



ROLE OF PROCUREMENT METHODS ON PERFORMANCE OF COUNTY GOVERNMENTS OF KENYA

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ABSTRACT

This study sought to establish the influence of procurement methods on performance of county governments in Kenya. Descriptive research design was used for the study. The target population for this study was procurement personnel from the six counties (Kisii, Migori, Vihiga, Kericho, Kwale and Isiolo). There were 90 employees working in procurement department as they were arguably in a better position to answer the question in order to address the research problem. The respondents included procurement managers, procurement officers, procurement assistants and clerical officers in the department. Primary data was collected using questionnaires by use of the census survey technique. The quantitative data was entered into SPSS 22 for analysis. Both quantitative and qualitative data analysis techniques were used. Quantitative data was analyzed using descriptive statistics while qualitative data was analyzed by the use of the content analysis. Descriptive statistics such as percentages, means and standard deviations were used to analyze the data while inferential statistics such as correlation and regression analysis was used to test on the relationship between the variables of the study. Multiple regression model was used at 5% level of significance. The correlation coefficient was 0.888. This indicated a very strong positive relationship between the independent variable and dependent variable. The data showed that the high R square was 0.788. It showed that the independent variables in the study were able to explain 78.80% variation in the performance of county governments in Kenya while the remaining 21.20% was explained by other variables or other factors which the study recommended for further study. This implied that these set of independent variables were very significant and they therefore needed to be considered in any effort to enhance performance of county governments in Kenya.

Key Words: open tendering, restricted tendering, single sourcing, request for quotations, County Governments

INTRODUCTION

The expansion of procurement has largely expanded post-implementation of county governments in Kenya. Chapter 11 (Cap 11) of the Kenya Constitution that was promulgated on August 27, 2010 paved way for the realization of the current devolved system of governance (Obanda, 2010). Juma (2010) noted that public procurement is a critical process in the economy owing to the fact that it controls a sizeable proportion (10%) of Kenya's GDP.

The Kenya constitution of 2010 devolved procurement powers such that at County levels, citizens are responsible for their own purchases (Constitution of Kenya, 2010). As such, each of the 47 counties has an established procurement function bestowed with the responsibility of purchasing goods and services for their departments. Nairobi County, though geographically small, harbours the largest number of people in Kenya due to its metropolitan position. Providing services founded on the dimensions of quality to large populations in the Nairobi County implies a huge budget of budget allocation and complex purchase and supply chain processes. Supply chain performance of such complex institution is founded on adoption of effective procurement methods.

Countries such as the UK, US and Canada have long employed SCM in the management of their procurement and logistics. For instance, Gangster et.al(2004) acknowledged that the Department of Defense (DOD) in the US has minimized cost through lead time in the management of its logistics by employing SCM practices. Also, the office of Government of Commerce (OGC) in the UK releases year to year updates about best practices of SCM in the public sector. In the past decades, the Public Procurement System in Kenya (SCM) has undergone significant development. From being a system with no regulation in 1960's and system regulated by treasury circulars in 1970's 1980's and 1990's, the reasons for slow growth was occasioned by lack of

guidelines for creating alliances with supply chain partners. Failure to develop measures for monitoring alliances, inability to broaden the supply chain vision beyond procurement of production distribution to encompass larger business processes, inability to integrate the organizations internal processes, lack of trust inside and outside the organization, organizational resistance to the concept, lack of integrated information systems and electronic

In South Africa, Supplier management is widely recognized as the most important responsibility of the purchasing function because the organization's suppliers can affect the price, quality, delivery reliability and availability of its products (Pearson & Ellram, 2008). Government aim that proper supplier relations management would help to reduce product and material costs while maintaining a high level of quality and after-sales services (Sonmez, 2008). Therefore, an efficient supplier relations management needs to be in place for the successful supply chain management. Many governments in the world have realized that they can sustain the cost reductions and improve their quality of care by concentrating on their purchasing and supplier management (Kumar *et al.*, 2007).

The Constitution of Kenya 2010 created County Government structure based on principles of democracy, revenue reliability, gender equity, accountability and citizen participation. Devolution is meant to enhance accountability by bringing politicians and resources closer to the people they are intended to serve. However, the implementation of devolution has not been easy as the County Government needed to engage in massive procurement in the establishment of County Governments. This has affected the performance levels of these County Government. Several studies have been done on impact of procurement and Disposal Act of 2005. Sound public procurement policies and practices are among the essential elements of good governance (KIPPRA, 2006; World Bank, 2012). An ideal procurement system should also focus on

effectiveness, where procuring entities should meet the commercial, regulatory and socio-economic goals of government in a manner that is appropriate to the procurement requirement to enhance supply chain performance (Orioki, 2013).

In Kenya, the Public Procurement and Disposal Act, of 2005 was assented to on 26th October 2005 and was revised in 2009 to establish procedures for procurement and the disposal of unserviceable, obsolete or surplus stores and equipment by public entities (Mwangi, 2009). With the gazettment of the subsidiary legislation, the PPDR of 2006, the law became operational on 1st January, 2007 (Kirugu, 2010). The Act established three independent bodies; an oversight body, the PPOA, Public Procurement Oversight Advisory Board (PPOAB) and the Public Procurement Administrative Review Board (PPARB).

Larmour (2011) stated that procurement methods remained relatively unchanged for over hundred years prior to the Second World War, with the main forms being traditional or conventional methods. Post 1945 many newer forms of procurement emerged and the use of different procurement methods changed over time. The rise and fall of the economy during the next fifty years has seen a number of different procurement methods fall in and out of favor depending on trends in the industry and changes in the project team structure. Procurement methods are procedures used by procuring entities to acquire goods, services and works. Peter Baily and *et. al* (2008) defined procurement as the process of acquiring goods for an organization in line with the set policies or methods that govern the choice of suppliers and products. They further summarized the main stages in the procurement process as follows: recognition of need, specification, make or buy decision, source identification, source selection, contracting, contract management, receipt, possibly inspection, payment and fulfillment of need.

Statement of the Problem

The poor supply chain performance is a common problem in many county governments with an

immeasurable cost spiraling to over USD10 million (Ksh, 85billion) annually. Understanding these impacts is crucial in the adoption of efficient and effective procurement methods (Cullen, Bernon & Grost, 2010). In Kenya, the central government and county government spends about Kshs. 234 billion per year on procurement. However, on annual bases, the county government losses close to Ksh. 71 billion about 17 per cent of the national budget due poor procurement methods used such as inflated procurement quotations (KISM 2014). According to Public Procurement Oversight Authority (PPOA 2014), most of the supply chain management in many county governments have a mark-up of 60 per cent on the market prices. The inefficiency and ineptness of overall implementation of procurement methods contributes to loss of over Ksh.50 million annually (Tom 2014). According to Victor (2012), procurement expenditure could be minimized through proper implementation of proper procurement methods.

From the empirical standpoint, local studies have been done on the area of procurement performance have focused on the effect of procurement process in companies. Ngugi and Mugo (2007) analyzed the effect of procurement activities on the operation and effectiveness of public sectors in Kenya. Abdi (2012) examined procurement practices of public state corporations in Kenya Apiyo and Mburu (2014) identified that there has been limited research carried out with the aim of determining the actual reasons why the devolved units have not been able to achieve their streamlined supply chain objectives. Apiyo and Mburu (2014) addressed the general factors affecting the procurement planning in county governments; hence, they did not address the influence of procurement methods on performance. Could open tendering, restricted tendering, single sourcing and request for quotations affecting performance of County governments of Kenya? This study sought to explore more.

Objectives of the Study

The purpose of the study was to establish the influence of procurement methods on performance of county governments of Kenya. The specific objectives were:-

- To assess how open tendering influence performance of county governments of Kenya
- To find out how restricted tendering influence the performance of county governments of Kenya
- To establish how single sourcing influence performance of county governments of Kenya
- To identify how request for quotations influence performance of county governments of Kenya.

LITERATURE REVIEW

Theoretical Review

Auction Theory

According to Gunnar Alexandersso and Staffan Hultén (2006) supplier selection when contracting out public services is similar to performing common value auctions with a sealed-bid procedure. However, the price of the bidders may not be the only factor (although often the most important) to take into account. The procuring public authority typically evaluates the competing bids regarding both price and quality once the bidding process has ended. He argues that, competitive tenders combine traits, advantages, disadvantages and risks, of both auctions and beauty contests.

Hultkrantz and Nilsson (2011) claim that a pure auction is better than a beauty contest because it offers a more market-oriented, objective and transparent method for awarding licences. Their strongest argument in favour of open tendering is that firms in the auction process, by means of offering more and more money, reveal information about their estimation of the value of the good. Hultkrantz and Nilsson (2011) point out several disadvantages with beauty contests: the process is slow and cumbersome, in particular if the final

decision is challenged in court, it is difficult to achieve transparency, and many criteria are not objective or difficult to quantify. They further suggest that, even when social concerns are important, an open tendering is a better alternative since it can also include minimum requirements and can allow both positive bids in attractive regions and negative bids in unattractive regions. This helps in performance of county government because the best supplier or bidder depending on the criterion that will be will be selected.

Theory of constraints

This theory will guide the study in investigating the relationship between restricted tendering and performance of county governments The theory of constraints views that organizations can be assessed and controlled by variations on three measures: inventory, operational expense and throughput (Barausse, Yunes & Chamberlain, 2016). Inventory is all the money that has been kept aside to buy goods or services that the system intends to use or sell. Operational expense is the capital spent to turn inventory into throughput. The rate at which the system generates capital by selling is called throughput. The main objective of most businesses is to make money, however, before this is achieved, necessary conditions such as legal obligations, quality and safety must be met. It is therefore vital for the business to understand how to make financial decisions based on inventory, operating expenses and throughput.

According to the theory of constraints, the rate of achieving a set goal is limited by at least one constraint. This is backed up by the argument that if there is nothing preventive a system from achieving higher throughput, then its throughput will be infinite, an impossible scenario in a real-life system (Puche *et al.*, 2016). The overall throughput can only be increased by increasing flow through the system. Once the goal of a system has been identified, the organization should identify the constraint, decide how to exploit it and subordinate all other things while elevating the constraint. This

will allow the organization to center its efforts on the identified constraint.

Agency Theory

This theory will guide the study in investigating the relationship between single sourcing and performance of county governments. Agency theory attempts to describe the agency relationship, this is where the principal gives work to the agent who executes the work (Eisenhardt, 1989). There are challenges in such kind of relationship, this is due to the fact that principal and agent have differing objectives and this can result into conflict, in addition it is also difficult for the principal to know what the agent is doing. Principal-agent researchers cover the theory of the principal-agent relationship, as a theory that can be used to access different relationships such as employer-employee, buyer-supplier and other agency relationships.

Agency theory is most relevant in situations in which contracting problems are difficult. This ideally includes situations where there are substantial goal differences between principals and agents and uncertain outcomes that trigger the risk implications of the theory (Eisenhardt, 1989). Eisenhardt (1989.) discusses the assumptions of the theory and raises the issue of principals learning about the agents when there is a long term relationship, when there may be less need for outcome-based contracts. This may be more the case with procurement in the private sector, where there are fewer regulations than in the public sector, and where tendering is not required. Private businesses are free to have long term relationships with software developers and consulting firms. Jones (1995) suggests that long term relationships with vendors may in the long run lead to higher effectiveness, due to the stability of the relationship being dependent on controlling goal conflicts. Sharma has extended the agency theory and focuses on the principal-professional relationship, where professionals can include consultants (Sharma, 2007). The agency theory is best used in restricted tendering where at times long term relationship is required between the buyer and the

supplier so that they may be in a position to learn each other better and develop their relationship more. In areas that are highly sensitive like purchase of military equipment and printing of currency, Agency theory is important since the work or service involved requires long term relationship to produce effective results.

Conceptual framework

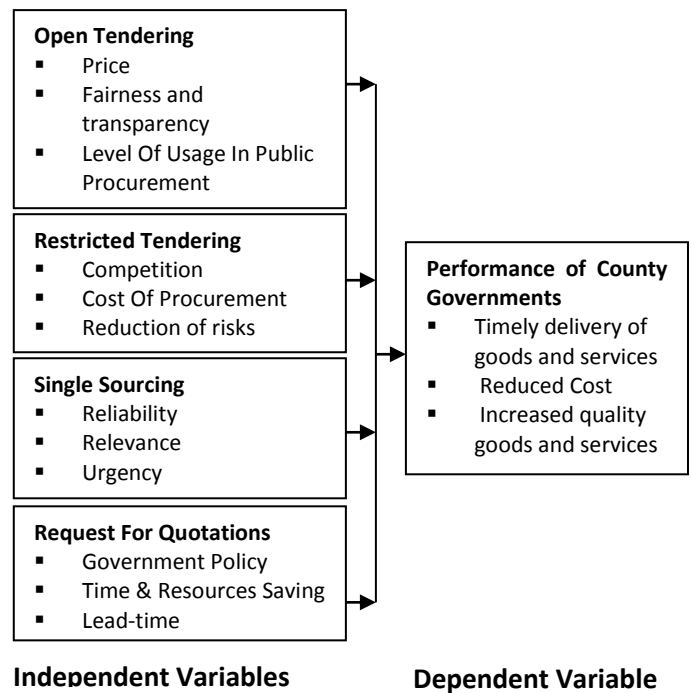


Figure 1: Conceptual Framework for the Study

Open Tendering

Mithamo, Iravo and Mbithi (2011) pointed out that open tendering allows for fairness and transparency. Fairness is seen in terms of equal opportunities given to any organization to submit a tender. Chimwani, Iravo and Tirimba (2014) note that the function of transparency is crucial in procurement as it refers to openness. Transparency in the county government ensures accountability and reduces corruption. Domestic and foreign investors have been attracted to open tenders in County governments and this has led to the creation of multinational trade thus enhancing the SMC by enabling sourcing to be done globally. (Mithamo, Iravo and Mbithi, 2011). Global sourcing of raw materials will enable SMC to effectively control global flow on inputs and outputs. However,

Amayi and Ngugi (2013) argue that lack of transparency means that there is an absence of information on the guidelines and practices and this can be a barrier to trade and may affect foreign suppliers more than the local ones. The affected suppliers will in turn affect the SMC because a setback in any step of the supply chain negatively influences the overall SCP.

Restricted tendering

Restricted tendering as per Karani (2014) is a procurement method that limits the request for tenders to a selected number of service providers, suppliers or contractors. Restricted tendering influences supply chain in organizations as it reduces the risks in the implementation of the contract. This is so due to the fact that it is a more flexible approach to awarding contracts as it allows potential bidders to participate in the definition of technical specifications and scope of work.

Restricted tendering allows for adjustment of technical specifications and work description (PPOA, 2010). However, this method also called two-stage process has been criticized due to long procurement lead time brought about by the two-stage submission process. Wanjiru (2016) argues that at the second stage, negotiations may become adversarial or there be a risk of price escalation thus negatively influencing the ability of SMC to generate revenue from costs. Restricted tendering method by the county government has effects on price because competition is lost once a firm is selected for negotiations (Rotich, 2011). The selected firm may take advantage of this scenario to hike prices of their goods, services or works.

Single Sourcing

Single sourcing strategies entail aiming hard for partnership between buyers and suppliers so as to enforce cooperation and achieve shared benefits. The tighter the coordination between procures in County Government and supplier required for Just in time (JIT) stock initiatives encourages the County to shift supply relations towards single sourcing. Kenyana, Onyango & Mamati (2011), state that it

is cumbersome to manage more than one source than when dealing with a single source. However, Karani (2014) argues that depending on one source may expose the buying company to a greater risk of supply interruption especially in cases where the public institution splits its total requirements among various suppliers.

Request for Quotations

The request for quotation method is a non-competitive procurement method (Karani, 2014). Request for quotation influences the supply chain in several ways. It reduces procurement lead-time and therefore the county has no need to prepare solicitation documents or advertise requirements as in the case of open tendering. This in turn reduces the time taken to acquire raw material, process them into finished products and sell them. A period for submission of quotations is very short and this enables the county to rapidly get the required items to complete projects and as a result enhances the performance of supply chain performance (Oyando, Kibet & Musiega, 2014).

Empirical Review

Bahaidar (2014) was interested in the factors affecting supply chain performance by oil companies in Kenya. The study was guided by the following specific objectives: to evaluate the influence of constrained infrastructure on SCP, to establish the influence of price control on SCP and to determine the influence of open tendering on SCP. The findings show that open tender system influences SCP in that it ensures competitive prices and is a flexible system as it reduces the cost of business and overstocking expenses. Kasisi,

Benjamin and Mwangi (2015) studied 'Factors Affecting the Performance of the Procurement Function in Government Organizations: A Case Study of National Oil Corporation of Kenya.' The general objective of the study was to establish the factors that affect procurement process in government institutions. One of the specific objectives was to determine the effect of tendering methods on supply chain performance. Qualitative

and quantitative data collection techniques were used. Useful information was sought from periodicals and articles using the inclusion and exclusion criteria. Additionally, a sample size of 150 respondents selected using purposive sampling technique filled the distributed questionnaire. Data was analyzed using SPSS Statistical package. Open tendering was identified as the most advocated method of acquiring products and services in public institutions.

Several researches have already been carried out on restricted tendering and supply chain performance. However, these studies are limited in scope because they were conducted in different national culture. According to Cobra, (2010) in the study on a comparative analysis of procurement methods used on restricted tendering office projects in UK, the study mainly compared the empirical information related to the successful tender for procurement methods used in restricted tendering of office projects in the United Kingdom (UK). It used numeric/quantitative indicators such as construction costs, construction speed, construction time and intensity of construction. This study did not look at all the restricted tendering on a like to like basis against the overall supply chain performance in the government.

Marwa (2006) found that on average projects procured using single sourcing procurement method were on average 3% over budget and delivered 2% behind project schedule while one-step projects were on average over budget and delivered 3.5% behind schedule. He further found that the single sourcing based method performed the worst in regard to budget and schedule and were on average 5.6% over budget and delivered 3.5% behind schedule. However this study examined design based projects based in the United States and may not be applicable in the context of county governments in Kenya.

Tingting (2011) in his study found that the obstacles of effective use of single sourcing methods in public procurement included lengthy lead times and high transactions costs. However this study was focused

on state corporations in New Zealand. Odhiambo and Kamau (2003) in their study found that the bulk of corrupt practices in Kenya occurred in public procurement. There was no reference made on the procurement methods especially on single sourcing and operational performance of the corporations in the study.

A study on the assessment of the procurement systems in Kenya, conducted by the Public Procurement Oversight Authority, PPOA, (2007) where seven procurement entities participating in the Consumer Price Index (CPI) survey undertook a total of 11,046 procurements during the assessment period confirmed the trend of procurement entities relying excessively on procurement through quotations. It was clear that the procurement functioning needs to be developed and considerable effort needs to be put into defining strategies on how to make open tendering the default method of procurement in the future. An invitation to quotation is a simplified tendering methodology where the procuring entity seeks to limit transactions costs, thus preferring to contact the firms that have proven track, when calling for quotations. Request for quotations should be addressed to not less three or more candidates (Ngari, 2012).

METHODOLOGY

Lavkaras, (2008) describes a research design as a general plan or strategy for conducting a research study to examine specific testable research questions of interest. This study used descriptive research design. The population and the area of study was drawn from 3 overall best performing ranked county governments in procurement and 3 worst ranked overall performing county government according to the latest procurement performance ratings. The target population of this study was 110 procurement staff drawn from the six counties. The study used questionnaires to collect primary data from respondents as research tools (Kothari, 2010). For the main purpose of this study, the study collected primary data and

compared it with the existing secondary data for the literature review. Qualitative data was analyzed by use of content analysis. Quantitative data was analyzed by employing descriptive statistics and inferential analysis using statistical package for social science (SPSS) version 22 and excel. The study further adopted multiple regression model to test the variation of the dependent variable. The multiple regression model that was then fitted to determine the combined effect that the independent variables had on the dependent variable when acting jointly was expressed as follows: $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$, :Where; Y= performance of County governments; β_0 = constant (coefficient of intercept), X_1 = Open tendering; X_2 = Restricted tendering; X_3 = Single sourcing; X_4 = Request for quotations; ϵ = Error term; $\beta_1 \dots \beta_4$ = Regression coefficient of four variables.

RESULTS

Open Tendering

The study sought to assess the influence of open tendering on performance of county governments

Table 1: Open Tendering Statistics

Open Tendering	Mean	Std. Dev
Enhance fairness and transparency	2.324	.439
Encourage application from the qualified suppliers	2.345	.468
Increase experience from the tenderer	2.543	.568
Enhance supplier competence due to its competitiveness process	2.135	.326
Does not compromise with the quality of procured goods and services	2.432	.580

Restricted Tendering

The study sought to assess the influence of restricted tendering on performance of county governments in Kenya. This section presented findings to statements posed in this regard with responses given on a five-point likert scale (where 5 = Strongly Agree; 4 = Agree; 3 = Neutral; 2 = Disagree; 1= Strongly Disagree). Table 2 presented the findings. The scores of 'strongly disagree' and 'disagree' were taken to represent a statement not

in Kenya. This section presented findings to statements posed in this regard with responses given on a five-point likert scale (where 5 = Strongly Agree; 4 = Agree; 3 = Neutral; 2 = Disagree; 1= Strongly Disagree). Table 1 presented the findings. The scores of 'strongly disagree' and 'disagree' were taken to represent a statement not agreed upon, equivalent to mean score of 0 to 2.5. The score of 'Neutral' was taken to represent a statement agreed upon moderately, equivalent to a mean score of 2.6 to 3.4. The score of 'agree' and 'strongly agree' were taken to represent a statement highly agreed upon equivalent to a mean score of 3.5 to 5.0.

As tabulated, a majority of respondents were found to disagreed that the organization it had enhanced fairness and transparency (2.324); Encouraged application from the qualified suppliers (2.345); Increased experience from the tenderer (2.543); Enhanced supplier competence due to its competitiveness process (2.13); The organization used contracting period review systems in the procurement process to enhance quality of procured goods (2.135). Did not compromise with the quality of procured goods and services (2.432).

agreed upon, equivalent to mean score of 0 to 2.5. The score of 'Neutral' were taken to represent a statement agreed upon moderately, equivalent to a mean score of 2.6 to 3.4. The score of 'agree' and 'strongly agree' was taken to represent a statement highly agreed upon equivalent to a mean score of 3.5 to 5.0. As tabulated, a majority of respondents were found to disagree that restricted tendering reduced the risks on the implementation of the contract (2.223); Enhanced the flexible approach to awarding contracts (2.135); Allowed potential

bidders to participate in the contract (2.232); Allowed the adjustments of technical specifications and work description (2.219); It enhanced technical

specifications and work description (2.231). This implied that there was poor implementation of restricted tendering in the county government.

Table 2: Restricted Tendering Statistics

Restricted Tendering	Mean	Std. Dev
Reduces the risks on the implementation of the contract	2.223	.321
Enhances the flexible approach to awarding contracts	2.135	.243
Allows potential bidders to participate in the contract	2.232	.321
Allows the adjustments of technical specifications and work description	2.219	.228
It enhances technical specifications and work description	2.231	.237

Single Sourcing

The study sought to assess the influence of single sourcing on performance of county governments in Kenya. This section presented findings to statements posed in this regard with responses given on a five-point likert scale (where 5 = Strongly Agree; 4 = Agree; 3 = Neutral; 2 = Disagree; 1= Strongly Disagree). Table 3 presented the findings. The scores of 'strongly disagree' and 'disagree' were taken to represent a statement not agreed upon, equivalent to mean score of 0 to 2.5. The score of 'Neutral' was taken to represent a statement agreed upon moderately, equivalent to a

mean score of 2.6 to 3.4. The score of 'agree' and 'strongly agree' was taken to represent a statement highly agreed upon equivalent to a mean score of 3.5 to 5.0. As tabulated, a majority of respondents were found to disagree that it minimized the cost involved in the tendering process (2.225); No delay and delivery of the procured goods and services (2.335); It did not have complicated details in the tender (2.272); It minimized resources during the tender selection process (2.259); It enhanced competent supplier to participate in the tender (2.511). This implied that there was poor implementation of single sourcing in the county government.

Table 3: Single Sourcing Statistics

Single Sourcing	Mean	Std. Dev
Minimizes the cost involved in the tendering process	2.225	.432
No delay and delivery of the procured goods and services	2.335	.215
It does not have complicated details in the tender	2.272	.321
It minimizes resources during the tender selection process	2.259	.524
It enhances competent supplier to participate in the tender	2.511	.318

Performance of County Governments

The study sought to examine the role of procurement methods on performance of county governments of Kenya, attributed to the influence of open tendering, restricted tendering, single sourcing and request for quotations. The study was particularly interested in three key indicators, namely reduction of costs, minimization of procurement expenditure, minimization of lead times and level of quality of procured goods and services. The first indicator for the dependent variable required knowing what the organizations level of reduction of costs was, 0% of the

respondents had 0%-10%, 3% had 11-20%, 11% had 21-30%, 17% had 31-40%, 69% had had over 40%. The modal class was of the respondents who had over 40% organizations level of reduction of costs. The median was found to be 5 which implied that on average the organizations level of reduction of costs was over 40%. The next indicator required the respondents to state the level of minimization of procurement expenditure in the organization, 3% of the respondents had 0-10%, 3% had 11-20%, 14% had 21-30%, 26% had 31-40%, 49% had over 40%. The modal class was of the respondents who had over 50%. The median was found to be 5 which implied that on average firm's levels of

minimization of procurement expenditure was by over 40%.

When the respondents were asked what the level of minimization of lead time was, 0% of the respondents 0-10%, 3% had 11-20%, 3% had 21-30%, 34% had 31-40%, 60% had over 40%. The modal class was of the respondents who had over 40% level of minimization of lead time. The median was found to be 5 which implied that on average the level of level of minimization of lead time in

organizations was over 40%. Finally, the respondents were asked what the level of Quality of procured goods and services offered was, 0% of the respondents 0-10%, 3% had 11-20%, 20% had 21-30%, 43% had 31-40%, 34% had over 40%. The modal class is of the respondents who had between 31-40% quality level. The median was found to be 4 which implied that on average the level of quality of procured goods and services offered was between 31-40%.

Table 4: Performance of County Governments

Statement	0%-10%	11%-20%	21%-30%	31%-40%	Over 40%	Mode
What is the level of reduction of costs in the organization?	0	3	11	17	69	5
What is the level of minimization of procurement expenditure?	3	3	14	26	49	5
What is the level of minimization of the lead time in the organization	0	3	3	34	60	5
What is the level of quality of procured goods and services offered?	0	3	20	43	34	4

Multiple Regression Analysis

As per the model summary Table 5, the correlation coefficient was 0.888. This indicated a very strong positive relationship between the independent variable and dependent variable. The data showed that the high R square was 0.788 It showed that the independent variables in the study were able to explain 78.80% variation in the performance of county governments in Kenya while the remaining 21.20% was explained by the variables or other factors which the study recommended for further study. This implied that these set of independent variables were very significant and they therefore needed to be considered in any effort to enhance performance of county governments in Kenya.

From the ANOVA statics in Table 6, the study established the regression model had a p-value of $0.000 < 0.05$ which was an indication that the data was ideal for making a conclusion on the population parameters as the value of significance. The calculated value was greater than the critical value ($30.961 > 13.764$) an indication that supplier

sourcing, purchasing price, total quality management and technical expertise all influence procurement performance in the public entities in Kenya.

The results of multiple regression analysis obtained regression coefficients t value and significance level as indicated in Table 7. The general form of the equation was to predict performance of county government from open tendering, restricted tendering, single sourcing and request for quotations was: $(Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \epsilon)$ becomes: $Y = 1.874 + 0.769X_1 + 0.760X_2 + 0.755X_3 + 0.740X_4$. From the study findings on the regression equation established, taking all factors into account (independent variables) constant at zero performance of county government was 1.874. The data findings analyzed also showed that taking all other independent variables at zero, a unit increase in open tendering would lead to a 0.769 increase in performance of county government; a unit increase in restricted tendering would lead to a 0.760 increase in performance of county government, a unit increase in single sourcing

would lead to 0.755 increase in performance of county government and a unit increase in request for quotations would lead to 0.740 increase in performance of county government. This inferred that open tendering contributed most to performance of county government. Based at 5% level of significance, open tendering had a t-value (4.320>1.96) with a .000 level of significance;

restricted tendering had a t-value (4.002 > 1.96) with a .003 level of significance single sourcing had a t-value (3.580>1.96) with a .0007 level of significance and request for quotations had a t-value (2.890>1.96) with a .010 level of significance hence the most significant factor was open tendering.

Table 5: Model Summary

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate
1	.888	.788	.765	.000

Table 6: ANOVA

Model	Sum of Squares	d.f	Mean Square	F	Sig.
Regression	103.913	4	25.9782	56.870	.000 ^a
Residual	37.008	80	.4568		
Total	140.914	84			

NB: F-critical Value = 21.876;

Table 7: Coefficient Results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	β	Std. Error	β		
(Constant)	1.874	.238		7.876	.000
X ₁ _Open tendering	.769	.178	.522	4.320	.000
X ₂ _Restricted tendering	.760	.190	.458	4.002	.003
X ₃ _Single sourcing	.755	.211	.388	3.580	.007
X ₄ _Request for quotations	.740	.256	.376	2.890	.010

CONCLUSION

The study concluded that open tendering was the first important factor that affects performance of county governments of Kenya. The regression coefficients of the study showed that open tendering had a significant influence performance of county governments of Kenya. This showed that tendering had a significant effect on performance of county governments of Kenya.

The study concluded that restricted tendering was the second most important factor that affects performance of county governments of Kenya. The regression coefficients of the study showed that restricted tendering had a significant influence performance of county governments of Kenya. This showed that restricted tendering had a significant

effect on performance of county governments of Kenya.

The study concluded that single sourcing was the third most important factor that affected performance of county governments of Kenya. The regression coefficients of the study showed that single sourcing had a significant influence performance of county governments of Kenya. This showed that single sourcing had a significant effect on performance of county governments of Kenya.

The study concluded that request for quotations was the fourth important factor that affects performance of county governments of Kenya. The regression coefficients of the study showed that request for quotations had a significant influence performance of county governments of Kenya. This

showed that request for quotations had a significant effect on performance of county governments of Kenya.

RECOMMENDATIONS

The study recommended for open tendering in the devolved governments as it allowed for fairness and transparency. Fairness was seen in terms of equal opportunities given to any organization to submit a tender. Transparency in the county governments ensured accountability and reduces fraud or theft of county resources. Domestic and foreign investors can be attracted to open tenders in County governments and this led to the creation of multinational trade thus enhancing the SCP by enabling sourcing to be done globally.

Restricted tendering as a procurement method can limit the request for tenders to a selected number of service providers, suppliers or contractors. Restricted tendering influences supply chain in the devolved governments as can reduce the risks in the implementation of the contract. It can be a more flexible approach to awarding contracts as it does not allow potential bidders to participate in the technical specifications and scope of work.

Single sourcing should be enhanced in the devolved governments especially when the tighter the coordination between buyers in the County Government and supplier required for Just in time (JIT) stock initiatives encourages the County to shift supply relations towards single sourcing. The county governments can benefit from single sourcing in terms of reduced order lead times, quantity discounts from order consolidation and logistical cost reductions and this influences supply and

processing of goods and services and achieve cost efficiency due to quantity discounts involved in this method.

Request for quotation need to be enhanced in the devolved governments since it influences the supply chain in several ways. It reduces procurement lead-time and therefore the county has no need to prepare solicitation documents or advertise requirements as in the case of open tendering. This in turn reduces the time taken to acquire raw material, process them into finished products and sell them. A period for submission of quotations is very short and this enables the devolved governments to rapidly get the required items to complete projects and as a result enhances the performance of supply chain performance.

Recommendations for Further Studies

The study was a milestone for further research in the field of public procurement performance in Africa and particularly in Kenya. The findings demonstrated role of procurement methods on the performance of county governments to include; open tendering, single sourcing, restricted tendering and request for quotations. The current study should therefore be expanded further in future in order to determine the effect of public procurement legal framework on performance of county governments of Kenya. Existing literature indicated that as a future avenue of research, there was need to undertake similar research in other county governments of Kenya and other countries in order to establish whether the explored factors can be generalized to affect performance of county governments of Kenya.

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