

ASSESSMENT OF PUBLIC PROCUREMENT PRACTICES IN ENHANCING PROCUREMENT COST REDUCTION AT EMBU UNIVERSITY COLLEGE, KENYA

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Abstract:

Objective: *To assess the role of public procurement practices in enhancing procurement cost reduction in Public Institutions, Embu University College, Kenya.*

Design: *Descriptive research design by simple random sampling which utilized structured questionnaire in collecting data.*

Setting: *Entire employees of Embu University, Kenya*

Subjects: *Seventy two respondents*

Results: *The content validity of the instruments was ascertained and tested to confirm the reliability and validity of the instrument by using SPSS software version 15.0. While descriptive statistics analyzed the quantitative data by use of tables, percentages, frequency counts, standard deviations, mean and inferences to test the relationship between the dependent and the independent variables. The study revealed that the University was outsourcing some of its procurement activities; this was fairly effective as a cost reduction strategy, though it was faced with a few challenges like slow delivery of service. It also concludes that inventory control was effective in enhancing timely availability of commodities. However the practice was not effective in enhancing procurement cost reduction. It further concluded that the procurement department was effective in Competitive bidding, which was very effective as procurement cost reduction strategy. The University practices e-procurement where tenders and quotations are uploaded on their website for prospective suppliers to download and submit as directed, the practice was effective in cost reduction on some commodities.*

Key Words: Public Procurement: Public entity: Procurement Practices, Cost: Procurement Cost Reduction: Outsourcing: Inventory control: Competitive tendering: E-procurement

1.1 Introduction

Weaknesses in public procurement including vulnerability to corruption are a global problem with approximately \$400 billion (Kshs 34.9 trillion) reported as being lost to bribery and corruption in procurement globally. In Kenya, Public Expenditure and Medium Term Framework carried out an elaborate research on the same in the year 2007. It estimated that Public procuring entities were buying at an average of 60% above the prevailing market price, an indicator that public procurement in Kenya does not receive the benefit of competitive procurement.

As a result Public institutions are under constant pressure with combination of external and internal factors, which include growing financial crises, donor pressure, rapid population growth, and endemic corruption triggered public sector reforms as a remedy, market-type solutions and values of entrepreneurial managerialism were introduced into the public sector so as to enhance value for money through procurement cost cutting measures (Knight, 2007), Roodhooft & Abbeele (2006).

In Kenya, Public institutions are still characterized by inefficiency and ineffectiveness as far as public procurement delivery is concerned, as a result, the public sector has recently been under a lot of pressure to reduce costs in their service delivery both in diaspora and the Kenya government, despite the efforts put in place there is evidence to suggest that institutions of higher learning have strenuously pared back spending while protecting their core pursuits of teaching, research and service by applying cost-reduction measures. This is according to the government's *Economic Survey 2015*,

Kenya's public universities including Embu University College will have to tighten their belts following a decision by the Treasury to cut funding by 6% in the coming financial year, which begins in July – 2015 despite 28% expansion in student numbers. While budget proposals released in January showed the East African country was planning to up financing to universities by 10% in what would have been the biggest funding rise in three years, final spending plans released last week show subsidies will be capped at US\$588 million, down from US\$627.2 million in the current fiscal year. However, others believe that more can and must be done and that additional opportunities for cost reduction do exist.

1.2 Cost Reduction in organizations

The objective of every organization is to operate efficiently and effectively in their procurement operations so as to reduce costs by utilizing the minimum resources against the unlimited wants, having in mind that procurement accounts to over 70% of every organization's budget, it is widely acknowledged fact that cost reduction is one of the most challenging tasks that a company can undertake especially when there are so many options open to cost conscious manager, (Gupta, 2000), in getting the best approach to reduce procurement costs by understanding that controlling operating costs at improving your competitive advantage.

According to a study by the Center for Applied Purchasing Studies (CAPS) Research, the primary goal of most purchasing executives is to reduce total costs. Supply managers in general are under an increasing amount of pressure to assure the accuracy and validity of their cost reduction measures. Their goals are often directly linked to promotions and bonuses as an incentive help their purchasing department reach its goals. As such, cost reduction measures must be able to withstand rigorous questioning from top management. Perhaps not surprisingly, public colleges and universities have achieved cost savings by turning to their own business services and processes.

Some services and processes utilized by institutions are inherent sources of cost saving opportunities as a result of Web-enabled technologies that permit service process redesigns to simultaneously improve cost structures and service quality, the forces of market competition, and business applications that are easily outsourced hence the pressure to reduce costs is increasing. Effective cost management and reduction in purchasing can be your road map to achieving your most critical organizational objectives. With careful planning and good cost reduction techniques and planning, purchasers can save big amount of company's budget Major concepts in cost in purchasing are price, cost, and total value analysis.

1.3 Statement of the problem

Trillions of dollars are spent each year buying goods and services for public projects, this means big budgets and complex plans. It also means ideal opportunities for corruption. Contracts to suppliers can be awarded without fair competition. This allows companies with political connections to triumph over their rivals or companies within the same industry can rig their bids, so each gets a piece of the pie. This increases the cost of services to the public and this adds as much as 50% to a project's costs. Over the past years public sector has been experiencing a lot of problems in managing its procurement processes where, a Data on the perception indicator from 2015 survey suggests that the level of corruption rose to 73.9% up from 67.9% from the 2012 survey. It is estimated that most organizations lose up to 40% of their revenue on corrupt deals.

1.4 Research Objectives:

The study was guided by the following specific objectives;

- i) To analyze the influence of outsourcing as a procurement cost reduction interventions at Embu University College.
- ii) To examine the use of inventory control management practices as a procurement cost reduction measure at Embu University College.
- iii) To determine how the use of competitive tendering as procurement cost reduction strategy at Embu University College.
- iv) To evaluate the benefits derived from of e-procurement in terms of procurement cost reduction at Embu University College

1.5 Justification of the Study

The recommendations from the research will benefit not only Embu University College, but also other public organizations that have inefficient and ineffectiveness supply chain management practices that do not add value in the role that it plays in enhancing smooth procurement process, it is therefore necessary that every shilling spent counts and translates in enhanced service delivery. The study gives a clear view of the relationship between supply chain management practices in cost reduction and the interdependence that exists between the two variables, since the study will assess and present the best procurement practices that will be applied to enhance cost reduction in procurement activities and key projects, it will assist the institution in avoiding processes that are wasteful by developing properly planned and coordinated procurement systems and practices.

1.6 Scope of the Study

The study was carried out in Embu University College situated 165 km from Nairobi City in the Eastern direction and about 4 km from Embu town along Embu-Meru road, it involved all departments of the institution from Top level management to clerical staff. There was a generalization from the findings due to

the relatively small sample of staff and officials who responded. The research project was undertaken from November 2015 to January 2016.

LITERATURE REVIEW

2.1 Theoretical Review

Plenty of reference authors present the theoretical basis of the study, which has been reviewed under the following theories:

2.1.1 General Systems Theory

The General Systems Theory was modeled by Ludwig Bertalanfy (1950); He relates the functioning of organizations with how living organisms function. The theory states, from a biological point of view, that, an organism is an integrated system of interdependent structures and functions made up of cells, and a cell contains molecules, which must work in harmony. Each molecule must know what others are doing, must be capable of receiving messages and must be sufficiently disciplined to obey.

Due to the complexity and instability of the external environment, the survival and effectiveness of an Organization will depend on how well it scans and adapts to its internal environment (Okumbe, 1998). Embu University College is an organization with many structures, each performing a different activity and they work in harmony in order to meet the overall mission and vision of the Institution i.e '*A dynamic epicenter of excellence in training and research for service to humanity*'. Therefore the success of the institution will be determined by how well the College University top management, stakeholders, and the government are going to co-ordinate, co-operate faithfully and loyally play their individual roles in achieving the overall goals of the instituton.

2.1.2 Transaction Cost Economics

Transactional cost economics, (TCE) associated with the work of Oliver E. Williamson represents one of the most influential attempts to develop an economic theory that takes seriously the structure of firms. Previously, economic theories tended to treat the firm as a sort of "black box," the internal workings of which were not considered to be important. However, it is acknowledged that profit maximization by firms requires rational, cost minimization behavior by owners and / or managers; TCE is different in that it stresses transaction costs as well as production costs. Williamson considers production costs as analogous to the costs of building and running an "ideal" machine while transaction costs are incurred by departures (such as friction) from such perfection.

Embu University College is a cost center in its performance especially when it engages in purchasing and supplies function as it tries to meet the customer demands in all divisions, where the University engaged employees to be in charge of income generating units to manage by making decisions of growth and advancing in order to supplement their income. EUC has the Catering, Accommodation, Farm, Health Unit services, lease of student shopping center and staff houses to enhancing supply of income to the institution. In many ways, transactional cost economics attempts to explain why EUC is able to manage the growing demand of education career opportunities by making diversified programmes in all academic faculties, also how they engage in day today direct marketing of these programmes to attract more self-sponsored student so that more income would be realized through fees collection and other entrepreneurial activities.

2.1.3 Theory of Procurement Contracts

A contract theory is the study of how individuals and businesses construct and develop legal agreements. Contract theory analyzes how parties to a contract make decisions under uncertain conditions, and when there is asymmetric information. It draws upon principles of financial and economic behavior, as principles and agents often have different incentives to perform or not perform actions. It is evident that Procurement problem has generated substantial attention in recent past. (Bajari & Tadelis, 2001) asserted that the primary focus of literature touching on procurement problem has been on the public sector procurement.

It is argued that this is a huge importance to the economy of any given country. The scholar argued that both the buyer and the contractor have private information at the onset of initiating a procurement project or activity, the theory is highly relevant to the procurement procedures and confidentiality of information during the procurement process for example undertakings to award contracts. EUC has established procurement unit staffed with procurement professional and the Principal has appointed the relevant committees that engages in approval of all procurement activities. Therefore, lack of information can lead to paying too high a price for a good or service. Bad debt can result from lack of information about a customer's creditworthiness. Under some circumstances transaction costs may be lower if the transaction takes place in an open market, while in others, they may be lower under hierarchical or alliance forms of governance structures.

2.1.4 Public Value Theory

Public Value Theory Public value theory was formulated by Moore, (1995) to provide public sector managers with a greater understanding of the constraints and opportunities within which they work, and the challenge to create publically valuable outcomes. (Benington & Moore, 2010) argue that public value theory envisages a manager's purpose as going beyond implementation of policy and adherence to institutional norms,

He notes that the theory articulates a more proactive and strategic role for public sector managers who seek to discover, define and produce public value, instead of just devising means for achieving mandated purposes.

The Kenyan Public Procurement and Asset Disposal Act, (2015) section 39 has a provision for preferences and reservations particularly for bidders from minority groups in society, local bidders, the youth, women and persons living with disabilities. This was operationalized with the gazette of the Preference and Reservations Regulation, (2011) and can be translated to mean positive discrimination, where these categories of suppliers are awarded 30% of all public procurement expenditure. This theory was important in explaining how the EUC implementation of the preference and reservations regulations has created procurement opportunities for the Small and Medium Enterprises and how this has made significant improvement to the lives of the citizens living within Embu County Government. The institution advertises its procurement opportunities in the daily newspaper and circulates posters of the same to Youth, women and people with disabilities as they train and educate them about 30% reservation of all procurement budgets in the public institution.

2.2 Empirical Review

This section will explain the various variables that the researcher intends to assess how public procurement practices enhance cost reduction in Public Institutions in Kenya.

2.2.1 Global Procurement Practices

The Organization for Economic Cooperation and Development (OECD) estimated the value of the government procurement market to be US\$2,000 billion in 1998, which was equivalent to 7% of world gross domestic product (GDP) and 30% of world merchandise trade (Organization for Economic Cooperation and Development, 2002). It has been estimated that between US\$30 to US\$43 billion could be available in the procurement marketplace in Sub-Saharan Africa; most industrialized countries spend at least 10% of their GDP on public procurement (Trionfetti, F. 2003).

However, in recent years, the impetus for reform has increased, partly in consequence of requirements set by the World Bank and other donor Organizations as conditions for providing development aid but principally because the inefficiencies of the unreformed systems have become self-evident. Most donors consider that a well-functioning procurement practice is an essential requirement if their funds are to be used effectively to promote development. (Callender & Mathews, 2000) argue that in all countries in the world, estimates of the financial activities of government procurement managers are believed to be in the order of 10% – 30 % of GDP.

The procurement practice of Embu University is an important function of administration for several reasons. First, the sheer magnitude of procurement outlays has a great impact on the economy and needs to be well managed. EUC procurement Unit has been perceived as an area with long processes hence waste of time and resources. Although EUC has complied with the Public procurement and Asset Act 2015 which came into being on 7th January 2016, by adopting the entire regulatory and legal framework in ensuring that the institution gets value for money in its procurement activities, not much has been achieved in controlling procurement costs.

2.2.2: Outsourcing as a Cost Reduction Strategy

Many countries are facing economic difficulties and they are finding ways of maximizing profits, thus many organizations have opted to concentrate on their core activities in order to increase market penetration and become more competitive. It is now widely recognized that to compete effectively, it is essential for business to continue on what they do best and what they can add value and minimize costs. Outsourcing expanded as a reaction in the 1970s and 1980s to the over-diversification that occurred, in this case, many organizations reconsidered their core activities and focused on their core competencies (Lysons & Gillingham, 2003).

This strategy is generally broken into two distinct focus areas; Business Process Outsourcing (BPO) and Knowledge Process Outsourcing (KPO). BPO is contracting of operations and responsibilities of a specific business functions to a third party service provider, in many instances, government outsourced some of its functions to private and voluntary sectors ushering in plurality in service delivery. Services such as physical infrastructure like construction of roads, building of classrooms, toilets and staff houses, health centers and water supply facilities among others have been outsourced at both local and national government levels.

A study conducted in United States, Europe and Asia by an outsourcing Institute (2000) states that outsourcing in US has become a business practice across small and large companies in about every industry. According to (Lysons , 2003)., procurement costs are one of the drivers of outsourcing where he explains that outsourcing is a possible solution to increased procurement costs and is compatible with a cost

leadership strategy. He further mentioned that outsourcing can be a solution for some other activities which promotes integration. By controlling and decreasing costs a company can increase its competitive position.

Kenya already has a growing outsourcing sector with over 50 registered companies (Moses, 2009). This has been facilitated by having affordable good quality labor due to its large English speaking population, Attractive social environment, time zones that makes it easy to work with Europe and USA, The Kenyan government has introduced raft incentives to make investing in outsourcing a very attractive proposition. In the unveiled vision 2030 initiative, outsourcing is underscored as a key pillar and driver of social and economic improvement through job and wealth creation (Kenya Vision 2030). This has attracted investors from around the world and from within Kenya.

2.2.3 Inventory Control Management as a Cost Reduction Strategy

Inventory is a supply of resources specifically materials goods and commodities held for the purpose of future utilization/use. Inventory is the stock of any item or resource used in an organization. Inventory could also refer to goods which an organization pools in its warehouses or stock yard (Coyle, et al., 2003). Inventory system is the set of policies and controls that monitor levels of inventory and determine what levels should be maintained, when stock should be replenished, and how large orders should be maintained.

A typical firm has about 70 percent of its capital invested in inventory. Because inventories may represent a significant portion of total assets, a reduction of inventories can result in a significant increase in return on investment (ROI), a ratio of profit after taxes to total assets. The scope of inventory management is broader than stock, basically inventory management can be defined as the “management of materials in motion and at rest” (Coyle et al., 2003). It is important for running operations that the required materials are present in the right quantities, quality and at the right time in order to deliver a specific level of service.

The second goal is to achieve this service level against optimal costs. Not all items can be held in stock against every cost and therefore choices have to be made. Establishing the correct quantity to order from vendors or the size of lots submitted to the firm’s productive facilities involves a search for the minimum total cost resulting from the combined effects of four individual costs i.e. holding costs, setup costs, ordering costs, and shortage costs.

Forecasting is the first activity that is performed, Forecasting is done based on orders: both previous amounts ordered and on (expected) upcoming orders (Visser & Goor, 2004). MRP-parameters, defined upfront, decide the levels for safety stock, review level etc. The order history for example is used to calculate the turnover rate which determines the point at which one should purchase new goods in order to prevent out of stocks.

2.2.4 Competitive Tendering as a Cost Reduction Strategy

Internal organization of procuring entities lays down the functions of the procurement unit as enshrined in the Kenya Public Procurement General Manual 2012 which states that Public entities have to maintain and update annually standing lists of registered tenderers required by the procuring entity or liaise with the Authorities. The procuring entities shall Prepare, publish and distribute procurement and disposal opportunities including invitations to tender, registration of suppliers and reservation of 30% for Special groups.

According to (Hahn, et al. 1990) defined supplier selection as “any systematic organizational effort to create and maintain a network of competent suppliers’, they further classified development activities into narrow and broad perspectives. The broader perspective involved “a long-term cooperative effort between a buying firm and its suppliers to upgrade the suppliers’ technical, quality, delivery, and cost capabilities to foster ongoing improvements” Watts and Hahn, (1993). This is a comprehensive process based on identifying the available prospective suppliers.

These function enables the procuring entity to have a standby list of pre-qualified bidders whom the bid documents will be issued in form of standard tender document, Quotations, Request for proposal etc. The Head of Procuring unit may recommend Evaluation, negotiating or inspection team for appointment by the accounting officer where, the team will coordinate the receiving and opening of tender documents in the present of bidders who wish to attend, they will be required to carry out the Preliminary, Technical and Financial evaluation of the tender and they present their recommendation for award to the accounting officer.

2.2.5 Benefits of E-Procurement as a Cost Reduction Strategy

E-procurement as a strategic tool for organizations’ competitive position in the new information economy, It argues that that e-Procurement is significantly changing the ways businesses operate and thus new business models are needed. E-procurement success factors that have to be considered are: cost factors, time factors, process simplification factors and the volume of e-transactions factors. By gaining understanding of the most important e-procurement factors, organizations have to organize themselves in a way that ensures success of procurement process in searching of products, services, order processing, monitoring, control, and coordination of relevant information.

On the buyer side the e-procurement solution is usually connected to other existing information systems, such as Enterprise Resource Planning which allows companies to leverage critical enterprise data present on these systems. On the supplier side, the solution is mostly connected to the suppliers order fulfillment system or product catalogs on the website of the supplier. (Subramaniam & Shaw 2004) Most companies implementing e-procurement solutions start their imitative with the purchasing of indirect goods (Angeles & Nath, 2007., Telgen & de Boer 1995) identified the typical characteristics related to indirect purchases: they consist of a wide range of goods and services, which are often purchased from an even larger number of suppliers, they are often time consuming as they consist of non-standardized items which are usually purchased in small orders.

The benefits of adopting e-procurement technologies have been widely researched in the literature (Kalakota and Robinson 2001; Attaran & Attaran 2002). The primary motivation for companies adopting e-procurement solutions has been cost reductions and process efficiencies. (Croom and Brandon-Jones, 2005) found that cost reductions in goods purchased comprise from three key issues: consolidation of purchase specifications; reducing the number of suppliers and; through improved compliance with existing contracts. Furthermore, before an e-procurement solution can be deployed, a company must undergo thorough procurement process reengineering.

2.2.6 The Public Procurement Oversight Authority (PPOA)

The Public Procurements Oversight Authority (PPOA) was created by an Act of Parliament in January, 2007. The Authority is mandated to among others, ensure that procurement procedures established under the

Public Procurement and Disposal Act are complied with and to monitor the procurement system and report to the Government on its overall functioning. The prevailing public procurement system had other institutional weaknesses that not only undermined its capacity for carrying out its mandates effectively but also led to a public perception that the public sector was not getting maximum value for money spent on procurement.

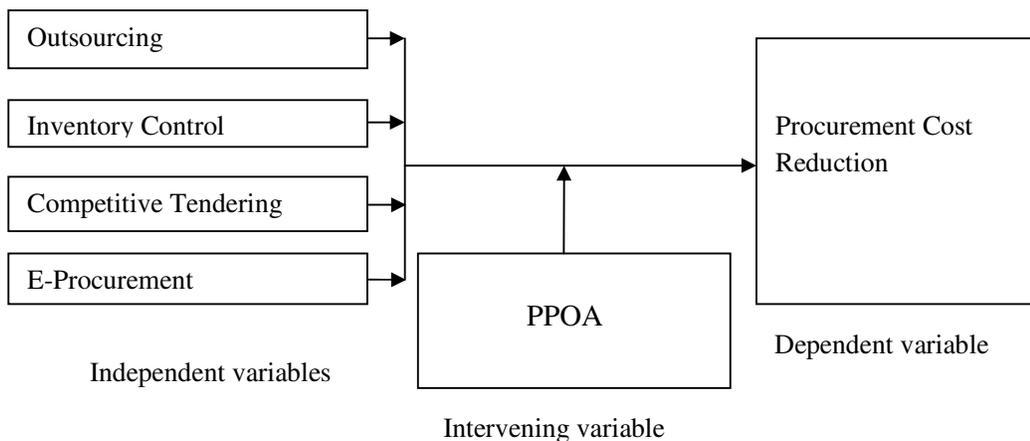
In an effort to create order in public procurement, PPOA through the support of the Kenya Government and the Public Financial Management Reform (PFMR) Program, has since its establishment in 2007 endeavored to implement a new legal and regulatory regime to publicize public procurement General and Disposal Manual for goods, works and services. PPOA issued the first market price index in 2008 in accordance with the Procurement and Disposal Act, 2005. The index targeted common user items and continues to guide procuring entities to avoid over pricing. The Index also ensures procuring entities get value for money.

The assessments focus on key indicators such as institutional arrangements or structures, procurement process, mandatory reporting requirements, stores, inventory control and management. Furthermore, an important accomplishment by the PPOA can be seen in the Authority’s action to develop and implement an e-procurement strategy. The strategy has made it possible to post tenders online thus ensuring transparency and accountability in public procurement. Moreover, e-procurement has also enhanced access to public procurement by vulnerable groups.

2.3 Conceptual framework

A conceptual framework is a structure of concepts and or theories which are put together as a map for the study and it shows the relationship of research variables (Mugenda & Mugenda, 2008). The conceptual framework is used to explain the relationship between the independent variables and the dependent variable. It helps to test certain the relationship so as to improve the understanding of dynamics of the situation. The explanation of the relationships between the variables for the study in the statement of the problem, objectives and research questions are illustrated.

Figure 2.1: Conceptual Framework



RESEARCH METHODOLOGY

3.1 Research Design

The study was conducted through a cross-sectional survey, in which the data required for the study was gathered just once. This kind of approach helps save on time, effort, and costs that would otherwise be incurred in collecting data over several time periods (Sekaram, 2007). The research design was descriptive in nature, this is because the quantitative aspects of the data emerge from the presence of the questionnaires which necessitates the measurement of variables, and it was cross-sectional in which primary data was collected.

3.2 Target Population

The population under study was the entire number of employees in Embu University College. The total number of employees in this study is 250 within all the departments of the institution. The main reason of selecting Embu University College to conduct this research is that Public Institution adopts a procurement practice that enables a Public Constituent College with few resources to reduce costs in terms of procurement activities.

3.3 Sampling Frame

The sampling frame for the study constituted the entire 250 employees drawn from Embu University College which was obtained from the Human resource register.

Table 3.1: Distribution of Sampling Frame

Sample Distribution	Number of employees	Sample size	Percentage
Top management	12	4	4.8%
University Library	23	7	9.2%
Academic division	47	14	18.8%
Administration	24	7	9.6%
Finance and Accounts	27	8	10.8%
Procurement and supplies	17	5	6.8%
Accommodation and Catering	56	17	22.4%
Research division	29	9	11.6%
ICT Department	15	4	6%
Total	250	75	100%

Source: Embu University College (2015)

3.5 Sample Size and Sampling Technique

The researcher used simple random sampling to come up with the selected sample. This is because under simple random sampling, each member of the population is a representative of the whole population and therefore has an equal chance of being selected to represent it. It is assumed that the views of the sample reflect the views of the total population. The researcher administered the structured questionnaires to 75 respondents. This is in line with Mugenda & Mugenda (2003), who argued that in a population of less than 500, a sample size of 30% respondents is usually enough and representative of the total population.

The sample size is the 30% of the total 250 employees of Embu University College and the questionnaires offered considerable advantage in administration, presents an even stimulus potentiality to large numbers of people simultaneously and provides the investigation with an easy accumulation of data. Gay L. R (1992)

maintains that questionnaires give respondents freedom to express their views or opinion and also to make suggestions. It's on the basis of these strengths that the instrument was chosen.

3.6 Data Analysis Procedures

The filed data was cleaned by checking for any missing or inaccurate data and correct it appropriately. After data cleaning, the quantitative data was coded and entered in the computer for analysis using Statistical Package for Social Sciences (SPSS) Version 15.0 for windows. Martin and Acuna (2002) eluded that SPSS is able to handle large amount of data, and given its wide spectrum of statistical procedures purposefully designed for social sciences, it is quite efficient. Qualitative data obtained from the interview was analysed and discussed thematically. This data was used to reinforce the quantitative findings, and to elaborate on the concepts obtained, the mean and Standard deviation was used in data analysis.

$$\sigma = \sqrt{\frac{\sum (x - \mu)^2}{N}}$$

The standard deviation formula is similar to the variance formula. It is given by:

Where x represents each value in the population, μ is the mean value of the population, Σ is the summation (or total), and N is the number of values in the population.

DATA ANALYSIS, PRESENTATION AND INTEPRETATION

4.1 Introduction

This chapter covers the analysis of data, presentation and associate discussions of the research findings as it relates to the dependent variable on a Likert scale of 5 to1 where; 5-Strongly Disagree, 4- Disagree, 3- Neutral, 2- Agree, and 1- Strongly Agree,

Table 4.5 Influence of Outsourcing as a Procurement Cost Reduction Strategy

Statement	n	min	max	mean	Std. Dev.
i) The Institution maintains a list of suppliers for specific category of goods, works and services.	72	1	5	2.1806	0.75669
i) The institution has improved service delivery due efficiency of outsourced services.	72	1	5	3.8194	0.69862
ii) The institution is able to manage its core business effectively when they outsource the non-core activities.	72	1	4	2.1250	0.80382
iii) The Suppliers of capital goods has an arrangement of after-sale service for the goods, works and services they provided.	72	2	5	3.1806	0.56485
iv) There are complaints over poor supply of goods and services by the institution to the Users.	72	1	4	1.8333	0.75059
v) The quality of services provided by and external firms is excellent	72	1	3	2.3611	0.81024

According to the findings revealed on table 4.5 the majority (mean of 2.3611) std. dev. ≤ 0.81024 of the respondents agreed that Embu University is able to get quality services when they contract to other external firms. The respondents agreed that EUC maintains a list of suppliers that can supply specific goods, works and services to the University on time as illustrated by mean 2.1806 std. dev. ≤ 0.75669 . On the one hand the respondent had no idea whether the outsourcing firms or organization offer after sale services, as represented by a mean of 3.1806 std. dev. ≤ 0.56485 .

EUC is able to do better on their core activities; this is supported by a mean of 2.1250 std. dev. ≤ 0.80382 thereby maximizing the potential effectiveness of those outsourced services. Majority of the respondents strongly agreed that there have been complaints due to due to inefficient performance of procurement functions of by the institution, as was revealed by a mean (1.8333) std. dev. ≤ 0.75059 of the respondents.

Table 4.6 Effectiveness of Inventory Control Management as a Procurement Cost Reduction Strategy,
The results obtained are presented on the Table 4.6 below:

Statement	n	min	max	mean	Std. Dev.
i) The process of Management of Inventory control is effective and efficient.	72	1	5	2.6111	0.91244
ii) User departments often experiences shortage of goods when they request from the University store.	72	1	5	3.5417	1.13755
iii) Delays in Inspection of goods, works and services have led to poor customer relation in the Institution.	72	1	5	4.2778	1.24722
iv) The University's Store's uses modern technology in maintaining records.	72	1	5	1.8750	0.94850
v) The University experiences non- deliveries due to delayed payment to suppliers.	72	1	5	3.5417	1.1755
vi) High level of stock has led to devastating effects like stock obsolescence and disposal.	72	1	4	1.7361	0.97855

The study established that the majority (4.2778) std. dev. ≤ 1.24722 of the respondents dis-agreed that delays in Inspection, Receiving, Acceptance and Storage of goods and services led to poor relationship with the suppliers and the users. The study revealed that most of the respondents had an idea and agreed that EUC have developed Inventory control measures which assist in controlling consumption rate and replenishment at the right Economic Order Quantity, this was supported by majority (2.6111) std. dev. ≤ 0.91244 .

The respondents had no idea whether the users were able to get all the items they request from the stores, this was explained by majority of mean of (3.5417) std. dev. $\leq (1.13755)$. Also they were not aware if the University were experiencing non-deliveries due to delayed payment to suppliers, this was indicated by mean of 3.4175 std. dev. ≤ 1.11755 . The study established that the University management was able to regularly monitor the quantity and quality of stock so as to mitigate obsolescence and chances of disposal due to overstocking; this was revealed by mean of (1.7361) std. dev. ≤ 0.97855 of the respondents.

Table 4.7 Impact of Competitive Tendering on Cost Reduction

The results obtained are presented on the Table 4.7 below:

Statement	n	min	max	mean	Std. Dev.
i). The Institution advertises and prequalifies its suppliers every financial period.	72	1	4	1.5833	0.81793
ii). The prequalification process is conducted in open is open and transparent	72	1	5	2.1944	0.94405
iii). The University carries out Market survey to ascertain whether there is value for money before engaging in a procurement process.	72	1	5	2.8611	0.93907
iv). The EUC undertakes Effective Supplier Re-Evaluation and Appraisals	72	1	5	4.0139	0.84742
v). There is an established Tender Processing Committee in the University as per the procurement law stipulates.	72	1	5	2.0278	0.64942

The study established that Embu University advertises and prequalifies its potential suppliers during and every financial period, as was strongly agreed by the majority mean (1.5833) std. dev. \leq 0.81793 of the respondents. They further agreed that the process of prequalification was being conducted in an open and transparent environment in the University, as this was supported by the majority mean (2.1944) std. dev. \leq 0.94405 of the respondents. The study established that the University carries out Market survey to ascertain whether the prices which the institution awards to suppliers for specific goods, works and services are within the market rates so that they get value for money before from procurement process, this was agreed by a mean of (2.8611) std. dev. \leq 0.93907 of the respondents.

The study found out that EUC does not undertake Effective Supplier Re-Evaluation and Appraisals, as was revealed by mean of (4.0139) std. dev. \leq 0.84742 of the respondents, in contrary the University was not in a position to rate their suppliers according to performance since there was no accurate data. Finally it established that in Embu University College had constituted and established Tender Processing Committee who were very active and perform their procurement functions as stipulated by the PPDA 2005. This was agreed by mean of (2.0278) std. dev. \leq 0.64942 of the respondents. The respondents were able to mention that EUC has managed to comply with the implementations of the new Public Procurement and Asset Disposal Act which came into being on 7th January 2016.

Table 4.8 Benefits of E-Procurement on Cost Reduction

The results obtained are presented on the Table 4.8 below:

Statement	n	min	max	mean	Std. Dev.
i). There exists an automation of procurement activities in the University.	72	1	5	3.5278	1.16247
ii). The procurement processes is characterized by too much of paper work.	72	2	5	3.9306	0.77508
iii). Government's IFMIS and E-tendering are key practices that would enhance cost reduction in procurement system	72	1	5	3.8056	1.00195

iv). EUC conducts its procurement transactions through the Website and email addresses in the internet.	72	1	5	3.7500	1.01745
v). Users and customers are integrated with the procurement system and processes.	72	1	5	3.4028	1.3855

The study found out that most of the staff working in EUC had no idea whether there is automation of procurement process; this was revealed by a mean of (3.5278) std. dev. ≤ 1.16247 of the respondents. The study further established that the procurement system was neither characterized by too much paper work, as was revealed by the majority mean (3.9306) std. dev. ≤ 0.77508 of the respondents which showed that they were aware of any documents being dealt by procurement department. The study sought to find if the introduction of the Government's IFMIS and E-tendering are key policies that would enhance cost reduction in procurement system. Majority of the employees had no idea as was revealed by mean of (3.8056) std. dev. ≤ 1.00195 of the respondents.

The researcher sought to find out if EUC conducted its procurement transactions through the Website and email addresses in the internet, majority of the respondents revealed that they had no idea mean of (3.7500) std. dev. ≤ 1.01745 of the respondents, At the same time the research wanted to find out if the Suppliers, users and procurement department were integrated with LAN network in the institution so that implementation of e-procurement becomes very easy. The majority of the employees responded that they had no idea mean of (3.4028) std. dev. ≤ 1.3855 if the institution departments including procurement and the suppliers were connected since they are not electronically involved in procurement of goods, works and services in the University.

4.7 Impact of Procurement Cost Reduction measures at EUC

The results obtained are presented on the Table 4.6 below:

Table: 4.9 Impact of Procurement Cost Reduction Measures at EUC

Statement	n	min	max	mean	Std. Dev.
i). To what extent does management of Inventory control effective and efficient in reducing stock outs?	72	1	5	2.0139	1.10687
ii). Outsourcing of procurement activities to a specialist has greatly enabled the institution to make some savings.	72	1	5	2.0694	1.33561
iii). Long procurement procedures have led to delay of supply of goods and services in the Institution.	72	1	5	2.7778	1.42633
iv). The University's use of Information and technology has help in reducing paper work on procurement transactions.	72	1	5	1.8889	1.25098
v). The University often experiences non-deliveries due to delayed payments to suppliers.	72	1	5	3.5000	1.17485
Vi). The cost of high prices on some commodities is due to lack of competitive tendering procedure.	72	1	5	3.3472	1.22371

The study established that the majority mean (2.0694) std. dev. \leq 1.33561 of the respondents agreed that Outsourcing of procurement activities to a specialist enabled the institution to make some savings instead of doing in-house, for example the design and subsequent constructions of various buildings within the University, the provision of security and insurance services. The majority of the respondents strongly agreed that the University's use of Information and technology will help in reducing paper work on procurement transactions; this was supported by mean of (1.8889) std. dev. \leq 1.25098. The researcher sought to find out if long procurement procedures that have been established by public institutions led to delay in supply of goods, works and services when requested by the Users, this phenomenon was agreed as a true fact since it was agreed and supported by the respondents with a mean of (2.7778) and std. dev. \leq 1.42633.

The respondents agreed that EUC have developed Inventory control measures which assist in replenishment at the right Economic Order Quantity, as evidenced by score of mean (2.0139) std. dev. \leq 1.10687, hence there were no stock outs being experienced by the University that could have otherwise resulted in stock out costs. Most of the respondents had no idea whether incidences of high prices on some commodities was due to lack of competitive tendering process, this was evidenced by score of mean (3.3472) std. dev. \leq 1.22371. Also the respondents were not sure since most of them were not involved in direct receiving of goods, works and services but they delegate to their procurement liaison officers, this was explained by mean of (3.5000) std. dev. \leq 1.17485,

SUMMARY, CONCLUSIONS AND RECOMMENDATION

5.1 Introduction

In this chapter, a summary of the main study findings is presented, together with a conclusion of the study.

5.2 Conclusions

Based on the findings of the study, the researcher makes the following conclusions;

- i. The procurement department in Embu University was outsourcing on some procurement issues and this was found to be fairly effective as procurement cost reduction strategy, though it was faced with a few challenges.
- ii. The study further concludes that inventory control in Embu University was effective in enhancing timely availability of commodities. However the system was not effective as procurement cost reduction strategy.
- iii. It further concludes that the procurement departments in Embu University was very effective in Competitive bidding on tenders, and the practice was very effective as a cost reduction strategy where by the institution is able to obtain goods, works and services at fairly market rate prices due to stiff supplier competition.
- iv. Finally, it concludes that Embu University College had not developed an e-procurement system although they have well developed LAN (Local Area Network) and fully equipped ICT department, but they use internet and web based communications in conducting its procurement activities, it discovered that most departments had emails which have password that can only be assessed by the authorized individuals.

5.3 Recommendations for the Study

Based on the findings of the study, the researcher makes the following recommendations.

- i) The procurement department of Embu University should review its guidelines for procurement outsourcing, revise it and make the necessary improvements in order to perfect its effectiveness, and improve on general cost reduction.
- ii) The Embu University should re-tailor its Inventory Control system, to fit in into the procurement practices of the institution so as to improve its effectiveness as a cost reduction measure.
- iii) Competitive tendering should be advocated so as to done in a transparent and accountable environment with participation of every stakeholder in the institution. The Tender Processing Committee in Embu University should be enlightened on the emerging issues on e-procurement and competitive tendering process, in efforts of improving it. The institution should organize for seminars for the procurement staff members on the best procurement practices.
- iv) The government of Kenya through the Commission for Higher Education and the Ministry of Information should design and implement a uniform E-procurement system for all universities that should be linked to a central server, for monitoring purposes. The government should then play the oversight roles in this by ensuring that proper control measures are put in place to avoid fraudulent activities through the system.

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