurement processes and centralize strategic ones due to higher transparency. Prior to e-procurement, strategic procurement often dealt with routine tasks such as individual transactions. Strategic aspects were frequently neglected, with the buyer having little influence over the choice of suppliers and purchased products. Internet technologies facilitate faster and more efficient operational procurement processes enabling managers to concentrate on strategic tasks.

Christopher (2005) contended that there is a dimension to information that enables supply and demand to be matched in multiple markets, often with tailored products, in ever-shorter time frames. This enables suppliers to react in real-time to market changes. ICT serves as the connection between various stages of the system, allowing them to co-ordinate and maximize total supply profitability. It is crucial to the daily operation of each stage in the procurement process. Kim and Rogers (2005) asserted that studies have examined business-to-business (B2B) transactions on different operational performance dimensions such as inventory cost, cycle time, and manufacturer flexibility. Rapid growth of importance of ICT application is a testimony to its impact on improving procurement performance. This is achieved through Internet, Intranet and Extranet. However, organizations must make a trade-off between efficiency and responsiveness. Bowersox, Closs and Cooper (2007) argued that ICT provides the means for collecting relevant demand data, developing a common database and providing a means for transmitting order information. It allows organizations to change the way they source supplies for smooth operations. Auto makers Ford Motor Company, DaimlerChrysler and General Motors have transacted their businesses on Internet since year 2000 and registered positive results. Based on expected procurement efficiencies, the firms' procurement and product development costs fell by 16%, a reduction that resulted in saving approximately US \$ 1,000 per motor vehicle.

Chopra, Meindl, and Dhamram (2007) asserted that ICT provides a collaboration platform by allowing customers and suppliers to work together on product design using specialist ICT design tools. Value chain integration may be made possible if separate activities can be knitted together by faster and more reliable information flows. Integration allows customers to change their specification and delivery schedules themselves which then automatically reconfigures requirements back in the procurement system. ICT can allow managers and external stakeholders to bypass traditional gatekeepers who gained power from their control of information. ICT-based systems can also create direct communication between the top and bottom of an organization through use of in-house websites.

This helps organizations reduce transaction and production costs and achieve operational efficiency. Kenth and Vahid (2008) found that ICT drives e-markets to increase the availability of information about suppliers who are made available for each product and increase market interest for parties, reduce procurement costs and support paperless transactions. It enables users to buy at lower prices worldwide. Offers of companies on their websites enable customers to choose between a variety of products and retailers. Products can be customized before shopping and warehousing related costs reduced due to direct delivery. Dell and Amazon work this way. The global setting includes higher cultural distance and geographical complexity, lower behavior transparency and social difficulties in bonding between procurement channel partners. Thus, ICT could be more effective procurement performance coordination and control mechanism than personal face-to-face interaction in international exchange relationships.

2.3.2. Procurement Policies

A procurement policy is simply the rules and regulations that are set in place to govern the process of acquiring goods and services needed by an organization to function efficiently (Findlay 2009). The exact process will seek to minimize expenses associated with the purchase of those goods and services by using such strategies as volume purchasing; the establishment of a set roster of vendors, and establishing reorder protocols that help to keep inventories low without jeopardizing the function of the operation. Both small and large companies as well as non-profit organizations routinely make use of some sort of procurement policy (Bartik 2009). There is no correct way to establish a procurement policy, factors such as the size of the business, the availability of vendors to supply necessary goods and services, and the cash flow and credit of the company will often influence the purchasing procurement approach. (Golder, 2007). The size of the company is likely to make a difference in the formation of procurement policy, in that a small company may not be able to command the volume purchase discounts that a large corporation can manage with relative ease (Gadde, 2007).

Procurement policy benefits the organization by keeping costs in line and clearly defining how purchases will be made (Hall 2009). As the needs of the entity change, there is a good chance that the procurement policy will be adjusted to meet those new circumstances. This is necessary to make sure the policy continues to function in the best interests of the company or non-profit organization and keep the acquisition process simple and orderly (Günther 2007). According to PPOA (2007), the public procurement system in Kenya has been undergoing consistent reforms with the global trend since mid-1990s, most notably within the periods covering 1997-2001 and 2005. Previous to these reforms, the legal framework governing public procurement was very amorphous, providing a conducive environment for the perpetration of various malpractices in public procurement including the endemic corruption that characterized the system. George (2010) contends that the level of compliance with procurement regulations greatly influences the efficiency of the procurement procedures in public sector organizations.

According to Patrick (2009), with the official launch of Public Procurement Reforms, the country set on the reform road in the area of public procurement by; putting in place a unified legal and regulatory framework to guide the reforms. This was realized through the gazettelement of the Exchequer and Audit Act Public Procurement, Regulations (2001), which harmonized all the Treasury circulars and manuals governing procurement in the public sector. Putting in place an institution to oversee development and implementation of the public procurement policy in Kenya and improve transparency. This was realized through the creation of the Public Procurement Directorate (PPD) to oversee the public procurement process in Kenya and the Public Procurement Complaints, Review and Appeals Board (PPCRAB) to handle tendering disputes Act (PPOA, 2007).

According to Johnson (2010), the landmark in the reforms was in 2005 when the Public Procurement and Disposal Act (2005) was enacted by Parliament. The Act established an oversight body, the Public Procurement Oversight Authority (PPOA), Public Procurement Oversight Advisory Board and the Public Procurement Administrative Review Board. It amended all other laws relating to procurement in public entities ensuring that all of it is done under the umbrella of the Act thus widening the scope of application of the law and providing a proper basis for enforcement. With the gazettelement of the subsidiary legislation entitled Public Procurement and Disposal Regulations 2006, the law became operational on 1st January, 2007 (PPOA 2007). According to Andrew (2008), the Public Procurement and Disposal Act, 2005 became operational on 1st January, 2007 with the gazettelement of the Public Procurement and Disposal Regulations, 2006. This called for all public entities to strictly execute procurement functions according to the Act. However, despite all these regulatory machines, the public sector procurement process is not in tandem with these legislations.

According to the study by Price Water House Coopers PWHC (2009), over 50% of public enterprises in Kenya do not comply with procurement regulations and this has created corruption loopholes and other malpractices on procurement processes. According to PPOA (2009), the current public procurement framework in Kenya has recently been strengthened in a number of respects: With the enactment of the PPDA and Regulations, Kenya today has in place a sound and comprehensive legal framework for public procurement with a clear hierarchical distinction. The PPDA clearly establishes the procurement methods to be applied, advertising rules and time limits, the content of tender documents and technical specifications, tender evaluation and award criteria, procedures for submission, receipt and opening of tenders, and the complaints system structure and sequence.

The PPDA and Regulations cover goods, works and services for all procurement using national funds. Both documents are published and widely distributed within government. The legal framework is complemented with a series of Standard Tender Documents (STDs) covering procurement of goods, works and services, and the responsibility for updating the STDs is clearly assigned to the PPOA.

Christianne (2008) found that the procurement policies employed by many State Corporation in UK determine the level of effectiveness in execution of the procurement practices. The study also notes that the level of procurement regulations compliance, level of top management support and the employed procurement procedures determine the nature of the employed procurement policies in State Corporations. Jackson (2007) noted that over 70% of public and private companies in Britain and Germany have embraced effective procurement policies while in China only less than 30% of organizations have managed to successfully implement effective procurement policies. Talluri (2008) found that many government organizations in United India and Malaysia lack effective procurement policies for supporting implementation of sustainable procurement policies. A study by George (2008) notes that in Africa many government corporations lack effective procurement policies and this influences implementation of ineffective procurement practices. Further, findings by Simpson & Power (2007) revealed that low level of procurement regulations compliance in many public training institutions in developing nations hampers effective execution of procurement functions and this impedes implementation of institutional development projects. Tanzi (2009) notes that application of poor procurement policies and lack of top management support does not promote effective implementation of procurement practice in many governments (PPOA 2009).

Ombuki, Arasa, Ngugi, and Muhwezi, (2014) conducted a study on determinants of procurement regulatory compliance by Kenya's public universities. The study findings indicate that political factors influence most the regulatory compliance in the public university procurement in Kenya. The most influential politician was the member of the women representative whose influence accounted for

95.5%. The study recommended that politicians should be well-educated on the need to comply with the government's procurement rules and regulations. A study by Muli (2009) reveals that the public procurement reforms in Kenya have culminated in promulgation of the Public Procurement and Disposal Act 2005 and the Public Procurement and Disposal Regulations 2006 that provide a legal framework for regulating public procurement, with oversight functions carried out by the Public Procurement Oversight Authority (PPOA). The study further notes that many State Corporation procurement practices do not fully comply with the procurement regulations and this leads to misappropriation of institutional funds.

2.3.3. Information Systems

Enterprise resource planning (ERP) integrates internal and external management information across an entire organization, embracing finance/accounting, manufacturing, sales and service and CRM. ERP systems automate this activity with an integrated software application. Its purpose is to facilitate the flow of information between all business functions inside the boundaries of the organization and manage the connections to outside stakeholders (Telgen, Zomer, & de Boer, 1997). Enterprise resource planning (ERP) as an extension of material requirements planning (MRP), later accounting resource planning and computer-integrated accounting. Without supplanting these terms, ERP came to represent a larger whole, reflecting the evolution of application integration beyond accounting (Raymond, 2005).

ERP is a business management system made up from a collection of applications or modules that integrates company functions such as marketing, finance, manufacturing and logistics (Helo and Szekeley, 2005). ERP uses database technology to control and integrate information related to a company's business including data related to customers, suppliers, employees and finance. All business transactions, such as inventory management, production planning and distribution are entered, recorded, processed, monitored and reported (Helo *et al.*, 2008).

An information technology (IT) specification is a description of a technology product or service a customer seeks to procure and is also a description of what a supplier must be prepared to offer to be considered for an award. International studies reveal that in spite of a growing proportion of purchased services, the management of these costs and processes is not yet very advanced compared with cost management of direct and indirect goods (Caldwell, *et al.*, 2009).

2.3.4. Environmental Factors

Several scholars have highlighted the linkage between the international regulatory environment and e procurement implementation. Reddick (2004) states that companies and governments have to overcome existing legislative, regulatory and organizational barriers in order to succeed in the e-procurement implementation. Many countries have not made e-procurement laws part of the national legislative framework as is the case with Portugal (European Union, 2012). According to Beauvallet, Boughzala and Assar (2011), public e-procurement is constantly progressing, although difficulties related to insufficient technical skills and the complexity of the juridical context hinder seriously its full adoption. Governments have not enacted laws that support e-procurement and this frustrates the usage of the technology in all industries (Beauvallet, 2011).

There are legal barriers that impede participation in cross-border tenders and this breeds a fertile ground for discriminatory purchasing and hinders transparency (European Commission, 2012). There are no elaborate laws guiding digital signatures as a principle of legal recognition and evidence value of electronic documents (European Commission, 2012).

2.4. Procurement Performance

Procurement encompasses the whole process of acquiring property and/or services. It begins when an agency has identified a need and decided on its procurement requirement. Procurement continues through the processes of risk assessment, seeking and evaluating alternative solutions, contract award, delivery of and payment for the property and/or services and, where relevant, the ongoing management of a contract and consideration of options related to the contract. Procurement also extends to the ultimate disposal of property at the end of its useful life (Waters, 2004).

Sound public procurement policies and practices are among the essential elements of good governance (KIPPRA, 2006). (Otieno, (2004) notes the irregular procurement activities in public institutions provide the biggest loophole through which public resources are misappropriated. According to Thai (2001), the basic principles of good procurement practice include accountability, where effective mechanisms must be in place in order to enable procuring entities spend the limited resources carefully, knowing clearly that they are accountable to members of the public; competitive supply, which requires the procurement be carried out by competition unless there are convincing reasons for single sourcing; and consistency, which emphasizes the equal treatment of all bidders irrespective of race, nationality or political affiliation.

According to (Kalakota & Robinson (2001) before the implementation of e-procurement, a company must first clearly define the business problems its e-procurement solution is intended to address. Furthermore, before an e-procurement solution can be deployed, a company must undergo thorough procurement process re-engineering. Automating an existing procurement process will only make matters worse (Kalakota & Robinson (2001). Puschmann and Alt (2005) recognize that in the successful practices the redesigning of the procurement process is focused on: reduction or elimination of authorization stages; regulation of exceptions to a limited degree in the beginning; elimination of paper; integration of suppliers in the entire process chain; and consideration of the complete process from searching for goods through to invoicing.

2.5. Critique of the Existing Literature

Existing literature has found colossal constraints in the public procurement system. For instance, Amayi (2011), in his study found that procurement operations require better performance control system. He asserted that a records management system that an organization adopts has effects on its procurement operations. The researcher concluded that without ethics the performance of procurement operations would be negatively affected and pointed out that existing legal framework was an impediment to the performance of operations in the public procurement. He further concluded that integrated ICT systems organize and disclose enormous amounts of information about the workings of the total system.

While appreciating his findings, this study notes that the researcher did not employ the personal observation tool so as to gather data especially on ethics and integrity. Analysis of factors such as core technical skills and application of ICT in procurement management are important to overcome some of the constraints. Kirungu (2002) in his study found that inefficiency in the supply chain (SC) was caused by bureaucratic procurement and disposal procedures, irrational supply base, adversarial customer-supplier relationships, and traditional storage operations. He recommended that Kenyatta National Hospital (KNH) procurement procedures be exempted from the Public Procurement Regulations, rationalization of the supply base, and partnership sourcing. This study concurs with his findings pertaining to supply base rationalization and relationships but wishes to point out that the research instruments used were limited to an interview and observations. No questionnaires were administered which could have given adequate data for analysis. It was further noted that senior managers were not interviewed and he failed to employ records analysis method. This study does not support the recommendation that KNH procurement procedures be de-linked from public procurement legal framework because with appropriate staff and technology, performance in the entire public sector procurement system can be improved. Maina (2011) in his study found that weak oversight and enforcement, non-transparent practices, lack of effective links between procurement and financial management, poor record management and filing system, and delays and inefficiencies on the implementation of the PPDA as factors influencing the implementation of the procurement law in Kenya, the case of Ministry of Education.

The study concluded inefficiencies in procurement led to increased procurement costs, causing longer cycle times, lower quality purchasing decisions within the ministry. While appreciating his findings, this study does not support findings that poor record management system alone impedes performance. Ethical issues should also be put into perspective. Indeed, performance can still be improved if ICT is employed with modern control mechanisms. This study agrees with his recommendation that all stakeholders need to be sensitized on the good of embracing financial and procurement reforms.

2.6. Literature Gap

Most of the studies however have concentrated in the developed economies with emerging economies attracting only a minority share of the studies conducted. Previous studies by Nicholas et al (2008) examined whether European procurement rules prevent or generate crime whereas Maina (2011) determined procurement procedures in the banking industry. Therefore, is a literature gap on procurement performance measurement.

2.7. Summary

The above chapter reviews the various theories that inform the independent and dependent variables. The chapter explores the conceptualization of the independent and the dependent variables by analyzing the relationships between the variables. In addition, empirical literature in a wide range of studies have considered procurement performance measurement as being the most basic concept used to determine the income and performance of economic entities, industries and even whole economies as well as empirical review.

3. Research Methodology

3.1. Introduction

This chapter outlines the research design and methodology that will be used to carry out the study. The chapter also deals with the target population, type of data collected, sampling frame, sample and sampling technique, the sample size, data collection procedures, pilot test, validity and reliability of the instrument as well as the data analysis techniques and how eventually data will be presented.

3.2. Research Design

The researcher used descriptive research design. Descriptive study is concerned with finding out who, what, where and how much of a phenomenon, which is the concern of the study. Sekaram (2006) observes that the goal of descriptive research is to offer the researcher a profile or describe relevant aspects of the phenomena of interest from the individual, organization, industry or other perspective. A descriptive research based study was used using a cross-sectional survey design. Bryman, (2004) indicated that, cross-sectional design entails collection of data on more than one case at a single point of time so as to collect a body of data in connection with more than one variable which is then looked at to detect patterns of connection. In addition, the design best fit in the ascertainment and description of characteristics of variable in this research study and allows for use of questionnaires, interviews and descriptive statistics such as frequencies and percentages. In addition, a descriptive design is appropriate since it will enable the researcher to collect enough information necessary for generalization.

3.3. Target Population

The study targeted employees of KCB. There are 1,200 employees of KCB coast region (KCB, 2016). Since the study is descriptive in nature, Mugenda & Mugenda (2003) recommends a sample size of ten percent. However, Kothari (2004) recommends that a sample

size be as large as possible in order to reproduce salient characteristics of the accessible population to an acceptable level as well as to avoid sampling errors. The banks head office is selected as a case study because of proximity to the researcher, time availability for research and budgetary constraints.

Management	Level Population	Percentage Target	Target Population
Top Management	54	10%	5
Middle Management	407	10%	41
Line managers'	739	10%	74
TOTAL	1,200	10%	120

Table 1: Target Population

3.4. Sample Size

Mugenda and Mugenda (2003) asserts that sampling is that part of the statistical practice concerned with the selection of individual or observations intended to yield some knowledge about a population of concern, especially for the purpose of statistical inferences. They advise that a researcher would have to use 30% of the total target population as a sample for it to be accepted as a good representative sample. The researcher therefore decided to use 120 as the sample size since applying a 30% would reduce the sample size below the minimum threshold that is not acceptable for research. The sample size was 120.

3.5. Sampling

Sampling is the process of selecting a number of individuals or objects from a population such that the selected group contains elements representative of the characteristics found in the entire population. Sample is a small group of objects or individuals selected or drawn from a population in such a manner that its characteristics represent population characteristics (Orodho, 2009).

3.6. Sampling Technique

Stratified random sampling method was used to select relevant respondents from various departments of KCB. Mugenda and Mugenda (2003) argue that stratified random sampling is where a given number of cases are randomly selected from each population sub-group. It thus ensures inclusion in the sample of subgroup which otherwise could be omitted entirely by other sampling methods. In this case stratification will be based on department from which employees come from.

Stratified sampling enables the population to be divided into five segments (relevant departments within KCB) called strata. Simple random sample is then drawn from each stratum, and then those sub-samples joined to form complete stratified samples. In addition, proportional allocation is done, where each stratum contributed to the sample a number that is proportional to its size in the population.

3.7. Data Collection Procedure

The researcher used structured questionnaires to collect data from KCB respondents. A questionnaire with high reliability would receive similar answers if it is done again and again or by other researchers (Bryman & Bell, 2007; Saunders et al., 2007). In addition, the questionnaires are convenient for the task in that they can be easily and conveniently administered with the study sample. The use of questionnaire is cost effective, less time consuming as compared to the use of interview. Data collected through the use of well-structured questionnaire was easy to analyze.

3.8. Pilot Test

The questionnaire was pilot tested before the actual data collection. This involved a few respondents from KCB to ascertain its effectiveness. The researcher was interested in testing the reliability of the research instruments, the questionnaire hence validity of data collected. Validity is the accuracy and meaningfulness of inferences which are based on the research results (Mugenda & Mugenda, 2003) asserts that reliability is done using Cronbach's Alpha Model on SPSS. Mugenda & Mugenda (2003) assert that reliability is the measure of the degree to which research instrument yields consistent results or data after repeated trials. The researcher will do a pilot with 10 respondents before distributing the questionnaire. The purpose is to ensure that those items in the questionnaire are clearly stated and have the same meaning to all respondents. At the same time this will help to determine how much time is required to administer the questionnaire. Respondents for pre-testing were not form part of the sample.

3.9. Data Processing, Analysis and Presentation

Kothari (2009) argues that data collected has to be processed, analyzed and presented in accordance with the outlines laid down for the purpose at the time of developing the research plan. Data analysis involves the transformation of data into meaningful information for decision making. It will involve editing, error correction, rectification of omission and finally putting together or consolidating information gathered. The collected data was analyzed quantitatively and qualitatively. The quality and consistency of the study was further assessed using Cronbach's alpha. Data analysis was performed on a PC computer using Statistical Package for Social Science (SPSS Version 22) for Windows. Analysis was done using frequency counts, percentages, means and standard deviation, regression, correlation and the information generated will be presented in form of graphs, charts and tables. Set of data was described using percentage, mean standard deviation and coefficient of variation and presented using tables, charts and graphs. Fraenkel and Wallen

(2000) argue that regression is the working out of a statistical relationship between one or more variables. The researcher used a multiple regression analysis to show the effect and influence of the independent variables on the dependent variables.

The relationship was as follows;

- $Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$
- Y = Represents the dependent variable, Procurement performance measurement
- α = Constant
- $\beta_1, \beta_2, \beta_3, \beta_4$ = Partial regression coefficient
- X_1 = E-procurement
- X_2 = Procurement policies
- X_3 = Information system
- X_4 = Environmental factors
- ε = error term or stochastic term

4. Data Analysis, Results and Discussions

4.1. Introduction

This chapter presents analysis of the data on the determinants of procurement performance among employees of Kenya Commercial Bank in Mombasa County, Kenya. The chapter also provides the major findings and results of the study and discusses those findings and results against the literature reviewed and study objectives. The data is mainly presented in frequency tables, means and standard deviation.

4.2. Response Rate

The study targeted 120 employees of Kenya Commercial Banks in Mombasa County, Kenya. From the study, 100 out of the 97 sample respondents filled-in and returned the questionnaires making a response rate of 83.3% as per Table 2 below.

	Frequency	Percentage
Respondent	100	83.3
Non-respondent	20	16.7
Total	120	100

Table 2: Questionnaire Return Rate

According to Mugenda and Mugenda (1999) a response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of 70% and over is excellent; therefore, this response rate was adequate for analysis and reporting.

4.2.1. Data Validity

The researcher asked experts, three academicians, to assess the scales' content validity. Accordingly, the researcher made changes on the first draft in terms of eliminating, adding or rewording some of the items included in that draft.

4.2.2. Reliability Analysis

Prior to the actual study, the researcher carried out a pilot study to pre-test the validity and reliability of data collected using the questionnaire. The pilot study allowed for pre-testing of the research instrument. The results on reliability of the research instruments are presented in Table 3 below.

Scale	Cronbach's Alpha	Number of Items
Procurement Performance	0.764	6
E-procurement	0.809	6
Procurement Policies	0.723	7
Information System	0.791	5

Table 3: Reliability Coefficients

The overall Cronbach's alpha for the four categories which is 0.752. The findings of the pilot study show that all the four scales were reliable as their reliability values exceeded the prescribed threshold of 0.7 (Mugenda and Mugenda, 2003).

4.2. Background Information

The background information was gathered based on company profile.

4.2.1. Number of Branches

The study sought to know how many branches there are in Mombasa county. The results showed that banks that have between 1-5 branches were 70%, 6-10 branches were 4% and those with over 10 branches were 26% with a mean score of 1.56 with a standard deviation of 0.880 as shown in figure 2 below

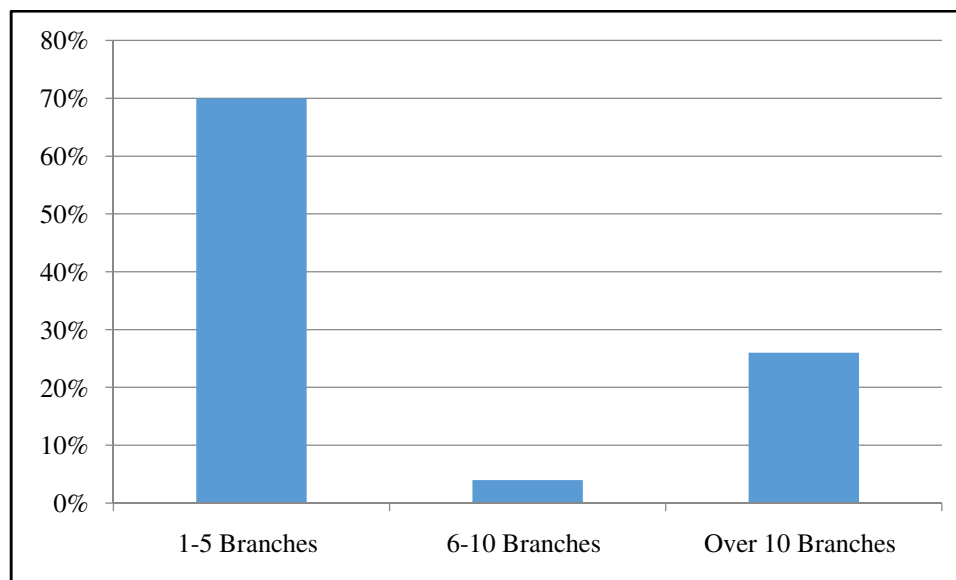


Figure 2: Number of branches

4.3. Determinants of Procurement Performance of Commercial Banks

In the research analysis the researcher used a tool rating scale of 5 to 1; where 5 were the highest and 1 the lowest. Opinions given by the respondents were rated as follows, 5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree and 1= Strongly Disagree. The analysis for mean and standard deviation were based on this rating scale.

4.3.1. E-Procurement

E-procurement	N	Mean	Std Deviation
My bank has invested heavily in E-procurement	100	4.54	1.086
The system has helped in controlling the inventory stocks	100	4.29	1.131
The system has added competitive advantage to the bank	100	4.36	1.030
The system has reduced operation costs for the banks	100	4.52	1.000
The system has helped in reducing ordering time and follow up	100	4.55	.845
The system is easy to use	100	4.41	1.026
Valid N (listwise)	100		

Table 4: E-procurement

The first objective of the study was to establish the effects of e-procurement on procurement performance of commercial banks. Respondents were required to respond to set questions related to e-procurement and give their opinions. The opinion that the bank has invested heavily in E-procurement and that the system is helping in controlling the inventory stocks to enable the re-order level to be sufficient with a mean score of 4.54 and 4.29 with standard deviation of 1.086 and 1.131 respectively. The system had added competitive advantage to the bank by reducing operational costs with mean scores of 4.36 and 4.52 with standard deviation of 1.030 and 1.000 signifying a high level of relationship. Further the study reveals that the system has helped in reducing ordering time and follow up and that it's easy to use had means score of 4.55 and 4.41 with standard deviation of 0.845 and 1.026 indicating a high level of agreement

4.3.2. Procurement Policies

Procurement Policies	N	Mean	Std. Deviation
My bank is in compliance with public procurement and disposal regulations (2006)	100	4.46	1.058
There is a high level of accuracy in procurement records used	100	4.18	.869
There is high level of accuracy and reliability of procurement records kept	100	4.33	1.074
My bank prepares and implements procurement plans annually	100	4.34	1.183
My bank receives expected management support annually	100	4.70	.482
My bank often fails to adhere to the budgetary allocation annually	100	1.91	1.147
Valid N (listwise)	100		

Table 5: Procurement policies

The second objective of the study was to establish the effects of e-procurement on procurement policies of commercial banks. Respondents were required to respond to set questions related to procurement policies and give their opinions. The opinion in agreement that my bank is in compliance with public procurement and disposal regulation (2006), had a mean score of 4.46 with a standard deviation of 1.058. The opinion that there is high level of accuracy in procurement records used had a mean score of 4.18 with a standard deviation of 0.869 signifying agreement. The opinion that there is high level of reliability of procurement records kept had a mean score of 4.33 with a standard deviation of 1.074 signifying a high level of agreement as stated by Arende (2015) that reliability in procurement records results in high performance of the organization. The opinion that my bank receives expected management support annually had a mean score of 4.70 with a standard deviation of 0.482 indicating that the management of commercial banks do support the procurement departments with adequate budget allocation for its operations. The opinion that the bank fails to adhere to budgetary allocation annually had a low mean score of 1.91 with a standard deviation of 1.147 signifying a low level of agreement.

4.3.3. Information System

Information System	N	Mean	Std Deviation
Improves quality of services while its absence or use of inappropriate means can act as a barrier to change and may lead to deterioration of the procurement function	100	4.31	1.293
Measuring the performance of the procurement function yields benefits to organization such as cost reduction, enhanced profitability, assured supplies, quality improvement and competitive advantage	100	4.50	.959
Important steps toward risk reduction and mitigating those that are most likely to occur	100	4.25	1.226
Placing and tracking orders online	100	4.46	1.096
Quick response and JIT replenishment	100	4.64	.659
Valid N (listwise)	100		

Table 6: Information System

The third objective of the study was to establish the effects of information system on procurement performance of commercial banks. Respondents were required to respond to set questions related to information system and give their opinions. The opinion in agreement that measuring the performance of the procurement function yields benefits to organizations such as cost reduction, enhanced profitability, assured supplies, quality improvements and competitive advantage has a mean score of 4.50 with standard deviation of 0.959 signifying a high level of agreement. The opinion that quick response and JIT replenishment had a mean of 4.64 with standard deviation of 0.659. The opinion that placing and tracking orders online had a mean score of 4.46 with standard deviation of 1.096. The statement that, information system improves quality of services while its absence or use of inappropriate means can act as a barrier to change and may lead to deterioration of the procurement function had a mean score of 4.31 with a standard deviation of 1.293 signifying a high level of agreement. Important step toward risk reduction and mitigating of those that are most likely to occur had a mean score of 4.25 with standard deviation of 1.226.

4.3.4. Environmental Factors

Determinants of Procurement Performance	N	Mean	Std. Deviation
Political influence in procurement	100	2.54	1.359
Poor data management system	100	2.61	1.476
Roll out strategy	100	3.29	1.610
Outsourcing contracts	100	3.76	1.156
Fear of losing business by suppliers	100	3.90	1.168
Unreliable internet connections	100	3.93	.728
Lack of full implementation	99	2.82	1.198
Valid N (listwise)	99		

Table 7: Environmental factors

The fourth objective of the study was to establish the effects of environmental factors on procurement performance of commercial banks. Respondents were required to respond to set questions related to environmental factors and give their opinions. The opinion in agreement that there is political influence in procurement processes had a mean score of 2.54 with a standard deviation of 1.359 signifying a low level of agreement. Poor data management system had a mean of 2.61 with standard deviation of 1.476. Rolling out strategy and outsourcing contracts had a means score of 3.29 and 3.76 with standards deviation of 1.610 and 1.156 respectively. Fear of losing business by suppliers had a mean score of 3.90 with a standard deviation of 1.168. Unreliable internet connections had a mean score of 3.93 and standard deviation of 0.728 signifying a high level of agreement that internet connection is paramount in driving business as stated by Arende (2015). Lack of full implementation had a mean score of 2.82 with a standard deviation of 1.198 signifying a low level of agreement.

4.3.5. Procurement Performance

Procurement Performance	N	Mean	Std. Deviation
My bank procurement systems are effective at detecting fraud	100	4.33	1.035
My bank has appropriate and sufficient internal controls in place	100	3.96	1.477
My bank does conduct performance appraisals at least twice a year	100	4.19	1.032
My bank conducts monthly and yearly budget variance analysis	100	4.41	1.026
My bank does produce daily, weekly, monthly, quarterly and Yearly financial reports.	100	4.39	1.072
The performance appraisals are supported by rewards.	100	4.22	1.124
Valid N (listwise)	100		

Table 8: Procurement Performance

The opinion that my bank has invested heavily in E-procurement had a mean score of 4.33 with a standard deviation of 1.035 signifying a high level of agreement. My bank has appropriate and sufficient internal controls in place had a mean of 3.96 with a standard deviation of 1.477, my bank conducts performance appraisals at least twice a year had a mean score of 4.19 with standard deviation of 1.032 signifying a high level of agreement. Budgetary variances are examined every year had a mean 4.41 and a standard deviation of 1.026 and bank produces daily, weekly, monthly, quarterly and yearly financial reports had a mean of 4.39 with standard deviation of 1.072 signifying a high level of agreement. The opinion that good performance is supported with rewards had a mean of 4.22 with standard deviation of 1.124 signifying a high level of agreement

4.4. Multiple Regression Analysis

The correlation analysis Table 9 shows the relationship between the independent variables, e-procurement, procurement policies, information system and environmental factors the dependent determinants of procurement performance. The analysis indicates the coefficient of correlation, r equal to 0.488, 0.522, 0.077 and 0.187 for e-procurement, procurement policies, information system and environmental factors respectively. This indicates a very strong positive relationship between the independent variables, e-procurement, procurement policies, information system and environmental factors the dependent variable determinants of procurement performance of commercial banks in Mombasa County.

Coefficients ^a									
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	31.132	7.729		4.028	.000			
	Procurement Performance	.674	.184	.371	3.656	.000	.488	.353	.292
	E-Procurement	.558	.146	.356	3.829	.000	.522	.367	.306
	Procurement Policies	.244	.146	.159	1.670	.000	.077	.170	.133
	Information System	.536	.188	.245	2.844	.005	.187	.281	.227

a. Dependent Variable: Determinants of Procurement Performance

Table 9: Multiple Regression Analysis Coefficients

The relationship was as follows;

$$\rightarrow Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

$$\rightarrow Y = 31.132 + 0.674X_1 + 0.558X_2 + 0.244X_3 + 0.536X_4$$

Where:

→ Y = Represents the dependent variable, Procurement performance measurement

→ α = Constant

→ $\beta_1, \beta_2, \beta_3, \beta_4$ = Partial regression coefficient

→ X_1 = E-procurement

→ X_2 = Procurement policies

→ X_3 = Information system

→ X_4 = Environmental factors

→ ε = error term or stochastic term

The regression equation above has established that taking all factors into account (determinants of procurement performance as a result of e-procurement, procurement policies, information systems and environmental factors) constant at zero determinants of procurement performance among employees of KCB will be 0.658. The findings presented also shows that taking all other independent variables at zero, a unit increase in e-procurement will lead to a 0.483 increase in the scores of determinants of

procurement performance among employees of KCB; a unit increase in procurement policies will lead to a 0.357 increase in determinants of procurement performance among employees of KCB, a unit increase in information systems will lead to a 0.496 increase in the scores of determinants of procurement performance among employees of KCB; and a unit increase in environmental factors will lead to a 0.451 increase in determinants of procurement performance among employees of KCB.

This therefore implies that all the four variables have a positive relationship with determinants of procurement performance with information system contributing most to the dependent variable. From the table we can see that the predictor variables of e-procurement, procurement policies, information system and environmental factors got variables coefficients statistically significantly since their p-values are less than the common alpha level of 0.05.

Hypothesis 1

H₀: There is no effect of e-procurement on procurement performance in commercial banks

$$\beta_1=0,$$

H₁: There is an effect of e-procurement on procurement performance in commercial banks

$$\beta_1\neq 0,$$

In relation to the variable e-procurement, the results in Table 9 above indicate that e-procurement process has a significant influence on procurement performance. This is supported by regression analysis t-value of 3.194 which is greater than the critical value 2.0 and a p-value of 0.01 at 95% level of significance which is less than 0.05. Arende, (2015) underscores that one of the most important facets of procurement is adopting technology in procurement processes to increase efficiency.

After testing the hypothesis by comparing the scores of calculated t-value and critical t; Calculated t-values was, 3.194 for e-procurement, which is greater than the critical $t_{36-1} (0.05) = 2.0$, the study rejected the null hypothesis that there is no effect of e-procurement on procurement performance in commercial banks in Mombasa county.

Therefore, the study accepted the alternative hypothesis that there is an effect of e-procurement on procurement performance in commercial banks in Mombasa County.

Hypothesis 2

H₀: There is no effect of procurement policies on procurement performance in commercial banks

$$\beta_1=0,$$

H₁: There is an effect of procurement policies on procurement performance in commercial banks

$$\beta_1\neq 0,$$

In relation to the variable procurement policies, the results in Table 9 above indicate that procurement policies have a significant influence on procurement performance. This is supported by regression analysis t-value of 2.95 which is greater than the critical value 2.0 and a p-value of 0.04 at 95% level of significance which is less than 0.05.

After testing the hypothesis by comparing the scores of calculated t-value and critical t; Calculated t-values was, 2.95 for procurement policies, which is greater than the critical $t_{36-1} (0.05) = 2.0$, the study rejected the null hypothesis that there is no effect of procurement policies on procurement performance in commercial banks in Mombasa County.

Therefore, the study accepted the alternative hypothesis that there is an effect of procurement policies on procurement performance in commercial banks in Mombasa County.

This is in agreement with Nduta *et al.* (2015) who argue that for an organization to operate efficiently; its procurement policies should be aligned to the objectives of the organization to create value to owners of the organization.

Hypothesis 3

H₀: There is no significant effect of information system on procurement performance of commercial banks

$$\beta_1=0,$$

H₁: There is a significant effect of information system on procurement performance of commercial banks

$$\beta_1\neq 0,$$

In relation to the variable information system, the results in Table 9 above indicate that information system has a significant influence on procurement performance in commercial banks. This is supported by regression analysis t-value of 4.111 which is greater than the critical value 2.0 and a p-value of 0.00 at 95% level of significance which is less than 0.05.

After testing the hypothesis by comparing the scores of calculated t-value and critical t; Calculated t-values was, 4.111 for information system, which is greater than the critical $t_{36-1} (0.05) = 2.0$, the study rejected the null hypothesis that there is no effect of information system on procurement performance of commercial banks in Mombasa County.

Therefore, the study accepted the alternative hypothesis that there is an effect of information system on procurement performance. This concurs with (Arende, 2015) who underscores that embracing technology in procurement processes enables information systems to thrive.

Hypothesis 4

H₀: There is no effect of environmental factors on procurement performance in commercial banks

$$\beta_1=0,$$

H₁: There is an effect of environmental factors on procurement performance in commercial banks

$$\beta_1\neq 0,$$

In relation to the variable environmental factors, the results in Table 9 above indicate that environmental factors have a significant influence on procurement performance in commercial banks. This is supported by regression analysis t-value of 3.109 which is greater than the critical value 2.0 and a p-value of 0.004 at 95% level of significance which is less than 0.005.

After testing the hypothesis by comparing the scores of calculated t-value and critical t; Calculated t-values was, 3.109 for space capacity, which is greater than the critical $t_{36-1}(0.05) = 2.0$, the study rejected the null hypothesis that there is no effect of environmental factors on procurement performance in commercial banks.

Therefore, the study accepted the alternative hypothesis that there is an effect of environmental factors on procurement performance in commercial banks. This is in agreement with Mahinda (2015) who observes that environmental factors hinder procurement processes.

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.795613 ^a	.633	.375	2.99100		
a. Predictors: (Constant), E-procurement, Procurement Policies, Information system, Environmental factors						

Table 10: Regression Analysis Summary

Table 10 above indicates an overall P-value of 0.000 which is less than 0.05 (5%). This shows that the overall regression model is significant at the calculated 95% level of significance. It further implies that the studied independent variables namely e-procurement, procurement policies, information system and environmental factors have significant effect on procurement performance in commercial banks.

Table 10 shows the regression model summary indicating the coefficient of determination R Square as 0.663. This means that 66.3% of the relationship is explained by the identified four factors namely e-procurement, procurement policies, information system and environmental factors. The rest 33.7% is explained by other factors in commercial banks not studied in this research.

In summary the four factors studied namely, e-procurement, procurement policies, information system and environmental factors explains or determines 66.3% of the relationship while the rest 33.7% is explained or determined by other factors.

4.5. Anova

The study used ANOVA to establish the significance of the regression model. In testing the significance level, the statistical significance was considered significant if the p-value was less or equal to 0.05. The significance of the regression model is as per Table 11 below with P-value of 0.00 which is less than 0.05. This indicates that the regression model is statistically significant in predicting factors affecting containerized cargo clearance at KPA.

Basing the confidence level at 95% the analysis indicates high reliability of the results obtained. The overall Anova results indicates that the model was significant at $F = 15.710$, $p = 0.000$.

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	562.180	4	140.545	15.710	.000 ^b
	Residual	840.931	94	8.946		
	Total	1403.111	98			
a. Dependent Variable: Determinants of Procurement Performance						
b. Predictors: (Constant), E-procurement, procurement policies, information technology, environmental factors						

Table 11: Anova

5. Summary of the Findings, Conclusions and Recommendations

5.1. Introduction

This chapter deals with the summary of the findings and provides conclusions of the findings in relation to the study. It also highlights recommendations and suggestions for further study.

5.2. Summary of Findings

The objective of this study was to assess the determinants of procurement performance of commercial banks Mombasa County. The study was conducted on the 100 employees out of 120 employees that constituted the sample size. To collect data, the researcher used a structured questionnaire that was personally administered to the respondents. The questionnaire constituted 32 items. The respondents were the employees of KCB. In this study, data was analyzed using frequencies, mean scores, standard deviations, percentage, Correlation and Regression analysis. From the study findings, on company profile majority of the respondents had between 1-5 branches.

5.2.1. E-Procurement

The study established that the bank has invested heavily in e-procurement software and infrastructure that has helped in controlling inventory stocks to enable re-order level to be sufficient. E-procurement with the support of technology has helped to operationalize the procurement processes from manual process to online applications that has reduced operational costs thus increasing profits in the banks Arende, (2015)

5.2.2. Procurement Policies

The study established that bank is in full compliance with the procurement and disposal regulation 2006 as well as other procurement laws. The bank's procurement policies have helped to reduce costs in the procurement processes by complying with procurement laws thus reducing cases being filed for review of or appeals that may delay supply of goods and services hence increasing efficiency and profitability.

5.2.3. Information System

The study established that measuring the performance of the procurement function yields benefits to organizations such as cost reduction enhanced profitability, assured supplies, quality improvement and competitive advantage. The platform on which procurement processes takes place has been secured to check frauds and to keep pre-qualified suppliers aware of the tenders available in the bank thus ensuring efficiency.

5.2.4. Environmental Factors

Political influence in the procurement processes has being reduced by disqualifying supplies who canvass for business that is already work in progress. This has helped to maintain suppliers who are committed to the open tendering processes. Full implementation of the e-procurement processes has reduced fraud in the procurement processes Arende, (2015).

The analysis indicates the coefficient of correlation, r equal to 0.488, 0.522, 0.077 and 0.187 for e-procurement, procurement policies, information system and environmental factors respectively. This indicates a very strong positive relationship between the independent variables, e-procurement, procurement policies, information system and environmental factors the dependent variable determinants of procurement performance of commercial banks in Mombasa County. The regression model summary indicating the coefficient of determination R Square as 0.663. This means that 66.3% of the relationship is explained by the identified four factors namely e-procurement, procurement policies, information system and environmental factors. The rest 33.7% is explained by other factors in commercial banks not studied in this research.

5.3. Conclusion

The study concluded the following:

5.3.1. E-procurement

That financial institution that have adopted E-procurement system has helped in reducing ordering time and follows up greatly in the banking industry thereby reducing operational costs, controlling the inventory stocks and adding competitive advantage. This improves performance of banks both financial and operationally creating more value for the shareholders.

5.3.2. Procurement Policies

That the banks management support is significant in creating sound procurement policies that ensure accuracy and reliability in procurement records and that procurement plans are implemented in required timelines.

5.3.3. Information System

With adequate information systems in place, banks can measure the performance of the procurement function to determine whether it yields benefits to the organization such as cost reduction, enhanced profitability, and assured supplies, quality improvement and competitive advantage. Further the study concluded that information systems help in risk reduction and mitigating those that are most likely to occur.

5.3.4. Environmental Factors

On environmental factors, the study concluded that with the right procurement laws and reliable internet connections, procurement processes help to increase performance of banks in Kenya.

5.4. Recommendations

The study recommended the following:

1. Those commercial banks should adopt technology in their procurement processes Arende (2015).
2. Those commercial banks should align their procurement policies in line with mission and vision of their organization
3. Those commercial banks should integrate the information systems like IFMIS into their operations
4. Those commercial banks should embrace good procurement practices so as to reduce external negative influence.

5.5. Suggestion for Further Studies

The study indicates e-procurement, procurement policies, information system and environmental factors have significant effect on determinants of procurement performance of commercial banks in Mombasa County privately entities. The researcher further recommends research in related areas in the public sector.

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