

**EFFECT OF SUPPLIER EVALUATION ON PROCUREMENT PERFORMANCE OF  
PUBLIC HOSPITALS IN KISUMU, KENYA**

**BY**

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SUPPLY CHAIN MANAGEMENT**

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## DECLARATION

### Student Declaration

This project report is my original work and has not been submitted for examination in any other university.

Signature ..... Date .....

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**MSC/BE/00111/2018**

### Supervisor's Declaration

This project report has been submitted for examination with my approval as the University supervisor.

Signature ..... Date .....

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## **ACKNOWLEDGEMENT**

My sincere acknowledgement goes to my supervisor who spent his dedicated time to guide me during this work regardless at whichever time I needed his guidance. I wish also to remember all my lecturers who were very instrumental in imparting knowledge in me, the skills and techniques which will go a long way in strengthening management science practice in the field of procurement at my work place and beyond.

## **DEDICATION**

This project is dedicated to my family and friends for their morale support during my study. May God bless them abundantly.

## ABSTRACT

Supplier Evaluation is key to the overall service delivery in an organization more so in the service industries where quality and timely service delivery is considered critical. Many of the procurement functions in the hospitals are mandated to ensure quality and timely deliveries of hospital pharmaceuticals and non- pharmaceuticals items. Public Hospitals are facing numerous challenges ranging from stockouts, capacity challenges both technical and financial from suppliers, long lead times, and poor workmanship descending their performance as evidenced by the 2020 PPOA report which recommended Supplier Evaluation as a solution to these challenges. This problem is however persistent in abate empirical application of supplier evaluation implementation and research studies. It is with this regard that this study purposed to establish the effect of supplier evaluation on the procurement performance of Public hospitals in Kisumu, Kenya. Specifically, this study sought to determine the effect of supplier consistency, supplier competence, and supplier production capacity on the procurement performance of Public Hospitals in Kisumu, Kenya. The study was anchored on Agile Supply Chain Theory and Supply Chain Management Theory. A correlational research design was adopted to carry out the study. The study target population was 63 drawn from JOOTRH, Kisumu County and Lumumba Hospitals which were selected using census survey as the sampling technique. Primary data collected using structured questionnaires will be used through the drop-and-pick method. A pilot study was conducted at Ahero County hospital on 11 employees. Content validity was ascertained through expert review, the recommendations of the experts were incorporated in the data tool. Cronbach's alpha was used to gauge internal reliability where a coefficient of 0.971 was established this being above the allowable threshold of 0.7. The study established the following through multiple regression analysis. A general beta constant of 2.055 and a  $p=0.011$ . This implies that a unit increase in supplier evaluation all other factors held constant, would lead to a corresponding change of 2.055 in the procurement performance of the public hospitals in Kisumu at 95% confidence level. On the effect of supplier consistency on the procurement performance of Public hospitals in Kisumu, Kenya the study established ( $\beta = 0.213$ ,  $p= 0.199 >0.05$ ) this implies that a unit changes in supplier consistency would lead to unit change(increase) in the procurement performance by 0.213 units, this though is not statistically significant at  $\alpha = 0.05$ . On the effect of supplier competency on the procurement performance of Public hospitals in Kisumu, Kenya the study established ( $\beta = 1.136$ ,  $p = 0.000 <0.05$ ) this implies that a unit changes in supplier competence would lead to unit change(increase) in the procurement performance by 1.136 units, this being statistically significant at  $\alpha = 0.05$ . On the effect of Supplier production capacity on the procurement performance of Public hospitals in Kisumu, Kenya the study established ( $\beta = - 0.293$ ,  $p = 0.075 >0.05$ , this implies that a unit changes in supplier capacity of production would lead to unit change(decrease) in the procurement performance by -0.293 units, this not being statistically significant at  $\alpha = 0.05$ . The study therefore recommends the inclusion of supplier competency metrics into supplier evaluation criteria and exclusion of supplier consistency and supplier production capacity from it.

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## **ABBREVIATIONS AND ACRONYMS**

<b>GDP:</b>	Gross Domestic Product.
<b>SC:</b>	Supply Chain
<b>SCM:</b>	Supply Chain Management
<b>PPOA:</b>	Public Procurement Oversight Authority
<b>PPDA:</b>	Public Procurement Disposal Act
<b>JOOTRH:</b>	Jaramogi Oginga Odinga Teaching and Referral Hospital
<b>CIPS:</b>	Chattered Institute of Purchasing and Supplies
<b>PP:</b>	Procurement Performance
<b>SC:</b>	Supplier Consistency
<b>SCOM:</b>	Supplier Competency
<b>SPC:</b>	Supplier Production Capacity



## OPERATIONAL DEFINITION OF TERMS

**Supplier Evaluation:** This is the process of assessing and approving potential suppliers by quantitative and qualitative assessment. In a Public hospital setup, Suppliers should be assessed based on various criteria for instance; Commitment to their work, Cost (Most Economically Advantageous Supplier), Culture; their style and how they are used to doing things, Cash; is the supplier liquid enough to meet the task that is expected of him. All this evaluate the supplier to settle on a supplier that is congruent to a hospital setup.

**Procurement Performance:** This is a measure of identifying the extent to which the procurement function, for in our case a public hospital procurement department, is able to reach the objectives and goals of the department and hospital at large with minimum costs possible.

**Supplier Competency:** This is the supplier's capability to do their duties successfully and efficiently. In a public hospital one should gauge how competent a supplier is. Make thorough assessment of their capabilities, and measure them against the hospital's needs. Then look at what other customers of the supplier (if there is any) think. How happy are they with the supplier? Have they encountered any problems? And find out why former customers of the supplier changed a supplier.

**Supplier Consistency:** This is the quality of the supplier achieving a level of performance which does not vary greatly in quality overtime. In public hospital setup supplier consistency is key, they should ensure they provide high quality goods and services. No one is perfect however the supplier should have processes or procedures in place to ensure consistency.

**Supplier Production Capacity:** This is the supplier's capability to generate output over a predetermined period. In a public hospital setup, the supplier should be able to respond to the hospital needs and be flexible to market and supply fluctuations.

**Public Hospitals:** These are hospitals which are government owned and are fully funded by the government and operates solely off the money that is collected from taxpayers to fund healthcare initiatives.

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## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background to the study**

Evaluating Suppliers is a significant process for any organization because on average, items that are purchased account for between forty and sixty percent of sales of end products (CIPS, 2013). As market factors change, companies also need to change. This directly influence the quality and cost of purchased products; a small gain in cost due to supplier evaluation has significant benefits for organizations. Supplier evaluation is one of the activities executed by procurement staff and one whose effective execution determines the success or failure in the procurement performance.

The underlying concept of supplier evaluation is to identify suppliers with the potential to support the buying institution to realize its interests with regard to purchasing. Supplier evaluation is a continuous process for purchasing departments and is a pre-qualification step in the process of procurement. Supplier evaluation involves appraising several aspects of the supplier, including financials, capacity, organizational processes and structure, quality assurance, and performance. (Monczka, Trent & Handfield, 2002).

Products bought by suppliers account for more than half of total costs for most companies and in some industries, such as electronics, telecommunications, construction, and automotive, this portion is normally substantially higher (Gadde & Håkansson, 2001).

Supplier evaluation is the quantitative and qualitative assessment of suppliers to ensure a portfolio of best in class suppliers is available for use (Kemunto, 2014). To sustain effective and reliable sources of supplies, buyers should select their suppliers carefully and evaluate them regularly

(Humphreys, 2003). The concept of supplier evaluation has gained a lot of popularity among practitioners and even scholars (Humphreys, 2004).

Public procurement is the purchasing and logistics operations in the public sector or in public institutions (Chuchu & Osuga, 2015). In several countries, the public sector is the major source of market for suppliers sometimes demanding up to 40 percent of national demand. For instance, in the UK, the public-sector demand per year stands at £150 billion. For this reason, the government of UK has put in place public contracts regulations 2015 aimed at enhancing transparency and efficiency in public procurement operations in the country (UK Legislation, 2015). In Africa, owing to the importance of public procurement, conference on public procurement has been constituted to look at issues of integrity and transparency in public procurement (Milner, International Trade Centre, 1999). Similarly, scholars have developed interest about public procurement in the recent past conducting a number of studies on the subject. For instance, Quinot& Arrowsmith (2013) wrote a book that focused on the law governing public procurement in a number of African systems and looks at key themes relevant to all African states to provide a focused view of the African systems and bring a comparative perspective in understanding Public Procurement in Africa and other parts of the world.

In Kenya, the Public Procurement and Disposal Act 2005 outlined the process through which the government operates and spends public money (Rotich, 2015). It is estimated that in Kenya public procurement accounts for over 10% of the Gross Domestic Product (GDP), making it a large market for suppliers and contractors (Cousins, 2008). With this amount of resource, public procurement tops the list of sectors with high opportunities for corruption (International Transparency, 2010). This therefore means that every effort should be made to erect safeguards to evaluate against corruptmal practices in public procurement (PPOA, 2009). It is for this reason

that there is a need to check both the potential and current suppliers on one on one basis to improve their performance and capabilities for the benefit of buying organization (CIPS Knowledge, 2014).

After the prequalification of suppliers through supplier evaluation, a number of improvements in procurement performance is expected, however it is surprising to note that buyer supplier relationship does not last any longer, suppliers are in most cases conventionally selected on the basis of low price and less concern is given to the suppliers who give assurance of delivery on time and long term relationships (OECD, 2007). The question arises in this case as to what criteria to Public Hospitals within Kisumu City use in selecting and evaluating its suppliers for better procurement performance.

Despite studies by Rajab (2016) and Kitheka (2013), among others agreeing to the fact that supplier responsiveness or a supplier's commitment has a positive impact on procurement performance of an organization, many of the literature recorded on the effects of supplier consistency and procurement performance was centered on county governments and corporate organizations procurement functions. This study therefore seeks to diversify and look at the effects on hospital procurement functions, using up to date information, a wide range of hospital levels in Kisumu, Kenya and lastly and most importantly, to establish the degree of the effect of the relationship between supplier consistency and procurement performance.

Just like supplier consistency, the competence of a supplier is key to bring a great influence to procurement performance. This is according to researches by Murigi (2014) and Kirande & Rotich (2014) among many others. There was very little research done on public hospitals where the researcher sort to capitalize on in order to add value to literature. Another important thing to note is that many of the literature on this topic just generalized the supplier competence function but

this study seals this gap by focusing on important issues like technology leverage, volume flexibility and the cost effectiveness aspect. Lastly, it is the researcher's desire to understand the extent of the effect of supplier competence on procurement performance using great statistical techniques.

Supplier production capacity has been cited in a number of literature reviews as a factor that influences procurement performance. But the paucity of the results from the literature is what brings about the inconsistency that the researcher ought to tap. Literature for example by Pamela (2013) suggests that production capacity has a high correlation with procurement performance, whereas studies like the one by Mwikali (2012) shows positive correlation but points out that the association is not such a key factor. On this note, the researcher seeks to dig deeper and understand the extent of the effect of supplier production capacity on procurement performance and majoring on public hospitals where most studies have dwelled on.

There has been reported concerns that procurement performance of the public institutions including public hospitals have a lot of gray areas in the procurement operations ranging from supplier's failure to meet delivery dates, delivery of inferior materials and even at times failing to furnish the orders completely (OECD, 2007). At the same time there is an increasing trend of a number of suppliers even those within the approved list of suppliers demanding payment before the deliveries are made (The star, 2014). The aim of this research proposal therefore is to find out the effect of supplier evaluation on the performance of procurement function in Public Hospitals within Kisumu City.

## **1.2. Statement of the Problem**

Procurement performance is key to the overall service delivery in an organization more so in service industries where quality and timely service delivery is considered critical. Procurement has been in the recent years considered to create very many benefits among them competitiveness and efficiency in service provision, but in realizing these benefits it is important to look at several factors that are strategic in affecting the contract of procurement functions. Procurement evaluation and maintaining competent suppliers is a very essential aspect in the procurement space. However, many factors affect a firm's ability to choose the right suppliers. Kisumu, Kenya public hospitals have put in place procurement functions that are mandated to ensure quality and timely deliveries of hospital equipment and non-equipment items. With the supply department in place, the hospitals have faced numerous challenges ranging from stockouts, capacity challenges both technical and financial from suppliers, long lead-times, poor workmanship etc. One key strategy of addressing such issues is through Supplier Evaluation where the supplier is taken through a process of due diligence before a final commitment to engage is made. However, procurement performance has not improved with departments still facing dissatisfaction for example with late deliveries and patients still facing challenges of purchasing drugs from external pharmacy due to stockouts. Researches have also been done previously on this subject, though few, with inconclusive results, and the researcher seeks to fill this knowledge gap by exploring further into the topic. From the researches that were conducted, most of them have been bias on procurement financial stability, supplier competency and supplier ethics as the variables that bring a positive shift to procurement performance.

With the paucities of research in this area, this has led the researcher to address the gaps using more updated evidence. The researcher sought to use more clear variables like supplier product



capacity and supplier consistency to test on the effects of supplier evaluation on procurement performance.

### **1.3 Objectives of the study**

#### **1.3.1 General objective**

The general objective of the study was to determine the effect of supplier evaluation on procurement performances of Public Hospitals in Kisumu, Kenya.

#### **1.3.2 Specific objectives**

The specific objectives of the study were:

- i. To evaluate the effect of supplier's consistency on procurement performance of Public Hospitals in Kisumu, Kenya.
- ii. To determine the effect of Supplier's production capacity on procurement performance of Public Hospitals in Kisumu, Kenya.
- iii. To assess the influence of supplier's competence on procurement performance of Public Hospitals in Kisumu, Kenya.

### **1.4 Research Hypothesis**

H<sub>01</sub>: Supplier consistency has no significant effect on procurement performance of Public Hospitals in Kisumu, Kenya.

H<sub>02</sub>: Supplier production capacity has no significant effect on procurement performance of Public Hospitals in Kisumu, Kenya.

H<sub>03</sub>: Supplier competence has no significant effect on procurement performance of Public Hospitals in Kisumu, Kenya.

## **1.5 Significance of the study**

Today's consumers demand cheaper price, high quality products, on-time delivery and excellent after-sale services. So, an efficient supplier evaluation needs to be in place and paramount importance for successful procurement activities.

The finding of the study may communicate the purchasing professionals for the effect of supplier evaluation on procurement performance. As such, they can develop their skills in supplier evaluation. For the suppliers, it may help them to understand the expectations of their customers by identifying the organization perceptions regarding the strengths and weaknesses of the suppliers.

This study may also be of relevant use to the industry and policy makers, to help a clear understanding of the effect of supplier evaluation on procurement performance at Public Procurement and Property Disposal Service. Mainly public organization may benefit from it by using the information from the study to work on areas which are important to improve supplier evaluation for the achievement of procurement performance by applying the recommendations. It provides a valuable insight to policy makers and other interested individual information on the effect of supplier evaluation. Academicians interested in supplier evaluation techniques in the quest to understand possible ways of improving procurement performance for further research, may benefit from this study.

Finally, recommendations drawn from this study may encourage other researchers to conduct similar and further in-depth researches on the subject under investigation.

## **1.6 Scope of the Study**

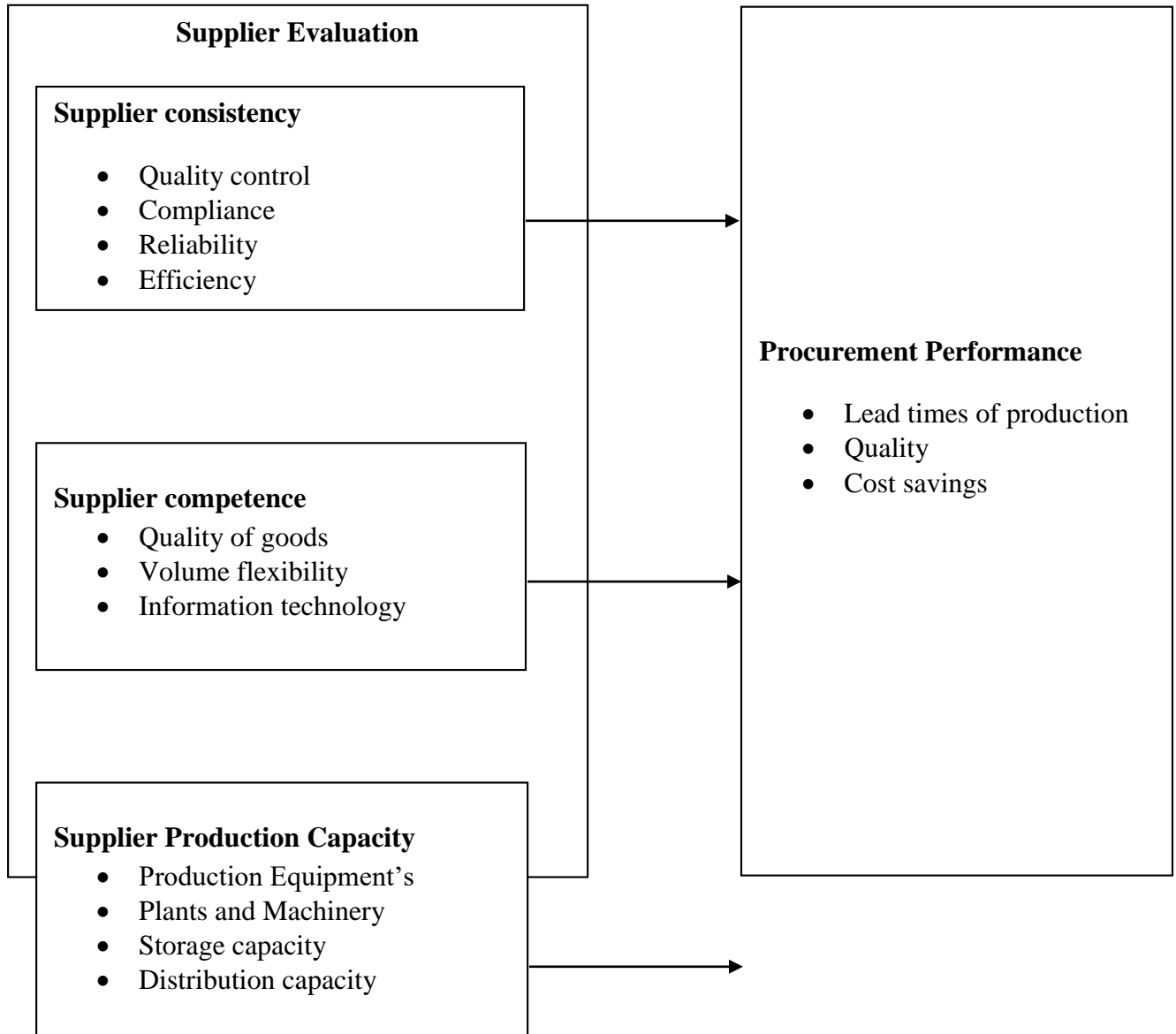
The study was carried out on Public Hospitals within Kisumu, Kenya. The study purposes generally to establish the effect of supplier evaluation on procurement performance specifically, the study seeks to establish the effect of supplier competency, supplier consistency and supplier production capacity on procurement performance of Public hospitals in Kisumu, Kenya.

The study focused on level 4 Public Hospitals in Kisumu because it is at the Level 4 hospitals where procurement procedures are carried out and the researcher can therefore get good data and correct information on procurement evaluation. The study considered the period between 2018 – 2023.

## 1.7 Conceptual framework

### Independent variables

### Dependent variable



Source: Adopted (Gazo, (2007)

**Figure 1. 1: Conceptual Framework of the relationship between supplier evaluation and procurement performance.**

The above figure depicts relationship between an Independent variable Supplier Evaluation and dependent variable Procurement Performances. Supplier evaluation metrics include Supplier Consistency, Supplier production capacity and Supplier Competence. Procurement performance metrics lead time of production, Quality and Cost savings while for independent variables are

## **CHAPTER TWO**

### **LITERATURE REVIEW**

This section reviews both theoretical and empirical literature on supplier evaluation and procurement performance.

#### **2.1. Theoretical Review**

##### **2.1.1 Supply Chain Management Theory**

Supply chain has its origin in Porter's (1985) value chain, which is the set of processes an organization uses to create value for its customers. Even though originally described as a chain, supply chain can nowadays be defined as the network of organizations that are involved through upstream and downstream linkages in the different processes and events that produce value in the form of products and services in the hands of the customer (Christopher, 2005). The chain involves two or more legally separated organizations that are linked together by material, information or financial flows and includes the ultimate customer. The objectives of the supply chain are to provide service to customers by bringing goods closer to customer reach, achieve low operating costs and minimize the assets in the chain (Skjott-Laysen, Schary, Mikkola, & Kotzab, 2004). Many organizations and state corporations are now looking at securing cost, quality, technology and other competitive advantages as strategies to pursue in a globally competitive environment and to achieve this government corporation are focusing on their supply chain management capability by investing in supplier evaluation management.

Supply chain management is an important multidisciplinary topic in modern business management and research. It enhances organizational productivity and performance through a revolutionary

philosophy to managing the business with sustained competitiveness (Gunasekaran, Patel, &McGaughey, 2014). Supply chain management emphasizes the overall and long-time benefit of all parties in the supply chain through co-operation and information sharing (Yu, Yan, & Cheng, 2013). Simchi-Levi et al. (2009), define Supply chain management as a set of approaches used to efficiently integrate suppliers, manufacturers, warehouses and stores so that products are produced and distributed at the right quantities, to the right locations, and at the right time in order to minimize system-wide costs while satisfying service-level requirements.

### **2.1.2. The Lean Supplier Competence Theory**

The Lean Supplier Competence Model was developed by Marks (2007). Through the model, a gap analysis can be charted and a plan drawn to bridge the disparity in the organization. The model evaluates the supplier against the five categories supports the Lean techniques of Kaizen – continuous improvement. The Supplier Competency Model explains how organizations interact in the five areas of competency where there are varying degrees of performance ultimately to achieve lean organizational operations. Each category is broken down into specific “behaviors” or ways the company and the supplier interact with each other. These behaviors are rated from a “1” as “Less Lean” to a rating of a “5” as “More Lean.” This measurement allows a company to determine placement of business based on common values and common strategic goals. Using this model, as the business philosophies of the company and the supply base draw together to eliminate waste, the natural result is a reduction of cost to the supply chain and to the ultimate customer (Xu, 2007).

This theory is equally relevant in supplier selection since it advocates for close working relationship. It is particularly important for an organization that is intending to foster lasting supplier relationship and those intending to build strategic partnership with their suppliers. The

sourcing organizations evaluate suppliers based on certain competence parameters and select the one that it would best work together with (Kitheka, 2013).

### **2.1.3. The Agile Supply Chain Theory**

The market environment has become more dynamic and turbulent; companies need to adopt new supply chain strategy for them to remain competitive. Supply chain management is now moving away from traditional processes to agile capability of competitive bases of speed, flexibility, innovation, quality, and profitability through the integration of reconfigurable resources and best practices in a knowledge-rich environment to provide customer-driven products and services in a fast-changing market environment (Yusuf et al., 2014). Agility is a business-wide capability that embraces organizational structures, information systems, logistics processes and in particular, mindsets (Christopher, 2013). Lee (2014) argues that supply chain agility aims at responding quickly to short-term changes in demand or supply and ensure that the company handles external disruptions smoothly. Christopher (2013) identified four characters of agile supply chain that included sensitivity, virtuality, process integration and network based. Process integration means collaborative working between buyers and suppliers, joint product development, common systems and shared information.

Agile supply chain is market sensitive and needs the supply chain members to be able to read and respond to the market demand. The supply chain members should show the willingness to create an environment in which information can flow freely in both directions in the chain for them to achieve a more agile supplier base. Christopher (2013) argues that leveraging supplier relations allows companies to create agile supply chains by reducing lead time between organizations.



The leverage of respective strengths and competencies of network partners assists to achieve greater responsiveness to market needs (Christopher, 2013). Krajewski et al. (2012) asserts that efficient supply chain has the qualities of make to stock, low capacity cushion, low inventory investment, short lead time, emphasis low process with consistent quality and on time delivery while for responsive supply chain include assemble to order with emphasis on product variety operational strategy, high capacity cushion, just as needed inventory to enable fast delivery time, shorten lead time and emphasis on fast delivery time, customization, and flexibility. It is through information sharing and collaboration that the company will have responsibility in assisting its external suppliers to improve quality, delivery time and service performance. This requires real time market feedback on actual customer requirements without making forecasts based upon past sales or shipments.

#### **2.1.4. Procurement Performance**

The evaluation of procurement performance takes into consideration of both the strategic and operational dimensions of the procurement function. From the operational dimension, procurement performance relates to the costs of purchasing, product and/ or service quality, delivery and flexibility in procurement (Henke, 2009). On the strategic dimension of procurement performance, it considers innovation in the purchasing process. In both cases, the measures that underlie the dimensions are multiple and differ based on inputs/outputs costs as well as quality, purchasing tasks costs, proportion of the just-in-time vendors, inventory turns, lifecycle durations for procurement, and timely deliveries (Lysons& Farrington, 2006).

As per Weele (2009) the effectiveness and efficiency of purchasing leads to purchasing performance. Performance is the foundation upon which an organization may gauge its progression toward the accomplishment of its pre-decided objectives, recognition of its strong and weak areas and choices on future programs with the view of triggering performance enhancements. As such, purchasing performance is not the ultimate objective, but an approach to a cost-effective control and checking the purchasing function. The cost-effectiveness of purchasing stands for numerous distinct competencies and abilities for the purchasing function.

Efficiency implies to “do things right” while on the other hands effectiveness means to “do the right thing”. The implication of this is that an effective entity is not necessarily 15 efficient, as the difficult part is to balance between the two. Assessing how the purchasing function performs brings gains to entities, for example, decline in costs, higher profits, ascertained supply, enhancements in quality, and a soaring competitive edge as suggested by (Batenburg & Versendaal, 2006).

Poor procurement performance on its part contributes to rising inefficiency as well as costs and competitiveness of the procurement function. According to Mlinga (2009), the bad performance of procurement is a factor in the decline of profits for the private sector, and as such, it is a significant hindrance to the realization of organizational growth as it leads to delays in delivery, low quality goods and services and increase in defects. In both private and public sectors, poor procurement performance results from inability to embrace e-procurement, use traditional procurement procedures and poor coordination of procurement activities between the requisitioning departments and the procurement department.

### **2.1.5 Supplier Evaluation**

A supplier evaluation should also be used for motivating existing suppliers and initiating corrective actions away from selecting suppliers and evaluating the bids (Buffa & Ittner 1987; Modi & Mabert 2007; Sarkar & Mohapatra 2006). With limited resources, it provides difficulty in evaluating all the existing suppliers.. By comparing the different suppliers, the ones that would benefit the most from supplier development can be identified (Forker & Mendez, 2001; Fredriksson & Araujo, 2003). In this process, supplier evaluation may be used as a tool to find areas in need of improvement. The evaluation can also be used as a basis for ongoing dialogue, where monitoring and learning are combined (Fredriksson & Araujo, 2003). In a study by Lamming, Cousins, & Notman (1996), it was found that improved overall quality, better all-round service, improved delivery performance and relationships, were the top four benefits of evaluating existing suppliers, with reduced costs following closely behind. When asked, the suppliers listed the same benefits, putting improved relationships first. In a similar study by Tracey & Tan (2001), it was found that the four dimensions of customer satisfaction and firm performance were positively affected when both choosing and regularly evaluating suppliers, with regard to quality, reliability and product performance.

In the same vein, it was also found that firms usually focus too much on unit price, leading to worse performance. To achieve the best performance, the company should work jointly with its suppliers on product development and continuous improvements. Price is considered as a key performance indicator during the last many years and a switch to the cost perspective can be clearly seen (Cho, Lee, Ahn, & Hwang, 2012; Groves, Collins, Gini, & Ketter, 2013). Moreover, quality and delivery performance have always been presented as significant variables in all supply chain models (Droge, Vickery, & Jacobs, 2012; Lee, Rhee, & Cheng, 2013; Loppacher, Cagliano, &

Spina, 2011; Shin, Benton, & Jun, 2009). Innovativeness has also been referred from several researchers although only recently has gained some significance (Caridi, Pero, & Sianesi, 2012; Inemek & Matthyssens, 2013; Panayides & Venus Lun, 2009). In addition, flexibility is a criterion that has started to appear in the models during the last decade (Das, 2011; Gong, 2008). Even though criteria such as continuous improvement (Jaber, Bonney, & Guiffrida, 2010) and personal relationships have followed the same trend, factors such as the importance of geographical location have decreased in significance.

## **2.2 Empirical Literature**

The empirical study is evidence-based research that is to say it uses evidence, experiment or observation to test the hypotheses. Empirical research allows researchers to find new and thorough insights into the issue. The researcher presents sub-section of the published work in the area of research interest as per the objectives of the study.

### **2.2.1 Suppliers' Consistency and Procurement Performance**

A study conducted by Rajab and Muchelule (2016) on the Effect of Supplier Responsiveness on Procurement Performance in County Governments, Kenya established that supply chain responsiveness plays a key role in elevating purchasing performance. There is therefore need for county government to source for supplier who respond in time and supply product within the given time. Moreover, suppliers need take responsibility of any complication that occurs during the procurement process. A study conducted by Kitheka (2013) on the Effect of Supplier Quality Management on Organizational Performance found that the effect of supplier quality commitment is significant for organizations with documented strategies of supplier evaluation. He pointed out that from supplier quality management, an organization may enjoy among other benefits reduced

lead times, increased responsiveness to customers, orders and enquiries, customer loyalty, increased profitability, reduced opportunity cost from lost sales and effective communication between the organization suppliers as well as customers.

A study by Tracey (2008) on analysis of supplier and procurement issues in UK established that quality commitment is determining factor for qualified supplier and is a key element and a good resource to cut production and material costs in order to survive or sustain competitive position in respective markets, hence development of an effective and rational supplier evaluation and selection is desirable. In the study, she observed that in South Korea for example, the supplier quality evaluation function's role has dramatically increased as companies sought to gain competitive advantage in the global market place. The effects of supplier quality evaluation were seen as a strategic resource for reaching high quality levels, fast delivery and cost savings. Companies such as General Motors, Mark & Spencer have been able to gain an improved competitive position through a better management of their purchasing activities (Dodos, 2003).

A study conducted by Kithaka et al (2013) on supplier evaluation practices established that supplier performance measurement, supplier audits, supplier development and supplier integration are the most used supplier quality management practices. The study also established that from supplier quality management, an organization may enjoy among other benefits reduced lead times, increased responsiveness to customers', orders and enquiries, customer loyalty, increased profitability, reduced opportunity cost from lost sales and effective communication between the organization suppliers as well as customers. The study further recommended that suppliers should maintain reliable records so as to avoid the problem of poor visibility and traceability and that the organizations must build into their systems quality measures and continuous inspections so that disappointments of customers through discontinuous supply or supply of poor-quality products.

Despite studies by Rajab (2016) and Kitheka (2013), among others agreeing to the fact that supplier responsiveness or a supplier's commitment has a positive impact on procurement performance of an organization, many of the literature recorded on the effects of supplier consistency and procurement performance was centered on county governments and corporate organizations procurement functions. This study therefore seeks to diversify and look at the effects on hospital procurement functions, using up to date information, a wide range of hospital levels in Kisumu, Kenya and lastly and most importantly, to establish the degree of the effect of the relationship between supplier consistency and procurement performance.

Studies though have attempted to look at the relationship between Supplier Evaluation and Procurement performance. None of the studies looked at supplier consistency a metric of Supplier evaluation and its effect on performance on public hospitals in Kisumu city and therefore information on its effect on procurement performance is missing and warrants investigation

### **2.2.2 Supplier Competence and Procurement Performance**

A study by Kirande & Rotich (2014) on the determinants of public procurement performance in Kenyan Universities established that the main concern of procurement function is to make sure that one buys from the best suppliers and also improve the current suppliers. The organizations therefore choose suppliers with who have the capacity to deliver. The study further observed that supplier evaluation can work as a tool to influence future behavior of both buyer and supplier organization. By connecting procurement targets to certain supplier competence, organizations achieve higher supplier performance thereby leading to improved procurement performance. On the other hand, Nzau (2014) in his study on factors affecting procurement performance of public Universities in Nairobi County found out that selection of suppliers is done based on certain set criteria and the needs of the procuring entity. He points out that among the factors which affects

the procurement performance includes timely preparation of procurement plan, strategic supplier selection plus buyer supplier relationships among other factors.

Further study indicates that, after the prequalification of suppliers based on supplier competence, public institutions expect a lot from their suppliers because they are confident that they have filtered their suppliers on very efficient basis but still they are uncertain about the quality of the items to be delivered, on time delivery, commitment to quality, technology leverage, and overall performance of suppliers (Masceko,2013). These findings concur with findings of CIPS (2013) in their report on monitoring the performance of suppliers pointed that strategic monitoring of competence of suppliers is critical in management of performance operations and most importantly, management of supplier-buyer relationship.

A study done by Murigi (2014) on the influence of Supplier Appraisal on Procurement Performance in the Real Estate Industry in Kenya, established that different supplier evaluation criteria are given different importance when selecting potential suppliers with financial stability, technical competence and quality control and management seen as major criteria in selecting suppliers. The study established that site visits and /or use of reference checks are the most common ways of appraising suppliers and their performance. The study revealed that supplier audits, incentives and awards improve supplier performance especially on quality management. The study also found that supplier training programs enables procurement to work collaboratively with suppliers to reduce costs and improve services. Thus, the study revealed that that supplier assessment and development improves efficiency and effectiveness in the procurement process. The study also established that supplier assessment and development has a great influence on procurement performance.

Just like supplier consistency, the competence of a supplier is key to bring a great influence to procurement performance. This is according to researches by Murigi (2014) and Kirande & Rotich (2014) among many others. There was very little research done on public hospitals where the researcher sort to capitalize on in order to add value to literature. Another important thing to note is that many of the literature on this topic just generalized the supplier competence function but this study seals this gap by focusing on important issues like technology leverage, volume flexibility and the cost effectiveness aspect. Lastly, it is the researcher's desire to understand the extent of the effect of supplier competence on procurement performance using great statistical techniques.

Studies though have attempted to look at the relationship between Supplier Evaluation and Procurement performance. None of the studies looked at supplier competence a metric of Supplier evaluation and its effect on performance on public hospitals in Kisumu city and therefore information on its effect on procurement performance is missing and warrants investigation

### **2.2.3 Supplier Production Capacity and Procurement Performance**

According to report produced by EU (2009) in their survey on supplier evaluation in Germany, a competitive supplier sourcing process should be carried out in an open, objective and transparent manner can achieve best value for money in public procurement. Essential principles that should be observed in conducting the procurement function include supplier production capacity, capability and readiness to embrace new technology among other factors. In addition to the above indicators, the findings of study conducted by Mwikali&Kavale (2012) revealed that cost factors, technical capability, quality assessment, organizational profile, service levels and risk factors, in that order of relative importance, are key factors affecting supplier selection in procurement management. The findings further indicated that supplier selection should be done by experts who



are knowledgeable and have expertise to conduct the exercise professionally since supplier selection is a process vulnerable to personal and political interference especially in the public sector.

According Pamela (2013) in her study on the determinants of supplier selection and evaluation in Pakistan Telecom industry, supplier production capacity expertise is one of the key factors which determine the eventual performance of both the supplier and procurement performance, the study depicted high correlation between the production capacity of supplier and ability of supplier to deliver which in turn enhances procurement performance indicating a need for a strategic alliance for improved performance of the parties.

Similarly, a study on the evaluation of procurement process in public institutions of Uganda, conducted in Makerere University established that reduction in purchasing cost through effective supplier evaluations is one of the most significant purposes of procurement. On average, public Universities in Uganda spent 80% of their budgets on activities related to the purchase of materials, hence cost reductions as a result of effective supplier evaluation allow the firm to pursue price competition strategies in downstream markets and sustain growth throughout the entire supply chain stream (Pontious, 2008).

Supplier production capacity has been cited in a number of literature reviews as a factor that influences procurement performance. But the paucity of the results from the literature is what brings about the inconsistency that the researcher ought to tap. Literature for example by Pamela (2013) suggests that production capacity has a high correlation with procurement performance, whereas studies like the one by Mwikali (2012) shows positive correlation but points out that the association is not such a key factor. On this note, the researcher seeks to dig deeper and understand

the extent of the effect of supplier production capacity on procurement performance and majoring on public hospitals where most studies have dwelled on.

Studies though have attempted to look at the relationship between Supplier Evaluation and Procurement performance. None of the studies looked at supplier production capacity a metric of Supplier evaluation and its effect on performance on public hospitals in Kisumu city and therefore information on its effect on procurement performance is missing and warrants investigation

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

In this section the researcher examined the methodology used to conduct the research. It discusses various aspects regarding the research design, study population, sample size, study area, data collection methods and lastly the analysis bit.

#### **3.1 Research Design**

The function of a study design is to provide relevance to a study structure. It is the guiding blocks that gives relevance to how the analysis of a study is to look like. According to Cooper & Schindler (2008), a Research Design is the broad outlook that takes into account procedures and plans that details the methods of data collection and data analysis. The study adopted correlational research design. The design was used in looking at the effects of supplier evaluation on the procurement performance of public hospitals in Kisumu town.

#### **3.2 Study area**

The study was carried out in three Level 4 public Hospitals in Kisumu, Kenya. The hospitals are JOOTRH, Kisumu County Hospital, and Lumumba hospital.

#### **3.3 Target population**

Target population in statistics is specific population about which information is desired. According to Kothari (2004) a population is a well-defined set of individuals, services, elements, and events, group of things or households which are being examined. The targeted population was obtained from three level three and four public hospitals in Kisumu, Kenya which are

JOOTRH, Kisumu County Hospital, Lumumba hospital and Ahero Sub County Hospital. The participants targeted from the hospital to participate in this study were all the heads of Procurement, warehousing and stores departments all totaling to 63 respondents.

### **3.4 Sample and Sampling Technique**

Conducting research analysis, it is recommendable to always use samples of data. According to Kothari (2004), a sample is a small representative portion of an entire population, more so when the population is quite large enough, that can be used to make generalizations about the whole population. Using census survey technique, all the staff from procurement departments, warehouse and stores department participated as respondents in the study.

### **3.5 Data Collection Method**

#### **3.5.1 Data Types and Sources**

The study collected primary data. The data was collected from the respondents of Jaramogi Oginga Odinga Hospital, Kisumu County Hospital, Lumumba Hospital and Ahero Sub County Hospital. The respondents were picked through a census survey method.

#### **3.5.2 Data Collection Procedure**

The study followed normal data collection procedure for any academic work. First, upon successful defense of this proposal, the researcher obtained a transmittal letter from the school of postgraduate to proceed to data collection. Second, upon approval, the researcher proceed to issuance of questionnaires to respondents using drop-and-pick data collection method.

### **3.5.3 Data Collection Instruments**

The study adopted questionnaire form for collecting primary data. The designed questionnaire gathered data on the extent to which supplier consistency, supplier competence and supplier production capacity evaluation techniques were adopted in their departments. The questionnaire also probed the respondents on the level of their procurement performance based. The choice of questionnaire was justified for its economical and convenience in use.

### **3.5.4 Pilot Test**

According to Zikmund et al. (2013) a pilot refers to as a small-scale research project that collects data from respondents similar to those that will be used in the full study. Connelly (2008) asserts that a pilot study sample size of 10% or more of the population is sufficient. It is on reference to this that the study settled for a sample size of 11 respondents who were employees in the departments of procurement, warehouse and stores from Magunga and Rachuonyo Level four Hospitals in Homabay County Government to conduct the pilot test of the research instrument. The distribution equated to all the departments to give a clear view of whether the study was sufficient to be conducted.

### **3.5.5 Instruments Validity Test**

According to Mugenda and Mugenda (2003) validity is the accuracy and meaningfulness of inferences, based on the research results. Validity indicates the degree to which an instrument measures what it is supposed to measure. This gives the accuracy and meaningfulness of inferences. It is the extent to which differences found with a measuring instrument reflect true differences among those being tested. It also refers to the data that is not only reliable, but also

true and accurate. Content validity was ascertained through issuing of the data collection instrument for review to experts in the field of supply chain who suggested that some items like the demographic information questions be removed from the questionnaire as they were not going to be useful in answering the objectives of the study.

### **3.5.6 Instruments Reliability Test**

Test for reliability of the questionnaire was done using Cronbach's Alpha Reliability Test. The Cronbach's Alpha Reliability Test provided an indicator of the internal reliability or consistency of items in a multiple item scale. According to (Kumar, 2011) Cronbach's Alpha Reliability test define the proportion of the variability in the responses of the survey. This variability is the result of differences in the responses of the respondents and indicates whether an item or scale is free from measurement error and identify inconsistent items. The alpha value ranges between 0 and 1 with reliability increasing with the increase in value. Therefore, the Alpha coefficient values above 0.7 is used as a rule of thumb to reject or accept the instrument (Kumar, 2011)

The data from the pilot test was analyzed and the results were correlated to determine their reliability coefficients. All variables combined had a reliability coefficient of 0.971. This was above the 0.7 threshold and therefore confirmed the instrument's reliability

### **3.6 Data Analysis Techniques**

Data was sorted through editing, coding and classification and then regressed using Multiple regression analysis to establish the effect of the supplier evaluations practices on procurement performance. The following regression model was adopted by the study:

$$Y = \beta_0 + \beta_1 XSCN_1 + \beta_2 SCM_2 + \beta_3 SCP_3 + \dots \epsilon$$

Where:

Y	Procurement performance measures index.
B <sub>0</sub>	Constant
β <sub>1</sub> ..... β <sub>3</sub>	Regression coefficients of variables
SCN <sub>1i</sub>	Supplier Consistency
SCM <sub>2</sub>	Supplier Competency
SCP <sub>3i</sub>	Supplier Production Capacity
ε <sub>i</sub>	Error term.

## CHAPTER FOUR

### RESULTS AND DISCUSSIONS

This study was carried out to determine the effect of supplier evaluation on procurement performances of Public Hospitals in Kisumu, Kenya. This chapter presents analysis and findings of the study as set out in the research objectives and methodology. The results are presented according to the objectives of the study.

#### 4.1. Response Rate

From a target population of 63 respondents, 63 questionnaires sent dropped and 62 were received, the majority of which were received after subsequent visits. This accounted for 98.4% of the targeted respondents. A sample of at least 30 respondents is considered adequate to provide data that can be subjected to correlation and regression analysis (Khothari, 2004).

#### 4.3 Regression Analysis

A multiple regression analysis was performed to establish the effect of the independent variable constructs; Supplier consistency (SCN), Supplier competency (SCM) and supplier production capacity (SPC) on procurement performance. The results are presented in table 4.1, 4.2 and 4.3.

The table 4.1 presents the model summary results indicating the variations in the outcome variable explained by the predictor variable constructs.

**Table 4. 1: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.959 <sup>a</sup>	0.919	0.915	1.51475

a. Predictors: (Constant), SCN, SCM, SPC

**Source: Research data, 2023**



From table 4.1, the model summary showed that  $R^2 = 0.919$ ; implying that 91.9% variations in the performance of the procurement of the public hospitals in Kisumu is explained by supplier evaluation while other factors not in the study model accounts for 8.1% of variation in the procurement performance of the public hospitals in Kisumu.

The table 4.2 the ANOVA table presents the overall F statistic for the regression model and the p-value associated with the overall F statistic results. These indicate how best the data fitted the model and the significant effect of the predictor variable on the outcome variable.

**Table 4. 2: ANOVA**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1519.963	3	506.654	220.817	.000 <sup>b</sup>
1 Residual	133.079	58	2.294		
Total	1653.041	61			

a. Dependent Variable: PP

b. Predictors: (Constant), SCN, SCM, SPC

**Source: Research data, 2023**

The F-statistic of 220.817 in table 4.2 is 220.817 and p value at 95% confidence level ( $P=0.000 < 0.05$ ), this implies that the data collected fitted the model evidenced by a f statistic of above 2 and that supplier evaluation collectively have a significant effect on procurement performance of the public hospitals in Kisumu at 95% confidence level evidenced by a p value of ( $P=0.000$ ).

Table 4.3 the Coefficient table presents the constant, unstandardized beta and their corresponding p vales results indicating any significant relationship between the predictor constructs and the outcome variables.

**Table 4. 3: Coefficient table**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
	(Constant)	2.055	0.778	2.64	0.011	
1	SCN	0.213	0.164	0.199	1.301	0.199
	SCM	1.136	0.278	0.968	4.082	0.000
	SPC	-0.293	0.161	-0.225	-1.815	0.075

a. Dependent Variable: PP

b. Predictors: (Constant), SCN, SCM & SPC

**Source: Research data, 2023**

From table 4.3 results the fitted regression model was as follows

$$PP = \beta_0 + \beta_1SCN_1 + \beta_2SCM_2 + \beta_3SPC_3 + \dots + e$$

$$PP = 2.055 + 0.213SCN_1 + 1.136SCM_2 - 0.293SPC_3$$

Model:

PP Procurement Performance

SCN<sub>1</sub> Supplier Consistency

SCM Supplier Competence

SPC Supplier Production Capacity

The results in table 4.3 the multiple regression coefficient table reveals a beta constant of 2.055 and a p=0.011. This implies that a unit increase in supplier evaluation other factors held constant, would lead to a corresponding change of 2.055 in procurement performance of the public hospitals in Kisumu at 95% confidence level. For the specific constructs of supplier evaluation, the multiple regression model revealed the following:

Supplier consistency has a positive effect but not a significant one on procurement performance ( $\beta = 0.213$ ,  $p = 0.199 > 0.05$ ) this implies that a unit change in supplier consistency would lead to unit change (increase) in the procurement performance by 0.213 units, this though is not statistically significant at  $\alpha = 0.05$ . In practise, the inclusion and adoption of supplier consistency as evaluation technique in supplier evaluation has an insignificant positive effect on the procurement performance of public hospital in Kisumu, Kenya. The hypothesis one ( $H_{01}$ ) that stated that supplier consistency has no significant effect on procurement performance of public hospitals in Kisumu and from the results, was therefore accepted.

The results refute the arguments in a study conducted by Rajab and Muchelule (2016) on the Effect of Supplier Responsiveness on Procurement Performance in County Governments, Kenya established that supply chain responsiveness plays a key role in elevating purchasing performance. There is therefore need for county government to source for supplier who respond in time and supply product within the accepted lead time. Moreover, suppliers need take responsibility of any complication that occurs during the procurement process.

Supplier competence ( $\beta = 1.136$ ,  $p = 0.000 < 0.05$ ) this implies that a unit change in supplier competence would lead to unit change (increase) in the procurement performance by 1.136 units, this being statistically significant at  $\alpha = 0.05$ . In Practise, the inclusion of supplier competence as an evaluation technique in supplier evaluation has a very strong positive effect on the procurement performance of public hospital in Kisumu, Kenya. The more supplier competence items are considered in the evaluation of the suppliers the more enhanced the procurement performance of the Hospitals. The hypothesis two ( $H_{02}$ ) that stated that supplier competency has no significant effect on procurement performance of public hospitals in Kisumu and from the results, was therefore rejected

The results therefore agree with studies done by Kirande & Rotich (2014) on the determinants of public procurement performance in Kenyan Universities established that the main concern of procurement function is to make sure that one buys from the best suppliers and also improve the current suppliers. The organizations therefore choose suppliers with who have the capacity to deliver. The study further observed that supplier evaluation can work as a tool to influence future behavior of both buyer and supplier organization. On the other hand, Nzau (2014) in his study on factors affecting procurement performance of public Universities in Nairobi County found out that selection of suppliers is done based on certain set criteria and the needs of the procuring entity. He points out that among the factors which affects the procurement performance includes timely preparation of procurement plan, strategic supplier selection plus buyer supplier relationships among other factors.

Supplier production capacity ( $\beta = - 0.293$ ,  $p = 0.075 > 0.05$ , this implies that a unit changes in supplier capacity of production would lead to unit change(decrease) in the procurement performance by -0.293 units, this not being statistically significant at  $\alpha = 0.05$ . In practice, the more emphasis is put on suppliers' production capacity as an evaluation criterion the less procurement performance is likely to be experienced by the public hospitals in Kisumu County. The hypothesis three ( $H_{03}$ ) that stated that supplier production capacity has no significant effect on procurement performance of public hospitals in Kisumu and from the results, was therefore accepted.

These results refute the argument in a study by Pamela (2013) who suggests that production capacity has a high correlation with procurement performance, but agrees with the study one by Mwikali (2012) shows positive correlation but points out that the association is not such a key factor.

## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This study was carried out to establish the effect of supplier evaluation on procurement performance of public hospitals in Kisumu. The study had three objectives, to establish the effect of supplier consistency on procurement performance of public hospitals in Kisumu, to determine the effect of supplier competence on procurement performance of public hospitals in Kisumu and to determine the effect of supplier production capacity on procurement performance of public hospitals in Kisumu. This chapter presents the summary of findings for the three objectives mentioned above, the conclusions, recommendations made based on findings and the suggestions on areas that need to be researched as far as this concept is concerned.

#### **5.1 Summary of Findings**

The first objective of the study was to establish the effect of supplier consistency on procurement performance of public hospitals in Kisumu. The hypothesis that supplier consistency has no significant effect on procurement performance of public hospitals in Kisumu was formulated and tested. The results indicated that a unit change in supplier consistency would lead to an insignificant unit change(increase) in the procurement performance at the study's acceptable confidence level. The hypothesis one ( $H_{01}$ ) that stated that supplier consistency has no significant effect on procurement performance of public hospitals in Kisumu , was therefore accepted.

The second objective of the study was to establish the effect of supplier competence on procurement performance of public hospitals in Kisumu. The hypothesis that supplier competence had no significant effect on procurement performance of public hospitals in Kisumu was formulated and tested. The findings indicated that a unit change in supplier competence would

lead to a significant unit change(increase) in the procurement performance at the study's acceptable confidence level. The hypothesis two ( $H_{02}$ ) that stated that supplier competency has no significant effect on procurement performance of public hospitals in Kisumu was therefore rejected.

The third objective of the study was to establish the effect of supplier production capacity on procurement performance of public hospitals in Kisumu. The hypothesis that supplier production capacity had no significant effect on procurement performance of public hospitals in Kisumu was formulated and tested. The findings indicate that a unit change in supplier production capacity would lead to insignificant unit change(decrease) in the procurement performance at the study's acceptable confidence level. The hypothesis three ( $H_{03}$ ) that stated that supplier production capacity has no significant effect on procurement performance of public hospitals in Kisumu and from the results, was therefore accepted.

## **5.2 Conclusions**

In practise, the inclusion and adoption of supplier consistency as evaluation technique in supplier evaluation has an insignificant positive effect on the procurement performance of public hospital in Kisumu, Kenya. The study therefore concludes that supplier's production consistency is not a suitable criteria or technique for evaluating suppliers in the organization.

In Practise, the inclusion of supplier competence as an evaluation technique in supplier evaluation has a very strong positive effect on the procurement performance of public hospital in Kisumu, Kenya. The more supplier competence items are considered in the evaluation of the suppliers the more enhanced the procurement performance of the Hospitals. The study therefore concludes that

supplier's competence is a suitable criteria or technique for evaluating suppliers in the organization.

In practice, the more emphasis is put on suppliers' production capacity as an evaluation criterion the less procurement performance is likely to be experienced by the public hospitals in Kisumu County. The study therefore concludes that suppliers' production capacity is not a suitable criteria or technique for evaluating suppliers in the organization

### **5.3 Recommendations**

The study recommends exclusion of supplier consistency items in the evaluation of suppliers as they have been established to be having no significant effect on the performance of procurement.

The study recommends inclusion of supplier competency items in the evaluation of suppliers as they have been established to be having a very high significant effect on the performance of procurement.

The study recommends exclusion of supplier production capacity items in the evaluation of suppliers as they have been established to be having no significant effect on the performance of procurement.

### **5.4 Limitations of the Study**

The findings of this study and application therefore are limited to public hospitals in Kisumu City. They may not be applicable directly to other organizations operating outside Kisumu. It is therefore important to note that they can only be used for comparative purposes and not any direct application in another sectors or country.

The research only focused on the public hospitals in Kisumu. It did not feature the public hospitals in other parts of the county or country. This was because of limited time and resources. It was such

an uphill task for the researcher to convince the respondents to participate in the study. Public hospitals are very busy organizations where getting a respondent was challenging. Most of the respondents agreed to participate on condition that the information was not to be divulged to any other party other than for academic purposes only.

### **5.5 Suggestions for Future Research**

First, a similar study can be done but incorporate electronic procurement to assess its influence on procurement performance function. Secondly, another study can be done but targeting customers or user departments to assess procurement performance in the eyes of procurement service recipients and not procurement officers as procurement service providers.



## REFERENCES

- Achuora, J., Arasa, R., & Ochiri, G. (2012). Precursors to effectiveness of public procurement audits for Constituency Development Funds (CDF) in Kenya. *European Scientific Journal*, 8(25): 198-214.
- Aljadir, A., & Alnemsh, M. (2020). Exploration of the COVID-19 pandemic in relation to the healthcare industry Supply Chain.
- Amemba, C. S., Nyaboke, P. G., Osoro, A., & Mburu, N. (2013). Challenges affecting public procurement performance process in Kenya. *International Journal of Research in Management*, 3(4), 41-55.
- Amin, S. H. (2011). Supplier selection and order allocation based on fuzzy SWOT analysis. *Expert Systems with Applications*, 38 (1), 334-342.
- Bai, C., & Sarkis, J. (2009) Supplier Selection and Sustainability: a Grey rough Set evaluation. *Working paper No. 2009 -05*.
- Barsemoi, H., Mwangagi, P., & Asienyo, B.O. (2014). Factors Influencing Procurement Performance in Private Sector in Kenya. *International Journal of Innovation and Applied Studies*, 9(2): 632-641.
- Batenburg, R. S., & Versendaal, J. M. (2006). Alignment Matters-Improving business functions using the procurement alignment framework.
- Beil, D. (2009). Supplier selection. Stephen M. Ross School of Business
- Blome, C., Hollos, D. and Paulraj, A. (2013). Green procurement and green supplier development: antecedents and effects on supplier performance. *International Journal of Production Research*, 52(1), pp.32-49.
- Campbell, D. (2006). Top ministers face inquiry into corruption allegations in Kenya.
- Chuchu, S. A., Adoyo, M., & Osuga, B. O. (2015). Information management for essential medicines supplies in public primary care facilities in Nairobi County, Kenya. *African Journal of Pharmacy and Pharmacology*, 9(19), 532-539.
- Chartered Institute of Procurement and Supply', (n.d.). Supplier Selection - The Chartered Institute of Procurement and Supply.
- Chemoiywo, P.K. (2014). Public procurement procedures and supply chain performance In state corporations in Kenya. Unpublished MBA project, University of Nairobi.
- Chen, Y. J. (2011). Structured methodology for supplier selection and evaluation in a supply chain. *Information Sciences*, 181(9), 1651-1670.
- Cheng, L., & Yuyan, G. (2013). Design of Closed-loop Supply Chain Contract for Third-party-led Recycling in Separated Recycling [J]. *Logistics Technology*, 3.
- Chimwani, B. I., Iravo, M.A., & Tirimba, O.I. (2014). Factors influencing procurement performance in the Kenyan Pubic Sector: Case study of the State Law Office. *International Journal of Innovation and Applied Studies*, 9(4): 1626- 1650.

- Chopra, S., & Meindl, P. (2015). *Supply chain management: Strategy, planning and operation* (6th Edition). New Jersey: Prentice Hall.
- Cho, D. W., Lee, Y. H., Ahn, S. H., & Hwang, M. K. (2012). A framework for measuring the performance of service supply chain management. *Computers & Industrial Engineering*, 62(3), 801-818.
- CIPS. (2013). *Monitoring the Performance of Suppliers-CIPS Positions on Practice*.
- CIPS Knowledge (2014). *Contract Management*; CIPS Knowledge bytes,
- Connelly, L. M. (2008). Pilot studies. *Medsurg nursing*, 17(6), 411.
- Cooper, D. R., & Schindler, P.J. (2003). *Business Research Methods* (8th edition). New Delhi: McGraw-Hill Inc.
- Cousins, P. D., & Spekman, R. (2008). "Strategic supply and the management of inter-and intra-organizational relationships". *Journal of Purchasing & Supply Management*, old
- Creswell, J. W. (2002). *Educational research: Planning, conducting, and evaluating quantitative* (p. 676). Upper Saddle River, NJ: Prentice Hall.
- Deyrup, M. (2013). *Successful strategies for teaching undergraduate research*. Lanham: Scarecrow Press, Inc.
- Diabat, A., & Simchi-Levi, D. (2009, December). A carbon-capped supply chain network problem. In *2009 IEEE international conference on industrial engineering and engineering management* (pp. 523-527). IEEE.
- Dobos, I. (2013). Supplier selection and evaluation decision considering environmental aspects. 1-23.
- Droge, C., Vickery, S. K., & Jacobs, M. A. (2012). Does supply chain integration mediate the relationships between product/process strategy and service performance? An empirical study. *International Journal of Production Economics*, 137(2), 250-262.
- Engelbert, A., Reit, N., & Westen, L. (2012). Procurement Methods in Kenya - A Step towards Transparency? *European Procurement & Public Private Partnership Law Review*, 7(3): 162-171.
- Evans & James, R. (2007). *Quality & Performance Excellence: Management, Organization and Strategy*. Mason, OH: Thomson Higher Education.
- Fan, Q., Xu, X., & Gong, Z. (2007, September). Research on lean, agile and leagile supply chain. In *2007 international conference on wireless communications, networking and mobile computing* (pp. 4902-4905). IEEE.
- Fredriksson, P., & Araujo, L. (2003). The evaluation of supplier performance: A case study of volvo cars and its module suppliers. *Journal of Customer Behaviour*, 2(3), 365-384.
- Gadde, L. E., & Hakansson, H. (2001). *Supply chain network Strategies*.
- Gordon, S. R. (2008). *Supplier evaluation and performance excellence: a guide to meaningful metrics and successful results*. Ft. Lauderdale, FL, J. Ross Pub.

- Gunasekaran, A., Patel, C., & McGaughey, R. E. (2004). A framework for supply chain performance measurement. *International journal of production economics*, 87(3), 333-347.
- Hald, K.S., & Ellegaard, C. (2011). Supplier evaluation processes: the shaping and Reshaping of supplier performance. *International Journal of Operations & Production Management*, 31(8): 888-910.
- Hoyt, D., Silverman, A., & Marks, M. (2007). *Crocs: Revolutionizing an Industry's Supply Chain Model for Competitive Advantage*. Stanford University, Graduate School of Business.
- Humphreys. (2003). The impact of supplier development on buyer–supplier performance. *The International Journal of Management Science*, 32, 131-143.
- Humphreys, P. K. (2004). The impact of supplier development on buyer–supplier performance. *Omega*, 32 (2004) 131–143.
- International Transparency. (2010). *Corruption and Public Procurement*. Nairobi: Transparency International.
- Ikumu, B. I. (2014). Factors Influencing Procurement performance in the Kenyan Public Sector: Case Study of the State law Office. *International Journal of Innovation and Applied Studies*, 9 (4), 1626-1650.
- Justus Kiprotich Mutai, Barrack Okello (2016) Department of Procurement, Effects of Supplier Evaluation on Procurement Performance
- Kamotho, K. (2014). *E-Procurement and Procurement Performance among State Corporations in Kenya*. Nairobi: University of Nairobi.
- Kangogo, J. and Kiptoo, E. (2013). Factors Affecting Ethical Standards in Public Procurement in Kenya. [online] Academia.edu. Available at:
- Karanja, N., & Mugo, W. (2010). Internal factors affecting procurement process of supplies in the public sector: A survey of government ministries. Nairobi: Jomo Kenyatta University of Agriculture and Technology.
- Kavale, S., & Mwikali, R. (2012). Factors affecting the selection of optimal suppliers in procurement management. *International Journal of Humanities and Social sciences*, 12(14): 189-193.
- Kemunto, D. &. (2014). Influence of Strategic Buyer Supplier Alliance on Procurement Performance in Private Manufacturing Organization: A Case of Glaxo Smithkline. *European Journal of Business Management*, 2 (1), 336- 341.
- Kirande, J. &. (2014). Determinants Affecting Public Procurement Performance in Kenyan Universities: A Case of the Co-operative University College of Kenya. *International Academic Journals*, 1(1), 104-123.

- Kitheka, S. M. (2013). The Effect of Supplier Quality Management on Organizational Performance: A Survey of Supermarkets in Kakamega Town. *International Journal of Business and Commerce*, Vol. 3, No.1: Sep 2013 [71-82].
- Kothari, C.R. (2004). Research Methodology (Methods and techniques) Second revised edition. New Delhi: New Age International (P) Limited, Publishers.
- Krause, D. R., Handfield, R. B., & Tyler, B. B. (2007). The relationships between supplier development, commitment, social capital accumulation and performance improvement. *Journal of operations management*, 25(2), 528-545.
- Krishna, H., & Kumar, K. (2011). Reliability estimation in Lindley distribution with progressively type II right censored sample. *Mathematics and Computers in Simulation*, 82(2), 281-294.
- Kue, R. C., Temin, E. S., Weiner, S. G., Gates, J., Coleman, M. H., Fisher, J., & Dyer, S. (2015). Tourniquet use in a civilian emergency medical service setting: a descriptive analysis of the Boston EMS experience. *Prehospital Emergency Care*, 19(3), 399-404.
- Lee, H., Kim, M. S., & Kim, K. K. (2014). Interorganizational information systems visibility and supply chain performance. *International Journal of Information Management*, 34(2), 285-295.
- Locke, E. A., & Latham, G. P. (2002). Building a practically useful theory of goal setting and task motivation: A 35- year odyssey. *American psychologist*, 57(9), 705.
- Locke, E. A., & Latham, G. P. (2006). New directions in goal-setting theory. *Current directions in psychological science*, 15(5), 265-268.
- Lysons, K., & Farrington, B. (2006). Purchasing and supply management. *Research Education*.
- Mangan, J., & Christopher, M. (2005). Management development and the supply chain manager of the future. *The International Journal of Logistics Management*.
- Milner, H. V. (1999). The political economy of international trade. *Annual review of political science*, 2(1), 91-114.
- Monczka, R. M., Trent, R. J., & Handfield, R. B. (2002). *Purchasing and supply chain management*. South-Western Pub.
- Murigi, P. M. (2014). Influence of supplier appraisal on procurement performance in the real estate industry in Kenya: A case study of international house ltd. *International Journal of Operations and Logistics Management*, 3(3), 250-262.
- Mwikali, R., & Kavale, S. (2012). Factors Affecting the Selection of Optimal Suppliers in Procurement Management. *International Journal of Humanities and Social Science*, 2 (14).
- Nzau, A., & Njeru, A. (2014). Factors affecting procurement performance of public universities in Nairobi County. *International Journal of Social Sciences and Project Planning Management*, 1(3): 147-156.

- OECD', (2007). Assessment of the Procurement System in Kenya. [online] OECD.
- Pontious, M. (2008). Evaluation of the procurement process in public institutions of Uganda, Unpublished thesis, a case study of Makerere University.
- PORTER'S, V. C. M. (1985). WHAT IS VALUE CHAIN.
- Project Management Institute. (2004). A guide to the project management body of knowledge
- Public Procurement Oversight Authority (PPOA). (2013). Public procurement Regulations.
- Quinot, G., & Arrowsmith, S. (Eds.). (2013). *Public procurement regulation in Africa*. Cambridge university press.
- Rajab, F. N., & Muchelule, Y. (2016). Effect of Supplier Responsiveness on Procurement Performance In County Governments, Kenya.
- Rotich, G. M. (2015). Relationship between E-Tendering and Procurement Performance among County Governments in Kenya. *Science Innovation*, 3(5), 46-51.
- Salaman, G., Storey, J., & Platman, K. (2005). Living with enterprise in an enterprise economy: Freelance and contract workers in the media. *Human Relations*, 58(8), 1033-1054.
- Sanders, I. A., de Kok, A. G., van Weele, A. J., MTD, T. G., den Hartog, I. A., & Werter, O. I. S. (2009). *Integrated product and supply chain design at Philips Healthcare* (Doctoral dissertation, Master's Thesis, Technische Universiteit Eindhoven, Netherlands).
- Schoenherr, T., Modi, S. B., Talluri, S., & Hult, G. T. M. (2014). Antecedents and performance outcomes of strategic environmental sourcing: an investigation of resource-based process and contingency effects. *Journal of Business Logistics*, 35(3), 172-190.
- Shahin, A., & Mahbod, M. A. (2007). Prioritization of key performance indicators: An integration of analytical hierarchy process and goal setting. *International Journal of Productivity and Performance Management*, 56(3), 226- 240.
- Tracey, M. V. (2008). The impact of supplier selection criteria and supplier involvement on manufacturing performance. *The journal of supply chain management. Global review of purchasing and supply*, 33-39.
- Tracey, M., & Tan, C. L. (2001). Empirical analysis of supplier selection and involvement, customer satisfaction, and firm performance. *Supply Chain Management: An International Journal*.
- Yusuf, Y. Y., Gunasekaran, A., Musa, A., Dauda, M., El-Berishy, N. M., & Cang, S. (2014). A relational study of supply chain agility, competitiveness and business performance in the oil and gas industry. *International Journal of Production Economics*, 147, 531-543.

## APPENDICES

### APPENDIX I: RESEARCH QUESTIONNAIRE

This questionnaire is designed to collect information on the effect of supplier evaluation on procurement performance of Public Hospitals in Kisumu City, Kenya. The information obtained will be used only for academic purposes and shall be treated confidentially. This questionnaire is to be completed by procurement officials or persons in comparable positions only.

#### SECTION ONE: SUPPLIER CONSISTENCY

Indicate to what extent the following statements on supplier consistency are evident in your department. Tick your choice in the appropriate answer box. 1 = Not at all 2 = Small Extent, 3 = Moderate Extent 4 = Great Extent, 5 = Very great extent

Parameter for measures	1	2	3	4	5
Suppliers are Committed to consistently provide quality products					
Suppliers have long standing relationship with their Customers.					
Suppliers have continuously availed the quality product information					
There is strong buyer trust on the services of the suppliers					
There is strong buyer dependence on the services of the supplier.					

## SECTION TWO: SUPPLIER COMPETENCE

Indicate to what extent following statements on supplier competence is evident in your department. Tick your choice in the appropriate answer box. 1 = Not at all 2 = Small Extent, 3 = Moderate Extent 4 = Great Extent, 5 = Very great extent

Parameter for measure	1	2	3	4	5
Ability of suppliers to produce above/below the installed volume capacity for products					
Suppliers have incorporated Information technology in their processes					
The supply team has support personnel who understand their duties and processes					
The suppliers provide prompt after sale service					
Suppliers supply quality goods and services					

## SECTION THREE: SUPPLIER PRODUCTION CAPACITY

Indicate to what extent the following statements on supplier production capacity management technique are evident in the department. Tick your choice in the appropriate answer box. 1 = Not at all 2 = Small Extent, 3 = Moderate Extent 4 = Great Extent, 5 = Very great extent

Parameter for measure	1	2	3	4	5
Suppliers can supply large volume of goods.					
Suppliers have enough Storage capacity to handle large production.					
Distribution capacity of suppliers meets procurement standards.					
Labor force capacity of suppliers can ensure enough production					
Suppliers often provide technical advice and services					

## SECTION FIVE: PROCUREMENT PERFORMANCE

In a scale of 1 – 5, kindly indicate the extent of the procurement performance on the following performance metrics. Use 1 = no extent at all; 2 = small extent; 3 = moderate extent; 4 = large extent 5 = very large extent

Procurement Performance Measures	1	2	3	4	5
Goods and services procured are of high Quality					
Lead times are within stipulated period.					
There is Cost savings in procurement process					
There is reduced communication time lags with suppliers					
The pricing of goods and services of the suppliers are competitive.					
There is Compliance with negotiated terms with suppliers					

## APPENDIX II: PROPOSED BUDGET

<b>Particulars / Item</b>	<b>Cost (KSH)</b>
Stationery	6, 500
Literature Review and Proposal Writing	9,000
Data Collection	15,500
Data Analysis	10,000
Printing Works	7, 000
<b>TOTAL</b>	<b>48,000</b>



**APPENDIX III: WORK SCHEDULE**

<b>PLANNED ACTIVITY</b>	<b>MONTH / YEAR 2020</b>					
	<b>ONE</b>	<b>TWO</b>	<b>THREE</b>	<b>FOUR</b>	<b>FIVE</b>	<b>SIX</b>
Problem Identification						
Review of Literature						
Proposal Writing						
Proposal Presentation						
Data Collection and Entry						
Data Analysis						
Draft Project Presentation						
Final Project Presentation						
Submission of Project to Examination						