EFFECT OF PROCUREMENT LIFECYCLE ON PERFORMANCE OF GOVERNMENT MINISTRIES IN KENYA

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EFFECT OF PROCUREMENT LIFECYCLE ON PERFORMANCE OF GOVERNMENT MINISTRIES IN KENYA

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Abstract

Purpose: The purpose of the study was to establish the effect of procurement lifecycle on performance of government ministries in Kenya. The study specific objectives were to establish the effect of procurement planning on performance of Government Ministries in Kenya, to assess the effect of procurement contract award on performance of Government Ministries in Kenya and to determine the effect of procurement contract management on performance of Government Ministries in Kenya.

Methodology: The study used five theories to support the literature. The study theories were Principal-Agency Theory, the Institutional Theory, Stakeholder Theory and Resource based Theory. The study employed descriptive research design. The targeted population of this study were 18 government ministries. The researcher collected primary data using both open-ended and closed-ended questionnaires. The data presentation was done using tables from both descriptive and inferential statistics analysis. The study used the multiple regression analysis models to measure the relationship between independent and dependent variables and the significant of the study.

Results: R Square (R^2) indicated that 51.8% of the variation on performance of government ministries could be explained by the fitted model leaving out 41.9% of variation unexplained. This indicated the presence of other factors in the surrounding, relating to procurement lifecycle towards the performance of ministries in addition to the ones identified for the study. However, the model showed goodness of fit since the R Square was above 50%. The value of the F statistic (9.146) indicates that the overall regression model was significant at the significance level of 0.05. From the finding, the study established that Tender Qualification and Selection, Procurement Contract Management and Procurement Planning were significant to the study with their P-values less than the default alpha. Procurement Contract Award was insignificant to the study with its P-value being greater that the default alpha level of significant.

Contribution to policy and practice: The study recommends the Government Ministries in Kenya to consider improving procurement contract award to their suppliers by improving on the way they prepare the solicitation document, receive and evaluate bids, conducts the cost analysis,

award the bid as required by the act as well as the way procurement prepares the solicitation document for better performance in future.The Government ministries to reconsider its persistence in ensuring that the procurement team develops contract administration plan, receives goods and services from the suppliers, signs the invoices to facilitate supplier payment, manages the vendors, starts up the contract in due time as required and closes the contract when it ends. By so doing, they shall ease the way in which their operational performance is conducted.

Key words: *Procurement Planning, Procurement Contract Award, Procurement Contract Management, Performance of Government Ministries*

1.0 INTRODUCTION

The extent to which contracting of services provides benefits to the public entity, and the community is more dependent on the efficient and effectiveness of the procurement lifecycle Basheka (2012). The tendering stage is the critical part of the procurement process for achieving value for money in the procurement cycle. The efficiency and effectiveness of the procurement process will solely depend on how frequent members are available for adjudication and granting of approvals. The tender document contains all the necessary information for invitation of bids 28 (adverts), evaluation criteria, and terms and conditions of the future contract Chekol and Tehulu (2014). The prepared tender document put in place procedures for the management of the contract, which includes contract variations including change control, cost monitoring, ordering procedures, payment procedures, payment procedures and reporting (Ellmers 2011).

According to Eriksson (2015) poorly prepared solicitation documents have several negative effects to procurement process, thus resulting to delays of delivery of the goods, works or services required. The negative effects include among others selection of unqualified contractor, supplier or service provider which in turn results to poor performance by failing to deliver the goods, works or service on time, at right cost, and quality prescribed. Eyaa and Oluka (2011) stated that delays and cost overrun of the procurement process may occur due to queries or additions arising from ambiguous specification, terms of reference, weak terms and conditions of the contract set forth in the bidding document or request for proposal for consultancy services. According to PPA (2004), the appropriate specifications, schedule of requirements and drawings submitted by users minimizes all the risks aforementioned. Also, adequately prepared bidding documents can minimize cancellation of tenders and lodging of complaints, hence contributing to effective procurement process. It is normal practice to appoint some members of the committee from user department and procurement specialists with adequate knowledge and skills on the tender floated Kathure (2013). In general terms, where award of contract is granted by the Tender Board and AO, PEs through PMU has to communicate award decision to the successful bidder and unsuccessful bidders participate in the subject tender for the purpose of transparency as one of the key pillars of public procurement. The transparency of the procurement process adds confidence to the unsuccessful bidder and trust in participating in the future procurement opportunities thus attracting more prospective bidders resulting to firm competition which results to awarding tender at competitive prices Kipkorir (2013). Whereas Kilungu (2014) defines supplier selection process means analyzing and comparing current supper with the newly acquired ones with the aim of selecting one who will satisfy the requirements of the procurement department. Malcolm (2014). Defines supplier's selection as process of choosing the right supplier which involves much more than scanning a series of price lists depending on a wide

range of factors such as value for money, quality and reliability and services. Mugo (2013) looks at suppler selection as a systematic approach of identifying source supplier with who to transact business. Supplier's selection is important because it prequalifies their suppliers in order to encourage transparency, competiveness and fairness. Muriungi (2014) point out that prior to every buying situation it is essential to first identify the suitable suppliers. The most interesting buying situation is when an item is bough for the first time. The supplier's expertise in such situation may be used in drawing up the specification and many departments may participate. Source selection starts with determining all potential suppliers and continues eliminating them based on the criteria's established unit the number is reduced to workable few. Buying firms may use variety of activities to develop their supplier. These activities include supplier evaluation as requirement for supplier selection, organization workshop for supplier personnel direct investment supplier's operation by the buying forms Kioko and Were (2014).

The financial stand of the supplier directly affects its ability to service and should be carefully evaluated. One way to perform this evaluation is through the analysis of credit reports also provide information on the experience, management and facilities of the potential vendors Ondiek and Ochieng (2013), purchasing principles and management points out those buyers prefer supplier to be reasonably profitable because they are interested in continuity and on time delivery. A supplier with cash flow problem will have difficulty paying their bills and consequently in obtaining materials their delivery times and possibly poor quality performance of organization ideally a supplier who becomes insolvent can be as big as an embarrassment as a customer in similar difficulties. Quality performance of organization is how well a company is doing vis a vis owners manager set objectives. Hence for a firm to perform well to be successful it should set a clear objectives, aimed at quality performance and able to compete both in the short and long term liability of a firm calls for measures of performance, which recognizes that the proper control of the firms requires a comparisons that the ream for comprehensive measures. Such measures would see in dissoluble link between the performance standard and the control of the firm by the owner manager Onyinkwa (2013).

1.2 Specific Objectives

The study based on the following specific research objectives;

i.   To establish the influence of procurement planning on performance of Government Ministries in Kenya

ii.   To determine the influence of Tender Qualification and Selection on performance of Government Ministries in Kenya

iii.   To assess the influence of procurement contract award on performance of Government Ministries in Kenya

iv.   To determine the influence of procurement contract management on performance of Government Ministries in Kenya

2.0 LITERATURE REVIEW

2.1 Theoretical Review

Principal-Agency Theory

The Principal-Agency Theory is the underpinning theory used to establish the framework for this study. The Principal-Agent Theory is an agency model developed by economists that deals with situations in which the principal is in position to induce the agent, to perform some task in the principal's interest, but not necessarily the agent's Freeman (1984). Several studies Wernerfelt (1984) have contributed to the literature on principal agent theory. All these contributions have one main theme which is the relationship between a principal and an agent. The Principal-Agent Theory concerns with the arrangement that exists when one person or entity (called the agent) acts on behalf of another (called the Principal). The principals contract with the agent to perform some services on the principal's behalf. These contracts require the agent to exert effort and make decisions. That is the management make operational decisions on behalf of the company shareholders for instance maximization of revenues and minimization of costs among other decisions. With this relationship, the principal engages the agent who acts and makes decisions on behalf of the principal Sang and Mugambi (2014). According to Eisenhardt (1989) Agency theory is directed at the ubiquitous agency relationship in which one party (the principal) delegates work or tasks to another party (the agent) who performs that work. Agency theory describes this type of relationship using the metaphor of a contract Jensen and Meckling (1976). Agency relationships are enacted in a broader social context for the adoption of policies about aligning incentives in order to discourage self-interested behaviour by managers and reducing agency costs. A number of studies have shown that procurement contributes about 60%-70% of an organization's expenditures thus the theory supports Procurement planning Strake group (2014).

The Institutional Theory

Institutional theory describes the effects of external institutional pressures on organizations and defines institutions as regulatory structures, government agencies, laws, courts, and professions, as well as interest groups and public opinion Wernerfelt (1984). The rules and norms set out by the institutions in an environment are endorsed by various actors. A strength attributed to institutional theory is its ability to explain non-choice behaviour of organizations how they conform to norms without questioning them and undertaking public function Lowell (1994).

According to Nunnally (1978) institutions are composed of cultural-cognitive and regulative elements that together with associated activities and resources give meaning to life. The author explains the three pillars of institutions as regulatory (policy), normative and cultural cognitive. The regulatory (policy) pillar emphasizes the use of rules, laws and sanctions as enforcement mechanism with emphasis on compliance. The institution theory advocate on the economic procedure or approach chosen carefully as guidelines for bids evaluation thus supporting tender qualification and selection.

Legitimacy Theory

The Legitimacy Theory states that the organization has the mandate to state its activities to the stakeholders, more specifically to the public and state the benefits the society will get from it Wilmshurst and Frost (2000). Legitimacy Theory therefore brings in good understanding in the

government procurement systems. The concept of legitimacy strongly suggests that the social contract which is between the government and the public can be eliminated. Legitimacy theory have different ideas of what is expected of them from the public and whether the department or agency or local authority is viewed by the society as complying with the expectations that is expected from them Deegan *et al.,* (2002). The legitimacy theory argues that compliance to regulation in government procurement sector is important thus supporting contract award in a fair procedure.

Stakeholder Theory

Freeman (1984), over the course of his work entitled Strategic Management: a Stakeholder approach, generally accepted as launching the stakeholder theory concepts, defines how stakeholders with similar interests or rights form a group. What Freeman was seeking to explain was the relationship between the company and its external environment and its behavior within this environment. The author set out his model as if a chart in which the company is positioned at the center and is involved with stakeholders connected with the company. In this model, the company-stakeholder relationships are dyadic and mutually independent Frooman (1999).
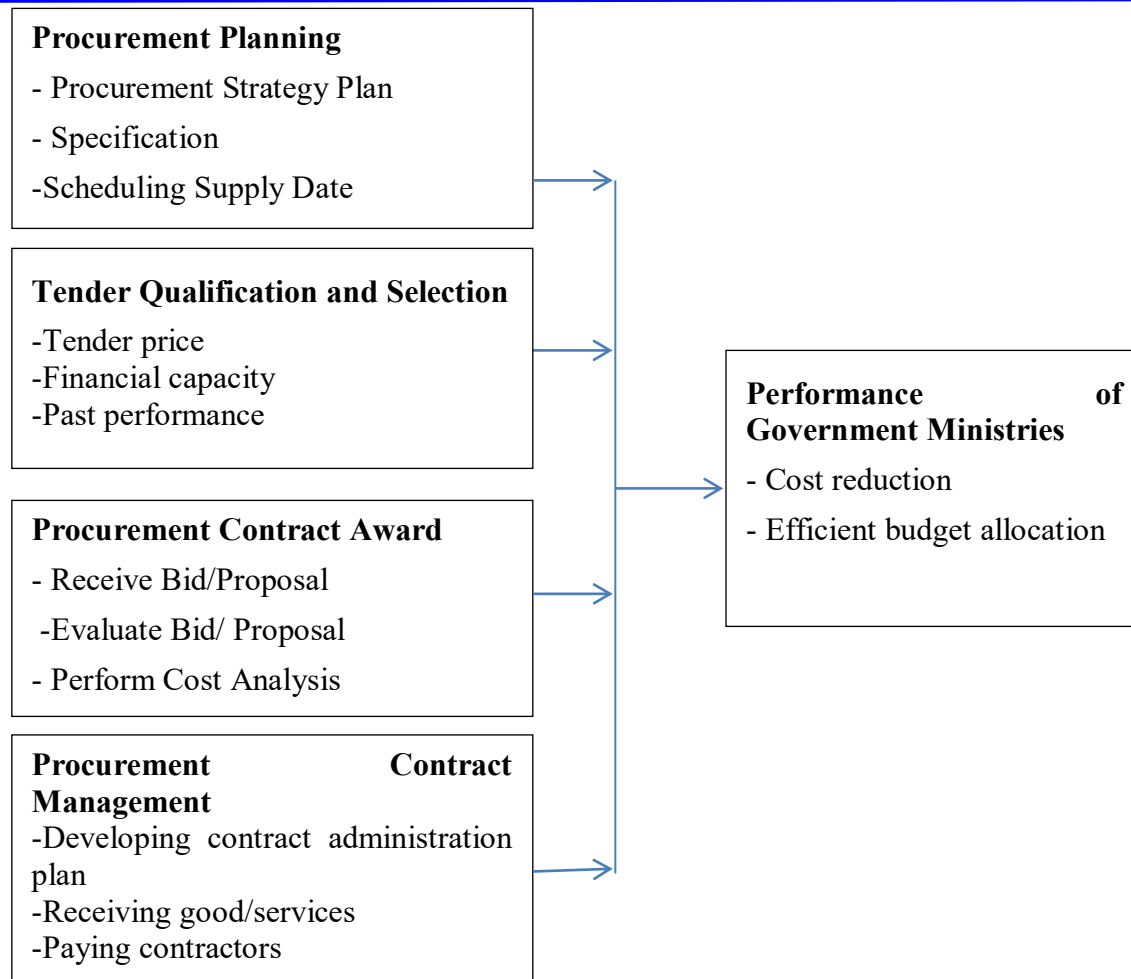
The theory focuses upon management decision making, explains how stakeholders try and influence organizational decision-making processes so as to be consistent with their needs and priorities. The stakeholder theory encourages on good management of the organizations and thus supports procurement contract management Gelderman and Brugman (2011).

Resource based Theory

According to Freeman (2004) resource-based theory embraces how resources are managed and organized by the institutions. Some authors have questioned the process and the content of the classical expansion strategy theory advanced by Mintzberg (2008). They looked to disclose better performance due than the organization assets and their capacity to use them. These scholars refer to a modern expansion strategy theory known as the resource-based expansion theory. They however stress that their approach is at par with the classical theories and mainly trace their theory on the work. The resource-based theory draws insights from the economic theory of the firm, focusing on the economic rationale of a firm's existence Colbert (2009). They comprehend firms as esteem makers as opposed to esteem appropriative center in conventional methodologies. The asset-based theory comprises of various related yet particular branches; resource-based theory, dynamic capacities and the center capabilities approach Wernerfelt (2004). Petaraf (1993), connect between resource-based theory and authoritative learning and he expressly talk about the vital estimation of hierarchical learning process ensured against impersonation by causal equivocalness and time pressure diseconomies. Resource based theory agrees with performance as deemed to be the fulfillment of an obligation in a manner that releases the performer from all liabilities under the contract thus agreeing on support performance of Government Ministries in Kenya.

2.2 Conceptual Framework

The Conceptual Framework described the association between the independent variables and the dependent variables. The Conceptual Framework shows the link between contextual variables in the study and show the relationship in diagram.

Procurement Planning

- Procurement Strategy Plan

- Specification

-Scheduling Supply Date

Tender Qualification and Selection

-Tender price
-Financial capacity
-Past performance

Procurement Contract Award

- Receive Bid/Proposal

 -Evaluate Bid/ Proposal

- Perform Cost Analysis

Procurement   Contract Management
-Developing contract administration plan
-Receiving good/services
-Paying contractors

Performance   of Government Ministries

- Cost reduction

- Efficient budget allocation

Independent Variables   **Dependent Variable**

3.0 RESEARCH METHODOLOGY

3.1 Research Design

A descriptive research design was used in this study. Descriptive research design is a method that involves the analysis of data collected from a population, or a representative subset, at one specific point in time Orodho (2003). Descriptive research design was used to obtain information concerning the current status of the phenomenon and to describe what existed with respect to variables or condition of a situation. Descriptive research was often used as a pre-cursor to more quantitative research designs with the general overview giving some valuable pointers as to what variables were worth testing quantitatively. This was supported by Mugenda and Mugenda (2003) who asserted that this type of design enabled one to obtain information with sufficient precision so that variables relationship could be tested properly. It is also a framework that guided the collection and analysis of data Kothari (2005) observed that a descriptive research design was used when data was collected to describe persons, organizational settings or phenomenon. The descriptive research design was good for this study since it allowed for in-depth contextual analysis (Kothari 2008).

3.2 Targeted Population

Population is defined as an entire group of individual, events or objects having common observable characteristics Cooper and Schindler (2006). According to Dempsey (2003) target population as a large population from which a sample population was selected. The targeted population of the study were 18 government ministries and the targeted respondents were procurement officer, procurement managers and stores managers since they played key role in determining the effect of procurement lifecycle on performance of Government Ministries in Kenya. The respondents was as shown in the table 1 below,

Table 1: Target Population

Category	Population	Percentages
Procurement Officer	18	34
Procurement Manager	18	34
Stores Manager	18	34
Total	**54**	**100%**

3.3 Sample Size and Sampling Procedure

A sample is a set of observations drawn from a population by a defined procedure. The sample always represent a subset of manageable size. Samples are collected and statistics are calculated from the samples so that one can make inferences or extrapolations from the sample to the population. The study used census, where all the 18 government ministries were sampled and the target respondents were Procurement Officer 18, Procurement Manager 18 and Stores Manager 18. Census is the procedure of systematically acquiring and recording information about the members of a given population (Israel 1992).

3.4 Data Collection Instruments

 Data collection is the means by which information is obtained from the selected subject of an investigation Dillman (2000). The study used primary data. The primary data was collected using open-ended and closed-ended questionnaires. According to Kothari (2008), the information obtained from questionnaires was free from bias and researchers' influence and thus accurate and valid data was gathered.

3.5 Data Collection Procedures

The study collected primary data based on the objectives of the study. Both open ended and close ended questionnaires were used. The study used introduction letter submitted to the management for the permission to conduct research in their premise. The study used drop and pick method in administering their questionnaires, where questionnaires were dropped and picked at a later date.

3.6 Pilot Test

Pilot test is a method that is used to test the design and instrument before carrying out the main research Gall, Gall and Borg (2007). It involves conducting pre-test sample of 1% -10 % depending on the sample size Mugenda and Mugenda (2003). The pilot was done on 8% of the targeted population from the government ministries in Kenya. The pilot sample helped in ascertaining the reliability and validity of the instrument.

Reliability is the measure of consistency of the instrument. There are various measures of reliability including test-retest reliability, alternative forms, split-halves, inter-rater reliability and internal consistency. Due to the nature of the study, reliability was measured using internal consistency. Internal consistency measures consistency within the instrument and questions how well a set of items measures a particular behaviour or characteristic within the test Kothari (2008). The most popular method of testing for internal consistency in the behavioural sciences is coefficient alpha Mugenda and Mugenda (2012). The standard is taken from Nunnally (1978), who suggested that in the early stages of research on predictor tests or hypothesized measures of a construct, reliabilities of .70 or higher was sufficient.

Validity was measured using content validity, construct validity, criterion validity and consequential validity measures Sekaran (2006). Content validity considers whether or not the items on a given test accurately reflected the theoretical domain of the latent construct it claims to measure. Items need to effectively act as a representative sample of all the possible questions that could have been derived from the construct Chakraborty (2009). Construct validity of a measure is concerned with the theoretical relationship of a variable (a score on some scale) to other variables or the extent to which a measure behaves the way that the construct it purports to measure should behave with regard to established measures of other constructs Saunders and Thornhill (2009).

3.7 Data Analysis and Presentation

The questionnaires were sorted, cleaned and data was coded and edited for completeness and consistency. Quantitative data was analyzed by employing descriptive statistics and inferential analysis using statistical package for social science (SPSS) version 22 Coakes and Steed (2001). Both descriptive and inferential statistics was used to analyze the data collected. Both the descriptive statistics and inferential statistics were used in the study. Descriptive statistics involved computation of mean scores, standard deviation, percentages, cross tabulation and frequency distribution which was described the demographic characteristics of the organization and the respondents. Inferential statistics was used to determine the relationships and significance between independent and dependent variable

The data presentation was done using charts, graph and tables. The study used the multiple regression models to measure the relationship between independent and dependent variables and the significant of the study.

$Y = \beta_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + e$

Where, Y = Performance of Government Ministries, β_0 = constant (coefficient of intercept)

X_1 = Procurement Planning, X_2 = Tender Qualification and Selection, X_3 = Procurement Contract Award, X_4 = Procurement Contract Management e = error term

4.0 RESULTS

4.1 Response Rate

The study issued questionnaire to a sample size of 54 respondents, out of which 15 questionnaires were not returned, and 39 were returned fully filled. The study only considered the fully filled questionnaires for analysis. The response rate is relatively good if the response rate is (70%) and above according to Creswell (2009). However, Mugenda and Mugenda (2003)

indicated that a response rate of 50% is adequate for analysis and reporting. The response was affected by the prevailing election time when data was collected.   The response rate is represented on Table 2.

Table 2: Response Rate

Response	Frequency	Percentages (%)
Fully filled and Returned	39	72%
Non returned	15	28%
Totals	**54**	**100.00%**

4.2 Results of Pilot Test

Coefficient of the data gathered from the pilot study was computed using SPSS statistical package, version 22. A coefficient of above 0.7 was obtained and this indicated the validity of data collection instruments Kothari (2005). The reliability of the questionnaires was determined using test retest method. A reliable measurement is one that if repeated a second time gives the same results as it did the first time Mugenda and Mugenda (2003).

Table 3: Reliability Analysis

Reliability Statistics	Cronbach's Alpha Value	Comments
Procurement Planning	0.881	Accepted
Tender Qualification and Selection	0.823	Accepted
Procurement Contract Award	0.901	Accepted
Procurement Contract Management	0.845	Accepted

4.3 Descriptive Statistics

This section presents the major findings of descriptive statistics results for objective questions. The mean and standard deviation for each objective element were presented and discussed as follows:

Procurement Planning

The study sought to establish the influence of procurement planning on performance of Government Ministries in Kenya. The study findings were as presented in the table below.

The study established that majority of the respondents agreed that the procurement planning team ensured the identification of need with a mean of 4.1081, the procurement team selects the planning committee with a mean of 4.1282, the planning team develops specifications with a mean of 4.1538, the procurement team determine the methods of procurement with a mean of 4.1795, the procurement team develops the planning strategies with a mean of 4.15385 and finally the procurement team schedules the dates of order delivery with a mean of 2.7692.

The study were in agreement with those of Ayoti (2012) on factors influencing effectiveness in tendering process in Public sector, the case of Nyeri County, Kenya, the study recommended that government should improve remuneration of all staff involved in tendering process since they handle large sums of tenders of very high value to avoid being corrupt. This process involves where to procure, how to procure, what to procure, how much to procure, and when to procure Ogachi (2014). This concurs with the study by Shiundu and Rotich (2014) which revealed that

procurement plan describes which product will be acquired from suppliers, when and how they will be acquired.

Table 4: Procurement Planning and performance of Government Ministries

	Mean	Std. D
Procurement Planning	2.8974	.91176
The procurement planning team ensures the identification of need	4.1282	.65612
The procurement team selects the planning committee	4.1081	.65612
The planning team develops specifications	4.1538	.62989
The procurement team determine the methods of procurement	4.1795	.55592
The procurement team develops the planning strategies	4.15385	.629890
The procurement team schedules the dates of order delivery	2.7692	1.11122

Tender Qualification and Selection

The study sought to establish the influence of tender qualification and selection on performance of Government Ministries in Kenya. The study findings were as presented in the table below.

The study established that majority of the respondents agreed that the ministry conduct Past Performance and quality for suppliers with a mean of 2.4872, Supplier selection criteria affect the influences Quality of services with a mean of 3.2564, Capability to manage subcontractors with a mean of 3.0513, Quality-control programme and quality of past projects with a mean of 3.8974, price evaluation influence on cost reduction with a mean of 4.4615 and lastly the supplier past performance influence on quality service with a mean of 3.7179

According to Susan and Namusonge (2014) the current methods and evaluation procedures for civil engineering works in the broadly adopt the concepts outlined in the guidance which are essentially concerned with the acceptance of the lowest priced bid. Onyinkwa (2013) acknowledges that bid analysis is not a straightforward commercial/pricing analysis, accepts that a technical comparison is in some degree difficult to quantify, and suggests that many of the necessary judgments delivered during technical comparisons are therefore subjective. According to Mugo (2013) a substantial majority of construction contracts are evaluated using the low-bid system, in which price is the sole basis for determining the successful bidder.

Table 5: Tender qualification and selection and performance of Government Ministries

	Mean	Std. D
Tender Qualification and Selection	3.2564	1.06914
Does the ministry conduct Past Performance and quality for suppliers	2.4872	1.23271
Supplier selection criteria affect the influences Quality of services	3.2564	.67738
Capability to manage subcontractors	3.0513	1.63753
Quality-control programme and quality of past projects	3.8974	1.02070
Does price evaluation influence on cost reduction	4.4615	.71987
Does the supplier past performance influence on quality service	3.7179	1.05003

Procurement Contract Award

The study sought to establish the influence of procurement contract award on performance of Government Ministries in Kenya. The study findings were as presented in the table below.

The study established that majority of the respondents agreed that the procurement team prepares the solicitation document with a mean of 4.8462, the procurement team receives the bid with a mean of 4.0769, the procurement evaluates the bids with a mean of 2.9231, the procurement conducts the cost analysis with a mean of 4.1538, the procurement award the bid as required by the act with a mean of 4.6410, the procurement prepares the solicitation document with a mean of 4.0769. According to Gelderman and Brugman (2011) after potential suppliers have been selected, a qualitative, evaluation, an elimination process is undertaken. This process compares supplier in terms of their ability to provide the desired quality, product and service issues like location, technical assistance, financial status, stability, quality control procedures. According to Mutero (2013) controlling the performance of the procurement function and ensuring its efficiency and effectiveness is essential to the management of the procurement process. It is vital to evaluate how well the procurement process has gone, identify any weaknesses or problems and agree actions to prevent similar problems in the future Muraguri (2013).

Table 6: Procurement contract award and performance of Government Ministries

	Mean	Std. D
Procurement Contract Award	3.6410	1.22447
The procurement team prepares the solicitation document	4.8462	.53991
The procurement team receives the bid	4.0769	1.01007
The procurement evaluates the bids	2.9231	1.62844
The procurement conducts the cost analysis	4.1538	1.01407
The procurement award the bid as required by the act	4.6410	.58432
The procurement prepares the solicitation document	4.0769	1.01007

Procurement Contract Management

The study sought to establish the influence of procurement contract management on performance of Government Ministries in Kenya. The study findings were as presented in the table below. The study established that majority of the respondents agreed that the procurement team develops contract administration plan with a mean of 2.9744, the procurement team receives goods and services from the suppliers with a mean of 3.7179, the procurement team signs the invoices to facilitate supplier payment with a mean of 2.9231, the procurement team manages the vendors with a mean of 3.9744, the procurement team starts up the contract in due time as required with a mean of 4.3846, the procurement team closes the contract when it ends with a mean of 3.6923.Contract management commences after contract signature and all precedence conditions of the contract such as performance security or bond are finalized Nzau and Njeru (2014). The process enables both parties to the contract to meet their obligations in order to deliver the objectives required in the contract. Contracts are in most cases complex, involves multiple actors, may last long and may consume a lot of resources if not properly managed Ogachi (2014). Contract Manager are responsible for effective management and monitoring of scope, quality and timely delivery of goods or services, process and timely completion of works

at acceptable quality in accordance with the terms and conditions of each contract Ogot, Mulinge and Muriuki (2010).

Table 7: Procurement contract management and performance of Government Ministries

	Mean	Std. D
Procurement Contract Management	3.9744	.93153
The procurement team develops contract administration plan	2.9744	1.64616
The procurement team receives goods and services from the suppliers	3.7179	.97194
The procurement team signs the invoices to facilitate supplier payment	2.9231	1.62844
The procurement team manages the vendors	3.9744	.93153
The procurement team starts up the contract in due time as required	4.3846	.71139
The procurement team Closes the contract when it ends	3.6923	1.10391

4.4 Inferential Statistics

This subsection presents the results for inferential analysis of the Pearson Correlation and Multiple Regression, including Analysis of Variance (ANOVA) and determination of coefficient or beta values of study variables.

Correlations Analysis

Correlation is a term that refers to the strength of a relationship between two variables. A strong or high correlation means that two or more variables have a strong relationship with each other while a weak or low, correlation means that the variables are hardly related. Correlation coefficient can range from -1.00 to +1.00. The value of -1.00 represents a perfect negative correlation while a value of +1.00 represents a perfect positive correlation. A value of 0.00 means that there is no relationship between variables being tested Orodho (2003). The most widely used types of correlation coefficient is the Pearson R which is also referred to as linear or product-moment correlation. This analysis assumes that the two variables being analyzed are measured on at least interval scales. The coefficient is calculated by taking the covariance of the two variables and dividing it by the product of their standard deviations. A value of +1.00 implies that the relationship between two variables X and Y is perfectly linear, with all data points lying on a line for which Y increases and X increases. Conversely a negative value implies that all data points lie on a line for which Y decreases as X increases (Orodho, 2003). In this study Pearson correlation is carried out to determine how the research variables related to each other. Pearson's correlation reflects the degree of linear relationships between two variables. It ranges from+1 to -1. A correlation of +1 means there is a perfect positive linear relationship between variables Young (2009).

The study from the finding in Table 4.6 show that all the predictor variables were shown to have a positive association with a significance level. The findings of the study were illustrated with a strong positive relationship. The study established that there was a positive association between variables as shown; procurement planning and performance of government ministries had a Pearson correlation of .271,Tender qualification and selection on performance of government ministries had a Pearson correlation of .568[**], Procurement contract award on performance of government ministries had a Pearson correlation of .107. Procurement contract management on

performance of government ministries had a Pearson correlation of.230. The correlation matrix implied that variables with negative significance had a negative influence on Performance and variables with positive significance had a significance influence on Performance. If one variable increases the other variable increases and vice versa. When two variables are negatively correlated it indicates that if one variable increases and the other variable decreases and vice versa. The correlation matrix implies that the independent variables: procurement contract management, tender qualification and selection, procurement contract award, procurement planning are very crucial determinants of performance as shown by their strong and positive relationship with the dependent variable.

Correlations

		Performance of Government Ministries	Procurement Planning	Tender Qualification and Selection	Procurement Contract Award	Procurement Contract Management
Performance of Government Ministries	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	39				
Procurement Planning	Pearson Correlation	.271	1			
	Sig. (2-tailed)	.095				
	N	39	39			
Tender Qualification and Selection	Pearson Correlation	.568**	-.166	1		
	Sig. (2-tailed)	.000	.312			
	N	39	39	39		
Procuract Contract Award	Pearson Correlation	.107	-.552**	-.209	1	
	Sig. (2-tailed)	.516	.000	.201		
	N	39	39	39	39	
Procurement Contract Management	Pearson Correlation	.230	-.251	.165	.430**	1
	Sig. (2-tailed)	.160	.123	.315	.006	
	N	39	39	39	39	39

Regression model Summary

R-squared is a statistical measure of how close the data are to the fitted regression Line. From the illustrated output below, the coefficient of determination R Square (R^2) indicated that 0.518 which is 51.8% of the variation on performance of government ministries can be explained by

the set of independent variables, namely; X_1 = Procurement Contract Management, X_2 =Tender Qualification and Selection, X_3 =Procurement Contract Award, X_4 =Procurement Planning.

The remaining 41.9% of variation in Performance of government ministries can be explained by other variables not included in this model. This shows that the model has a good fit since the value is above 50%. This concurs with Kothari (2004) that R-squared is always between 0 and 100%: 0% indicates that the model explains none of the variability of the response data around its mean and 100% indicates that the model explains the variability of the response data around its mean. In general, the higher the R-squared, the better the model fits the data. The adjusted R square is slightly lower than the R square which implies that the regression model may be over fitted by including too many independent variables. Dropping one independent variable will reduce the R square to the value of the adjusted R square.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.720[a]	.518	.462	.85620

a. Predictors: (Constant), Procurement Contract Management, Tender Qualification and Selection, Procurement Contract Award, Procurement Planning

ANOVA

The results of Analysis of Variance (ANOVA) for regression coefficients in table below reveals that F-statistics tabulated ($F_{\alpha/2=0.05}$ (4, 34)) = 2.650 < F Statistics Computed =9.146 which implied that the overall regression model was significant at the 0.05 significance level. Similarly, the F-statistics P-value=0.000[b] < 0.05 hence the regression model was significant at 0.000 significance level. The value of F is large enough to conclude that the set coefficients of the independent variables are not jointly equal to zero. This implies that at least one of the independent variables had an effect on the dependent variable. The F-value in the ANOVA shown above was used to test the overall regression model of the goodness of fit. The value of the F statistic (9.146) indicates that the overall regression model was significant at the significance level of 0.05. The value of F is greater than the zero and it's enough to conclude that predictor; procurement contract management, tender qualification and selection, procurement contract award, procurement planning.

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	26.819	4	6.705	9.146	.000[b]
	Residual	24.925	34	.733		
	Total	51.744	38			

a. Dependent Variable: Performance of Government Ministries

b. Predictors: (Constant), Procurement Contract Management, Tender Qualification and Selection, Procurement Contract Award, Procurement Planning

Regression Coefficients Results

The prior step was to test on whether the fitted/regressed model was significant to the study or not. From Table 4.8 ANOVA. The result was that the regressed model was significant, the researcher narrowed down to test on the individual variables' significance in the model to the model on how they contributed towards the performance of Government Ministries in Kenya. The multiple regression analysis results showed the beta coefficients obtained from as follows; From the regressed model, the researcher found out that any increase in unit of procurement planning while holding other factors constant, would cause a significant increase in the performance of Government Ministries in Kenya by 1.226, increase in unit of tender qualification and selection while holding other factors constant, would cause a significant decrease in the performance of Government Ministries in Kenya by -0.795, increase in unit of procurement contract award while holding other factors constant, would cause a significant increase in the performance of Government Ministries in Kenya by 0.269 and finally increase in unit of procurement contract management while holding other factors constant, would cause a significant increase in the performance of Government Ministries in Kenya by 0.588.the regressed model also indicated that if all the regressed variables to be eliminated from the study then the results were that the Kenya's Government Ministries would encounter a negative performance in their operations with a unit of -0.791. The regressed model;

$Y = \beta_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + e,$ with the beta coefficients inserted was found to be;

$Y = -0.791 + 1.226X_1 - 0.795X_2 + 0.269X_3 + 0.588X_4$

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.791	1.033		-.766	.449
	Procurement Planning	1.226	.225	.958	5.440	.000
	Tender Qualification and Selection	-.795	.171	-.728	-4.646	.000
	Procurement Contract Award	.269	.146	.282	1.842	.074
	Procurement Contract Management	.588	.177	.469	3.320	.002

a. Dependent Variable: Performance of Government Ministries

The constant term has a p-value of 0.449 which is greater than 0.05. This implies that the constant term is insignificant. The multiple regression performance of government ministries is thus an equation through the origin. If all the independent variables take on the values of zero, there would be zero performance of government ministries.

The significant level helped in determining the relative importance of each variable in the model. As a guide regarding useful predictors, we look for p- values above -0.5 or below +0.5. In this case the significant variable level of the variables was as follows; procurement contract management P-value=0.000<0.05, tender qualification and selection P-value=0.000<0.05, procurement contract award P-value=0.074>0.05, procurement planning P-value=0.002<0.05 respectively. Hence, procurement contract management, tender qualification and selection and procurement planning were significant at 5%level of significant but procurement contract award P-value=0.074>0.05 was insignificant in the model at 0.05 level of significant.

Summary of the Findings

Generally, the objective of the study was to establish the influence of procurement lifecycle on performance of Government Ministries in Kenya, with a case study of 18 sampled ministries. The study therefore established the following as per the study factors: Procurement Planning, Tender Qualification and Selection, Procurement Contract Award and Procurement Contract Management.

The study sought to establish the influence of procurement planning on performance of Government Ministries in Kenya. The study therefore established that majority of the respondents agreed that the procurement planning team ensured the identification of need in Government Ministries to enhance their performance. The procurement team selects the planning committee, the planning team develops specifications, the procurement team determine the methods of procurement, the procurement team develops the planning strategies and finally the procurement team schedules the dates of order delivery in Kenya's Government ministries.

The study also sought to establish the influence of tender qualification and selection on performance of Government Ministries in Kenya. The study thus established that majority of the respondents agreed that the ministry conduct Past Performance and quality for suppliers, that the ministries have the capability to manage subcontractors, that the ministries have Quality-control programme and quality of past projects. In Kenya's Ministries, price evaluation influence on cost reduction and lastly the supplier past performance influence on quality service in Government Ministries in Kenya.

Further, the study sought to establish the influence of procurement contract award on performance of Government Ministries in Kenya. study hence established that, majority of the respondents agreed that the procurement team prepares the solicitation document, receives the bid and evaluates them. The procurement team conducts the cost analysis and award the bid as required by the act and lastly the procurement prepares the solicitation document in the Kenya's Government Ministries.

In addition, the study sought to establish the influence of procurement contract management on performance of Government Ministries in Kenya. The study established that majority of the respondents agreed that the procurement team develops contract administration plan receives goods and services from the suppliers, signs the invoices to facilitate supplier payment, manages

the vendors, starts up the contract in due time as required and lastly, the procurement team closes the contract when it ends.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusion

The coefficient of determination R Square (R^2) indicated that most of the variation on performance of government ministries could be explained by the set of independent variables, namely; Procurement Contract Management, Tender Qualification and Selection, Procurement Contract Award, Procurement Planning leaving a certain magnitude slightly below the average percentage unexplained. This implied that there are other variables on procurement lifecycle that might be of influential towards the performance of government ministries that had not been included in the model. However, the model had a good fit since the value of R Square was above average. From the findings, the study established that Tender Qualification and Selection, Procurement Contract Management and Procurement Planning were significant to the study with their P-values less than the default alpha. Procurement Contract Award was insignificant to the study with its P-value being greater that the default alpha level of significant.

The study also indicated that the constant Beta value had a P-value greater than the default alpha with a negative coefficient value. This implied that the multiple regression performance of government ministries was thus an equation through the origin. If all the independent variables take on the values of zero, there would be zero performance of government ministries in Kenya. From the study, it was established that variables with negative significance had a negative influence on Performance and variables with positive significance had a significance influence on Performance thus in the Kenyan Government Ministries, one variable increases leads to the increase of the other variable and vice versa. The correlation values implied that the independent variables: procurement contract management, tender qualification and selection, procurement contract award, procurement planning were very crucial determinants of performance as shown by their strong and positive relationship with the dependent variable.

5.2 Recommendations

The study recommended that Performance is the accomplishment of a given task measured against present known standards of accuracy, completeness, cost, and speed. In contract, performance is deemed to be the fulfillment of an obligation in a manner that releases the performer from all liabilities under the contract. It refers the conformance of contractor or supplier with contract terms, specifications, service level agreements or Key Performance Indicators (KPI) and other elements of the commercial agreement. The study established that Key performance indicators are used to track and evaluate the Contractor's performance in complying with the contract requirements. Performance indicators measure and evaluate success against a specific goal. The process begins by selecting performance indicators that are relevant for the procurement environment with the main objective being Cost reduction and efficient budget allocation as the immediate aspects of Performance of Government Ministries in Kenya. From the study, the researcher highlighted a few of the recommendations as per the research objectives:

The study sought to establish the influence of procurement planning on performance of Government Ministries in Kenya. The results indicated that a unit increase in procurement planning while holding other factors constant, would cause a significant increase in the performance of Government Ministries in Kenya. The study therefore recommends the Kenyan Government Ministries to consider focussing more on procurement planning in their respective procurement departments for better performance. In addition, the study sought to establish the influence of tender qualification and selection on performance of Government Ministries in Kenya. The findings indicated that an increase in unit of tender qualification and selection while holding other factors constant, would cause a significant decrease in the performance of Government Ministries in Kenya. As the Kenyan Government Ministries continue focusing on improving their performances, the study recommends that they should consider tender qualification and selection as their last option in the procuring goods and services at this does not play any significant role in the ministries, instead it tends to trigger the performance of a ministry.

Further, the study sought to establish the influence of procurement contract award on performance of Government Ministries in Kenya. From the study it is indicated that increase in unit of procurement contract award while holding other factors constant, would cause a significant increase in the performance of Government Ministries in Kenya. This study therefore recommends the Government Ministries in Kenya to consider improving procurement contract award to their suppliers by improving on the way they prepare the solicitation document, receive and evaluate bids, conducts the cost analysis, award the bid as required by the act as well as the way procurement prepares the solicitation document for better performance in future.

Finally, the study sought to establish the influence of procurement contract management on performance of Government Ministries in Kenya. The findings indicated that an increase in unit of procurement contract management while holding other factors constant, would cause a significant increase in the performance of Government Ministries in Kenya. The study therefore recommends the Government ministries to reconsider its persistence in ensuring that the procurement team develops contract administration plan, receives goods and services from the suppliers, signs the invoices to facilitate supplier payment, manages the vendors, starts up the contract in due time as required and closes the contract when it ends. By so doing, they shall ease the way in which their operational performance is conducted.

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