

**ANALYSIS OF FACTORS INFLUENCING EFFECTIVE PROCUREMENT
PROCESS: IN OF KENYA MEDICAL RESEARCH INSTITUTE, KISUMU
COUNTY, KENYA**

BY

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**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS
ADMINISTRATION**

DEPARTMENT OF MANAGEMENT SCIENCE

MASENO UNIVERSITY

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DECLARATION

Declaration by the Student

This research paper is my original work and has never been submitted to any other university or institution for any ward. The work of others has been cited and due acknowledgment has been made.

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Declaration by the Supervisor

This research paper has been submitted for examination with my approval as the university supervisor

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ACKNOWLEDGEMENT

I would like to take this opportunity to thank my supervisor Mr. Silas Owuor for his invaluable and insightful support and guidance that has enriched the results of this study. His patience and sacrifice has been profound. Secondly I would wish to thank my family for moral support, financial support and encouragement and their understanding throughout my study period.

Finally I wish to thank the Almighty God for granting me the opportunity to successfully complete the research project.

DEDICATION

This research project is dedicated to my family members, supervisor and friends who have been very supportive and to the almighty God for the good health of mind that he accorded me.

ABSTRACT

Success of any given organization depends on the strategic management of all key functions and procurement is one of them. KEMRI works to advance health through high quality medical and social research, health care services, and training in collaboration with local partners in Kenya and internationally. However, KEMRI has been facing some problems in its procurement function including wrong specifications of required supplies, long lead time, poor quality of supplies and over expenditure on the organization's budget, these challenges leads to failure in running clients test in good time and offering treatment while these are part of the core business of KEMRI. The purpose of this study was to analyze factors influencing effective procurement process. The objectives of the study were to establish the influence of supplier relationship management on effective procurement process, to establish effect of global sourcing on effective procurement process and to determine the contribution of tendering process on effective procurement process. The study was anchored on contingency theory. Correlation research design was adopted and a census survey was used to collect data from the 40 procurement staff was involved. Quantitative primary data was collected using self-administered questionnaires while secondary data was collected from relevant documents. Validity of questionnaire was confirmed by research experts while reliability was determined using Cronbach alpha and an alpha coefficient of 0.75 was obtained. Data were analyzed using regression analysis. The study found that there was low after sale service offered to KEMRI by the suppliers at 40.5%. The study found that 43.2% of respondents confirmed that there was high frequency of rejection of goods due to non-conformity with standards and there were considerably high instances of failure to fulfill orders among suppliers. Generally, the study found that improvement in SRM could lead to reduction on procurement expenditure and that there was a statistical significant relationship between supplier relationship management and effective procurement process of ($B_1=0.29$, $P<0.05$). 86.5% of respondent found that goods sourced internationally took long to be delivered indicating that there was an evident delay in delivery of procured products. 45.9% found that global sourcing was a challenge that KEMRI was facing. Further; relationship between global sourcing and effective procurement was statistically significant ($B_2=0.224$, $P<0.05$). The relationship between tendering process and effective procurement was statistically significant ($B_3=0.311$, $P<0.05$). The study concluded that there was low after sales service while international sourcing took long to deliver goods and lastly tendering process at KEMRI Kisumu County was not effective due to low level of transparency and accountability of the process and failure by the firm to prepare the procurement progress reports as required by the organizational tendering policy. The study recommends that accountability and measurement of goals and results need to be considered since they affect effective procurement process at any organization. Adequate controls should be put in place reducing opportunities for corruption. The study further recommends the organizations such as KEMRI to adopt ICT, this will enhance the process of effective tendering through advertising, sourcing reviews, prequalification, potential for cost savings and greater awareness of new development. Further research should be done on the impact of ethical practices in tendering process and how it affects the Kenyan economy and a similar study may also be carried out in other organizations to establish whether the findings are similar as those generalized in this study.

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ABBREVIATIONS AND ACRONYMS

AFMC	: Air Force Material Command
CRM	: Customers Relationship Management
HIV	: Human Immunodeficiency Virus
ICT	: Information and Communications Technology
IPOs	: International purchasing offices
ISO	: International Organization For Standardization
KEMRI	: Kenya Medical Research Institute
SRM	: Supplier Relationship Management

DEFINITION OF TERMS

Procurement	This is the acquisition of goods or services at the best possible total cost of ownership, in the right quantity and quality at the right time in the right place for the direct benefit or use of the governments, corporation or individuals generally via but not limited to a contract.
Supply Management	This is the process of planning implementing and controlling efficient and effective flow and storage of goods, services and related information from the point of origin up to the point of consumption with the purpose of conforming the customers' requirements.
Supplier Vetting	Evaluate and select suppliers based on their ability to meet your requirements by deciding what is important, e.g. criteria. Supplier evaluation and approval can be based on previous performance, the results of supplier audits or questionnaires, but these are not are not mandatory.
Global Sourcing	Global Sourcing is the acquisition of goods, services or works from an external source outside the borders of a country.
Tendering process	Tendering is a Procurement Procedure whereby potential Suppliers are invited to make a Firm and unequivocal offer on the price and terms in which they will supply specified goods, Services or works which on acceptance shall be the basis of a subsequent contract

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CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

The procurement process follows specific steps for identifying a requirement or need of the company through the final step of the award of the product or contract. Responsible management of public and corporate funds is vital when handling this process, whether in strong or weak economic markets. Following a proven step-by-step technique will help management successfully achieve its goals. The processes include: identification of requirement, authorization of purchase request, final approval of purchase request, source for correct specifications and identification of vendors, receipt of quotations, negotiation, purchase order acknowledgement, goods delivered, invoicing recording and payment to the vendor (Brammer, 2007).

KEMRI is an institution under research industry working towards eradication of diseases like HIV, malaria and tuberculosis to the community. This involves running of numerous test and treatment to its clients, through these activities KEMRI has a procurement department that facilitates purchase of goods and services to ensure smooth run of the organizations activities (Ondieki, 2015). KEMRI procurement section faces challenges that affects its goals and objectives, this includes long lead time, wrong specification of supplies, over expenditure in relations to budget and stock outs. These challenges have resulted to stoppage of running laboratory tests which is the core business of the organization since in the long run it could affect funding sent to KEMRI by the donors to facilitate research activities, this will not only affect KEMRI as an institution but also the community that seeks to get health treatment.

Mettler (2009) studying supplier relationship management in healthcare stated that although today's reason for implementing SRM is mostly driven by cost-savings and efficiency increase propositions, substantial improvements in efficiency and quality in different areas of health care organizations can be achieved. By exchanging product and supplier information with other hospitals, the purchasing department under study has made the first move to establish strategic aspects of SRM.

Ondieki (2015) researched on effect of supplier relationship management on the effectiveness of supply chain management. The study concluded that the effectiveness of supply chain management practices in the ministry of finance depended on application of modern supplier relationship management strategies. Supplier relationship activities play important role where players willingly share risks and rewards and maintain relationship on long term basis he further recommended to manage supplier relationship management, the ministry should intensify centralization of common user items.

Chenoweth (2012) researched on best practices in SRM and early implementation stated that SRM has grown in importance in the private sector over recent years; experience with SRM suggests that while it has tried to implement many of the best practices, some obstacles prevent it from reaping real benefits from the initiative. If these obstacles are addressed, SRM could become a significant strategic tool for seeking real cost and performance improvements with its key suppliers.

These studies indicate different results either significant or not significant, studies done in different industries with different sample size, different study area, different sampling technique of collecting data and analyzed using quantitative or qualitative; however a

study on analysis of factors that influence effective procurement process in KEMRI Kisumu is unknown.

Nassimbeni (2006) studying international purchasing offices in China stated that the creation of IPOs is one of the most frequently adopted solutions by Western companies for the management of their international sourcing activities. Despite the current importance of this phenomenon, few studies have analyzed it so far. The research also shows that there are several advantages and problems related to the creation and management of an IPO. Some advantages are given by a reduction of purchasing prices, higher level quality controls, and a reduction of cultural distance. Some of the problems are summarized by the costs related to the presence of IPOs, the difficulty in hiring staff, cultural problems, the need to have sufficient annual volumes, and difficulties connected with the need for overseas support by senior management.

Brammer (2007) studying sustainable procurement practice in the public sector concluded that the first large-scale study of sustainable procurement practice globally. Building upon a conceptual model that emphasizes the importance of national policy environments regarding sustainable procurement mediated by a range of organizational contextual factors, our analysis shows that a wide range of sustainable procurement practices are embedded to some degree in public sector procurement practice around the world. This finding confirms earlier suggestions in the literature Mc Crudden (2004) that governments are widely using the power embodied in public procurement activities to further social and environmental policy goals.

Laura (1993) studying international purchasing on benefits, requirements and challenges, states that to meet the global competitive challenge that exists today, firms must be able to offer customers new products of high quality and perceived value. Because purchasing some required inputs internationally can assist firms in doing this, international purchasing has become an increasingly popular competitive approach. The catalyst underlying international sourcing has been competition; this has forced firms to reduce costs and to improve quality and responsiveness. However, a change in attitude has emerged among some manufacturing firms regarding their international sourcing activities. That is, today's manufacturers have realized that international sourcing can be transformed from a unique, but traditional reactive activity to a proactive strategy capable of helping the firm establish a sustainable competitive advantage.

The studies above under global sourcing are evident that there are varied results from them as much as they had used different research designs, different sample designs, different population sizes, in different research area either local or international. Some of these studies reveal that there are positive significant effects on factors that influencing effective procurement process while other studies have a different view. However a study on analysis of factors that influence effective procurement process in KEMRI Kisumu County is still unknown the more reason to find out its outcome.

Agerberg, (2012) studying risk management in the tendering process stated that most of the studied department is risk management and tendering practices are formalized and effectively performed. Their practices comply with the established internal documentation and routines. The company should use a common risk definition. The interviewees have divergent risk definitions. ISO 31000 highlights that it is vital to have a

common risk definition to eliminate misunderstandings and confusion during the risk management process. Their established definition should be better communicated in the organisation. The department's risk management process is associated with risk adversity. The respondents claimed themselves to be restrictive to risks as a consequence of project failure in the past. Nevertheless, Lyons and Skitmore (2004) state that construction contractors often act in accordance to a risk taking behavior.

Kang (2015) studied on comparative study between clients and contractors on competitive tendering in the Sudan, concluded clients view and contractors' view on competitive tendering in the Sudan construction industry. Despite their opposite positions in respect of tender price and different roles/responsibilities, clients and contractors have almost the same view on the main aspects of competitive tendering. The questionnaire consists of comprehensive points of competitive tendering from various angles. Future research will be conducted in other countries to verify the finding of this research.

Ayoti (2012) researching on factors influencing effectiveness in tendering process in public sector recommended that all the employees involved in tendering process should advance their level of education especially those with o-level and Diplomas as their highest education qualification. Government to improve remuneration of all staff involved in tendering process since they handle large sums of tenders of very high Value to avoid being corrupt. The agency should train all the procurement staff and persons involved in the tendering process in order to provide them with skills and knowledge of procurement process. Lastly payments for Sale of tenders should be done online to add more value in the Tendering process this will greatly improve efficiency and effectiveness of tendering process.

According to these studies on challenges of tendering process that affects effective procurement process we are able to find varied results, some studies reveal a positive significant effect on factors that influence effective procurement process, while other studies have contrary results that there is insignificant effect. Using different research designs such as quantitative and qualitative design, different population sizes, different industries and different models of analyzing data there is still need for the researcher to find out the result on analysis of factors that influence effective procurement process in KEMRI, Kisumu County.

1.2 Statement of the Problem

KEMRI has been facing major challenges that have negatively affected its efforts towards achievement of increased sustainable growth and development. The challenges faced by the institution are centered on the process under which procurement functions are conducted. Supplier relationship management problem has therefore been a challenge that has been making it difficult for the institution to select and manage its suppliers effectively even after the introduction of prequalified list of suppliers there hasn't been any improvement since the organization still experience deliveries of wrong specifications, poor quality goods, and lack of ability to supply certain amounts of goods. Global sourcing strategy has also been another problem affecting the organization's procurement function due to the long duration and processes taken before timely delivery of goods, lastly tendering process isn't dually followed since the organization continues to face high cost of goods and use of the same suppliers for a long period of time despite being in this competitive market whereby prices should be going down. From literatures, scholars have had contradicting opinion on the factors hindering effective procurement

process, due to the differing opinions it is therefore not clear whether the effect is positive or negative. In the case of KEMRI the effect is unknown probing the researcher to undertake this study.

1.3 Objectives of the Study

1.3.1 General Objective

The main objective of the study was to analyze factors that influence effective procurement process in KEMRI.

1.3.2 Specific Objectives

The study was guided by the following research objectives:

- i. To determine the influence of supplier relationship management on effective procurement process at KEMRI Kisumu County
- ii. To find out the influence of global sourcing on effective procurement process at KEMRI Kisumu County.
- iii. To determine the contribution of tendering process on effective procurement process at KEMRI, Kisumu County.

1.4 Research Hypothesis

The study sought to answer the following research questions:

- i. To what extent does supplier relationship management affect effective procurement process in KEMRI?
- ii. Does global sourcing affect effective procurement process in KEMRI?
- iii. To what extent does tendering process contribute to effective procurement process in KEMRI?

1.5 Scope of the Study

The research study was undertaken at KEMRI, located in Kisumu county, whereby it involved administrative officers within KEMRI who are concerned with execution and management of the organization procurement function plus procurement and stores personnel working in the institution. It took a period of 8 months to complete the research.

1.6 Justification of the Study

The study is important to the scholars, students and future researchers, as the documented report will provide detailed information on the challenges facing procurement function in the research industry. This will act as a source of knowledge to many students who will be researching on purchasing and supplies functions. The study will act, as guideline to future researchers since the information provided by the study will be used in literature review of the future research studies. Also assist KEMRI and other organizations to improve on their procurement process.

1.7 Conceptual Framework

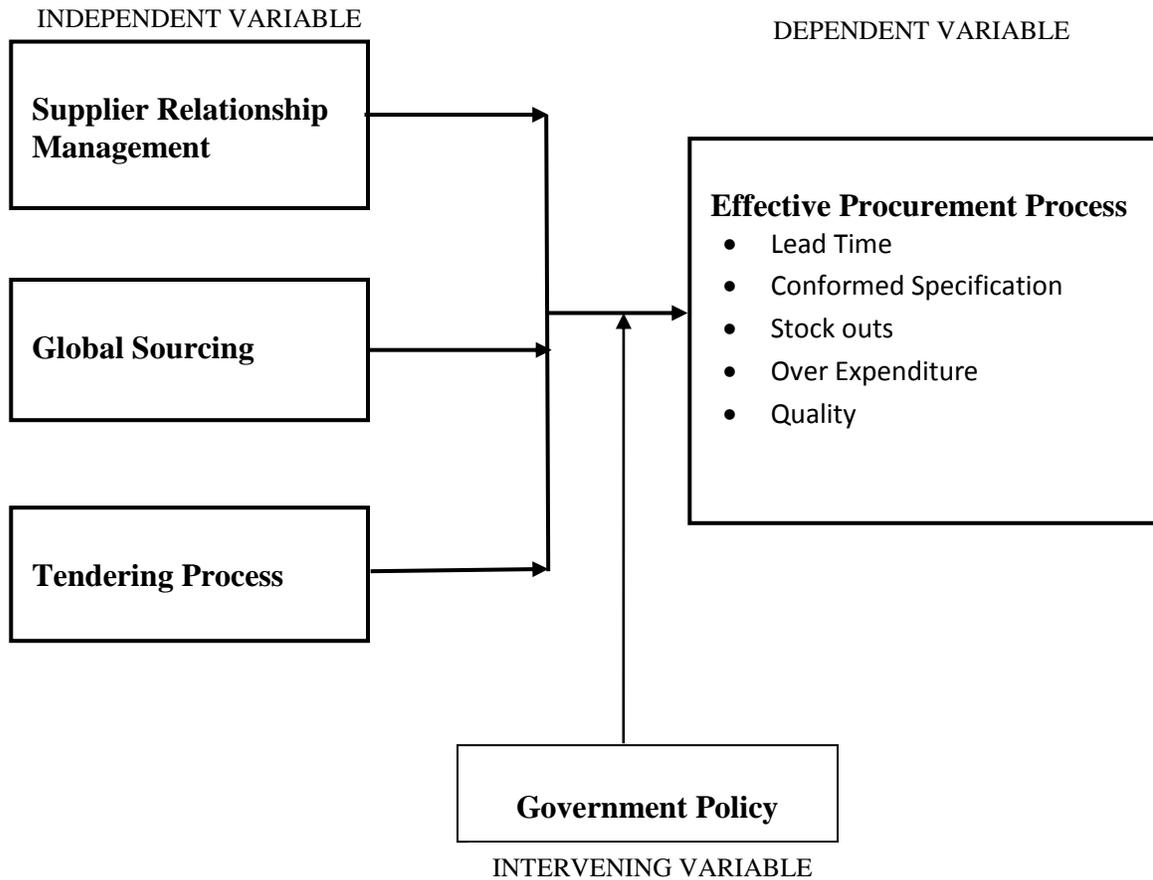


Figure 1.1: Analysis of factors influencing effective procurement process at KEMRI Kisumu, county

Through conceptual framework above the study wished to find out how independent variable which is: supplier relationship management, global sourcing and tendering process influenced dependant variables which is effective procurement process and this has been broken down as follows:

Lead time procurement process takes before delivery of goods which mostly would have been caused by global sourcing as independent variable.

If at all goods purchased conformed to required specification this would have been attained through assessing how tendering process is conducted in KEMRI.

Frequency of stock outs experienced at KEMRI, so the study wished to ascertain this through analyzing SRM process e.g. if it's ever conducted or dually followed.

The study also wished to ascertain if KEMRI experiences over expenditure on its annual budget this was guided by assessing influence of all the independent variables and lastly quality of goods supplies by the vendors by assessing SRM and Tendering process as independent variable.

Within the conceptual framework the study also wished to clarify the effect of intervening variable to both independent and dependent variables through government policy.

CHAPTER TWO: LITERATURE REVIEW

This chapter discusses the literature review of the study. The review provides the reader with an explanation of the theoretical rationale of the problem being studied as well as what research has already been done and how the findings relate to the problem at hand. The information covered in the literature review was obtained in form of past reference materials like magazines, newspapers articles and other published materials. The purpose of the literature review is to avoid unnecessary intentional or accidental duplication of materials already covered. This chapter goes through the past studies, theoretical review, critical review, research gaps and summary.

2.1 Theoretical Review

2.1.1 Contingency Theory

A contingency theory is an organizational theory that states that there is no best way to organize a corporation, to lead a company, or to make decisions. Instead, the optimal course of action is contingent (dependent) upon the internal and external situation. A contingent leader effectively applies their own style of leadership to the right situation. This is to say decisions are depended on leader. Contingency theorists attempted to identify the important variables assumed to influence organizational performance. They then attempted to operationalize and measure these variables and determine their effects on performance. Seminal studies were done by researchers such as Lawrence and Lorsch (1967) (influence of the environment on organizational integration and differentiation), Burns and Stalker (1961) and Woodward (1965) (influence of the technology on organizational structure). Historically, contingency theory has sought to formulate broad generalizations about the formal structures that are typically associated with or best fit the

use of different technologies. The perspective originated with the work of Woodward (1958), who argued that technologies directly determine differences in such organizational attributes as span of control, centralization of authority, and the formalization of rules and procedures. Mohsini and Davidson (1986) make use of contingency theory to examine the effects of structure and environment on performance, measured using the concept of conflict. This theory is relevant to the study since the researcher looked into the factors that influence effective procurement process, looking into the objective one this theory explained how effective procurement process was influenced by supplier's relationship management therefore it means that for effective procurement process to be in place its dependent to supplier's relationship management, global sourcing as objective two and lastly tendering process

2.1.2 Procurement

The process in procurement starts from the initiation of the need by user department and it is approved by the head of the department, as way one of acknowledging the requirement. This has to do with the process of acquiring goods, works and services. It begins when a department has identified a need and decided on its procurement requirement. The process needs to adhere to the laid down procurement process and procedures in order to achieve procurement performance in Kenya. According to Thai (2001), the basic principles of good procurement process include accountability, where effective mechanisms must be in place in order to enable procuring entities spend the available resources carefully, knowing clearly that they will account everything to members of the public; competitive supply, which requires procurement to be carried out by competitive bidding process, embracing transparency and efficiency in the system,

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.

2.1.3. Suppliers Relationship Management

SRM begins with the process through which the suppliers are selected by the organization, many organizations suppliers' selection activities are determined by procurement methods applied. Timely and effective supply of goods and services to the user department contributes to the organization efficiency. Poor integration and coordination of supplier management activities result to a high a degree of inefficiency in purchasing and supplies function.

Supplier Relationship Management (SRM) is one approach to connect the different interests both within the organization and with the extended supply chain. SRM identifies and engages the right stakeholders to create ownership of the relationship, drive effective communication and align strategic objectives.

2.1.4 Global Sourcing

Global sourcing occurs when the buyer and suppliers are not located in the same country. This creates more complicated situations than domestic purchasing. The buyer, at this point, may put longer lead times, negotiations, import-export regulations, price terms, etc. in their concerns. In this setting, the buyer is demanded to have better skills in negotiation. They are expected, at a minimum, to know what and how to handle the complexity of laws, regulations, to deal with currency fluctuations and other many variables such as languages, cultures as well as time-zone issue (Trent and Monzcka, 2005, Monzcka et al, 2008). Global sourcing has been emerged from its primary and

simple pattern due to the development, a wide spread of information technology and a rapid change in worldwide scene where integration is unavoidable.

2.1.5 Tendering Process

Tendering is a Procurement Procedure whereby potential Suppliers are invited to make a Firm and offer on the price and terms in which they will supply specified goods, Services or works which on acceptance shall be the basis of a subsequent contract. Tendering is based on the principles of competitiveness, fairness and accessibility, transparency, openness and probity (World Bank, 2008). Internationally, all Public entities are subjected to open tendering by law so as to prevent fraud, waste, unethical practices or local protectionism.

2.2 Empirical Review

2.2.1 Influence of Supplier Relationship Management and Effective Procurement

Process

Mettler (2009) studying supplier relationship management in health care stated that although today's reason for implementing SRM is mostly driven by cost-savings and efficiency increase propositions, substantial improvements in efficacy and quality in different areas of health care organizations can be achieved. The described case study shows a first attempt for doing so. By exchanging product and supplier formation with other hospitals, the purchasing department under study has made the first move to establish strategic aspects of SRM. The availability of comprehensive and up-to-date product information can definitely enhance the bargaining power of the hospital's purchasing department. The European Commission reported that hospitals which had experience with ICT-supported sourcing had sustainable cost reductions (51% said that

the perceived effects were fairly positive, 17% said that they were even very positive). However, a more detailed study of the effects resulting from this better information basis has to be conducted in future research.

Ondieki (2015) studying effect of supplier relationship management on the effectiveness of supply chain management in the Kenya public sector stated that the effectiveness of supply chain management practices in the ministry of finance depended on application of modern supplier relationship management strategies. Supplier relationship activities play important role where players willingly share risks and rewards and maintain relationship on long term basis Ondieki further recommended managing supplier relationship management, the ministry should intensify centralization of common user items. The organization should create a data base on supplier activities such as delivery schedules, complaints, quality management processes. The procurement managers in organization should increase the level of interaction with suppliers. The interaction should involve efficiently providing suppliers with expectations of how the communications and flow of products/services are to be provided.

Chenoweth (2012) studying best practices in supplier relationship management Their Early Implementation in the Air Force Materiel Command concluded that SRM has grown in importance in the private sector over recent years. AFMC's experience with SRM suggests that while it has tried to implement many of the best practices, some obstacles prevent it from reaping real benefits from the initiative. If these obstacles are addressed, SRM could become a significant strategic tool for AFMC in seeking real cost and performance improvements with its key suppliers.

Lee (2002) affirmed that SRM is a discipline of working collaboratively with those suppliers that are vital to the success of your organization to maximize the potential value of that relationship. SRM is about developing two-way, mutually beneficial relationships with your strategic supply partners that deliver greater levels of innovation and competitive advantage than could be achieved by operating independently.

Peters (2004) argued that SRM managers should be responsible for managing no more than three supplier relationships, in order to devote sufficient time to each. Staff involved in SRM activities will have a good combination of commercial, technical and interpersonal skills. Commercial acumen, market knowledge, analytical abilities and project management expertise are important. But “softer” skills around communication, listening, influencing and managing change are critical to developing strong and trusting working relations. SRM managers understand their suppliers’ business and strategic goals and are able to see issues from the supplier’s point of view, while balancing this with their own organization’s requirements and priorities.

Cooper (2003) concurred that SRM includes both business practices and software and is part of the information flow component of supply chain management (SCM). SRM practices create a common frame of reference to enable effective communication between an enterprise and suppliers who may use quite different business practices and terminology. As a result, SRM increases the efficiency of processes associated with acquiring goods and services, managing inventory, and processing materials. According to Ansari (2009), the use of SRM software can lead to lower production costs and a higher quality, but lower priced end product.

2.2.2 Effect of Global Sourcing and Effective Procurement Process

Nassimbeni (2006) affirmed that creation of IPOs is one of the most frequently adopted solutions by Western companies for the management of their international sourcing activities. Despite the importance of this phenomenon, few studies have analyzed it so far. The research has also shown that there are several advantages and problems related to the creation and management of an IPO. Some advantages are given by a reduction of purchasing prices, higher level quality controls, and a reduction of cultural distance. Some of the problems are summarized by the costs related to the presence of IPOs, the difficulty in hiring staff, cultural problems, the need to have sufficient annual volumes, and difficulties connected with the need for overseas support by senior management.

Brammer (2007) reported a wide range of sustainable procurement practices are embedded to some degree in public sector procurement practice around the world. This finding confirms earlier suggestions in the literature McCrudden, (2004) that governments are widely using the power embodied in public procurement activities to further social and environmental policy goals. This analysis also reveals significant variation across countries in the extent and emphasis of sustainable procurement practices and highlights a set of factors that are perceived to play important roles in shaping the propensity for individual organizations to more deeply embed sustainable procurement activities. Both the cross-country variation in the SP activities of organizations and the observation that government/legislative support for SP is among the most frequently cited facilitators of SP suggest that national and international policy environments regarding SP are a primary determinant of the extent to which organizations engage in SP. The focus in the private sector literature lies with environmental and green aspects of

procurement Srivastava (2007). Second, there appears to be more substantial variation across countries in SP practices in the public sector than has been documented for private sector organizations. This perhaps reflects the greater salience of national policy

Laura (1993), studying international purchasing: benefits, requirements and challenges stated that to meet the global competitive challenge that exists today, firms must be able to offer customers new products of high quality and perceived value. Because purchasing some required inputs internationally can assist firms in doing this, international purchasing has become an increasingly popular competitive approach. The catalyst underlying international sourcing has been competition; this has forced firms to reduce costs and to improve quality and responsiveness. However, a change in attitude has emerged among some manufacturing firms regarding their international sourcing activities. That is, today's manufacturers have realized that international sourcing can be transformed from a unique, but traditional reactive activity to a proactive strategy capable of helping the firm establish a sustainable competitive advantage. By helping firms exploit the international division of labor and decouple comparative advantage from regions of ownership, international supply networks enable firms to meet advancing competition. Firms that are considering international sourcing as a competitive option must remember that success requires substantial resource dedication and considerable management effort. As noted above, extensive preparation in the strategy formulation stage is needed to assure success. Further, long-term commitment and intensive skill building international supply required if the firm truly desires to enhance its competitive.

2.2.3 Influence of Tendering Process and Effective Procurement Process

Agerberg (2012) studying risk management in the tendering process stated that most of the studied department is risk management and tendering practices are formalized and effectively performed. Their practices comply with the established internal documentation and routines. The company should use a common risk definition. The interviewees have divergent risk definitions. ISO 31000 highlights that it is vital to have a common risk definition to eliminate misunderstandings and confusion during the risk management process. Their established definition should be better communicated in the organisation. The department's risk management process is associated with risk adversity. The respondents claimed themselves to be restrictive to risks as a consequence of project failure in the past. Nevertheless, Lyons and Skitmore (2004) state that construction contractors often act in accordance to a risk taking behavior.

Kang (2015) concluded that the research investigated and compared clients' view and contractors' view on competitive tendering in the Sudan construction industry. Despite their opposite positions in respect of tender price and different roles/responsibilities, clients and contractors have almost the same view on the main aspects of competitive tendering. The questionnaire consists of comprehensive points of competitive tendering from various angles. Even though competitive tendering has some disadvantages, it seems that this tendering method can still be efficient and effective to be used in the 21st century, as both parties are well aware of the advantages and disadvantages.

Ayoti (2012) researching on Factors influencing effectiveness in tendering process in public recommended that all the employees involved in tendering process should advance their level of education especially those with o-level and Diplomas as their highest

education qualification. Government to improve remuneration of all staff involved in tendering process since they handle large sums of tenders of very high Value to avoid being corrupt, management should ensure that procurement policies and regulations are adhered to. The agency should train all the procurement staff and persons involved in the tendering process in order to provide them with skills and knowledge of procurement process. Lastly payments for Sale of tenders should be done online to add more value in the Tendering process this will greatly improve efficiency and effectiveness of tendering process.

2.3 Summary of Gaps

From the literature reviewed above, studies were done with data analyzed by applying quantitative design, quantitative and qualitative, survey research design, multiple linear regression models, descriptive and inferential research approaches. These studies were carried out in different areas using different sample designs and different population sizes. The studies focused on analysis of factors influencing effective procurement process they established that there was either positive or negative significant relationship between SRM, global sourcing or tendering process to effective procurement process. Further to this some studies using the regression analysis also done in different places using different research designs and different population size also revealed either positive or negative significance, however no study has been carried out using correlation research design with sample size of 40, data analyzed using regression model in KEMRI, Kisumu County.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Research Design

This study employed correlation research design. According to Cooper and Schindler (2006), a correlation research design attempts to establish the relationship between research variables or interactions. The research design was suitable in this study since it established the relationship between SRM, global sourcing and tendering process to effective procurement process in KEMRI.

3.2 Study Area

Kisumu County

3.3 Target Population

Population is the entire set of units for which the study data are to be used to make inferences (Kothari 2003). Target population defines those units for which the findings of the study are meant to be generalized from (Dempsey 2003). The target population for the study was 40 members of staff. Being the whole population census technique used. According to the table below administration department constituted 20 of the population, stores 10 and procurement officers 10; the researcher used these respondents since they were involved in execution of day to day procurement functions in the institution and are knowledgeable on matters of institution procurement.

Table 3.1

Target Population

Population Category	Target population	Percentage (%)
Administrative Department	20	100
Procurement Department	10	100
Store Department	10	100
Total	40	100

Table 3.2

3.4 Data Collection Instruments

3.4.1 Sources of Data

Both quantitative and qualitative data was used. Primary data was collected through structured questionnaires, observation, and interviews. Secondary data was obtained from relevant books, journals and periodicals.

3.4.2 Instruments and Procedures of Data Collection

This involves the methods that were used to collect data from the respondents. The main technique used of questionnaire which was administrated to the respondents by visiting them in the organization. According to Mugenda and Mugenda (2003), data collection instruments of questionnaire are appropriate for data collection to facilitate easy analysis of data. Drop and pick method was used to distribute the questionnaires to put controls. Questionnaires are preferred because according to Dempsey (2003) they are effective data collection instruments that allow respondents to give much of their opinions pertaining to the researched problem. According to Kothari (2003), the information obtained from questionnaires is free from bias and researchers have no influence and thus accurate and valid data was gathered.

3.5 Validity of the Instrument

Validity refers to the extent to which an instrument measures what is supposed to measure. Data need not only to be reliable but also true and accurate. If a measurement is valid, it is also reliable Joppe (2000). Content validity of data collection instrument was determined through discussing the research instrument with the research experts. The valuable comments, corrections, suggestions that the research experts gave assisted in the validation of the instrument. The research experts and the procurement department staff was expected to tick the items in the questionnaires if at all they helped to analyze factors influencing effective procurement process in KEMRI. The expected content of the responses given by the respondents were checked against the study objectives.

3.6 Reliability for Data Collection Instruments

According to Cooper & Schindler (2003) reliability refers to the consistency or dependability of the data, whenever an investigator measures a variable they wish to be sure that the measurement provides dependable and consistent results. A reliable measurement is one that if repeated a second time and gives the same results as it did the first time. If the results are different, then the measurement is unreliable, Mugenda & Mugenda (2008). To measure the reliability of the data collection instruments, an internal consistency technique using Cronbach's alpha was used. Cronbach's alpha is a coefficient of reliability that gives an unbiased estimate of data generalizability. An alpha coefficient of 0.75 or higher indicates that the data is reliable as it has a relatively high internal consistency and can be generalized to reflect opinions of all respondents in the target population Zinbarg (2005).

3.7 Pilot Study

Pilot study was conducted to test the reliability and validity of the questionnaire, according to Dempsey (2003) pilot study is the process of conducting preliminary test of data collection instruments in order to eliminate data collection problems that may led to low data validity and reliability. Connelly (2008) suggests that a pilot study sample should be 10% of the sample projected for the larger parent study. To achieve these 4 respondents were selected randomly 2 from administration department and 1 each from procurement and stores respectively were used.

3.8 Data Analysis and Presentation

The study adopted the multiple regression analysis, to establish the relationship between the dependent variables which is effective procurement process and the independent variables which are SRM, global sourcing and tendering process. The study was embodied on the regression model below;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

Where Y = Effective procurement process

X1 = SRM

X2 = Global Sourcing

X3 = Tendering Process

β_1 = Effect of X1 on Y

β_2 = Effect of X2 on Y

β_3 = Effect of X3 on Y

α = Constant/the intercept point of the regression line and the y-axis,

e = Error term.

The strength of the relationship between the dependent and the independent variables was measured by carrying out t -test at 5% level of significance. The test was done to determine whether the coefficients β_1 , β_2 and β_3 , are significantly different from zero.

CHAPTER FOUR: RESULTS AND DISCUSSIONS

This chapter presents the results and discussion of the study which is presented on the basis of the research objectives as defined in chapter one. The data was analyzed and summarized in form of frequency distribution tables, using descriptive analysis technique and inferential statistics using simple linear and multiple linear regression. Microsoft Excel and statistical package for social sciences (SSPS) version 22 were used to analyze the data.

4.1 Questionnaire Return Rate

The study was designed to draw respondents from 40 staff members at KEMRI Kisumu County. Out of the 40 targeted respondents, 37 returned completed and duly filled questionnaires giving a questionnaire return rate of 92.5%. The return rate was high because the researcher administered the questionnaires to the respondents in person and made follow ups to ensure the questionnaires were duly filled.

4.2 Demographic and Background Information

To be able to gauge the significance of the information provided by the respondents, it was important to understand their background and demographic information. As such, background and demographic information was solicited through the question which included gender, marital status, age group, level of education, involvement in procurement process duration of service at KEMRI with findings presented in the subsequent sections.

4.2.1 Gender

On gender, the respondents' gender was captured as either male or female. The data was analysed and presented in Table 4.1.

Table 4.1

Distribution of respondents by Gender

Gender	Frequency	Percent
Male	20	54.1
Female	17	45.9
Total	37	100.0

Source: Researcher's own analysis (2016)

From the findings, the staff members at KEMRI are almost evenly distributed in terms of gender with males being the slight majority at 54.1%. This shows that gender could not be a factor in understanding the procurement system at KEMRI.

4.2.2 Marital Status

On marital status, the respondents were asked to indicate their marital status. The findings are presented in Table 4.2.

Table 4.2

Distribution of Respondents by Marital Status

Marital status	Frequency	Percent
Married	21	56.8
Single	16	43.2
Total	37	100.0

Source: Researcher's own analysis (2016)

Majority of the respondents (56.8%) were married with the remaining 43.2% being single. The findings show a close balance between the married and the single group in the staff membership at KEMRI thus marital status is not a distinctive factor in the staff.

4.2.3 Age group

Age is perceived to correlate with wisdom and maturity in decision making. Similarly age determines an individual’s level of comprehension as well as experience if a considerable of the years have been acquired while performing a given function. Consequently, the age of the respondents was considered to be a factor in understanding the procurement system and the ability to provide valuable information which is credible. A finding on distribution of gender by age group is presented in Table 4.3.

Table 4.3

Distribution of Respondents

Age group	Frequency	Percent
18 - 25 years	6	16.2
26 - 49 years	31	83.8
Total	37	100.0

Source: Researcher’s own analysis (2016)

From the findings, an overwhelming majority (83.8%) of the respondents were aged between 26-49 years. This shows that the staff at KEMRI were at the desirable age thus could provide the credible information on procurement.

4.2.4 Level of education

Education implies acquisition of knowledge necessary to execute assigned tasks. Individuals with higher levels of education are considered to be academically competent and qualified to discharge their duties. The researcher therefore sought to understand the

level of education of the respondents to be able to gauge the usefulness of information provided. The findings are presented in Table 4.4.

Table 4.4

Respondents Level of Education

Level of education	Frequency	Percent
University	34	91.9
Secondary	3	8.1
Total	37	100.0

Source: Researcher's own analysis (2016)

Nearly all the study respondents (91.9%) had at least university level of education. This implies that the respondents were adequately knowledgeable and could provide authentic and credible information as required for the study. Moreover, the respondents are in a position to discharge their duties based on the fundamental academic requirements.

4.2.5 Involvement in tendering process

To be able to answer the research questions, it was necessary to establish whether respondents were involved in the procurement process in any way. Respondents were asked to indicate whether they are involved in procurement either directly or indirectly. The findings were analysed and presented in percentages of respondents involved and those not involved as presented in Table 4.5.

Table 4.5

Involvement in Tendering Process

Directly or indirectly involved in tendering process	Frequency	Percent
Yes	35	94.6
No	2	5.4
Total	37	100.0

Source: Researcher's own analysis (2016)

From the findings, 94.6% of the respondents are involved in procurement in some way at KEMRI. This implies that respondents' understand the procurement process at the organization thus would be able to provide the required information.

4.2.6 Duration of service at KEMRI

Norms, traditions and practices within an organization are understood over a period of time. The researcher sought to establish the duration the respondents had served in the organization. This would help gauge the extent of their understanding of the operations within the organization. The longer an individual stays within an organization or system, the more he/she will understand the operations. The findings on duration of service are presented in Table 4.6.

Table 4.6

Duration of Service at KEMRI

Duration of service in KEMRI	Frequency	Percent
Less than 1 year	3	8.1
Between 1 to 5 years	9	24.3
Between 5 to 10 years	21	56.8
More than 10 years	4	10.8
Total	37	100.0

Source: Researcher's own analysis (2016)

From the findings, majority of the respondents (56.8%) had served at KEMRI for between 5 to 10 years followed by 24.3% who had served for between 1 to 5 years and 10.8% who had served for more than 10 years. However, only 8.1% of the respondents had served for less than 1 year. This finding gives accumulative total of 67.6% of the respondents who had served for at least 5 years thus had the considerable time exposure

to understand the procurement process at the organization thus able to provide reliable information.

4.3 Supplier Relationship Management and Effective Procurement

In the first objective, the study sought to determine the influence of supplier relationship management on effective procurement process at KEMRI Kisumu County. One of the factors considered to influence effective procurement process at KEMRI Kisumu County was supplier relationship management. To be able to measure this, 7 indicators were measured to establish supplier relationship management. The indicators were measured using LIKERT scale with scores ranging from 1 to 5. The findings are presented in the subsequent section

4.3.1 Supplier appraisal, timely payment and after sale service

For the first part, the researcher measured the frequency with which the suppliers were appraised annually, were paid annually and the frequency with which the offered after sale service to KEMRI annually. The responses were given as never = 1, once = 2, twice = 3, thrice = 4 and over three times = 5. Data was analysed to show frequency of each response. Mode and median were used as the measures of central tendency. The findings are presented in Table 4.7.

Table 4.7

Supplier appraisal, timely payment and after sale service

Statement	Never	Once	Twice	Thrice	Over 3 times	Mean	Std. Dev
Appraisal for suppliers is done annually, if not please state how many times	24 64.9%	8 21.6%	3 8.1%	2 5.4%	0 0.0%	1.54	0.726
State number of times suppliers are paid in time annually	5 13.5%	1 2.7%	12 32.4%	3 8.1%	16 43.2%	3.65	1.418
State number of times after sale service from your suppliers is given annually to KEMRI	15 40.5%	8 21.6%	5 13.5%	4 10.8%	5 13.5%	2.35	1.325

Source: Researcher's own analysis (2016)

On appraisal of suppliers, 64.9% of the respondents believe that supplier appraisal is never done with another 21.6% saying that appraisal is done once annually. The findings indicate that KEMRI rarely does supplier appraisal which points to poor supplier relationship management. On the contrary, Ondieki (2015) recommended that managing supplier relationship management is necessary through intensifying centralization of common user items by creating a data base on supplier activities such as delivery schedules, complaints, quality management processes.

On timely payment of suppliers, majority of the respondents (43.2%) observed that KEMRI pays the suppliers on time over 3 times annually, 32.4% indicated twice with 13.5% indicating that suppliers are never paid in time. The findings show that there is a tendency of late payment of suppliers which affects the relationship between the

organization and its suppliers. The late payment of suppliers within the organization savors the relationship which leads to delay in delivery of supplies.

On after sale services offered by suppliers to KEMRI, the study found that there is low after sale service offered to KEMRI by the suppliers with the majority of the respondents (40.5%) reporting that it is never offered while 21.6% saying that the organization receives after sale service once annually. However, 13.5% indicated twice annually, 10.8% indicated thrice annually while 13.5% indicated more than thrice. This shows that less after sale service is offered to the organization by its suppliers. With less after sale services received by the organization, benefits that would accrue from such after sales services are forfeited thus the procurement of supplies lacks value for money spent by the organization.

4.3.2 ISO certified suppliers and Credit Facilities

The respondents were asked to state the proportion of their suppliers who are ISO certified and the proportion of suppliers who offer credit facilities the institution. The responses were rated as 0-20%, 21-40%, 41-60%, 61-80% and over 80% and scored from 1 to 5 respectively. The findings are presented in Table 4.8.

Table 4.8

ISO certified suppliers and Credit Facilities

Statement	0-20%	21-40%	41-60%	61-80%	Over 80%	Mean	Std. Dev
State the percentage of your suppliers who are ISO certified	6 16.2%	10 27.0%	9 24.3%	9 24.3%	3 8.1%	2.81	1.214
State percentages of your suppliers who offer credit facilities	0 0.0%	2 5.4%	4 10.8%	8 21.6%	23 62.2%	4.41	0.929

Source: Researcher's own analysis (2016)

Majority of the study respondents (27%) indicated that 21-40% of the suppliers are ISO certified with another 24.3% indicating that 41-60% is ISO certified. Cumulatively, 67.5% of the respondents believe that less than 60% of the suppliers are ISO certified. This finding shows that a significant proportion of the suppliers are not ISO certified. Since majority of the suppliers are not ISO certified, this shows that they fail to meet international standards set for various practices which implies that they do not offer effective and quality services.

On credit facilities offered by the suppliers, 62.2% of the respondents agree that over 80% of the suppliers offer credit facilities to the organization with another 21.6% indicating that between 61-80% of suppliers offer credit facilities. Cumulatively, 94.6% of the respondents indicated that at least 41% of the suppliers offer credit facilities. The findings show that suppliers of KEMRI are ready to offer credit facilities which should enhance the effectiveness of their procurement system. Since majority of the suppliers offer credit, KEMRI is able to acquire supplies before paying for them thus benefiting

from such goods before payment is made. However, this scenario could lead to expenses and compromise in quality due to overreliance on suppliers who offer credit facilities thus leaving out those who do not offer credit facilities but might have comparatively high quality products.

4.3.3 Rejected Goods due to Non-conformity and suppliers failing to honor orders

The other indicators investigated the frequency of goods being rejected by the organization due to non-conformity with the specifications and when suppliers fail to fulfill orders. The respondents indicated the frequencies from over 6 times coded as 1, 5-6 times coded as 2, 3-4 times coded as 3, 1-2 times coded as 4 and never, which was coded as 5. The analysis of the findings is presented in Table 4.9.

Table 4.9

Goods Rejected due to nonconformity and failure to deliver

Statement	Over 6 times	5-6	3-4	1-2	Never	Mean	Std. Dev
State the number of times annually when delivered goods are rejected due to non-conformity to specifications	8 21.6%	2 5.4%	16 43.2%	10 27.0%	1 2.7%	2.84	1.225
State the number of times annually when suppliers fail to honor the orders issued	5 13.5%	15 40.5%	11 29.7%	3 8.1%	3 8.1%	2.57	1.158

Source: Researcher's own analysis (2016)

Findings on goods being rejected indicate that there is high frequency of rejection of goods due to non-conformity with standards. Majority of the respondents (43.2%) indicated that goods are rejected between 3 to 4 times annually, with 27% indicating 1 to

2 times. The study found that cases of goods being rejected due to not meeting the specifications is a regular occurrence at KEMRI Kisumu County thus affecting the effectiveness of the procurement process.

On the number of times suppliers fail to honour the orders issued, the study found that it does occur although at small frequency. Majority of the respondents (40.5%) indicated that suppliers fail to honour orders between 5 to 6 times annually with another 13.5% indicating that they fail to honour orders over six times annually. Further, 29.7% indicate failure between 3 to 4 times. This finding shows that there are considerably high instances of failure to fulfill orders among suppliers with 51.3% of respondents indicating that failure occurs at least 3 times annually. The frequent failures, by suppliers in delivering products on time, lead to lack of essential products thus an overall negative effect in service delivery. Similarly, Lee (2002) affirmed that SRM is about developing two-way, mutually beneficial relationships with your strategic supply partners that deliver greater levels of innovation and competitive advantage than could be achieved by operating independently.

4.3.4 Influence of Supplier Relationship Management on Effective Procurement

For effective procurement, two indicators influenced greatly by Supplier relationship management were considered to be able to assess the effect of SRM on effective procurement. The factors, measured on a LIKERT scale: Not at all = 1, To a small extent = 2, To a moderate extent = 3, To a large extent = 4 and To a very large extent =5, were analysed and presented in terms of frequencies and percentages as shown in Table 4.10.

Table 4.10

Effective Procurement Process

Statement	Not at all	To a small extent	To a moderate extent	To a large extent	To a very large extent	Mean	Std. Dev
Level of procurement expenditure can easily be minimized	1 2.7%	2 5.4%	7 18.9%	16 43.2%	11 29.7%	3.92	0.983
The level of quality of procured goods and services offered are up to standard	3 8.1%	4 10.8%	12 32.4%	10 27.0%	8 21.6%	3.43	1.274

Source: Researcher's own analysis (2016)

The study found that the respondents believe that level of procurement expenditure can easily be minimized to a large extent (Mean = 3.92; SD = 0.983). In this case, majority of the respondents consider it to be possible to a large extent (43.2%) and to a very large extent (29.7%). This finding indicates that improvement in SRM can lead to reduction procurement expenditure.

Similarly, the respondents believe that the level of quality of procured goods and services offered are up to standard to a large extent (Mean = 3.43; SD = 1.274). Specifically, 32.4% of the respondents believe the qualities of goods procured are up to standard to a moderate extent, 27% to a large extent and 21.6% to a large extent. The findings indicate that the respondents generally agree that the quality of goods procured is up to the required standard to a moderate extent. On the other hand, Cooper (2003) opined that SRM includes both business practices and software and is part of the information flow component of supply chain management for successful implementation of effective supply chain management practices.

4.3.5 Relationship between SRM and effective procurement process

In order to establish the relationship between SRM and EP, regression analysis was conducted between the two variables with SRM as the independent variable and EP as the outcome variable. Scores on the individual indicators in the SRM scale were summated to obtain the total score of the respondents on the scale which yields continuous data suitable for regression. Similarly, EP was measured using six items scored on a likert format as 1 = not at all, 2 = small extent, 3 = moderate extent, 4 = large extent and 5 = very large extent. Subsequently, the regression model showing model summary, ANOVA and coefficients is presented in Table 4.11.

Table 4.11

Regression output for relationship between supplier relationship management and effective procurement

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
Model Summary	.243	.259	.238	4.116		
		Sum of Squares	df	Mean Square	F	Sig.
ANOVA	Regression	163.082	1	37.082	8.389	.014
	Residual	467.026	35	16.944		
	Total	630.108	36			
		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
	(Constant)	14.014	4.319		3.245	.003
Coefficients	Supplier Relationship Management	.291	.197	.243	1.479	.014

Dependent Variable: Effective Procurement Process

Source: Researcher's own analysis (2016)

The study found that SRM explains up to 25.9% ($R^2 = 0.259$) of variance in effective procurement which was statistically significant as $F_{\text{stat}}(1, 35) = 8.389$ was found at $p = 0.014$ ($p < 0.05$).

Using the model equation in the $Y = \beta_0 + \beta_1 X_1$ where Y is Effective procurement, X_1 is Supplier Relationship Management, β_0, β_1 are the coefficients of the terms and ϵ is the error term, the equation connecting the variables can be written as:

$$Y = 14.014 + 0.291X_1, \text{ thus;}$$

$$[\text{Effective Procurement}] = 14.014 + 0.291[\text{Supplier Relationship Management}]$$

This implies that for every unit increase in effectiveness of supplier relationship management, effective procurement increases by 0.291. This means that for KEMRI to attain effective procurement process then it should improve on supplier relationship management though Mettler (2009) studying supplier relationship management in healthcare stated that although today's reason for implementing SRM is mostly driven by cost-savings and efficiency increase propositions, substantial improvements in efficiency and quality in different areas of health care organizations can be achieved. By exchanging product and supplier formation with other hospitals, the purchasing department under study has made the first move to establish strategic aspects of SRM.

Ondieki (2015) researched on effect of supplier relationship management on the effectiveness of supply chain management; concluded that the effectiveness of supply chain management practices in the ministry of finance depended on application of modern supplier relationship management strategies. As compared to my study Ondieki (2015) stated that modern supplier management practices has effect on supply chain so the difference is that this study didn't indicate if SRM should be modern and again it was

researching on effective procurement process unlike Ondieki (2015) who was looking into supply chain management. He further stated that Supplier relationship activities play important role where players willingly share risks and rewards and maintain relationship on long term basis. Also a researcher Chenoweth (2012) researched on Best Practices in SRM and Early Implementation stated that SRM has grown in importance in the private sector over recent years; experience with SRM suggests that while it has tried to implement many of the best practices, some obstacles prevent it from reaping real benefits from the initiative. If these obstacles are addressed, SRM could become a significant strategic tool for seeking real cost and performance improvements with its key suppliers. In conclusion there was need for this study to be researched on since it has different outcome to the three discussed above though with a few similarities

4.4 Influence of Global Sourcing on Effective Procurement

In the second objective, the study sought to find out the effect of global sourcing on effective procurement process at KEMRI Kisumu County. Consequently, global sourcing as a variable was measured using 8 Likert scale items. Further, indicators of effective procurement with a close bearing on global sourcing were analysed to establish the effect of global sourcing on effective procurement. Regression analysis was conducted to establish the relationship between global sourcing and effective procurement.

4.4.1 Global Sourcing

In investigating this variable, respondents were asked to rate 8 items on a 5-point LIKERT scale on the extent to which they apply to KEMRI Kisumu. The responses were rated as strongly disagree = 1, disagree =2, neutral = 3, agree = 4 and strongly agree = 5.

The findings were analysed and presented in form of frequency and percentages as presented in Table 4.12.

Table 4.12

Global Sourcing

Statement	SD	D	N	A	SA	Mean	Std. Dev
Goods sourced internationally take long to be delivered	2 5.4%	0 0.0%	3 8.1%	13 35.1%	19 51.4%	4.27	1.018
Global sourcing is a challenge that KEMRI is facing due to long lead time	6 16.2%	0 0.0%	1 2.7%	17 45.9%	13 35.1%	3.84	1.365
KEMRI is experiencing stock outs due to global sourcing	7 18.9%	4 10.8%	9 24.3%	12 32.4%	5 13.5%	3.11	1.329
Frequent stock outs experienced at KEMRI affects its research activities	4 10.8%	0 0.0%	8 21.6%	11 29.7%	14 37.8%	3.84	1.259
The cost of procuring goods globally is more expensive as compared to local purchase	8 21.6%	2 5.4%	4 10.8%	12 32.4%	11 29.7%	3.43	1.519
KEMRI procures a lot of medical and laboratory supplies that need special temperature during being transported	5 13.5%	1 2.7%	0 0.0%	12 32.4%	19 51.4%	4.05	1.373
Suppliers who supply these goods delay in delivery which results in tempering with recommended temperature for medical and laboratory supplies	5 13.5%	4 10.8%	9 24.3%	10 27.0%	9 24.3%	3.38	1.393
Most vendors are financially unstable to indulge in global sourcing which leaves very few therefore resulting to non-competitive market	8 21.6%	4 10.8%	9 24.3%	7 18.9%	9 24.3%	3.14	1.475

Source: Researcher's own analysis (2016)

Majority of the respondents (51.4%) strongly agree that goods sourced internationally take long to be delivered while 35.1% agree with a mean 4.27 and standard deviation = 1.018. this indicates that there is an evident delay in delivery of procured products.

The study also found that global sourcing is a challenge that KEMRI is facing due to long lead time with majority of the respondents (45.9%) agreeing while 35.1% strongly agreeing (Mean = 3.84; SD = 1.365). This long lead time affects procurement process of KEMRI.

Further, KEMRI procures a lot of medical and laboratory supplies that need special temperature during transportation with 51.4% of the respondents strongly agreeing and 32.4% agreeing (Mean = 4.05; SD = 1.373). The special temperature conditions required by the purchases of KEMRI Kisumu County require proper storage which complicates the procurement process of such goods.

The study respondents also agree that the cost of procuring goods globally is more expensive as compared to local purchase with a mean of 3.43 and standard deviation of 1.519. Specifically, 32.4% of the respondents agree with another 29.7% strongly agreeing. The high cost of procuring goods globally affects the effectiveness of procurement by KEMRI Kisumu.

Of a greater problem to effective procurement, the study found that suppliers are not financially stable to facilitate the procurement and delivery of specific goods and materials. Specifically, the respondents moderately agree that most vendors are financially unstable to indulge in global sourcing which leaves very few therefore resulting to non-competitive market with 24.3% strongly agreeing, 18.9% agreeing and

another 24.3% reporting that they are neutral to this statement (Mean = 3.14; SD = 1.475).

4.4.2 Global sourcing and effective procurement

To assess the influence of global sourcing on effective procurement, two indicators directly related to global sourcing with effect on effectiveness of procurement process were analysed. The findings were presented in frequency and percentages as shown in Table 4.13.

Table 4.13

Effective Procurement Process

Statement	Not at all	To a small extent	To a moderate extent	To a large extent	To a very large extent	Mean	Std. Dev
The organization's level of compliance to procurement regulations is good	1 2.7%	3 8.1%	13 35.1%	11 29.7%	9 24.3%	3.65	1.024
KEMRI fail to adhere to the budgetary allocation annually	4 10.8%	14 37.8%	11 29.7%	2 5.4%	6 16.2%	2.78	1.206

Source: Researcher's own analysis (2016)

The study found that the organization's level of compliance to procurement regulations is good to a moderate extent (Mean = 3.65; SD = 1.024). This was established as majority of the respondents considered it to be true to a moderate extent, 29.7% to a large extent and to a very large extent (24.3%).

The study also found that KEMRI Kisumu fails to adhere to the budgetary allocation annually (Mean = 2.86; SD = 1.206). In this case, majority of the respondents (37.8%)

believe that the organization fails to adhere to annual budgetary allocations to a small extent with 29.7% of the respondents say the organization only fails to adhere to allocations to a moderate extent. However, only 10.8% say the organization does not fail to adhere to budgetary allocations.

The findings show that although the level of compliance with procurement regulations is acceptable, there is still the case of the organization not adhering to budgetary allocations implying over expenditure which results into the ineffectiveness of the procurement process.

4.4.3 Relationship between Global Sourcing and Effective Procurement Process

In order to determine the relationship between challenges global sourcing and effective procurement, a regression analysis was run with global sourcing as the predictor variable and effective procurement as the outcome variable. The value of global sourcing was obtained by summation of the LIKERT individual scores of the LIKERT scale items to obtain scale data. The scores on the effective procurement scale were also summated for the individual respondents. The regression output showing model summary, ANOVA and coefficients are presented in Table 4.14.

Table 4.14

Regression output for influence of Global sourcing on effective procurement

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
Model Summary	.384	.347	.329	3.918		
ANOVA	Regression	Sum of Squares 218.917	df 1	Mean Square 92.917	F 6.054	Sig. .019
	Residual	411.191	35	15.348		
	Total	630.108	36			
Coefficients	(Constant)	Unstandardized Coefficients B 26.741	Std. Error 2.686	Standardized Coefficients Beta	T 9.955	Sig. .000
	Global Sourcing	-0.224	.091	-.384	-2.460	.019

Dependent Variable: Effective Procurement Process

Source: Researcher's own analysis (2016)

From the model summary, Global sourcing explains up to 34.7% ($R^2 = 0.347$) of the variance in effective procurement at KEMRI. The relationship between global sourcing and effective procurement is statistically significant with $F_{\text{stat}}(1, 35) = 6.054$ as $p = 0.019$ ($p < 0.05$).

Using the model equation in the $Y = \beta_0 + \beta_2 X_2 + \varepsilon$ where Y is Effective procurement, X_2 is Global Sourcing, β_0, β_2 are the coefficients of the terms and ε is the error term, the equation connecting the variables can be written as:

$$Y = 26.741 - 0.224X_2 + \varepsilon, \text{ thus;}$$

$$[\text{Effective Procurement}] = 26.741 - 0.224[\text{Global Sourcing}]$$

This implies that for every unit increase in the challenges of global sourcing, effective procurement decreases by 0.224. This also means that to attain effective procurement process at KEMRI then the organization should reduce practicing in global sourcing as a way of purchasing its requirements, doing a comparison on Laura (1993) studying international purchasing on benefits, requirements and challenges, states that to meet the global competitive challenge that exists today, firms must be able to offer customers new products of high quality and perceived value. Because purchasing some required inputs internationally can assist firms in doing this, international purchasing has become an increasingly popular competitive approach. For Laura (1993) global purchase is of a benefit unlike this study which recommends reduction on global sourcing, she further states that a change in attitude has emerged among some manufacturing firms regarding their international sourcing activities. That is, today's manufacturers have realized that international sourcing can be transformed from a unique, but traditional reactive activity to a proactive strategy capable of helping the firm establish a sustainable competitive advantage.

4.5 Tendering Process and Effective Procurement Process

The third study objective required the researcher to determine the contribution of tendering process on effective procurement process at KEMRI, Kisumu County. Various items were developed to assess the tendering process at KEMRI Kisumu County with a view to establish its contribution to effective procurement. The findings are presented as follows.

4.5.1 Rating the tendering process

The respondents were asked to rate in their opinion, the tendering process at KEMRI. The rating was done on a four point scale as very poorly managed =1, poorly managed = 2, well managed = 3 and very well managed. The findings are presented in table 4.15.

Table 4.15

Rating the tendering process

Response	Frequency	Percent
Very poorly managed	11	29.7%
Poorly managed	20	54.1%
Well managed	6	16.2%
Total	37	100.0%

Source: Researcher's own analysis (2016)

Employees of KEMRI consider that the procurement process is not well managed with none of the respondents picking this option. Specifically, majority of the respondents consider the tendering process to be poorly managed (54.1%) with another 29.7% considering it to be very poorly managed. The findings show that procurement process is generally poorly managed thus ultimately affecting effectiveness of the procurement process.

4.5.2 Level of favoritism in tendering process

The level of favoritism in tendering process influence effective procurement as it compromises the tendering process. The respondents were asked to indicate their perception of level of favoritism at KEMRI Kisumu County. The findings were summarized in frequency and percentages as presented in Table 4.16.

Table 4.16

Level of favoritism in tendering process

Response	Frequency	Percent
Very high	1	2.7
High	5	13.5
Moderate	21	56.8
Low	5	13.5
Very low	5	13.5
Total	37	100.0

Source: Researcher's own analysis (2016)

The findings show that there is moderate level of favoritism (56.8%) while 13.5% of the respondents consider it to be high with another 2.7% rating favoritism in the tendering process as very. The findings show that the level of favoritism in tendering process at KEMRI is relatively high ranging from moderate to very high which affects effective procurement at the organization.

4.5.3 The extent politics affect the tendering process

Politics as a factor also influences effective procurement in government organization of which KEMRI is. The respondents were asked to rate the extent to which politics affects procurement process at the organization based on their observation and involvement in the procurement process. The findings are presented in Table 4.17.

Table 4.17

The extent politics affect the tendering process

Response	Frequency	Percent
Very profoundly	3	8.1
Profoundly	6	16.2
Average	15	40.5
Below average	13	35.1
Total	37	100.0

Source: Researcher's own analysis (2016)

The findings show that politics affect procurement to a low extent with majority of the respondents (40.5%) indicating that it averagely affects procurement process. Further, 35.1% of the respondents consider the influence of politics on procurement process to be below average with only 16.2% who consider politics to profoundly influence procurement. The findings imply that there are some aspects of political influence on procurement process at KEMRI albeit being at average levels.

4.5.4 Level of use of Government Tendering Procedures

On the level of observation of Government procedures in procurement process, the respondents indicated ranging from fully (100%), through average (50%), partly (30%) to not sustainable. The findings are presented in Table 4.18.

Table 4.18

Level of use of Government Tendering Procedures

	Frequency	Percent
Fully 100%	12	32.4
Average 50%	12	32.4
Partly 30%	12	32.4
Not observed	1	2.7
Total	37	100.0

Source: Researcher's own analysis (2016)

From the findings, there is observance of government rules in the procurement process. 32.4% of the respondents observe that it is fully observed, 32.4% observe averagely observed while another 32.4% reported that the policies are partly observed. However, only 2.7% of the respondents were of the opinion that government tendering procedures are not observed in tendering process at KEMRI Kisumu County. The findings imply that there is observance of the government procedures in procurement at KEMRI.

4.5.5 Respondents' Perception of the tendering process

The study sought to find out how the respondents perceived the tendering process at KEMRI Kisumu County. They gave their responses on whether tendering process was a waste of time and whether tendering process in KEMRI was effective. The findings are presented in Table 4.19.

Table 4.19

Perception of the tendering process

Statement	Response	Frequency	Percent
Tendering process wastes time	Yes	13	35.1%
	No	24	64.9%
	Total	37	100.0%
Tendering process in KEMRI is effective	Yes	16	43.2%
	No	21	56.8%
	Total	37	100.0%

Source: Researcher's own analysis (2016)

Overall, the respondents consider tendering process at KEMRI to be important as majority (64.9%) say it is not a waste of time. However, majority of the respondents (56.8%) believe that tendering process at KEMRI Kisumu County is not effective (56.8%). This implies that the non-effectiveness of the tendering process ultimately affects the organizations procurement process.

4.5.6 Influence of Tendering Process on Effective Procurement

To be able to investigate the influence of tendering process on effective procurement, two indicators of tendering process were analysed to establish their influence. The findings were analysed and presented in terms of frequency and percentages as shown in Table 4.20.

Table 4.20

Effective Procurement Process

Statement	Not at all	To a small extent	To a moderate extent	To a large extent	To a very large extent	Mean	Std. Dev
The level of transparency and accountability of procurement funds adheres to organization's policy	10 27.0%	11 29.7%	10 27.0%	4 10.8%	2 5.4%	2.38	1.184
The firm often fails to prepare the procurement progress reports as required annually	13 35.1%	4 10.8%	11 29.7%	5 13.5%	4 10.8%	2.54	1.386

Source: Researcher's own analysis (2016)

On whether the level of transparency and accountability of procurement funds adheres to organization's policy, the study found that this is only true to a small extent (Mean = 2.38; SD= 1.184) with 27% of the respondents saying its true to a moderate extent, another 27% saying not at all while 29.7% say to a small extent. However, 10.8% of the respondents believe that the level of transparency and accountability of procurement funds adheres to organization's policy to a large extent while 5.4% believe it adheres to a very large extent. This finding shows that transparency and accountability in procurement is not according to the firm's policy at KEMRI. Consequently, increasing accountability and transparency to meet the firm's policy may increase effectiveness in procurement.

The study also found that the firm often fails to prepare the procurement progress reports as required annually with majority of the respondents (29.7%) saying to a moderate extent, 13.5% saying to a large extent and 10.8% saying to a very large extent. The

glaring failure to prepare progress reports hampers the procurement process making it ineffective.

4.5.7 The contribution of tendering process on effective procurement process

In order to establish relationship between tendering process and effective procurement, 6 items under tendering process were aggregate to give the respondents score on procurement process. The items were: rating of the tendering process, level of favouritism, extent of political influence, use of government tendering procedures, outcome of tendering process on organization's income as well as tendering process being free and fair. As for effective procurement, the respondents' scores on the 6 items in the scale were aggregated through summation. Consequently, a regression analysis was conducted with tendering process as the independent variable and effective procurement as the dependent variable. The findings and the regression output showing model summary, ANOVA and coefficients is presented in Table 4.21.

Table 4.21

Regression output for tendering process and effective procurement

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
Model Summary	.172	.316	.296	4.180		
ANOVA		Sum of Squares	df	Mean Square	F	Sig.
	Regression	198.884	1	18.684	11.070	.008
	Residual	431.224	35	17.469		
	Total	630.108	36			
Coefficients		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
	(Constant)	15.296	4.910		3.115	.004
	Tendering Process	.311	.301	.172	1.034	.008

Dependent Variable: Effective Procurement Process

Source: Researcher's own analysis (2016)

From the findings, there is a weak positive relationship between tendering process and effective procurement ($R = 0.172$). The model summary shows that tendering process explains up to 31.6% ($R^2 = 0.316$) of variance in effective procurement at KEMRI. The relationship between global sourcing and effective procurement is statistically significant with $F_{\text{stat}}(1, 35) = 11.070$ as $p = 0.008$ ($p < 0.05$).

Using the model equation in the $Y = \beta_0 + \beta_3 X_3 + \varepsilon$ where Y is Effective procurement, X_3 is tendering process, β_0, β_3 are the coefficients of the terms and ε is the error term, the equation connecting the variables can be written as:

$$Y = 15.296 + 0.311X_3 + \varepsilon, \text{ thus;}$$

$$[\text{Effective Procurement}] = 15.296 + 0.311[\text{Tendering Process}]$$

This implies that for every unit increase in tendering process, effective procurement increases by 0.311, therefore this means that effective procurement process will be

efficient and better if only improvement is done on tendering process. Ayoti (2012) researching on Factors influencing effectiveness in tendering process in public recommended that all the employees involved in tendering process should advance their level of education especially those with o-level and Diplomas as their highest education qualification. In this study we are able to compare similarity of improvement in tendering process though in two different aspects since Ayoti talks on advanced level of education while this study didn't indicate how the improvement can be done.

Agerberg, (2012) studying risk management in the tendering process stated that most of the studied department in risk management and tendering practices are formalized and effectively performed. Their practices comply with the established internal documentation and routines. The company should use a common risk definition. Comparing this study to analysis of factors influencing effective procurement process a case of KEMRI is the fact both studies highlight improvement of tendering process though in different perspectives. The difference between the two studies is that Agerberg (2012) concentrated on the risk management in tendering process while this study looked in the effect that tendering process made in effective procurement process. Kang (2015) studied on comparative study between clients and contractors on competitive tendering in the Sudan, clients view and contractors' view on competitive tendering in the Sudan construction industry concluded that despite their opposite positions in respect of tender price and different roles/responsibilities, clients and contractors have almost the same view on the main aspects of competitive tendering. Even though competitive tendering has some disadvantages, it seems that this tendering method can still be efficient and effective to be used in the 21st century, as both parties are well aware of the advantages

and disadvantages. Kang(2015) as compared to my study is that both are addressing tendering though Kang (2015) was looking into competitive tendering while my study was analyzing effect of tendering process to effective procurement process, both studies however agreed that tendering is an important aspect on procurement process.

4.6 Combined effect of factors influencing effective procurement

In order to investigate the combined effect of factors influencing effective procurement at KEMRI Kisumu, a regression analysis was used. Three dependent variables: supplier relationship management, global sourcing, tendering process and predictor variable (effective procurement) were used. Aggregate scores for the various variables were obtained from their respective LIKERT scales. The regression output for the combined effect showing model summary, ANOVA and coefficients is shown in Table 4.22.

Table 4.22

Regression output for the combined effect of factors influencing effective procurement

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
Model Summary	.461	.564	.525	3.878		
ANOVA		Sum of Squares	df	Mean Square	F	Sig.
	Regression	355.751	3	44.584	2.964	.046 ^b
	Residual	274.357	33	15.041		
	Total	630.108	36			
Coefficients		Unstandardized Coefficients	Std. Error	Standardized Coefficients	T	Sig.
	(Constant)	B		Beta		
	Supplier relationship Management	16.794	6.616		2.538	.016
	Global sourcing	.197	.189	.164	1.042	.005
Tendering Process	-.214	.092	-.366	-2.326	.026	
		.333	.281	.184	1.186	.044

Dependent Variable: Effective Procurement Process

Source: Researcher's own analysis (2016)

From the regression output, the independent variables (supplier relationship management, global sourcing and tendering process) were found to explain up to 56.4% ($R^2 = 0.564$) of variance in the outcome variable (Effective Procurement). The regression model was statistically significant as $F_{\text{stat}}(3, 33) = 2.964$ with $p = 0.046$ ($p < 0.05$).

The coefficient of the constant term ($B = 16.794$; $p = 0.016$), the coefficient of global sourcing ($B = -0.214$; $p = 0.026$), the coefficient of supplier relationship management ($B = 0.197$; $p = 0.005$) and the coefficient of tendering process ($B = 0.333$; $p = 0.044$) were all found to be statistically significant since $p < 0.05$).

Using a linear equation connecting the variables in the form $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \varepsilon$ where Y is Effective procurement, X_1 is Supplier Relationship Management, X_2 is Global Sourcing, X_3 is tendering process, β_0 , β_1 , β_2 and β_3 are the coefficients of the terms and ε is the error term, the equation connecting the variables can be written as:

$$Y = 16.794 + 0.197X_1 - 0.214X_2 + 0.333X_3 + \varepsilon$$

Since the coefficient of global sourcing is statistically significant, this implies that holding other factors constant, an increase in global sourcing challenges by one unit will result to a decrease in effective procurement by 0.214 units.

4.7 Government Policy and Effective Procurement

Government policy influences the operations of public institutions. As a public institution, KEMRI Kisumu is governed by several government policy and principles in its operation. The policies established affect its operations including procurement of goods and services. The respondents rated for items on a 5-point likert scale to include

strongly disagree = 1, disagree = 2, neutral = 3, agree = 4 and strongly agree = 5. The responses were analysed and presented in form of frequencies and percentages as well mean and standard deviation as shown in Table 4.23.

Table 4.23

Government Policy

Statement	SD	D	N	A	SA	Mean	Std. Dev
KEMRI as an organization uses government policies to manage its activities	4 10.8%	0 0.0%	4 10.8%	8 21.6%	21 56.8%	4.14	1.294
KEMRI board members who implement policies are appointed by the government	3 8.1%	1 2.7%	4 10.8%	5 13.5%	24 64.9%	4.24	1.256
In case where KEMRI partners with NGOs to work together government policies are used	2 5.4%	0 0.0%	7 18.9%	12 32.4%	16 43.2%	4.08	1.064
Government policies affect decision making at KEMRI	2 5.4%	2 5.4%	9 24.3%	3 8.1%	21 56.8%	4.05	1.246

Source: Researcher's own analysis (2016)

All the four indicators of the government policy were rated to indicating agreement with mean scores above 4. On the indicator KEMRI as an organization uses government policies to manage its activities, the study found a mean of 4.14 with standard deviation = 1.294. Specifically, 56.8% of the respondents strongly agree that KEMRI as an organization uses government policies to manage its activities, 21.6% agree while 10.8% were neutral.

However, the respondents agree that Government policies affect decision making at KEMRI (Mean = 4.05; SD = 1.246). With regard to this, 56.8% of the respondents

strongly agree, 24.3% were neutral with 8.1% agreeing. On the policies, the study found that KEMRI board members who implement policies are appointed by the government (Mean = 4.24; SD = 1.256). Majority of the respondents (64.9%) strongly agree, 13.5% agree while 10.8% were neutral.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter presents a summary of this study in the following order; summary of the research project results, conclusions and recommendation.

5.1 Summary of Findings

The purpose of the study was to analyze factors that influence effective procurement process in KEMRI.

The first objective sought to determine the influence of supplier relationship management on effective procurement process at KEMRI Kisumu County. The major findings on this objective show that on Supplier appraisal, timely payment and after sale service, majority of the respondents believed that supplier appraisal is never done. On timely payment of suppliers, majority of the respondents observed that KEMRI pays the suppliers on time over 3 times annually. The study also found that there was low after sale service offered to KEMRI by the suppliers.

Findings on goods being rejected indicate that there is high frequency of rejection of goods due to non-conformity with standards. Majority of the respondents indicated that goods were rejected. The study found that cases of goods being rejected due to not meeting the specifications is a regular occurrence at KEMRI Kisumu County thus affecting the effectiveness of the procurement process. On the number of times suppliers fail to honour the orders issued, the study found that it did occur although at small frequency. Majority of the respondents indicated that suppliers fail to honour orders. This shows that there were considerably high instances of failure to fulfill orders among suppliers with respondents indicating that failure occurred.

In establishing the influence of Supplier Relationship Management on Effective Procurement, the respondents believed that level of procurement expenditure could easily be minimized to a large extent. In this case, majority of the respondents consider it to be possible to a large extent and to a very large extent. This finding indicates that improvement in SRM can lead to reduction procurement expenditure. Similarly, respondents believed that the level of quality of procured goods and services offered were up to standard to a large extent. In order to establish the relationship between SRM and EP, regression analysis was conducted between the two variables with SRM as the independent variable and EP as the outcome variable.

Based on global Sourcing, majority of the respondents cumulatively agreed that goods sourced internationally took long to be delivered indicating that there is an evident delay in delivery of procured products. The study also found that global sourcing was a challenge that KEMRI was facing due to long lead time with majority of the respondents. This long lead time affects procurement process of KEMRI. The study respondents also agreed that the cost of procuring goods globally was more expensive as compared to local purchase; the high cost of procuring goods globally affects the effectiveness of procurement by KEMRI Kisumu. Of a greater problem to effective procurement, the study found that suppliers were not financially stable to facilitate the procurement and delivery of specific goods and materials. Specifically, the respondents moderately agreed that most vendors were financially unstable to indulge in global sourcing which leaves very few therefore resulting to non-competitive market with cumulatively agreeing with the statement. In assessing the influence of global sourcing on effective procurement, the study found that the organization's level of compliance to procurement regulations was

good to a moderate extent. The study also found that KEMRI Kisumu failed to adhere to the budgetary allocation annually.

Employees of KEMRI consider that the procurement process is not well managed with none of the respondents picking this option. Specifically, majority of the respondents consider the tendering process to be poorly managed and considered it to be very poorly managed. The findings show that procurement process is generally poorly managed thus ultimately affecting effectiveness of the procurement process. On level of favoritism, the study showed that there was moderate level of favoritism. The study also found that politics affected procurement with majority of the respondents indicating that it averagely affected procurement process.

Overlay, the respondents considered tendering process at KEMRI to be important, however, majority of the respondents believe that tendering process at KEMRI Kisumu County was not effective. The study also found that the firm often fails to prepare the procurement progress reports as required annually with majority of the respondents.

5.2 Conclusion

Major conclusions drawn from the first objectives were that supplier appraisal was never done and that KEMRI paid the suppliers on time. It was also concluded that there was low after sale service offered to KEMRI by the suppliers. The study also concluded that most of the suppliers were not ISO certified. There was also high frequency of rejection of goods due to non-conformity with standards and there were considerably high instances of failure to fulfill orders among suppliers. Generally, the study concluded that improvement in SRM could lead to reduction on procurement expenditure and that

there was a statistical significant relationship between supplier relationship management and effective procurement process.

In the second objective, the study concluded that goods sourced internationally took long to be delivered indicating that there was an evident delay in delivery of procured products. The study also concluded that global sourcing was a challenge that KEMRI was facing and that cost of procuring goods globally was more expensive as compared to local purchase. Of a greater problem to effective procurement, the study concluded that suppliers were not financially stable to facilitate the procurement and delivery of specific goods and materials. In assessing the influence of global sourcing on effective procurement, the study concluded that the organization's level of compliance to procurement regulations was good to a moderate extent and using the regression to establish the relationship between global sourcing and EP, the relationship between global sourcing and effective procurement was statistically significant

Based on the last objective, the study concluded that employees of KEMRI considered that the procurement process was not well managed thus ultimately affecting effectiveness of the procurement process. Overall, the respondents considered tendering process at KEMRI to be important and not a waste of time. However, tendering process at KEMRI Kisumu County was not effective due to low level of transparency and accountability of the process and failure by the firm to prepare the procurement progress reports as required annually according to the organizational tendering policy. Using the regression to establish the relationship between tendering process and EP, the relationship between global sourcing and effective procurement was statistically significant.

5.3 Recommendations

This section stipulates the recommendations to be implemented for practice and policy for effective tendering and procurement process. The study recommends that examination and evaluation of offers be made effective. Accountability and measurement of goals and results need to be considered since they affect effective procurement process at any organization.

Adequate controls should be put in place reducing opportunities for corruption. Performance incentives need to be offered to employees to reward good performance. This will help to increase accountability and transparency in procurement process.

The study further recommends the organizations such as KEMRI to adopt ICT adoption. This will enhance the process of effective tendering through advertising, sourcing reviews, prequalification, potential for cost savings and greater awareness of new development. It will also enable the organizations to provide excellent service to their suppliers in an effective and transparent manner.

Tender bids evaluation need to be improved to take lesser time and product specifications should be made clear. Slanting product specifications need to be discouraged.

5.4 Suggestion for further study

The study recommends further research should be conducted to investigate the impact of ethical practices in tendering process in similar organizations and how it affects the Kenyan economy. Further, other factors that may influence effectiveness in the tendering Process in Kenya.

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APPENDEICES
Appendix I: Research Questionnaire

DEMOGRAPHIC DATA

Please tick [] the option that best suits your opinion on the corresponding statements.

1. a. Gender

(i) Male []

(ii)Female []

b. Marital status:

(i) Married []

(ii) Single []

(ii) Divorced []

(iv) Widowed []

(v) Separated []

3. Check your appropriate age group.

(i) 18-25 []

(ii) 26-49 []

(iii) 50-69 []

(iv) 70 or above

4. The Current level of education:

(i) University []

(ii) Secondary []

(iii) Primary []

(iv) None of the above []

6. Are you directly or indirectly involve in tendering process?

Yes [] No []

7. How long have you been working for KEMRI?

a. Less than one year []

b. Between 1 to 5 years []

c. Between 5 to 10 years []

d. Above 10 years []

SECTION 1: Supplier's relationship management in KEMRI

Please tick [√] the option that best suits your opinion on your institution way of operations with respect to supplier's relationship management

Questions	Never	Once	Twice	Thrice	Over 3 times
Appraisal for suppliers is done annually, if not please state how many times					
State number of times suppliers are paid in time annually					
State number of times after sale service from your suppliers is given annually to KEMRI					
	0-20%	21- 40%	41- 60%	61- 80%	Over 80%
State the percentage of your suppliers who are ISO certified					
State percentages of your suppliers who offer credit facilities					
	Over 6 times	5-6	3-4	1-2	Never
State the number of times annually when delivered goods are rejected due to non-conformity to specifications					
State the number of times annually when suppliers fail to honor the orders issued					

SECTION 2: Global sourcing in KEMRI.

Please tick [√] the option that best suits your opinion on the corresponding statements.

- 1 Strongly disagree
- 2 Disagree
- 3 Neutral
- 4 Agree
- 5 Strongly agreed

Questions	1	2	3	4	5
Goods sourced internationally take long to be delivered					
Global sourcing is a challenge that KEMRI is facing due to long lead time					
KEMRI is experiencing stock outs due to global sourcing					
Frequent stock outs experienced at KEMRI affects its research activities					
The cost of procuring goods globally is more expensive as compared to local purchase					
KEMRI procures a lot of medical and laboratory supplies that need special temperature during being transported					
Suppliers who supply these goods delay in delivery which results in tempering with recommended temperature for medical and laboratory supplies					
Most vendors are financially unstable to indulge in global sourcing which leaves very few therefore resulting to non-competitive market					

SECTION 3: Tendering process in KEMRI

Please tick [√] the option that best suits your opinion.

1. Please rate the tendering process

- (i) Very poorly managed []
- (ii) Poorly managed []
- (iii) Well managed []
- (iv) Very well managed []

2. Kindly rate the level of favourism in tendering process

(i) Very high []

(ii) High []

(iii) Moderate []

(iv) Low []

(v) Very Low []

3. State to what extent politics affect the tendering process

(i) Very Profoundly []

(ii) Profoundly []

(iii) Average []

(iv) Below Average []

4. Do you think tendering process wastes time?

(i) Yes [] (ii) No []

5. Tendering process in KEMRI is effective.

(i) Yes [] (ii) No []

6. State averagely the use of government tendering procedures

(i) Fully 100% []

(ii) Average 50% []

(iii) Partly 30% []

(iv) Not sustainable []

7. State the outcome of tendering process to organization's income

(i) Increase []

(ii) Decrease []

(iii) Not Change []

(iv) Don't know []

8. Tendering should be free and fair in Public Sectors

(i) Strongly Disagree [] (ii) Disagree []

(iii) Agree [] (iv) Strongly Agree []

SECTION 4: Effective procurement process in KEMRI

Using a scale of 1-5 where (1= not at all, 2 = small extent, 3 = moderate extent, 4 = large extent, 5 = very large extent), indicate the extent to which the following factors determine the effective of procurement practices in the institution?

Questions	1	2	3	4	5
The organization's level of compliance to procurement regulations is good					
Level of procurement expenditure can easily be minimized					
The level of transparency and accountability of procurement funds adheres to organization's policy					
The level of quality of procured goods and services offered are upto standard					
KEMRI fail to adhere to the budgetary allocation annually please confirm					
The firm often fails to prepare the procurement progress reports as required annually					

SECTION 4: Government Policy

A) Is KEMRI a government instruction?

(i) Yes []

(ii) No []

Please tick [√] the option that best suits your opinion on the corresponding statements.

- 1 Strongly disagree
- 2 Disagree
- 3 Neutral
- 4 Agree
- 5 Strongly agreed

Questions	1	2	3	4	5
KEMRI as an organization uses government policies to manage its activities					
KEMRI board members who implement policies are appointed by the government					
In case where KEMRI partners with NGOs to work together government policies are used					
Government policies affect decision making at KEMRI					

Appendix II: Work Plan

MONTH/ACTIVITY	March	May	June	July	August	August	Sep	Sep
Proposal writing								
Correction								
Presentation								
Data Collection								
Data Analysis								
Submission of Research								

Appendix III: Budget

ITEM	DESCRIPTION	PRICE (KSHS)
Stationeries	5 pens @ 20/=	100.00
	Five reams of foolscaps @ 400/=	2000.00
	Binding and cover @ 4500/=	4500.00
Flash Disk	1200/=	1200.00
Modem plus airtime	7000	7000.00
Typing & printing	35 Page @ 25/= 10 copies	8750.00
Transport	2500	2500.00
TOTAL		26,050.00