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INFLUENCE OF PROCUREMENT METHODS ON PROCUREMENT PERFORMANCE IN PUBLIC HOSPITALS IN KENYA. A CASE OF KENYATTA NATIONAL HOSPITAL

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ABSTRACT

This study sought to find the influence of procurement methods on procurement performance in public hospitals in Kenya, using a case of KNH. Specifically, the study sought to find the influence of internationals competitive tendering on procurement performance in public hospitals in Kenya; to establish the influence of national competitive tendering on procurement performance in public hospitals in Kenya; to determine the influence that restricted tendering has on procurement performance in public hospitals in Kenya; and to find out the influence of direct procurement on procurement performance in public hospitals in Kenya. The study used a descriptive survey research design with a target population of 6,000 employees and management at KNH. Further, this study adopted stratified sampling with a base sample size of 90 respondents. The study used structured questionnaires for collecting primary data from the respondents. SPSS together with Microsoft Excel were used for data analysis. The statistical parameters generated from the software were presented in tables and charts for easier interpretation. Multiple Linear Regression Analysis was used to estimate the relationship between the dependent and independent variables, and provided a means of objectivity in assessing the degree and nature of the relationship between the dependent and independent variables. The study established that only International Competitive Tender and National Competitive Tender variables had a positive and statistically significant influence on the dependent variable (Procurement Performance). Both Restricted Tender and Direct Procurement were statistically insignificant. Therefore the study concluded that a combination of all this methods does not necessary result in better procurement performance. Further, the study concluded that competitive tendering leads to better procurement performance. This study therefore recommended that policy makers at KNH give an edge to competitive tendering over other methods of procurement particularly Restricted Tendering and Direct Procurement.

Key Words: *Internationals Competitive, Restricted Tendering, Direct Procurement, National Competitive Tendering, Procurement Performance*

INTRODUCTION

Procurement is one department that can contribute tremendously to the organizations efficiency effectiveness. If the procurement department bought all that is required into the organization at the right price, time, place, quantity and quality all other department within the organization would drive great benefits from this and would be able to serve their customers (both internal and external) better. If the procurement department is inefficient in its acquisition of goods and services or even works, other departments would be affected and sometimes the consequences can be grave (Snider & Rendon, 2008).

According to Getuno *et al.* (2015), procurement encompasses the whole process of acquiring goods, works or services. It begins when an agency has identified a need and decides on its procurement requirement. Procurement continues through the process of risk assessment, seeking and evaluating solutions, contract award, delivery and payment for the goods, work or service, ongoing management of the contract and consideration of options related to the contract and extends to the ultimate disposal of property at the end of its useful life (Johnson, Leenders & McCue, 2017). According to Markowski, Hall and Wylie (2009), public procurement is concerned with how public sector organisations spend taxpayers' money on goods, works and services. Globally, in many developed nations, governments and organizations across the world tend to spend between 8 per cent and 25per cent of Gross Domestic Product (GDP) on goods and services.

Amo Asante (2016) argued that the basic presumption in public procurement in all public institutions is that contracts of a specified type and value will be procured using an advertised, competitive procedure that is open, fair and transparent, ensuring equality of opportunity and treatment for all candidates and tenderers. There are only limited circumstances where a procedure without advertised competition is permitted. The public procurement entities are legally bound to ensure this is achieved through the Public Procurement and disposal Act of 2005 (Buuri, 2016).

The selection of the most appropriate procurement method is critical for both the client and other project participants as it is an important factor that contributes to the overall client's satisfaction and project success (Ramanathan & Narayanan, 2016). This selection will be dependent upon a number of factors such as cost, time and quality which are widely considered as being the most fundamental criteria for clients seeking to achieve their end product at the highest quality, at the lowest cost and in the shortest time (Kakwezi & Nyeko, 2010). The existence of a wide variety of procurement methods available to project developers on the market today has led to several comparisons being made on how the different procurement methods have performed at the end of the construction phase.

Purchasing performance evaluation may be defined as the quantitative or the qualitative assessment over a given time towards the achievement of corporate and operational goals and objectives relating to purchasing economies, efficiency and effectiveness. Quantitative objectives are measurable using such measures as number of orders placed, reduction in lead times, price savings and reduced administrative costs and will tend to be used when purchasing is regarded mainly as a clerical and transactional activity (Ahmadi, Pishvaee & Torabi, 2018). Matthew, Patrick and Denise (2013) asserts that measuring purchasing performance is important as the purchasing department plays an ever increasingly important role in the supply chain in an economic downturn. A reduction in the cost of raw material and services can allow companies to competitively market the

price of their finished goods in order to win business. Traditionally, procurement is considered to have achieved a high level of performance if it is delivered at the right time, right price and good quality level of product or service delivered. It should also provide the client with a high level of satisfaction. Ghadamsi and Braimah (2012) concluded that the traditional distinction between good and poor procurement performance focused on the meeting of cost, time and product quality-related criteria.

Statement of the Problem

The different procurement methods now available has partly made clients' decisions to adopt any of the method for any given project a complex task to grapple with. Various factors have to be taken into consideration before any informed decision can be made on the right procurement choice. According to Love *et al.* (2008), the selection of an appropriate procurement method has two main components. The first component involves analysing and establishing priorities for project objectives and client attitudes to risk. The second involves considering possible options, evaluating them and finally selecting the most appropriate. The accuracy and clarity of the client's requirements and needs are crucial ingredients here.

Providing health facilities with drug and medical supplies is a very complex process that involves a large variety of actors from both the private and public sectors. Government's health ministries often lack the management skills required to write technical specifications, supervise competitive bidding, and monitor and evaluate the contract performance. Corruption can occur at any stage of the process and influence decisions on the model of procurement (direct rather than competitive), on the type and volume of procured supplies, and on specifications and selection criteria ultimately compromising access to essential quality medicines (Ondigi & Muturi, 2015).

According to Njoki and Kimiti (2015) health institutions in Kenya are ailing from shortage of drugs or holding on expired drugs. Health centres and dispensaries are hardly stocked with the recommended medicines. It indicates that high rate of expired drugs in dispensaries and other public hospitals indicates poor planning and high wastage of public resources and this affects efficient delivery of quality services. Country Procurement Assessment Report (CPAR) reveals substantial inefficiency in public procurement and concludes that the principle of "value for money" is not achieved. An effective procurement process ensures the availability of the right medical supplies in the right quantities, available at the right time for the right patient and at the right prices and at recognizable standards of quality (Tweneboah & Ndebugri, 2017). According to Lemayian and Moronge (2018) hospitals in Kenya are grappling as Kenyans especially the poor suffer from Medical stock-out, Medical wastage or lack of prescribed drug in public hospitals. Therefore, this study sought to find out if the resultant issues were caused by procurement methods as well as how these methods affected procurement performance in public hospitals in Kenya.

Objectives of the Study

The study sought to find the influence of procurement methods on procurement performance in public hospitals in Kenya. A case of KNH. The specific objectives were:-

- To find the influence of internationals competitive tendering on procurement performance in public hospitals in Kenya
- To establish the influence of national competitive tendering on procurement performance in public hospitals in Kenya
- To determine the influence that restricted tendering has on procurement performance in public hospitals in Kenya

- To find out the influence of direct procurement on procurement performance in public hospitals in Kenya

LITERATURE REVIEW

Theoretical Framework

The Systems Theory

The General Systems Theory modeled by Ludwig Bertalanfy in 1950 relates the functioning of organizations with how living organisms function. The theory states, from a biological point of view, that, an organism is an integrated system of interdependent structures and functions made up of cells, and a cell contains molecules, which must work in harmony. Each molecule must know what others are doing, must be capable of receiving messages and must be sufficiently disciplined to obey. Due to the complexity and instability of the external environment, the survival and effectiveness of an Organization will depend on how well it scans and adapts to its internal environment (Whitchurch & Constantine, 2009).

Von Bertalanffy was reacting to reductionism and attempted to revive the unity of science. He emphasized that real systems were open to interact with their environments and that they can acquire qualitatively new properties through emergence, resulting in continual evolution. He argued that rather than reducing an entity or organization to the properties of its parts or elements, systems theory focused on the arrangement of and the inter-relations between the parts which connect them into a whole. Such an organization determined a system that is independent of the concrete substance of the elements (for example, the various departments such as finance, accounting, human resources, research and development). Thus, the same concepts and principles of organization underlie the different disciplines, providing a basis for their unification (Keraro, 2014).

Hanson (2014) observed that, the systems theory provides a leader with a tool for analyzing organizational dynamics without providing a specific theory about how an organization should be managed. He also observed that with the recognition of systems theory, all organizations consist of processing inputs and outputs with internal and external systems and subsystems helpful in providing a functional overview of any organization. The effect of the systems theory in management is that managers look at the organization from a broader perspective. Systems theory has a new perspective for managers to interpret patterns and events in the workplace. They recognize the various parts of the organization, and, in particular, the interrelations of the parts, e.g. the coordination of central administration with its programs, supervisors and workers, among other variables. In traditional management practices, managers typically took one part and focused on it. They then moved all attention to another part. The problem was that an organization could, for example, have a wonderful central administration and wonderful set of teachers, but the departments didn't synchronize at all (Adams *et al.*, 2014).

The Contingency Theory

The contingency theory, developed by Joan Woodward in the 1950s, is a class of behavioural theory which claims that there is no best way to organize an organization, to lead a company or to make decisions. Instead, the optimal course of action is contingent upon the internal and external situations. Several contingency approaches were developed concurrently in the late 1960s. The authors of these theories argued that Marx Weber's bureaucracy and Fredrick Taylor's scientific management theories had failed as they neglected environmental influences and that there is not one best way to manage enterprises. These influences shape the individual behaviour in a certain situation

while managing organizations (Van de Ven, Ganco, & Hinings, 2013).

The contingency approach to management finds its foundation in the contingency theory of leadership effectiveness developed by management psychologist Fred Fielder. It is based on the theory that management effectiveness is contingent, or dependent, upon the interplay between the applications of administration behavior. In other words, the way you manage should change depending on the conditions and that one size does not fit all. As argued by Fiedler (2015), the contingency theory is about the need to achieve a fit between what the organization is and what it wants to become. It is all about the organization's strategy, culture, goals, technology, staff and external environment, and what it does; how it is structured and the processes, procedures and practices it puts into effect.

Conceptual Framework

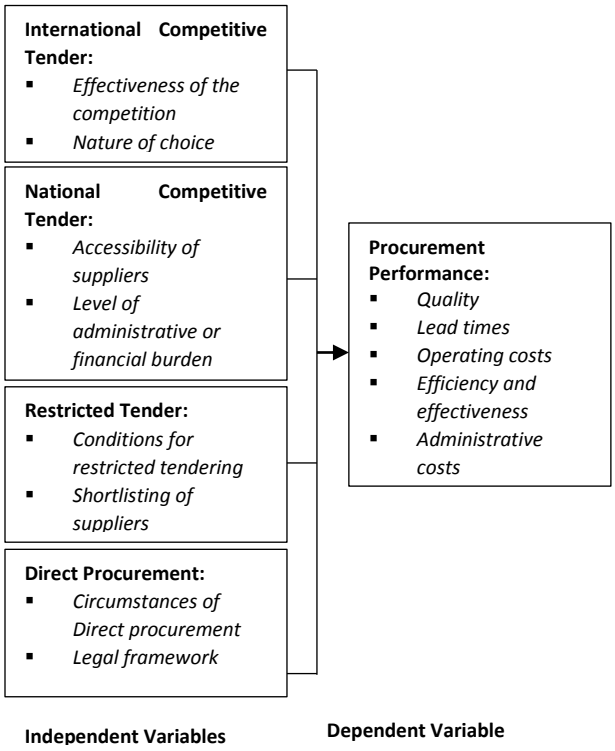

Figure 1: ***Conceptual Framework***

Empirical Review

International Competitive Tender

International Competitive Tendering can be used whenever open/competitive tendering is used and effective competition cannot be obtained unless foreign contractors are invited to tender as well as, when items to be procured are not available locally or cannot be provided on account of technical and other competencies together with financial constraint (Jacob, 2010). International competitive bidding (ICB) is the most appropriate method of procurement in most cases. This provides an executing agency with a wide choice in selecting the best bid from competing suppliers and contractors. It gives prospective bidders from eligible source countries equal opportunity to bid on goods and works that are being procured (Rose-Ackerman & Palifka, 2016).

According to Hensher and Stanley (2008) this is one of the most appropriate methods of competitive bidding in public procurement. The process entails the procurement entity to internationally advertise their requirement of goods and services. In an internationally acceptable language. The contract is then awarded to the bidder with the best bids and contract terms. The procurement entity in such kind of arrangements enjoys a certain amount of freedom in selecting winning bids for its projects. ICB procedures are normally employed for contracts with estimated values that exceed thresholds set at the time of procurement plan preparation (Tetteh, 2014).

Song, Landrum and Chernew (2013) noted that ICB has several advantages in that it promotes competition between suppliers, resulting in best "value for money" for purchasers and users; offers a kind of transparency and help avoid corruption and favouritism; and gives all suppliers the opportunity to win the business that is advertised. Takano, Ishii and Muraki (2014) added that International Competitive Bidding also enables effective

competition and gives equal opportunities for businesses to participate and win in government procurement activities. Countries and large organizations such as The World Bank offer the option of international competitive bids because they want to find the best companies in the world to provide their products and solutions.

National Competitive Tender

National Competitive Tendering (NCT) is the tendering procedure normally used for public procurement opened to only national suppliers, contractors and consultants. According to Arrowsmith and Quinot (2013) this is a procurement proceeding wherein the procurement entity or the government decides that only the domestic suppliers or contractors may participate in the tenders. The bidding process may then employ National Competitive Bidding procedure. NCT may be the preferred method of public procurement where foreign bidders are unlikely to be interested as a result of low/small contract values, nature and scope of the works or where the works are considerably scattered geographically or spread over time or where the works are labour intensive or where the contract value falls within the threshold for NCT and/or where the goods or works are available locally at prices below the international market. NCT procedures may also be used where the administrative or financial burden of the requirement outweigh the advantages of inviting tenders beyond national boundaries (Gbogr, 2017).

According to the World Bank NCT procedures would only be acceptable for use in the Bank's financed procurement, if these procedures guarantee efficiency, economy and transparency and in line with other appropriate guidelines of the Bank (in Gbogr, 2017). NCT begins with a limited advertisement to the national press and PPA official gazette and website. The tendering documents are usually in the national official language of the country and their local currency is used in the processes of tendering and payment (Kinyua, 2015). Tenders are expected from suppliers and contractors whose companies are fully owned or has majority ownership by nationals and is registered in the country (Akuffo, 2014). The national open competitive tender practices are often preferred by diverse public entities and are often advocated for by procurement entities across the world. Muraguri (2013) notes that all the public procurement must be undertaken on an open competitive basis except in few allowed circumstances.

Restricted Tender

This is a method of procurement which only invites the firms that they think can perform the works without inviting the general public (Bochenek, 2014). It is normally used for works that are specialized in nature or can be executed by a specified group of contractors. All the processes required in open competitive tendering are applied here. According to the Baiden, Abdul-Razak and Danku (2015), this method of procurement allows entities to invite the contractors that they already know or have a shortlist of some pre-registered contractors that they send invitation to.

According to Afriyie (2015), it is a method that is appropriately used for projects that are specialized in nature, requires the safety of the public which wouldn't be safe to have a tender that is open competitive. It can also be used for projects which are urgent in nature, which has a limited number of potential contractors and lastly used mostly when using a competitive method which is open fails to award a contract for a project. Restricted tendering is mostly used when the value and the conditions are not justifiable to the open tendering where by bids are obtained directly without floating the tender to the public. Here the procuring entity uses its database of pre-qualified providers who are directly invited to tender. However, the procuring

entity must demonstrate that open tendering is not applicable and for a procuring entity to use this method of procurement the tender committee must consent to its use (Iregi & Kipkorir, 2017).

Mukura *et al.* (2016) noted that restricted tendering is a procurement method that limits the request for tenders to a select number of suppliers, contractors or service providers. This method of procurement is also called: Limited Bidding and Selective Tendering. Although considered a competitive procurement method, competition is limited to only firms shortlisted or invited by the procuring entity. A process should be in place for arriving at the number and specific firms that will be invited; that number however is dependent on the stipulations of the public procurement legal framework. Any decision to use the Restricted Tendering procurement method must conform to the policies and procedures governing the procurement system. According to Waigwa and Njeru (2016) a basic characteristic of this method is that competition is confined to a certain number of firms either because only a few firms are qualified to fulfill the specific type of requirement, or certain conditions warrant the use of a limited number of firms in order to reduce the time and cost of the selection process.

Direct Procurement

Acquiring goods, services and construction works from only one source is referred to as: sole-source procurement, single-source procurement, sole-source selection, direct procurement, among others. Silwimba (2017) noted that direct or single sourcing is used where circumstances do not allow for competitive bidding. It is used for small quantities in case where time may not allow for competitive bidding. Kiruja (2014) states that direct procurement method is only applicable on ground of urgency or emergency when life and property are threatened and other methods are not practical. According to Section (74) of the Kenyan Constitution, a procuring entity may use direct procurement if the following are satisfied; there is only one person who can supply goods, works or services or there is no reasonable alternative or substitute or there is urgency (life and property threatened) and other available procurement methods are impractical.

This is clearly a non-competitive procurement method, and it should be used only under exceptional circumstances, namely: for emergency situations; when only one firm or individual is qualified to fulfill the requirement; for the continuation of previous work, or additional work, that cannot be acquired from another firm or individual due to patent, compatibility issues, or exclusive rights; the use of this method represents a clear advantage over the use of a competitive method; the total cost is within the threshold set for this method of procurement; for the procurement of related items that are available only from one source for other situations contemplated in the procurement legal and regulatory framework (Mbae, 2014).

There are diverse reasons under which the use of the direct procurement tendering practices is allowed in Kenya. The direct procurement tendering method is applicable in Kenya when a public entity procures services or goods from a service provider without competition (Public Procurement Oversight Authority, 2016). According to Public Procurement Oversight Authority (2016) direct procurement tendering processes is applicable when the purchase is for urgently needed remedial works, provided this is restricted to the minimum requirement to meet the urgent need until a procurement by other methods can be fulfilled. The other acceptable scenario for direct procurement is when the work can only be provided by one source for physical, technical or policy reasons e.g. requiring the use of proprietary techniques that are obtainable only from one source.

Procurement Performance

Philly, Were and Nkirina (2017) defines purchasing performance evaluation as the quantitative or qualitative assessment over a period of time towards the achievement of corporate or operational goals and objectives relating to purchasing economies, efficiency and effectiveness. Quantitative objectives are measurable using such measures as number of orders placed, reduction in lead times, price savings and reduced administrative costs and will tend to be used when purchasing is regarded mainly as a clerical and transactional activity (Ahmadi, Pishvaee & Torabi, 2018). An obvious performance measure of the success of any purchasing department is the amount of money saved by the company.

Some common areas of measurement of operational procurement performance according to Baily *et al.* (2008) are; quality which can be viewed into performance quality where supplies staffs are concerned with quality of design or specifications. They are interested in specifying the right material for the job, and communications to the supplier in clear and unambiguous manner. Conformance quality is concerned with the supplier providing materials in accordance with the specifications which are usually inspected to evaluate the procurement performance. Further, on quality one would seek to know the percentage of rejects in goods received, percentage of goods rejected in production and percentage of raw materials rejected in production (Amayi & Ngugi, 2013). To evaluate procurement performance using quantity one would seek to know the quantity percentage of stock that has not moved over a specified period, number of stock outs and the number of small value orders, number of emergency orders, and comparison of stock with the target stock (Amemba *et al.*, 2013).

Kiilu (2016) stated that in the past it was often the case that price was paramount as an influence on the buying decision. He went on to suggest that, while price is still important, a major determinant of choice of supplier or brand is the cost of time. The cost of time is simply the additional costs that a customer must bear while waiting for delivery or seeking out alternatives. To evaluate procurement performance using time one would seek to know the timing of supplier's actual delivery performance against promised, time taken to process requisitions and time taken up with remedial action.

Pricing in nearly all types of business is affected by what economist call the price mechanism, which is the theory of supply and demand. There is the notion of an equilibrium price which proposes that at the equilibrium or market price exactly the same quantity is both demanded. In most free market economies the process of equilibrium helps to decide what is produced and what is not produced. To evaluate the procurement performance using price one would seek to know if the price paid against standard market price, price paid for key items compared with market indexes, price paid against budget cost and the price at the time of use against price at the time of purchase (Bollapragada, Kuppusamy & Rao, 2015).

Beckford (2016) observed that in search of cost savings, companies are looking for ways to standardize and automate their operational processes. Standardization combined with automation of the operational procurement processes relieves the purchasing department of a huge administrative burden. Not only does this lead to a reduction in operating costs, it also frees up time in the purchasing department, which can then be spent on more strategic tasks (spend analysis, supplier evaluation, sourcing projects, etc.). Through automation, components of the process can be either removed or deskilled improving efficiency and reducing costs. Buyer and supplier work collectively to add competitive advantage in the supply chain for mutual benefit. To evaluate the

procurement performance using operation costs one would seek to know the cost of processing an order, progression costs as a percentage of the total, and communication costs (Baily *et al.*, 2008).

METHODOLOGY

The study used a descriptive survey research design finding the influence of procurement methods on procurement performance in public hospitals in Kenya. Descriptive survey design portrays an accurate profile of persons, events, or account of the characteristics of a particular individual, situation or a group (Coughlan, Cronin & Ryan, 2007). This was a survey at Kenyatta National Hospital (KNH) and therefore, the population of this study was the 6,000 employees and management in the hospital. However, due to time and cost constraints this study exclusively targeted the procurement department at the Hospital with an approximate population of 300 employees. The study was guided by a model of the form;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where:

Y = Represents the dependent variable (Procurement Performance)

β_0 = The Constant, the value of *Y* when all *X* values are zero.

β_i = The regression coefficients (*i = 1, 2, 3 and 4*). The regression coefficients indicate the relative importance of each of the independent variables in prediction of the dependent variable.

X_i = The independent variables (*i = 1, 2, 3 and 4*), will explain the variation in Procurement Performance. In this case:

X_1 = Internationals Competitive Tendering

X_2 = National Competitive Tendering

X_3 = Restricted Tendering

X_4 = Direct Procurement

ε = the error term (To account for all other variables not considered in the study), assumed to be normally distributed with mean zero and constant variance.

FINDINGS

Descriptive statistics for International Competitive Tender

The study generated a descriptive statistics table using SPSS Program and the findings were summarized in Table 1. From the table, 33.7% agreed that international competitive tendering provides an effective competition in the tendering process, 37.3% agreed that international competitive tendering offers them a wide choice in selecting the best bid from competing suppliers and contractors, 28.9% strongly agreed or remained neutral that they only use international competitive tendering when items to be procured are not available locally or cannot be provided due to technical and other competencies together with financial constraint, 33.7% remained neutral that international competitive tendering is expensive to hold and even more expensive to complete, while 34.9% agreed that they follow the laid down procedures when they decide to use international competitive tendering in their procurement process.

Table 1: ***Descriptive statistics for International Competitive Tender***

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
International competitive tendering provides an effective competition in the tendering process	2.4%	19.3%	22.9%	33.7%	21.7%

International competitive tendering offers us a wide choice in selecting the best bid from competing suppliers and contractors	3.6%	15.7%	15.7%	37.3%	27.7%
We only use international competitive tendering when items to be procured are not available locally or cannot be provided due to technical and other competencies together with financial constraint	2.4%	14.5%	28.9%	25.3%	28.9%
International competitive tendering is expensive to hold and even more expensive to complete	2.4%	14.5%	33.7%	31.3%	18.1%
We follow the laid down procedures when we decided to use international competitive tendering in our procurement process	4.8%	19.3%	18.1%	34.9%	22.9%

Descriptive statistics for National Competitive Tender

The study generated a descriptive statistics table using SPSS and presented the results in Table 2. From the table, 37.3% agreed that they use national competitive tendering in most of their tendering processes because it is easier to contact suppliers personally, 34.9% remained neutral that they preferred national competitive tendering because the administrative or financial burden requirement outweigh the advantages of inviting tenders beyond national boundaries, 32.5% also remained neutral that national competitive tendering procedures guarantee efficiency, economy and transparency, 45.8% agreed that KNH, as a matter of national policy, normally adopt national competitive tendering to encourage domestic industry, and 31.3% agreed that KNH prefers national competitive tendering as payment terms are easier as no foreign exchange is involved.

Table 2: ***Descriptive statistics for National Competitive Tender***

	Strongly disagree	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
We use national competitive tendering in most of our tendering processes because it is easier to contact suppliers personally	2.4%	10.8%	21.7%	37.3%	27.7%
We prefer national competitive tendering because the administrative or financial burden requirement outweigh the advantages of inviting tenders beyond national boundaries	3.6%	15.7%	34.9%	26.5%	19.3%
National competitive tendering procedures guarantee efficiency, economy and transparency	3.6%	9.6%	32.5%	31.3%	22.9%
KNH, as a matter of national policy, normally adopt national competitive tendering to encourage domestic industry	3.6%	8.4%	18.1%	45.8%	24.1%
KNH prefers national competitive tendering as payment terms are easier as no foreign exchange is involved	2.4%	9.6%	27.7%	31.3%	28.9%

Descriptive statistics for Restricted Tender

The study generated descriptive statistics table and the results were tabulated in Table 3. From the table, 37.3% agreed that at KNH they frequently used restricted tendering especially where the works were specialized in nature or can be executed by a specified group of contractors, 36.1% agreed that in restricted tendering process, they invite the contractors that they already know or have a shortlist of some pre-registered contractors that they send invitation to, 31.3% agreed that some projects at KNH are urgent in nature and only a limited number of contractors can deliver and as such they use restricted tendering process, 38.6% agreed that they have a database of pre-qualified providers who are invited to tender in restricted tendering process, while 30.1% agreed that they have a tender committee that consents to the use of restricted tendering.

Table 3: ***Descriptive statistics for Restricted Tender***

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
At KNH we frequently use restricted tendering especially where the works are specialized in nature or can be executed by a specified group of contractors	2.4%	10.8%	21.7%	37.3%	27.7%
In restricted tendering process, we invite the contractors that we already know or have a shortlist of some pre-registered contractors that we send invitation to	0.0%	12.0%	32.5%	36.1%	19.3%
Some projects at KNH are urgent in nature and only a limited number of contractors can deliver and as such we use restricted tendering process	0.0%	12.0%	27.7%	31.3%	28.9%
We have a database of pre-qualified providers who are invited to tender in restricted tendering process	2.4%	13.3%	22.9%	38.6%	22.9%
We have a tender committee that consents to the use of restricted tendering	2.4%	10.8%	28.9%	27.7%	30.1%

Descriptive statistics for Direct Procurement

The study generated a descriptive statistics of the Direct Procurement and presented the results in Table 4. From the table, a majority of the respondents (36.1%) strongly agreed that they often use direct procurement particularly where circumstances do not allow for competitive tendering, 44.6% agreed that some supplies cannot be acquired from another firm or individual due to patent and this forces them to use direct procurement, 37.3% agreed that in some cases they are faced with compatibility issues and therefore, such circumstances force them to use direct procurement, 48.2% agreed that when procuring directly they ensure that the total cost is within the threshold set, 36.1% remained neutral that they streamlined the processes of managing direct procurement requirements to ensure its effectiveness, 49.4% agreed that direct procurement process is closely scrutinized to ensure that it does not become an avenue for corruption.

Table 4: ***Descriptive Statistics for Direct Procurement***

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
We often use direct procurement particularly where circumstances do not allow for competitive tendering	3.6%	10.8%	20.5%	28.9%	36.1%
Some supplies cannot be acquired from another firm or individual due to patent and this forces us to use direct procurement	0.0%	7.2%	34.9%	44.6%	13.3%
In some cases we are faced with compatibility issues and therefore, such circumstances force to use direct procurement	1.2%	10.8%	24.1%	37.3%	26.5%
When procuring directly we ensure that the total cost is within the threshold set	0.0%	8.4%	25.3%	48.2%	18.1%
We streamlined the processes of managing direct procurement requirements to ensure its effectiveness	0.0%	8.4%	36.1%	31.3%	24.1%
Direct procurement process is closely scrutinized to ensure that it does not become an avenue for corruption	0.0%	3.6%	27.7%	49.4%	19.3%

Descriptive statistics for Procurement Performance

The study generated a descriptive statistics of Procurement Performance from SPSS and presented the findings in Table 5. From the table, 38.6% remained neutral that there is improved quality of goods and or services delivered, 36.1% agreed that there is reduction in lead times, 30.1% remained neutral that there is reduction in operating costs, 34.9% agreed that there is efficiency and effectiveness of the tendering process, and 28.9% agreed that there is reduced administrative costs.

Table 5: ***Descriptive Statistics for Procurement Performance***

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
There is improved quality of goods and or services delivered	2.4%	6.0%	38.6%	36.1%	16.9%
Reduction in lead times	1.2%	18.1%	28.9%	36.1%	15.7%
Reduction in operating costs	2.4%	14.5%	30.1%	27.7%	25.3%
Efficiency and effectiveness of the tendering process	2.4%	8.4%	33.7%	34.9%	20.5%
Reduced administrative costs	6.0%	10.8%	26.5%	28.9%	27.7%

Regression Analysis between International Competitive Tender and Procurement Performance

Table 6: ***Model Summary Table of International Competitive Tender and Procurement Performance***

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.752[a]	.566	.561	.48023

a. Predictors: (Constant), International Competitive Tender

From the Anova Table 6, the model was statistically significant as p-value is less than .05 and hence was accepted.

Table 7: Anova Table of International Competitive Tender and Procurement Performance

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24.385	1	24.385	105.733	.000[b]
	Residual	18.681	81	.231		
	Total	43.065	82			

a. Dependent Variable: Procurement Performance

b. Predictors: (Constant), International Competitive Tender

From the coefficient Table 7, International Competitive Tender contributes a statistically significant value (p-value = .000) of .597 to the optimal model shown below.

$$Procurement\ Performance\ (Y) = 1.650 + .597X_1$$

Table 8: Coefficient Table of International Competitive Tender and Procurement Performance

Coefficients[a]

		Unstandardized Coefficients		Standardized Coefficients		
Model		**B**	**Std. Error**	**Beta**	**t**	**Sig.**
1	(Constant)	1.650	.210		7.841	.000
	International Competitive Tender	.597	.058	.752	10.283	.000

a. Dependent Variable: Procurement Performance

Regression Analysis on National Competitive Tender and Procurement Performance

From the Model Summary Table 9, 59.4% (R Square = .594) of the total variability in Procurement Performance could be explained by National Competitive Tender.

Table 9: Model Summary of National Competitive Tender and Procurement Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.771[a]	.594	.589	.46467

a. Predictors: (Constant), National Competitive Tender

The Anova Table 10 showed that the model was statistically significant at p-value = .000 (less than .05 threshold) and was therefore accepted.

Table 10: Anova Table of National Competitive Tender and Procurement Performance

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25.576	1	25.576	118.452	.000[b]
	Residual	17.489	81	.216		
	Total	43.065	82			

a. Dependent Variable: Procurement Performance

b. Predictors: (Constant), National Competitive Tender

The Coefficients Table 11 showed that for every unit change in Procurement Performance, National Competitive Tender contributes a statistically significant (p-value = .000) value of .625 to the optimal model shown below.

$$Procurement\ Performance\ (Y) = 1.451 + .625X_2$$

Table 11: Coefficients Table of National Competitive Tender and Procurement Performance

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.451	.217		6.692	.000
	National Competitive Tender	.625	.057	.771	10.884	.000

a. Dependent Variable: Procurement Performance

Regression Analysis on Restricted Tender and Procurement Performance

From the Model Summary Table 12, 48.4% (R Square = .484) of the total variability in Procurement Performance can be explained by Restricted Tender.

Table 12: Model Summary Table of Restricted Tender and Procurement Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.695[a]	.484	.477	.52394

a. Predictors: (Constant), Restricted Tender

The Anova Table 13 shows that the model was statistically significant at p-value = .000 (less than .05 threshold) and was therefore accepted.

Table 13: Anova Table of Restricted Tender and Procurement Performance

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	20.829	1	20.829	75.877	.000[b]
	Residual	22.236	81	.275		

	Total	43.065	82

a. Dependent Variable: Procurement Performance

b. Predictors: (Constant), Restricted Tender

The Coefficients Table 14 shows that for every unit change in Procurement Performance, Restricted Tender contributes a statistically significant (p-value = .000) value of .572 to the optimal model shown below.

$$Procurement\ Performance\ (Y) = 1.698 + .572X_3$$

Table 14: Coefficients Table of Restricted Tender and Procurement Performance

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.698	.242		7.020	.000
	Restricted Tender	.572	.066	.695	8.711	.000

a. Dependent Variable: Procurement Performance

Regression Analysis between Direct Procurement and Procurement Performance

Table 15: *Model Summary Table of Direct Procurement and Procurement Performance*

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.702[a]	.493	.486	.51934

a. Predictors: (Constant), Direct Procurement

From the Anova Table 16, the model was statistically significant as p-value is less than .05 and hence was accepted.

Table 16: Anova Table of Direct Procurement and Procurement Performance

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.218	1	21.218	78.671	.000[b]
	Residual	21.847	81	.270		
	Total	43.065	82			

a. Dependent Variable: Procurement Performance

b. Predictors: (Constant), Direct Procurement

From the coefficient Table 17, Direct Procurement contributes a statistically significant value (p-value = .000) of .553 to the optimal model shown below.

$$Procurement\ Performance\ (Y) = 1.639 + .553X_4$$

Table 17: Coefficient Table of Direct Procurement and Procurement Performance

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.639	.244		6.710	.000
	Direct Procurement	.553	.062	.702	8.870	.000

a. Dependent Variable: Procurement Performance

Combined Regression Analysis

Table 18: ***Model Summary of the Variables***

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.820[a]	.673	.656	.42515

a. Predictors: (Constant), Direct Procurement, Restricted Tender, International Competitive Tender, National Competitive Tender

Table 19: ***ANOVA on dependent variable and the independent variables***

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	28.967	4	7.242	40.065	.000[b]
	Residual	14.098	78	.181		
	Total	43.065	82			

a. Dependent Variable: Procurement Performance

b. Predictors: (Constant), Direct Procurement, Restricted Tender, International Competitive Tender, National Competitive Tender

The Beta Coefficients Table 19 showed that only International Competitive Tender and National Competitive Tender variables had a positive statistically significant influence on the dependent variable (Procurement Performance). Therefore, study optimal model was fitted as shown;

$$Utilization\ of\ M\&E\ Reports = 1.141 + .274\ (X_1) + .300(X_2)$$

Restricted Tender and Direct Procurement were statistically insignificant and were therefore excluded from the model.

Table 20: ***Beta Coefficients on dependent variable and the independent variables***

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.141	.216		5.289	.000
	International Competitive Tender	.274	.086	.345	3.167	.002

National Competitive Tender	.300	.098	.370	3.047	.003
Restricted Tender	.113	.091	.138	1.240	.219
Direct Procurement	.036	.095	.045	.374	.709

a. Dependent Variable: Procurement Performance

CONCLUSION AND RECOMMENDATIONS

In the first objective, the study sought to find the influence of international competitive tendering on procurement performance in public hospitals in Kenya. The findings revealed that 33.7% agreed that international competitive tendering provides an effective competition in the tendering process, 37.3% agreed that international competitive tendering offers them a wide choice in selecting the best bid from competing suppliers and contractors, 28.9% strongly agreed or remained neutral that they only use international competitive tendering when items to be procured are not available locally or cannot be provided due to technical and other competencies together with financial constraint, 33.7% remained neutral that international competitive tendering is expensive to hold and even more expensive to complete, while 34.9% agreed that they follow the laid down procedures when they decide to use international competitive tendering in their procurement process. Correlation analysis results showed that International Competitive Tendering had a positive and statistically significant (p-values less than 5%) correlation with the dependent variable (Procurement Performance). Additionally, regression output revealed that 56.6% of the total variability in the dependent variable (Procurement Performance) can be explained by the independent variable (International Competitive Tendering).

In the second objective the study sought to establish the influence of national competitive tendering on procurement performance in public hospitals in Kenya. From the findings, 37.3% agreed that they use national competitive tendering in most of their tendering processes because it is easier to contact suppliers personally, 34.9% remained neutral that they prefer national competitive tendering because the administrative or financial burden requirement outweigh the advantages of inviting tenders beyond national boundaries, 32.5% also remained neutral that national competitive tendering procedures guarantee efficiency, economy and transparency, 45.8% agreed that KNH, as a matter of national policy, normally adopt national competitive tendering to encourage domestic industry, and 31.3% agreed that KNH prefers national competitive tendering as payment terms are easier as no foreign exchange is involved. From correlation results, National Competitive Tendering had a positive and statistically significant (p-values less than 5%) correlation with the dependent variable (Procurement Performance). Furthermore, from the regression analysis 59.4% (R Square = .594) of the total variability in Procurement Performance could be explained by National Competitive Tendering.

In the third objective the study sought to determine the influence that restricted tendering has on procurement performance in public hospitals in Kenya. The findings showed that 36.1% agreed that in restricted tendering process, they invite the contractors that they already know or have a shortlist of some pre-registered contractors that they send invitation to, 31.3% agreed that some projects at KNH are urgent in nature and only a limited number of contractors can deliver and as such they use restricted tendering process, 38.6% agreed that they have a database of pre-qualified

providers who are invited to tender in restricted tendering process, while 30.1% agreed that they have a tender committee that consents to the use of restricted tendering. Correlation analysis table revealed that Restricted Tendering had a positive and statistically significant (p-values less than 5%) correlation with the dependent variable (Procurement Performance). In addition, regression results revealed that 48.4% (R Square = .484) of the total variability in Procurement Performance can be explained by Restricted Tender.

In the fourth objective the study sought to find out the influence of direct procurement on procurement performance in public hospitals in Kenya. The findings revealed that a majority of the respondents (36.1%) strongly agreed that they often use direct procurement particularly where circumstances do not allow for competitive tendering, 44.6% agreed that some supplies cannot be acquired from another firm or individual due to patent and this forces them to use direct procurement, 37.3% agreed that in some cases they are faced with compatibility issues and therefore, such circumstances force them to use direct procurement, 48.2% agreed that when procuring directly they ensure that the total cost is within the threshold set, 36.1% remained neutral that they streamlined the processes of managing direct procurement requirements to ensure its effectiveness, 49.4% agreed that direct procurement process is closely scrutinized to ensure that it does not become an avenue for corruption. From correlation analysis, the study established that Direct Procurement had a positive and statistically significant (p-values less than 5%) correlation with the dependent variable (Procurement Performance). Further, regression analysis showed that shows that 49.3% (R Square = .493) of the total variability in the dependent variable (Procurement Performance) could be explained by the independent variable (Direct Procurement).

Conclusions of the Study

In the first objective, the study sought to find the influence of international competitive tendering on procurement performance in public hospitals in Kenya. The findings led the study to conclude that there was resultant positive and statistically significant influence of International Competitive Tendering on Procurement Performance. In a similar study, Rose-Ackerman and Palifka (2016) concluded international competitive bidding provides an executing agency with a wide choice in selecting the best bid from competing suppliers and contractors. The author further concluded that international competitive bidding gives prospective bidders from eligible source countries equal opportunity to bid on goods and works that are being procured. A study by Song, Landrum and Chernew (2013) concluded that ICB has several advantages in that it promotes competition between suppliers, resulting in best “value for money” for purchasers and users; offers a kind of transparency and help avoid corruption and favouritism; and gives all suppliers the opportunity to win the business that is advertised.

In the second objective the study sought to establish the influence of national competitive tendering on procurement performance in public hospitals in Kenya. From the findings, the study concluded that National Competitive Tendering had a positive and statistically significant influence on Procurement Performance. In a similar study Gbogr (2017) concluded that national competitive tendering procedures are used where the administrative or financial burden of the requirement outweigh the advantages of inviting tenders beyond national boundaries. Patil and Waghmare (2014) found that national competitive tendering is mostly preferred because payment terms are easier as no foreign exchange is involved;

it is easier to contact suppliers personally, without the need of visas and foreign currency for visits abroad; inspection visits to the supplier's manufacturing units are convenient; the domestic firms may offer better maintenance facilities; and there is no need to know laws of purchase and sale of foreign companies.

In the third objective the study sought to determine the influence that restricted tendering has on procurement performance in public hospitals in Kenya. The findings accordingly led the study to conclude that Restricted Tendering had positive and statistically significant influence on Procurement Performance. Baiden, Abdul-Razak and Danku (2015) concluded that restricted tendering method of procurement allows entities to invite the contractors that they already know or have a shortlist of some pre-registered contractors that they send invitation to. Afriyie (2015) further observed that restricted tendering method is appropriately used for projects that are specialized in nature, requires the safety of the public which wouldn't be safe to have a tender that is open competitive.

In the fourth objective the study sought to find out the influence of direct procurement on procurement performance in public hospitals in Kenya. From the findings, the study concluded that Direct Procurement had a positive and statistically significant influence on Procurement Performance. In similar studies, Vos, Schiele and Hüttinger (2016) found that the direct procurement has the capability to impacts on the operational performance of public organizations through reduction of the lead times compared to other tendering process, while Tai (2017) noted that public sector institutions increase their operational performance through combining the resources and capabilities of their direct services and good suppliers through embedding inter organizational cooperation in their direct procurement operations. Kalatya (2017) recommended that to obtain the benefits of direct procurement, firms not only have to streamline their procurement processes, but also have to strengthen the governance of their complicated interactions with their direct goods and services suppliers.

Policy Recommendations

From the combined regression output, only International Competitive Tender and National Competitive Tender variables had a positive and statistically significant influence on the dependent variable (Procurement Performance). Both Restricted Tender and Direct Procurement were statistically insignificant. This implies that a combination of all this methods does not necessary result in better procurement performance. It could also mean that competitive tendering leads to better procurement performance. This study therefore recommends that policy makers at KNH give an edge to competitive tendering over other methods of procurement particularly Restricted Tendering and Direct Procurement.

Recommendations for further studies

This study sought to determine the influence of procurement methods on procurement performance in public hospitals in Kenya, using a case of KNH. Therefore, a similar study can be carried out using a different case study. This study particularly used International Competitive Tendering, National Competitive Tendering, Restricted Tendering and Direct Procurement as its variables. Therefore, a study can be carried out using different variables from the ones used in this study. Besides, Restricted Tendering and Direct Procurement were found to be statistically insignificant and therefore, a confirmatory study could be done on this area, using a different combination of variables.

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