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CASE OF KENYATTA NATIONAL HOSPITAL

Vol. 5, Iss. 2, pp 1520 - 1545, May 12, 2018. www.strategicjournals.com, @strategic Journals

# INFLUENCE OF VENDOR RATING ON PROCUREMENT PERFORMANCE OF PUBLIC HOSPITALS IN KENYA: A CASE OF KENYATTA NATIONAL HOSPITAL

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Accepted: May 11, 2018

#### **ABSTRACT**

The objective of the study was to find out the influence of vendor rating on procurement performance of public hospitals in Kenya with specific reference to Kenyatta national hospital. The study would be of significance to the management of Kenyatta National Hospital, suppliers and the government of Kenya. The study used descriptive research design. The target population of the study comprised of employees of Kenyatta National Hospital, managers and their assistants from different departments. The census was carried out for the 111 respondents. Questionnaires were used to collect data. The data analysis was carried out using SPSS. According to the study findings, the correlation coefficient was 0.783. This indicates a very strong positive relationship between the independent variable and dependent variable. The data showed that the high R square was 0.613. It showed that the independent variables in the study were able to explain 61.30% variation in the procurement performance in the organization while the remaining 38.70% was explained by the variables or other aspects outside the model. This implied that these variables were very significant and they therefore need to be considered in any effort to boost procurement performance in the organization. The study therefore identified variables as critical determinants of procurement performance in the organization. The study recommended that inspection methods for supplier to be included in the approved list and assessed on quality aspects. It was also vital to establish which of the supplier knows about and was ready to implement the concept of total quality policy. The study recommended that the order handling time for goods and services should be always short as possible for the order fulfillment. It can provide the basis for integrating the manufacturing and distribution planning for the inventory control policy. The organization should ensure that the production costs should be continuously pursued by the organization. The transaction costs should continue to be relatively low and variations in prices across the organization are substantial. There is need to ensure that those who finance purchasing services have taken inefficiency that inflates procurement costs. The supplier financial stability and fiscal outlook enhance timely deliveries. The supplier bankruptcy distracts procurement process thus affecting timely deliveries of goods. The organization should ensure that there is financial soundness of the supplier contributing to a lasting partnership thus reduction of costs.

**Key Words:** Quality of Supplies, Lead Time, Cost Of Supplies, Supplier Financial Capacity, Procurement Performance

#### **INTRODUCTION**

Vendor rating is a system for recording and ranking the performance of a supplier based on a variety of issues, such as the delivery of performance, the quality of items, lead time and financial capacity of the supplier (Awino, 2011). Vendor rating is an essential process to effectively purchasing of items in an institution. In Kenya, public hospitals such as Kenyatta national hospital develop their own parameters in making the selection of the suppliers. Some of the parameters they apply are lowest price on a bid and the track record of the suppliers in the previous orders they supplied (MoH, 2010).

Since last two decades, there has been considerable growth in the industries around the globe. With this rapid progression, competition in the market is also increasing. The high quality of vendors' products is vital factor to the success of the company's quality control function. In order to be successful in the competitive business environment of today, organizations cannot operate in isolation and only rely on its own performance. They are highly dependent on the performance of other actors in the supply chain as well, not least the vendors. This increases the need for vendor performance rating; to evaluate and ensure that the suppliers perform according to the level of performance that is required by the buying firm.

It was not until the late 1960s that purchasing was considered more than a clerical function. Prior to this time, supplier selection was focused on the short-term. Suppliers were often evaluated solely on price and were quickly dropped when outbided by another vendor. Suppliers were viewed as adversaries rather than partners and relationships between buyers and suppliers were often short-term.

In the intense business competitive environment, organizations are relying more on their supply chain as a source of competitive advantage (Bai & Sarkis, 2010). Purchasing and supply management

has achieved a higher level of importance in today's business environment than it was more than two decades ago when the concept of vendor rating had not fully been understood and adopted.

Most private and public firms globally want vendors that will produce the entire products and services defect-free and deliver them just in time (or as close to this ideal as reasonably possible (Hsu & Hu, 2009). Some type of vehicle is needed to determine which supplying firms are capable of coming satisfactorily close to this and thus to be retained as current suppliers. One such vehicle is the vendor rating (Katsikeas, Paparoidamis & Katsikea, 2011). According to Awino, (2011) public sector in Kenya is operating in an increasingly dynamic commercial and technological environment. Effective procurement planning and monitoring of supplier performance is critical to controlling the risks and costs involved in purchasing.

Benton *et al.*, (2011) views vendor rating as the process of measuring the performance of a vendor (supplier). His study notes the importance of measuring performance of the vendors by first establishing the issues that are unique to the company and fashioning a way to monitor how suppliers deliver on orders. The guiding principle towards understanding the effectiveness of the suppliers is the track record and the principles instituted by the organization itself to assure delivery of their orders. In effect the vendor rating as an avenue where an organization can continually assess the suppliers determining those that are effective in undertaking their roles.

ISO:1204: 12040-2001 provides the broad guidelines for development of Vendor Rating System. The standard stipulates quality, price, delivery, service and system as five key factors to work out rating system. The standard also stipulates the need for the development of vendor rating system in a bid to maintaining a balanced cost of vendor rating system anticipated

returns and other factors in view. As this study complements ISO: 12040-2001, the main vendor rating factors are quality of supplies, cost of supplies, lead-time and financial capacity (Forker & Mendez, 2001).

Global supply chain survey conducted by Price water Coopers (2013) shows how Leaders are moving ahead of the pack. They are tailoring their supply chains to vendor rating accommodativeness and investing in next-generation capabilities while keeping the focus on supply chains that are both fast and efficient. The need to cope with a whole range of supply chain challenges is putting greater pressure than ever on supply chain executives to use vendor rating for proficient performance.

The Kenyan perspective of vendor rating is companies who evaluate their suppliers find that they have better visibility into supplier performance, uncover and remove hidden cost drivers, reduce risk, increase competitive advantage by reducing order cycle times and inventory, gain insight on how to best leverage their supply base, and align practices between themselves and their suppliers. Companies pursuing supplier assessment commonly see over a 20% improvement in supplier performance metrics e.g., on-time delivery, quality, and cost (Burt et al, 2006).

The Ministry of Public Health (MoH) operates a four-tiered system of health care facilities, delivering primary health care in dispensaries and health centres and (Levels 1 and 2) at the location levels and secondary care at district and provincial hospitals (level 4 and 5), and tertiary care at national referral hospitals (Kenyatta and Moi) (level 6).

The Kenyatta National Hospital is the largest hospital in East and Central Africa. It has a large purchasing function to supply to 50 wards, 22 outpatient clinics, 24 theatres, accident & emergency department and a bed capacity of 1800. Vendor rating is vital to the hospital as it offers a wide range sensitive services which require satisfaction in quality, lead time, cost and

financial capacity for efficient running of diagnostic services such as laboratories, radiology and endoscopy among other specialized service. In addition it hosts in its wards between 2500-3000 patients making vendor rating all the more important to avoid avoidable mistakes. On average the hospital hosts an average of 500,000 out-patients annually. With this capacity the purchase department is becomes heart of the organization as the hospital cannot function without constant supplies.

#### Statement of the Problem

Over the years, vendor rating has been one of the most critical activities in procurement process in Kenya. According to Ombaka (2009), there has been the increasing need of the suppliers to improve their performance by showing their ability to deliver tenders within the set time frame, and within the specifications. As World Bank (2017) report on the procurement system in Kenya suggests, about 37% of suppliers who receive tender specifications are unable to apply while for those who submit, 29% of these are rejected on the preliminary stage and 45% on the evaluation. The high rate of rejection as the research suggests are as a result of poor understating of the procurement requirements and further failure to comprehend important factors such as the financial capacity, quality of supplies of the supplier that build up the character to allow them to be selected.

Measuring the performance of suppliers is vital to ensuring a well-functioning supply chain. Companies who evaluate their suppliers find that they have better visibility into supplier performance, uncover and remove hidden cost drivers, reduce risk, increase competitive advantage by reducing order cycle times and inventory, gain insight on how to best leverage their supply base, and align practices between themselves and their suppliers. Companies pursuing supplier assessment commonly see over a 20% improvement in supplier performance

metrics (e.g., on-time delivery, quality, and cost). From a lean enterprise view of supply management, the supply chain is full of waste and hidden cost drivers. And from a global perspective, supply management is fraught with risks as companies deal with increasing numbers of offshore suppliers. Measuring and understanding supplier performance is critical to ensure a well-functioning supply chain and to a company's competitive position. Improving the performance of key suppliers is the goal.

Public hospitals worldwide have been embarking on vendor rating as a measure to overcome performance challenges and realize increased efficiency on suppliers (WB, 2007). In Kenya, public hospitals have been trying to meet efficient and effectiveness in suppliers with good terms of cost, quality, lead time and financial capacity (Robins, 2012). Statistics from the government journals shows that in the year 2007 the government accumulated losses of Kshs.576 Million from irregularities in procurement which were cleared in 2009 (MoH, 2010). When companies do not know the facts about how their suppliers are performing, supplier management tends to be based on guesses. Moreover, the simple act of measuring performance can help improve performance. This improvement can be even more dramatic when companies award additional business on the basis of suppliers meeting performance goals.

Developing a robust, easy-to-deploy method of vendor rating is a critical business competency. The methodology should be sound and the approach practical. Gathering data for the sake of data will not produce the return on investment in vendor rating. Most importantly, government institutions need to use the results as a means to foster communications and a starting point for supplier development and performance improvement. This, in turn, will help them reap the financial and competitive rewards of high performing key suppliers. This study looked into the influence of vendor rating on the performance

of public hospitals in Kenya using a case study of Kenyatta National Hospital.

## **Objectives of the Study**

The main objective of the study was to determine the influence of vendor rating on procurement performance of public hospitals in Kenya. The specific objectives were:-

- To assess the influence of quality of supplies on procurement performance of public hospitals in Kenya.
- To assess the influence of lead time on procurement performance of public hospitals in Kenya.
- To assess the influence of cost of supplies on procurement performance of public hospitals in Kenya.
- To establish the influence of supplier financial capacity on procurement performance of public hospitals in Kenya.

# LITERATURE REVIEW

# **Theoretical Review**

# **Rough Set Theory**

Rough set theory was proposed by Pawlak in 1982 as a method which classifies objects into similarity classes (clusters) containing objects that are indiscernible with respect to previous occurrences and knowledge. According to Bai & Sarkis (2009) rough set theory allows for distillation of a larger set of suppliers into a smaller set of candidate preferred suppliers, and eventually the selection of preferred supplier. Its application to vendor rating and decision making contributes through use of historical decisions integrating previous organizational knowledge and learning into the latest decision process. Previous acquired knowledge on quality is taken and used to find a specific supplier from a pool of them. The major advantage is that it can generate satisfactory outcomes using a relatively small amount of data or with great variability in factors.

As time progresses, organizations can further refine their decision making on quality to either maintain some consistency and/or improve their decision process with further weighting and development of attributes that are salient for the organization's strategic direction. The final decision may be sensitive to the attributes that are used in the evaluation process. Practically, organizations that do not use the full complement of attributes to select suppliers or for outsourcing in a world where sustainability has gained significant importance governments, bv communities, industry, customers, and markets, have competitive disadvantage may consequences (Bai & Sarkis, 2009).

#### Trade-off theory

It refers to the idea that a company chooses how much debt finance and how much equity finance to use by balancing the costs and benefits. It is classically considered as a balance between the dead-weight costs of bankruptcy and the tax saving benefits of debt. Often agency costs are also included in the balance. This theory is often set up as a competitor theory to the pecking order theory of capital structure (Forger, 2004). An important purpose of the theory is to explain the fact that corporations usually are financed partly with debt and partly with equity. It states that there is an advantage to financing with debt, the tax benefits of debt and there is a cost of financing with debt, the costs of financial distress including bankruptcy costs of debt and nonbankruptcy costs (e.g. staff leaving, suppliers demanding disadvantageous payment terms, bondholder/stockholder infighting, etc.). The marginal benefit of further increases in debt declines as debt increases, while the marginal cost increases, so that a firm that is optimizing its overall value will focus on this trade-off when choosing how much debt and equity to use for financing (Forger, 2004). A factor in vendor rating is financial capacity the theory articulates that it's not limited to assets but also liabilities can

increase capital and make the company sound financially.

According to Myers (1984) bankruptcy and agency costs are greater for firms with high expectations of growth opportunities; firms can be reluctant to use high amounts of debt so as not to increase their likelihood of bankruptcy. Additionally, Myers further suggests that firms with high growth opportunities may not use debt as the first financing option. Consequently, firms with greater growth opportunities have a lower level of debt, given that greater investment opportunities increases the possibility of agency problems between managers / owners and creditors, because the former have a great incentive to under-invest (Myers, 1977).

On the other hand, Titman and Wessels (1998) argue that larger firms tend to have greater diversification of activities that implies less likelihood of bankruptcy. In addition, large firms with less volatile profits are more likely to take advantage of the debt tax shields thus increasing the potential benefits of debt (Smith, Stulz 1985). Therefore, according to the Trade-Off approach, large firms tend to increase their level of debt as a consequence of the lesser likelihood bankruptcy, and also as a way to increase the debt tax shields. Applicable to the study, the theory explains the importance of tax shields in terms of increasing potential capacity of an organization in terms of growth and development. In terms of vendor rating, the theory will assist in the analysis of financial capacity of hospitals and determine the level of performance based on vendor evaluation procedures and measures in place.

# **Transaction Cost Theory**

Ronald Coase, Chester Barnard, and Herbert Simon are among the early authors who describe the contributions of transaction cost theory to the existence of firms (Scott, 2003; Williamson, 2005).

Whether we look at purchasing, as a network or as an integrated process, the transaction cost theory explains the vertical connection and integration of various elements of organizational supply chain, from second tier and first tier suppliers to first tier and second tier customers.

Grover and Malhotra (2003) concluded that transaction cost theory applies to organizational supply chain management in four facets: effort, monitor, problem, and advantage. Effort to build and maintain the relationship with suppliers; cost of monitoring the performance of suppliers; resolving the problems that arise in the business relationships; and engagement of suppliers in an opportunistic behavior. With the transactional theory then lead-time is enhanced to be followed as with longer lead time increases the transactional cost. An effort should be made to monitor problems of lead times to ensure it only offers competitive advantage. With regards to the study, the theory provides an insight on how supply chain management in the public sector can be monitored with an aim of determining delivery schedules from various supply Additionally, the theory will be applicable to the study in terms of evaluation of supplier's performance and building positive relationship which will in turn engage suppliers in an opportunistic way.

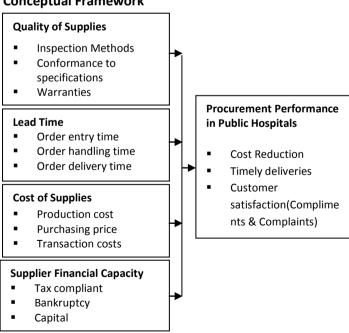
# **Fuzz Set Theory**

Fuzzy sets theory was introduced by Lotfi A. Zadeh and Dieter Klauain 1965 as an extension of the classical notion of set. Fuzzy relations are used in supplier evaluation and vendor rating. Today's increasingly uncertain world yields a highly competitive environment for every business. The imprecise and vague terms will exist, because most executives find it more practical and easier to evaluate performance in linguistic terms. To deal with vagueness of human thought, Zadehhence introduced the fuzzy set theory,

which was oriented on the rationality of uncertainty due to imprecision or vagueness.

Fuzzy sets theory is especially powerful when there is a need to take into consideration the ideas and judgments of like in vendor rating because of complexity and lack of proper information. Fuzzy sets provide representation of the knowledge of decision-makers in a better and more natural way. It allows mathematical operators and programming to apply to the fuzzy domain (Christopher, 2005). A major contribution of fuzzy set theory to the study is its capability of representing vendor rating as a combination of logical sets of elements that is quality, lead time, cost and capital that can be used to make a logical decision. In relation to the study, the theory highlights knowledge of decision makers in a more natural way by translating ideas into valid judgments based on vendor rating outcome. In this case, the theory becomes suitable to the study specifically in public hospitals in that a lot of thought has to be put in place to evaluate suppliers based on their track record and performance before contractual signing agreements with any third party organization.

#### **Conceptual Framework**



Independent Variables Dependent Variable Figure 1: Conceptual Framework

## **Quality of Supplies**

According to forger 2004 quality is the conformance to requirement or fitness for use. It refers to the characteristics and feature of a product to satisfy for intended need/use. Also quality entails the standards according to the range of packaging expiry date shelf life and the content of a product. Quality is the degree to which inherent characteristics of product meet requirement, quality standard communicate information about the attributes of a product. This attributes can be classified and understood in relation to changing features of consumption. Consumption is necessarily characterized by the rate of which materials are being used. There has been increased importance for issues of quality that may be seen as a question of competition and cooperation as a question of competition and cooperation. Quality entails standards labels, certification and procedure (Robins, 2012)

Supplies are typically based on the buyers perception of the suppliers ability to meet quality, quantity, delivery, price needs of a firm to much of the supply chain management has been on cost reduction but performance in real world supply chain multiple attribute where performance needs flexibility and cost delivery performance and quality are the mist crucial measures of supplier assessment. The present study reveals that depending on the purchase market features and storage strategies there is a mix of requirements buyer (Kauffman, 2001)

In Kenya, the custodian of quality is Kenya Bureau of standards that sets criteria to be met by the products. This presents the keeping of inferior materials in the country at lower prices in favor of the buying organization. Greater access to product ranges due to improved technology has resulted to high quality products and has increased competition in the market (Burt et al, 2003).

According to Christopher (2005) standard available materials with required quality and competitive pricing allows companies to prefer locally manufactured products, centralized purchasing organization involve purchasing standard materials relevant to final product quality and value. These materials are available at required quality and price levels. This drives firms to prefer for proper supplier selection and price negotiations to ensure quality standards compliance to standards and specifications. Better quality and cost reduction is due to better negotiations which results into large quantity purchases (Kannan, 2002). When firms purchase non critical suppliers locally available competitive prices and quality, they usually resort locally available goods with responsibility and flexibility through closer buyer supplier relationships. Organizations benefit from local supply on account of local proximity to suppliers. Quality is the degree to which inherent characteristics of product meet requirement, quality standard communicate information about the attributes of a product. This attributes can be classified and understood in relation to changing features of consumption (Chenget, 2003). Consumption is necessarily characterized by the rate of which materials are being used. There has been increased importance for issues of quality that may be seen as a question of competition and cooperation as a question of competition and cooperation. Quality entails standards labels, certification and procedure (Dobbler, 2002)

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Managing your vendors and suppliers doesn't stop after the outsourcing contract is signed. You must continually measure and monitor your vendor's performance in order to ensure continued success. Additionally, this must be spelled out in the contract so that the vendor understands your expectations and you have a course of action if the vendor's performance falls below your expectations. Without this understanding, the success of your outsourcing project will be a shot-

in-the-dark. The initial justification for an outsourcing project is usually based upon cost savings. Unfortunately, most companies do not know if they are saving a little or a lot or anything at all. Before beginning any outsourcing project, you must know what your current costs are for the product or service being outsourced to a vendor (Wagner, 2006).

According to Bailey (2000) first, this information will give you additional leverage during the negotiation process. Secondly, the product or service must be delivered at a level of quality that is defined by your business, communicated to vour vendor and used to measure their performance. These two aspects will give you the tools you need to manage your vendor. Any outsourcing arrangement must be viewed as an extension of your company into the vendor's organization. Any quality control standards or methodologies must be communicated and shared with your outsourcing vendor so that the product or service will be delivered at a level of quality that is consistent with your internal organization. This will prevent any negative impact to your current customer base. If you can't measure it, you can't manage it" was the mantra of a previous employer of mine. Giving the vendor the tools to define and measure quality will aid the vendor's quest to provide a consistent quality product or service to you. Additionally, the vendor can use these tools for a continuous improvement program that will help them manage quality while controlling their costs (Robins, 2012).

Total Quality Management (TQM) is an approach that seeks to improve quality and performance which will meet or exceed customer expectations. This can be achieved by integrating all quality-related functions and processes throughout the company. TQM looks at the overall quality measures used by a company including managing quality design and development, quality control and maintenance, quality improvement, and quality assurance. TQM takes into account all

quality measures taken at all levels and involving all company employees. Total quality management has evolved from the quality assurance methods that were first developed around the time of the First World War. The war effort led to large scale manufacturing efforts that often produced poor quality. To help correct this, quality inspectors were introduced on the production line to ensure that the level of failures due to quality was minimized (Park et al, 2010).

#### **Lead Time**

This is the duration of time taken from need identification, planning the order to the delivery of goods ready for use. The lead time for goods and services should be as short as possible. Because when the lead time too long it defeats the purpose of the intended purchasing for the organization (Liker et al. 2004). This is the duration of time taken between placing the order to receiving the goods from the suppliers and giving them to customers (users lead time should be scheduled and time with the duration that the customer has avail the customer must have the goods at the right time. For example, currency exchange rate affect the price paid for goods that are purchases and so influence the timing of shipping them to the buyer. According to Grover & Malhotra (2003) lead time is the length of time taken to obtain or supply requirements from the time a need is ascertained to the time the need is satisfied. In many practical situations it may be observed neither the consumption rate of material is constant throughout a period of time nor in designing an inventory control system, it is very important then to decide upon the level of service desired by management. The service level required for an item may set at 100 per cent if the items where at stock out world result in great expense due to production delays, (Lysons, 2006).

According to Delloite & Toudhia (2006) of Canada found out that Lead Time has direct effect on distribution planning which links with the customer and the organization. It stated that

distribution serves as the central role in coordinating the flow of goods in an organization with system modules that place the goods in the hands of a good customer. It provides basis of the integrating the manufacturing, planning one control system through the use of MRP from the firm to the field. This is because lead time is the time between the delivery of goods to the customer and the time the goods arrive to the organization. If the lead time is long, it may have an effect to the organization since the customer may tend to find other ways to shorten the lead time. This in turn will tend to affect the inventory control policy of the organization.

According to Farmer & Farrington (2007) in practice, if the rates of consumption remain constant, the supplier's delivery times do not vary and there are no rejections during inspection. It would have been a simple matter to place a new order whenever stock - on - hand reached the quantity equal to lead time usages. In this type of circumstances, a hundred per cent efficient service level can be easily attained and no occasions for stock outs as new supplies will always be arriving hand as reserves in order to avoid temporary shortages in stock conditions. However, in some real life situations, the lead time varies so little that it can be reasonably ignored or treated as construct for many practical purposes. In such situations, it is only necessary to know the distribution of actual demand in order to provide a specific protection against stock out probability (Datta, 1998).

Improved coordination of sales and production leads to better customer service and increased sales. Improvements in managing customer contacts, in making and meeting delivery promises, and in shorter order to ship lead times, lead to higher customer satisfaction and repeat orders. Kerridge, et al (2001) sales people can focus on selling instead of verifying or apologizing for late deliveries. In custom product environments, configurations can be quickly

identified and priced, often by sales personnel or even the customer rather than technical staff. Taken together, these improvements in customer service can lead to fewer lost sales and actual increases in sales, typically 10 percent or more. ERP systems also provide the ability to react to changes in demand and diagnose delivery problems. Corrective actions can be taken early, such as determining shipment priorities, notifying customers of -changes to promised delivery dates, or altering production schedules to satisfy demand. The process of managing the timing and the quantities of goods to be ordered and stocked is of great importance in that demands can be met satisfactorily and economically. Inventories are stock of materials of any kind stored for future use, mainly in the production process. Broadly inventories can be deeply thought of as materials or resources of any kind having some economic value, either awaiting conversation or use in future. Most at times, inventories are categorized as raw materials and production inventories, components and service parts, as well as work in – process and finished goods inventories. All of these do not necessarily require the same treatment and, therefore, policy with regard to reach may also differ, according to their types and needs in different types of organization (Vollmann, 2005).

Bartezzaghi (2003)improved collection procedures can reduce the number of days of outstanding receivables, thereby providing additional available cash. Underlying these improvements is fast accurate invoice creation directly from shipment transactions, timely customer statements, and follows through on delinquent accounts. Credit checking during order entry and improved handling of customer inquiries further reduces the number of problem accounts. Improved credit management and receivables practices typically reduce the days of outstanding receivables.

#### **Cost of Supplies**

According to Grover & Malhotra (2003) cost is the expenditure outlay or of money accomplish/maintain/obtain something. It is the price at which goods are bought and prices at which the supplier sells to the buyer and the expenses incurred when goods are ordered until they are received for use. Cost is the value of economic resources used as a result of production of any commodity or performing any service. Cost is the amount that has to be paid or spent to buy or obtain something. It is the price at which goods are bought and prices at which the suppliers' sells to the buyers and the expenses incurred when the goods are ordered until the goods are delivered.

According to Lyson (2006) cost refers to the cost of resources such as labour, transportation during procurement. The two main factors employed in producing the goods. This means that the average amount of produced by each individual employed in a given unit of time and labour cost there is more to invest in productivity (Burt et al, 2003).

The second factor that influences cost is the rate of exchange of currency in different countries. Exchange rates may fluctuate considerably overtime and this change relatively labour cost and clearly varies because of the resources needed to loan sport goods from point of manufacturing to the customer (Pandey, 2005).

According to Liker et al (2004) custom duties and trade policies as well as legal issues with regard to ownership of manufacturing point to the customers. The procurement manager should focus in important activities in which cost competitiveness. The important cost involved varies widely over different goods/products. Focused production hastens cost reduction which must be continually pursued by buyers new technologies for material procurement often reduce costs by allowing more efficient processing and operations cost is crucial activity for any organization on ever growing range of new

products. Transaction costs continue to be relatively high and variation in prices across the organization is substantial. Those who finance purchasing services have taken an interested inefficiency that inflates procurement costs.

Today the process of procurement is characterized by fragmented labor and intensive activities in consistent practice and controls. Lack of visibility and time access to pricing, rogue buying and manual work error results to gross over payment for goods and services, not to mention high transaction costs. The resources costs and consumption consideration disconnected from makes the staff not to know the true cost of the goods, how much was spent, whether contract compliance has been met, whether the right price was paid what is driving cost increase or who is accountable (Donald, 2002). Generally labor costs are more than materials if you mean finding the right quantity, tools to involve the linking of the work even if these goods are somewhat expensive, is usually a good buy for organization (Grover & Malhotra, 2003).

#### **Supplier Financial Capacity**

According to Park et al (2010) most business enterprises should start investment with adequate capital, from initial stage of business capital is needed to support and promote or establish the business, acquire assets and support operations if the supplier lacks adequate capital to supply goods, then it cannot be rated as a consistent/potential vendor. Capital is the major resource that keeps the organization running its business. No enterprise whether big or small can be started without adequate amount of capital.

According to Shields (2006) Right from the beginning of business start an idea to business, capital is needed to improve and establish the enterprise, acquire buildings equipment even land i.e. fixed assets, carry out survey, develop products, employ staff and create value. Even

existing firms need capital for making improvement or expanding the enterprise. It is important of developing of business to understand the implication of capital on functions that include taxation, treasury risk management which contribute to the achievement of strategic objectives and goals of an enterprise for corporate governance.

The need for working capital an organization depends upon the nature and volume of operation. These factors also depend on the size and scope of business enterprise for example large organizations require enormous capital expenditure for the range of activities carried out by it and vice versa (Baity. 2005). In the capitalism regime, the size of the business organization is increasingly resulting into corporate empires empowered with a lot of influence. This makes capital; as a financial management practice by most enterprises to achieve their objectives. The importance of financial management can be described as the importance of corporate finance. The role of capital has emerged from a conventional view point to an innovation view point to current competitive environment (Pandey, 2005).

Capital has been rightly termed as universal lubricant that keeps the enterprise dynamic. No business, whether big, medium or small can be started without an adequate amount of finance. Gitman (2007) right from the very beginning, i.e. concerning an idea to business, finance is needed to promote or establish the business, acquire fixed assets, make investigations such as market surveys develop product, keep men and machine at work, encourages management to make progress and create values. Even an existing concern may require further finance for making improvement or expanding the business. Thus the importance of finance cannot be over emphasized and the subject of business finance has become utmost important both to the academicians and practicing managers.

According to Bai & Sarkis (2009) the academicians find interested in the subject because the subject is still in its developing stage and the practicing managers are interested in the subject. The functions of finance that includes tax, treasury, risk management which will Contribute to the achievement of the strategic objectives and goals of the company's most the above factors have further increased the importance of corporate finance. As the owners in a corporate enterprise are widely scattered and the management is separately from the ownership, the management has to ensure the maximization of owner's economic welfare. Octavian (2005) the success and growth of a firm is only by maximization of principles and procedures as laid down by corporation finance. The knowledge of the discipline of corporation finance is important not only to the practicing managers, but also to others who deal with a corporate enterprise, such as investors, lenders, bankers, creditors, as there is always a scope for the management to manipulate and 'window dress' the cost statements.

In the recent day capitalistic regime, the size of the business enterprise is increasing resulting into corporate empires empowered with a lot of social and political influence. This makes corporate finance all the more important. Further, if we refer to corporate finance as the financial management practices by business times, the importance of financial management can well be described as the importance of corporate finance. The role of finance has been emerging from a conventional view point to an innovation viewpoint in current competitive business world. ever changing competitive business environment, it's vital to re - examine the role of finance function due to the following change drivers (Pandey, 2005).

Gaining importance of strategic role, higher volatility, financial evaluation of mergers and acquisitions, information economy, mitigation of

evolving business risks, new organizational hierarchy rules and requirements in today's competitive world, the roles and responsibilities of finance and accounting functions are facing key knowledge and skills related issues such as lack of consistency in the current process which in turn will impact the transparency of financial reporting abilities (Carr et al, 1999).

#### **Procurement Performance**

Vendor rating has an impact on procurement performance. According to Leenders and Fearon (2012), decisions to buy instead of make to improve quality, lower inventories, integrate supplier and buyer systems, and create cooperative relations underline need for good procurement performance. Recent trends are to have fewer suppliers; long-term contracts, eprocurement, and continuing improvement in quality, price, and service require closer coordination and communication between key procurement partners. Supplier switching for lower prices may not result in the best long-term value. Sharing information and assisting suppliers to improve performance is a necessity for worldclass performance.

The vendor rating activities with low strategic value can lead to lower costs and thereby improve the organizational results (Espino-Rodríguez & Padrón-Robaina, 2005). Firms are increasingly viewing vendor rating strategies for reducing or controlling costs (Smith et al., 2008). Empirical research also suggests that firms often achieve cost advantages relative to vertically integrated firms (Gilley *et al.*, 2004; Gilley & Rasheed, 2000). It is commonly believed that vendors can give the same level of service at a lower cost than internal departments.

Presumably, vendors benefit from economies of scale, tighter control over fringe benefits, and better access to lower-cost labour pools, and more focused expertise in managing service (Downey, 2015). By focusing on specific skills and

technologies, a vendor may become more proficient at that activity than the outsourcing firm may. Ideally, the vendor is also a cost-conscious provider and reduces bureaucratic costs, produces further efficiencies, and shares some of the savings with its clients. In addition, outsourcing arrangements reduce the need for capital assets, and this reduced investment in organization's capacity lowers fixed costs and leads to a lower break-even point. Outsourcing not only results in a shift of profitability but also exacerbates the productivity differential between outsourcing firms and vendors (Gilley & Rasheed, 2010).

#### **Empirical Review**

## **Quality of Supplies**

Maritim and Ochiri (2015) primarily focused on finding out the effect of vendor rating on performance of procurement function in public sector, quality of supplies affect performance of procurement function in public sector. The study concluded that it is logical to articulate that the current phenomenon of poor procurement performance in the public sector can be reversed if the government and other stakeholders ensure that vendor rating exercised through assessing quality of supplies The study recommends that the government of Kenya, policy makers, suppliers and other stakeholders should pay attention on measures that ensure effective vendor rating especially on the quality of supplies to enhance procurement performance.

A study by Pandey (2005), supplier qualifications, whose objective is to illustrate importance of supply screening. It illustrates that to avoid the dire outcomes of supplier non-performance; buyers typically take proactive steps to verify a supplier's qualifications prior to awarding them a contract. The primary goal of "supplier qualification screening" is to reduce the likelihood of supplier non-performance, such as late delivery, non-delivery, or delivery of non-

conforming (faulty) goods. A secondary goal is simply to ensure that the supplier will be a responsible and responsive partner in the day-to-day business relationship with the buyer supplier qualification screening involves many aspects financial status checks. The buyer may use published supplier ratings (e.g., Dunn & Bradstreet) to determine the supplier's financial status and likely financial viability in the short to medium term. For example, if the supplier has recently assumed significant debt, this may raise red flags about the possibility the supplier will declare bankruptcy before fulfilling its obligations to the buyer.

#### **Lead Time**

According to Delloite & Toudhia (2006) study on effect of lead time, with an objective of finding out that Lead Time has direct effect on distribution planning which links with the customer and the organization. It stated that distribution serves as the central role in coordinating the flow of goods in an organization with system modules that place the goods in the hands of a good customer. It provides basis of the integrating the manufacturing, planning one control system through the use of MRP from the firm to the field. This is because lead time is the time between the delivery of goods to the customer and the time the goods arrive to the organization. If the lead time is long, it may have an effect to the organization since the customer may tend to find other ways to shorten the lead time. This in turn will tend to affect the inventory control policy of the organization.

According to studies done by Simchi et al (2008), lead time as performance delivery, its objective is to it describes the efficiency rate of business operations when preparing and delivering an order to a customer. The work starts with the evaluation of the processes and procedures used to receive orders from clients, schedule the production of the goods or services necessary to fulfill those orders and finally, the time necessary

to deliver the goods or services to meet client expectations. The goal is to manage and pay attention on every task across the whole process chain to deliver goods and services as efficient as possible. There are seven key elements in performance delivery; order lead time: The elapsed time from order being placed to delivery. Delivery reliability: The reliability of the delivery time. Delivery certainty: The right product with the right quality delivered in the right quantity. Review of existing methods, models and tools for supplier evaluation. Information: Information exchange between buyer and seller. The most important benefit of a good delivery performance is the customer satisfaction.

# **Cost of Supplies**

According to Dobbler (2002) studied cost as the most important criterion in vendor rating. His objective was to show purchasing cost is related acquisition Procurement total cost. department's traditional purchasing strategy considers price/cost as the most important attribute. It also prefers a multi-supplier strategy assigning not more than 15% to 25% of the purchase orders to the same supplier, which provides the company more negotiating power, and protects the company against sudden price increases, or modifications in the delivery time. Only in exceptional cases, when there are no other alternative (monopoly market) or when time and resources to find and negotiate alternative suppliers are not available, it is approved to assign the 100% of the articles to the same supplier.

Forker & Mendez (2001) conducted studies on Volvo and their objective was to find out how to reduce the module price as much as possible and to ensure annual price reductions they deduced that Volvo's cost of a module is carefully evaluated by the Purchasing department that is responsible for signing price contracts with the module suppliers. While Volvo single-sources all modules and wants to keep the same module

suppliers over a product generation (about 8 years), the module supplier's efforts to reduce the price may be as important as the price itself. When negotiating with the module supplier, the Purchaser breaks down the offered module price by analyzing the cost drivers in the module supplier's internal operations and in its component supply. The Purchaser also analyzes the component suppliers' other customer relations in order to identify opportunities for increasing economies of scale and thereby lower price. A broad scope is thus used when evaluating a module supplier from a commercial perspective

## **Supplier Financial Capacity**

According to Datta (2008) in practice, if the rates of consumption remain constant, the supplier's delivery times do not vary and there are no rejections during inspection. It would have been a simple matter to place a new order whenever stock - on - hand reached the quantity equal to lead time usages. In this type of circumstances, a hundred per cent efficient service level can be easily attained and no occasions for stock outs as new supplies will always be arriving hand as reserves in order to avoid temporary shortages in stock out conditions. However, in some real life situations, the lead time varies so little that it can be reasonably ignored or treated as construct for many practical purposes. In such situations, it is only necessary to know the distribution of actual demand in order to provide a specific protection against stock – out probability

In the other hand, Kaminsky et al (2008) research proves that sometimes there are delivery problems like suppliers deliver too late, deliveries are not complete, products are damaged or do not meet quality requirement, packaging is unsound or information labels cannot be read by bar code systems. The reason for these problems usually can be traced back to unclear specifications or a careless supplier selection. To prevent these problems, companies need clear

rules and guidelines with regard to procurement governance.

Gillingham (2003) study, importance of financial stability, whose objective of the study is to instill a culture of businesses going into partnership with financially stable partners. An assessment of the financial stability and fiscal outlook of the supplier is a factor gaining in importance in the growing trend of forging supplier buyer partnerships. Both buyers and sellers are looking for partners that are viable, ongoing concerns that will contribute to the relationship both for the present and in the future. A supplier on financially unstable footing will have much more difficulty contributing to the partnership venture, as it must focus its efforts on improving its financial soundness. Hence, both suppliers and buyers are becoming more mindful of the financial position of their potential partners in their decision making.

## **METHODOLOGY**

A research design describes how the study addresses the specific aims and objectives of the research. The study used a descriptive survey designed to establish the influence of vendor rating on procurement performance in public hospitals in Kenya. The target population in this study was 111 employees; the study targeted each department that was involved in the procurement functions at the Kenyatta National Hospital. The multiple regression model that will aid the analysis of the variable relationships will be as follows:  $\mathbf{Y} = \mathbf{\beta_0} + \mathbf{\beta_1} \mathbf{X_1} + \mathbf{\beta_2} \mathbf{X_2} + \mathbf{\beta_3} \mathbf{X_3} + \mathbf{\beta_4} \mathbf{X_4} + \mathbf{\epsilon}$ ,

## Where;

Y= Procurement Performance (dependent variable);

 $\beta_0$ = constant (coefficient of intercept);

X<sub>1</sub>= Quality of supplies (independent variable);

 $X_2$ = Lead time (independent variable);

 $X_3$ = Cost of supplies (independent variable);

X<sub>4</sub>= Supplier financial capacity (independent variable);

 $\varepsilon$  = Error term;

 $\beta_1...\beta_4$ = Regression coefficient of four variables.

# FINDINGS AND DISCUSSIONS Quality of Supplies

The study sought to assess the influence of quality of supplies on procurement performance in public hospitals in Kenya. This section presents 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 4.5 presents the findings. The scores of 'strongly disagree' and 'disagree' have been taken to represent a statement not agreed upon, equivalent to mean score of 0 to 2.5. The score of 'Neutral' has been 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' have been taken to represent a statement highly agreed upon equivalent to a mean score of 3.5 to 5.0. Table 1 presents the findings.

As tabulated, a majority of respondents were found to highly agree that inspection methods for supplier to be included in the approved list would require that such a organization be assessed on quality aspects (4.6759); It is also vital to establish which of the supplier knows about and is ready to implement the concept of total quality policy (3.6548); Profitability is virtually guaranteed if quality is present (3.7765); quality assurance if a product fulfills a customer expectation, the customer would be pleased and consider that product as of acceptable or even of high quality (3.4564); Quality assessment is a key factor of suppliers by which they can improve and maintain quality and delivery performance (3.6122). Conformanace to specifications enhanace suppliers' need competent technical ability to provide high quality product or service, ensure future improvements in performance and promote successful development efforts (3.6791); This finding supports Ambe (2012) who argues that conducting a stakeholder analysis early in the

planning process is a useful technique to identify the likely key issues in relation to the planned procurement. Consider the internal and external stakeholders who may need to be involved in the procurement planning. Bedey (2008) adds that in determining the level of detail required for specific significant procurement plans, agencies must take into consideration the nature of their procurement environment and the capability of

their procurement function. Jankiraman and Gopal (2006), notes that the relationship between quality, profitability and market share is quite evident. They go further and state that one factor above all other, which is quality, drives market share. Customer satisfaction and reduction of costs is virtually guaranteed if quality is present. There is no doubt that relevant perceived quality and customer satisfaction are strongly related.

**Table 1: Influence of Quality of Supplies on Procurement Performance** 

Quality of Supplies	Mean	Std. Dev
Inspection methods applied for supplier to be included in the approved list would require that such an organization be assessed on quality aspects	4.6759	.4321
Quality assurance is also vital to establish which of the supplier knows about and is ready to implement the concept of total quality policy	3.6548	.5672
Conformance to specifications enhance profitability is virtually guaranteed if quality is present	3.7765	.9812
Quality warranties if a product fulfills a customer expectation, the customer would be pleased and consider that product as of acceptable or even of high quality	3.4564	.6218
Quality assessment is a key factor of suppliers by which they can improve and maintain quality and delivery performance	3.6122	.3843
Conformance to specifications requires suppliers' need competent technical ability to provide high quality product or service, ensure future improvements in performance and promote successful development efforts	3.6791	.5136

## Lead Time

The study sought to assess the influence of lead time on procurement performance in public hospitals in Kenya. This section presents 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 4.5 presents the findings. The scores of 'strongly disagree' and 'disagree' have been taken to represent a statement not agreed upon, equivalent to mean score of 0 to 2.5. The score of 'Neutral' has been 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' have been taken to represent a statement highly agreed upon equivalent to a mean score of 3.5 to 5.0. Table 2 presents the findings.

As tabulated, a majority of respondents were found to be neutral that the organization has ensured that order handling time for goods and services is always short as possible for the order fulfillment (2.8760); Organizations has ensured that order delivery time for goods and services meets customer satisfaction (2.8753); The organization has provided basis for integrating the manufacturing and distribution planning for the inventory control policy (2.8892). The long lead time has the impression that the specific supplier relationship is less efficient or he just has more customers than he can serve thus delaying deliveries (2.7632); The organization provides a specific protection against stock out probability leading to improved customer service (3.1290). There is always credit checking during the order entry which has enhanced improved handling of customers (2.8902); The organization has

managed the training and the quantities of goods ordered and stocked to meet service economically (2.8882). The study findings indicate that lead time affect procurement performance in the public hospitals in Kenya.

The study findings are in agreement with literature review by Simchi et al (2008), lead time as performance delivery, its objective is to it describes the efficiency rate of business operations when preparing and delivering an

order to a customer. The work starts with the evaluation of the processes and procedures used to receive orders from clients, schedule the production of the goods or services necessary to fulfill those orders and finally, the time necessary to deliver the goods or services to meet client expectations. The goal is to manage and pay attention on every task across the whole process chain to deliver goods and services as efficient as possible.

**Table 2: Influence of Lead Time on Procurement Performance** 

Lead Time	Mean	Std. Dev
The organization has ensured that order handling time for goods and services is always short as possible for the order fulfillment.	2.8760	.9092
Organizations has ensured that order delivery time for goods and services meets customer satisfaction	2.8753	.8235
The organization has provided basis for integrating the manufacturing and distribution planning for the inventory control policy	2.8892	.7421
Long lead time has the impression that the specific supplier relationship is less efficient or he just has more customers than he can serve thus delaying deliveries	2.7632	.6280
The organization provides a specific protection against stock out probability leading to improved customer service	3.1290	.7902
There is always credit checking during the order entry which has enhanced improved handling of customers	2.8902	.1290
The organization has managed the training and the quantities of goods ordered and stocked to meet service economically	2.8882	.2358

#### **Cost of Supplies**

The study sought to assess the influence of cost of supplies on procurement performance in public hospitals in Kenya. This section presents 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 presents the findings. The scores of 'strongly disagree' and 'disagree' have been taken to represent a statement not agreed upon, equivalent to mean score of 0 to 2.5. The score of 'Neutral' has been

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' have been taken to represent a statement highly agreed upon equivalent to a mean score of 3.5 to 5.0. Table 3 presents the findings.

As tabulated, a majority of respondents were found to be neutral that the organization The organization has ensured that there is cost competitiveness on the goods and services to meet customer for the order fulfillment (4.8762); The organization has ensured that the production costs are continuously pursued by the

organization (4.7621); The organization has ensured that transaction costs continue to be relatively low and variations in prices across the organization is substantial (3.9861).organization has ensured that those who finance purchasing services have taken inefficiency that inflates procurement costs (3.7690); The labor costs are catered by the right quantity and tools which involve linking to the work (3.7625). The study findings indicate that cost of supplies affect procurement performance in the public hospitals in Kenya. The study findings are in agreement with literature review by Grover & Malhotra (2003) cost is the outlay or expenditure of money to accomplish/maintain/obtain something. It is the price at which goods are bought and prices at which the supplier sells to the buyer and the expenses incurred when goods are ordered until they are received for use. Cost is the value of economic resources used as a result of production of any commodity or performing any service. Cost is the amount that has to be paid or spent to buy or obtain something. It is the price at which goods are bought and prices at which goods are bought and prices at which the suppliers' sells to the buyers and the expenses incurred when the goods are ordered until the goods are delivered. Today the process of procurement is characterized by fragmented labor and intensive activities in consistent practice and controls. Lack of visibility and time access to pricing, rogue buying and manual work error results to gross over payment for goods and services, not to mention high transaction costs.

**Table 3: Influence of Cost of Supplies on Procurement Performance** 

Cost of Supplies	Mean	Std. Dev
The organization has ensured that there is cost competitiveness on the goods and services to meet customer for the order fulfillment.	4.8762	.9092
The organization has ensured that the production costs are continuously pursued by the organization	4.7621	.8532
The organization has ensured that transaction costs continue to be relatively low and variations in prices across the organization is substantial	3.9861	.7641
The organization has ensured that those who finance purchasing services have taken inefficiency that inflates procurement costs	3.7690	.5632
The labor costs are catered by the right quantity and tools which involve linking to the work	3.7625	.6542

## **Supplier Financial Capacity**

The study sought to assess the influence of supplier financial capacity on procurement performance in public hospitals in Kenya. This section presents 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 4.5 presents the findings. The scores of 'strongly disagree' and 'disagree' have been taken to represent a statement not agreed upon, equivalent to mean score of 0 to 2.5. The score of

'Neutral' has been 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' have been taken to represent a statement highly agreed upon equivalent to a mean score of 3.5 to 5.0. Table 4.7 presents the findings.

As tabulated, a majority of respondents were found to be neutral that the organization suppliers are tax compliant and meet rules and guidelines with the procurement governance. (2.8763); The supplier financial stability and fiscal outlook enhance timely deliveries (3.2109); The

supplier bankruptcy distracts procurement process thus affecting timely deliveries of goods (2.8973). The organization has ensured that there is financial soundness of the supplier contributing to a lasting partnership thus reduction of costs (3.1192); The suppliers bankruptcy affect quality of products, long lead time thus affecting timely deliveries (2.0093). The suppliers' terms of payment affect timely delivery of goods and services in the hospital (2.3452). The study findings indicate that supplier financial capacity affect procurement performance in the public hospitals in Kenya.

The study findings are in agreement with literature review by Park et al (2010) most business enterprises should start investment with adequate capital from initial stage of business capital is needed to support and promote or establish the business, acquire assets and support operations if the supplier lacks adequate capital to supply goods, them it cannot be rated as a consistence/potential vendor. Capital is the major resource that keeps the organization running its business. No enterprise whether big or small can be started without adequate amount of capital.

**Table 4: Influence of Supplier Financial Capacity on Procurement Performance** 

Supplier Financial Capacity	Mean	Std. Dev
The organization suppliers are tax compliant and meet rules and guidelines with the procurement governance.	2.8763	.3219
The supplier financial stability and fiscal outlook enhance timely deliveries	3.2109	.4279
The supplier bankruptcy distracts procurement process thus affecting timely deliveries of goods	2.8973	.3218
The organization has ensured that there is financial soundness of the supplier contributing to a lasting partnership thus reduction of costs	3.1192	.4680
The suppliers bankruptcy affect quality of products, long lead time thus affecting timely deliveries	2.0098	.3218
The suppliers terms of payment affect timely delivery of goods and services in the hospital	2.3452	.5690

## **Procurement Performance**

The study sought to examine the determinants of procurement performance in the hospital attributed to the influence of quality of supplies, lead time, cost of supplies and supplier financial stability. The study was particularly interested in three key indicators, namely order fulfillment, cost reduction and customer satisfaction, with all the three studied over a 5 year period, running from 2013 to 2017. Findings in Table 4.11 above reveal improved procurement performance across the 5 year period running from the year 2012 to 2016. Reduction of costs recorded positive improvement with a majority affirming to less than 10% in 2012 (42.3%) and 2013 (37.7%), to

10% in 2014 (36.1%) then more than 10% in 2015 (41.1%) and 2016 (37.5%). A similar trend was recorded timely deliveries, growing from less than 10% (44.1%) in 2012, to more than 10% in 2013 (36.4%), 2014 (40.4%) and 2015 (37.3%). Customer satisfaction further recorded positive improvement with a majority affirming to less than 10% in 2012 (37.9%) and 2013 (35.9%), to 10% in 2014 (35.9%) and 2015 (35.3%) then by more than 10% in 2016 (36.2%). It can be deduced from the findings that key procurement performance indicators considerably have improved as influenced by among other management attributes, procurement influence of quality of supplies, cost of supplies, lead time and supplier financial capacity Reduction of costs, timeliy deliveries and customer satisfaction have particularly improved by at least 10 percent across the hospital pointing

to the significance of quality of supplies, cost of supplies, lead time and supplier financial capacity in the procurement process.

**Table 5: Procurement Performance** 

Reduction of Costs	2013	2014	2015	2016	2017
Reduced by less than 10%	42.3	37.7	31.6	30.7	29.5
Reduced by 10%	31.8	32.9	36.1	28.2	33
Reduced by more than 10%	25.9	29.4	32.3	41.1	37.5
Timely Deliveries	2013	2014	2015	2016	2017
Improved by less than 10%	44.1	35.2	33.4	25.7	27.1
Improved by 10%	31.7	32.6	30.2	33.9	35.6
Improved by more than 10%	23.5	32.2	36.4	40.4	37.3
Customer Satisfaction(Compliments and Complaints)	2013	2014	2015	2016	2017
Increased by less than 10%	37.9	35.9	31.2	25.7	33.1
Increased by 10%	36.2	31.3	35.9	35.3	30.7
Increased by more than 10%	25.9	32.8	32.9	39	36.2

# **Multiple Regression Analysis**

The study adopted a multiple regression analysis so as to establish the relationship of independent variables and dependent variables. The study applied SPSS to compute the measurements of the multiple regression analysis. According to the model summary Table 6, the coefficient of determination (R²) is used to measure how far the regression model's ability to explain the variation of the independent variables. The correlation coefficient was 0.783. This indicates a very strong postive relationship between the independent

variable and depedent variable. The data showed that the high R square is 0.613. It shows that the independent variables in the study were able to explain 61.30% variation in the procurement perfomance in the organization while the remaining 38.70% is explained by the variables or other aspects outside the model. This implies that these variables are very significant and they therefore need to be considered in any effort to boost procurement perfomance in the organization. The study therefore identifies variables as critical determinants of procurement perfomance in the organization.

**Table 6: Model Summary** 

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error of the Estimate
	.783	.613	.587	.009

#### **ANOVA Results**

F-test is done to test the effect of independent variables on the dependent variable

simultaneously. The F-statistic test basically shows whether all the independent variables included in the model jointly influence on the dependent variable. Based on the study results of

the ANOVA Test or F-test in Table 7, obtained F-calculated was 35.993 greater the F-Table (12.890) with significance of 0.003. Since the significance level of 0.000<0.05 we conclude that

the set of independent variables affect the procurement performance (Y-dependent variable) and this shows that the overall model was significant.

Table 7: ANOVA

Model	Sum of Squares	d.f	Mean Square	F	Sig.
Regression	20.876	4	5.219	35.993	.003ª
Residual	10.873	75	.1450		
Total	31.749	79			

NB: F-critical Value = 12.890;

# **Regression Coefficients**

The results of multiple regression analysis obtained regression coefficients t value and significance level as indicated in Table 8. The study conducted a multiple regression analysis so as to determine the relationship between the dependent variable and independent variables. The general form of the equation was to predict procurement perfomance in the hospital from the quality od supplies, lead time, cost of supplies and supplier financial capacity is:  $(Y = \beta_0 + \beta_1 X_1 + \beta_1 X_1)$  $\beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$ ) becomes: Y= 8.098+  $0.762X_1 + 0.745X_2 + 0.688X_3 + 0.625X_4$ . This indicates that procurement perfomance = 8.098 + 0.762\* Quality of Supplies + 0.745\*Lead time + 0.688\*Cost of Supplies + 0.625\*Supplier Financial Capacity + 3.908. From the study findings on the regression equation established, taking all factors into account (independent variables) constant at zero procurement perfomance in the hospital was 8.098.

The data findings analyzed also shows that taking all other independent variables at zero, a unit increase in quality of supplies would lead to a 0.762 increase in procurement perfomance in the hospital, a unit increase in lead time would lead to 0.745 increase in procurement perfomance in the hospital, a unit increase in cost of supplies would lead to 0.688 increase in procurement perfomance in the hospital and a unit increase in supplier financial capacity would lead to 0.625 increase in procurement perfomance in hospital. This infers that quality of supplies contributed most to procurement perfomance in the hospital. Based at 5% level of significance, quality of supplies had a t-value (7.076>1.96) with a .000 level of significance; lead time had a t-value (6.254 > 1.96) with a .001 level of significance, cost of supplies had a t-value (4.876>1.96) with a .018 level of significance and supplier financial capacity had a t-value (3.771>1.96) with a .039 level of significance hence the most significant factor was quality of supplies.

**Table 8: Coefficient Results** 

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	β	Std. Error	β		
(Constant)	8.098	1.063		7.615	.000
X <sub>1</sub> _Quality of supplies	.762	.108	.765	7.076	.000

X <sub>2</sub> _Lead time	.745	.119	.654	6.254	.001
X <sub>3</sub> _Cost of Supplies	.688	.141	.555	4.876	.018
X <sub>4</sub> _Supplier Financial Capacity	.625	.166	.532	3.771	.020

#### CONCLUSION AND RECOMMENDATIONS

The study established that inspection methods for supplier to be included in the approved list would require that such a organization be assessed on quality aspects. It is also vital to establish which of the supplier knows about and is ready to implement the concept of total quality policy. Profitability is virtually guaranteed if quality is present. The quality assurance if a product fulfills a customer expectation, the customer would be pleased and consider that product as of acceptable or even of high quality. Conformance specifications enhances suppliers' competent technical ability to provide high quality product or service, ensure future improvements performance and promote successful development efforts.

From descriptive statistics, a majority of respondents were found to be neutral that the organization has ensured that order handling time for goods and services is always short as possible for the order fulfillment. Organizations have ensured that order delivery time for goods and meets customer satisfaction. organization has provided basis for integrating the manufacturing and distribution planning for the inventory control policy. The long lead time has the impression that the specific supplier relationship is less efficient or he just has more customers than he can serve thus delaying deliveries. The organization provides a specific protection against stock out probability leading to improved customer service. There is always credit checking during the order entry which has enhanced improved handling of customers. The organization has managed the training and the quantities of goods ordered and stocked to meet service economically.

From descriptive statistics, majority of respondents were found to be neutral that the organization has ensured that there is cost competitiveness on the goods and services to meet customer for the order fulfillment. The organization has ensured that the production costs are continuously pursued by organization. The organization has ensured that transaction costs continue to be relatively low and variations in prices across the organization are substantial. The organization has ensured that those who finance purchasing services have taken inefficiency that inflates procurement costs. The labor costs are catered by the right quantity and tools which involve linking to the work.

From study results a majority of respondents were found to be neutral that the organization suppliers are tax compliant and meet rules and guidelines with the procurement governance. The supplier financial stability and fiscal outlook enhance timely deliveries. The supplier bankruptcy distracts procurement process thus affecting timely deliveries of goods. organization has ensured that there is financial soundness of the supplier contributing to a lasting partnership thus reduction of costs. The suppliers' bankruptcy affects quality of products, long lead time thus affecting timely deliveries. The suppliers' terms of payment affect timely delivery of goods and services in the hospitals.

The study sought to examine the determinants of procurement performance in hospitals in Kenya, attributed to the influence of quality of supplies, lead time, cost of supplies and supplier financial capacity over a 5-year period, running from 2013 to 2017. Reduction of costs, timely deliveries and customer satisfaction recorded improved positive performance. From inferential statistics, a positive

correlation is seen between each determinant variable and procurement performance. The strongest correlation was established between quality of supplies and procurement performance. All the independent variables were found to have a statistically significant association with the dependent variable at ninety-five level of confidence. Analysis of variance was further done to show whether there is a significant mean

#### **Conclusions of the Study**

From on the study findings, the study concludes that procurement performance in logistics companies is affected by quality of supplies, lead time, cost of supplies and supplier financial capacity as the major factors that mostly affect procurement performance in public hospitals in Kenya.

According to the study findings, the study concludes that quality of supplies is the first important factor that affects procurement performance in public hospitals in Kenya. The regression coefficients of the study show that quality of supplies has a significant influence on procurement performance in public hospitals in Kenya. This implies that increasing levels of quality of supplies would increase the levels of procurement performance in public hospitals in Kenya. This shows that quality of supplies has a positive influence on procurement performance in public hospitals in Kenya.

Additionally, the study concludes that lead time is the second important factor that affects procurement performance in public hospitals in Kenya. The regression coefficients of the study show that lead time has a significant influence on procurement performance in public hospitals in Kenya. This implies that increasing levels of lead time would increase the levels of procurement performance in public hospitals in Kenya. This shows that lead time has a positive influence on procurement performance in public hospitals in Kenya.

Further, the study concludes that cost of supplies is the third important factor that affects procurement performance in public hospitals in Kenya. The regression coefficients of the study show that cost of supplies has a significant influence on procurement performance in public hospitals in Kenya. This implies that increasing levels of cost of supplies would increase the levels of procurement performance in public hospitals in Kenya. This shows that cost of supplies has a positive influence on procurement performance in public hospitals in Kenya.

Finally, the study concludes that supplier financial capacity is the fourth important factor that affects procurement performance in public hospitals in Kenya. The regression coefficients of the study show that supplier financial capacity has a significant influence on procurement performance in public hospitals in Kenya. This implies that increasing levels of supplier financial capacity would increase the levels of procurement performance in public hospitals in Kenya. This shows that supplier financial capacity has a positive influence on procurement performance in public hospitals in Kenya.

## **Recommendations of the Study**

The study recommends that inspection methods for supplier to be included in the approved list and assessed on quality aspects. It is also vital to establish which of the supplier knows about and is ready to implement the concept of total quality policy. The quality assurance and conformance to specifications can enhance suppliers' need competent technical ability to provide high quality product or service, ensure future improvements in performance and promote successful development efforts.

The study recommends that the order handling time for goods and services should be always short as possible for the order fulfillment. It can provide the basis for integrating the manufacturing and distribution planning for the

inventory control policy. The long lead time has the impression that the specific supplier relationship is less efficient or he just has more customers than he can serve thus delaying deliveries. The organization should provide a specific protection against stock out probability leading to improved customer service.

The organization should ensure that the production costs should be continuously pursued by the organization. The transaction costs should continue to be relatively low and variations in prices across the organization are substantial. There is need to ensure that those who finance purchasing services have taken inefficiency that inflates procurement costs. The labor costs should be catered by the right quantity and tools which involve linking to the work.

The supplier financial stability and fiscal outlook enhance timely deliveries. The supplier bankruptcy distracts procurement process thus affecting timely deliveries of goods. The organization should ensure that there is financial soundness of the supplier contributing to a lasting partnership thus reduction of costs. The suppliers' bankruptcy can quality of products, long lead time thus affecting timely deliveries.

#### **Areas for further Research**

The study is a milestone for further research in the field of procurement performance in public hospitals in Africa and particularly in Kenya. The findings demonstrated the important factors to procurement performance in public hospitals to include; quality of supplies, lead time, supplier financial capacity and lead time. The remaining factors which contribute to 61.30% should be studied as established in the study. This implies that these variables are very significant and they therefore need to be considered in any effort to boost procurement perfomance in public hospitals. The current study should therefore be expanded further in future in order to determine the effect of procurement legal framework on effective implementation of procurement practices in the public hospitals Existing literature indicates that as a future avenue of research, there is need to undertake similar research in other organizations in Kenya and other countries in order to establish whether the explored factors can be generalized.

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