

## **INFLUENCE OF PROCUREMENT PROCESS AUDIT ON PROCUREMENT PERFORMANCE IN PUBLIC HEALTH FACILITIES IN KIAMBU COUNTY, KENYA**

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### **Abstract**

**Purpose:** *Influence of Procurement Process Audit on Procurement Performance in Public Health Facilities in Kiambu County, Kenya.*

**Materials and methods** *the current study adopted descriptive research design. The research design is appropriate since the study seeks to examine determinants of Public Procurement Act compliance in public health facilities in Kiambu County. In this study the target population comprised of 117 health facilities which comprises of public health institutions in Kiambu County. There a level-two (Health Centers) and level-ones also known as dispensaries which are well distributed within the county. The rest of the facilities are private with 17 Mission Hospitals, five nursing homes and 30 dispensaries. The researcher collected data using questionnaires method. Drop and pick approach was adopted whereby respondents was given adequate time to fill the questionnaires. The questionnaires were well structured, with the aim of collecting specific information Qualitative reports were presented in form of essay which was discussed as per the study objectives aligned with the theories and empirical study. These data were analyzed using descriptive analysis such as frequency, percentage, mean and standard deviation. Qualitative data was transcribed and summarized according to themes and contents. These themes and contents were used to confirm or refute quantitative responses drawn from closed ended questions in the questionnaire.*

**Results:** *The study revealed that the audit of procurement procedures involves both compliance audit and performance audit in most cases. Compliance criteria, against which the process is to be assessed, are based on the legal framework applicable in the particular context of the procurement law. Public procurement procedure must be designed so as to permit maximum competition for public contracts as well as to ensure the best value for money.*

**Recommendations:** *The study recommends that the Public Procurement Act 2005 (Act 2015) is observed to proffer solutions but not without challenges. It pencils out weaknesses and threats of the various sectors.*

**Keywords:** *Procurement process Audit, Internal auditors, External auditors, reporting*

### **INTRODUCTION**

#### **Background to the Study**

This study focused on the establish Determinants of public procurement compliance on Procurement performance in Public Health Facilities in Kenya. This chapter covered the background information of the

study, in which a description of the current state of strategic alliances in supply chain globally, regionally and locally is provided. This is followed up with the problem statement, the general and specific objectives of the study, es, significance of the study, limitations of the study and scope of the study

One measure of a well function government is in the management of the health facilities which is primary role leaders are elected to oversee the smooth running of these institutions. Allocated funds to health sector are a significant expenditure of the government and therefore prudence and procedure utilization should be keenly observed by all. Enactment of public procurement and disposal act are necessary instruments to advocate for a more efficient systems and essential blockage of loopholes that allow fund wastage and corruption of the system (Kiama, 2014). A serious concern in attending to the public procurement activities is fundamental because they account for between 8% and 25% of Gross National Product (GNP) on most government's financial expenditures (Njeru, 2015).

Globalization has made things complex especially in the supply chains of some products and services. Currently, Muhia, Waithera and Songole (2017) sees the process of manufacturing products to be stringent since like raw materials are seen to be produced in one country while processing of the same is done in another and then finished product takes places in third country. This necessitates technology to track processing line to show compliance to safety regulations through whole operation of the product. Absence of effective and comprehensive procurement policy reduces the choice of suppliers and thus leads to higher price charges (Ondigi & Muturi, 2015).

Management of public institutions ought to have outright transparency and accountability. This is because public organizations work huge budgets that mostly end up with big purchases. As such procurement of goods and services ought to be done accordingly, more so in the information world today. Public procurement serves as one indicator of good governance when organized well. Consequently, good governance goes down to a greater extent in increasing public confidence that their resources are been spent well. From World Health Organisation (WHO, 2007) an institution is said to be effective procure-wise when right materials are availed in correct quantities, at the right time, for purpose required, at reasonable price(s) and complying with the set standards.

Managers and other departments involved in the procurement process in the public institutions are always on the look-out especially on how they follow complex array of statutes regulations, policies, directives and procedures (Mwendwa, 2013). The procurement environment is characterized by rapid changes accelerated by frequent reviews on programs; need to adopt technology, calls for enhanced accountability and high expectation that ought to see continuous improvements. As reported by Ngongo (2009), lot of resources is lost owing to by inefficient and ineffective Procurement professionalism, policies and structures leading to violation of rules and regulations that govern procurement and subsequently poor service delivery in most public institutions.

### **Global Perspective on Public Procurement Compliance**

Challenges facing different countries are numerous and unique depending on the social, political, cultural and economic environment (Thai, 2008). Though the public procurement challenges are different they may be the same type but at different levels when compared between countries. Public procurement globally is viewed as an avenue of waste and corruption. Thousands of dollars have been reported lost in cases involving untrained personnel and poor procurement systems in a disposal of a USA government items. Evidently, are the regular reported cases of a number of the state officials facing charges in US courts for misappropriation (Chapman, 2016)? Publications of similar reports can also be cited in many other developed countries.

A debate and keen consideration is paid worldwide on the processes of procurement for the public institutions. Owing to the usage of traditional procurement globally, systems have continued to allow infamous maverick purchases practices that result to purchases from non-preferred suppliers who often charge higher prices (Osir, 2016). Nonetheless, the emergence of Procurement Act has eased the processing and making available everywhere transnationally even at a time when adoption of this most demanded technology has posed great challenges to many public institutions. Probably, the cartels would like to hide behind the bureaucratic procedures in the procurement. This poses systems deficiencies that automatically lead to massive loss on the public funds (Mose, 2012). According to Thai (2017) adoption of e-government procurement is likely to increase “competition, transparency and accountability, efficiency and enable faster procurement decisions” (p.20).

Another challenge facing the compliance of public procurement in the global arena is how to comply with national economic policies without breaching the trading agreements in the global economy such as those agreed upon World Trade Organization (WTO). This calls for a careful consideration to enable countries to take advantage of special provisions. In Australian public healthcare sector, the major critical challenges to compliance of public procurement have to do with lack of legislation, lack of backing from the senior managers, lack of understanding of the policy and collaboration with the suppliers (Ahsan & Rahman (2017). According to Neuhaus, Schmitz and Umbeck (2015) Northern American executives think that company’s hurdles are to blame for loss in saving through the procurement.

A comparison of the development in procurement process developed countries is far in adopting and regulating their public expenditure since there have gain a quick momentum (Njoroge & Ngugi, 2016). Nonetheless, United Nations Department of Economic and Social Affairs (2008) still gives hope on if compliances since they perceive that development of patterns of consumption and production can only be achieved via public procurement. Therefore, adequate knowledge and adept skills in procurement management are necessary since most studies reports incompetency and legal framework as major hindrances to the compliance process (Inzofu, 2016). Further, use of electronic processing in the procurement has been proven to improve the systems in countries such as Korea. In fact, Procurement Act has led to Korean institutions reducing their procurement cycle systems, improved efficiency, reduced procurement cost and enhanced compliance towards policy and standards (Chang, 2011).

### **Regional perspective on Public Procurement Compliance**

Public procurement has been a hotly debated subject among the African country and more so in the Sub-Saharan region public domains. A lot of interest surrounds the African countries because almost all the countries are still in development stage. Through flawed procurement money for tax payers in billion dollars have been lost. McGinity (2014) observation on the Africa countries discovered that the regimes of procurement regulations are recipe for success for the public expenditure in that through the procurement effective and efficient service delivery to the member of the public achieve and fully certified. Conversely, unregulated public entities increase avenue for frauds and theft of billions of shilling from the public coffers (Ohkubo, 2012). Apparently, a keen eye on the governance has seen the fraudster and thieves in African countries celebrated while observant are ridiculed.

A regulation such as seen in Uganda’s Public Procurement and Disposal of Assets Authority (PPDAA) was formed under the Public Procurement and Disposal Act (PPDA) of 2003. The PPDAA provide guidelines and regulations in public procurement of all public institutions (Eyaa & Oluka, 2011). Similarly, to Kenya’s

neighbour on the south, Tanzania, Procurement Act sets out an all-inclusive coverage of all regulations on the aspect critical to public procurements including health sectors (Eyaa & Oluka, 2011).

To obviate malpractices in procurement process, proper documentation is needed to give rise to audit trails that help trace any fraudulent dealings. Voleza (2014) suggest that an end of these practices could be achieved by reducing the turnaround period, improve communication with all the stakeholders, employs competent staff and controlling the stocking method. Further, lead times can be cut down via automation, harmonization of Acts to serve local demands and training user. Moreover, the choice of procurement method, sourcing for bidders; evaluation processes and appraisal of suppliers to be expedited diligently to avoid return of funds to the treasury. Last but not least, top management need to back and appreciate installation of JIT to reduce or eliminate cost of doing business and thus adds value for money while enabling them achieve their mission and vision in their strategic plans. Finally, public institutions such as health sector need to increase employees and stakeholders, involvement for purposes of service delivery.

Elsewhere in Ghana, Kumak (2012) reported that public procurement accounts for between 70-80% of the government expenditure. In this vein, presence of bottlenecks, corruption and lack of capacity building in procurement reduces the government purchasing power and also renders a poor service to the citizens thus sanity in the process must be sort at all cost (Senzu & Ndebugri, 2017). Moreover, Czibik et al., (2017) point to the need for Tanzania procurement department to have an effective monitoring and control systems around the procuring authority to ensure compliance with the required standard and procedures. In a country like South Africa, Pretoria News (2011, October 13) noted with concern that non-compliance to the procurement practices was marred irregularities in tendering process plus the looming corruption, incompetence and negligence by the public servants. In fact, South African drains to waste around 20% of government procurement budget owing to non-compliance to the procurement act (Ambe & Badenhorst-Weiss, 2012). As it can be inferred from the look of many studies on African countries procurement process reveals a dire need to compliance. A question that continues to linger in the mind of the many scholars and researchers is whether auditing and Procurement professionalism still hold when it comes to check and balances of the conforming or complying with procurement standards and procedures.

### **Local perspective on Public Procurement Compliance**

Excluding county government procurement, Kenya procurement takes about 45% of our national Budget (Njogu & Gichinga, 2016). This is to say a substantial amount is spent on public procurement that accountability cannot be an option but compulsory for the departments in charge. The process of carrying out procurement is details and entails several stages. Arthur (2009) points that there several ways of conducting public procurement. First is where prospective suppliers are invited to bid a contract in an open tendering process. Second the process is restricted open tender where prospective tenderer competes for a contract after invitation through appropriate local dailies. Three, tenders are awarded selectively from an approved listed which has been vetted on the financial standing and competence. Fourth, the tender is only negotiated with one supplier to eliminate competition (Njogu & Gichinga, 2016).

Despite many incidences of fund embezzlement, public procurement process in Kenya are usually regulated under presumed strict Act such as the (PPDA) and Supplier Practitioner Management Act (SPMA) which are reviewed as per the need from time to time. As for SPMA regulate public and private sector to practice professionalism in procurement (Andrew, 2010).

An evolution has been witnessed in Kenya and in particular public procurement that has changed from annals of rare regulations to now independent procurement structures and regulating bodies. However, incidence of

collusion and corruption among supply agents and inclusion of non-value adding purchasing methods are reported by the auditor general (Migai, 2010). This could be attributed to lack of competitiveness in public institutions, consultations, bureaucracy and lack of transparency and accountability. Equity, a thing of the past, has been revived by the current reviews in PPDA where open space for even small medium enterprises is also considered. In fact, they are given priority in matters of public tenders. For sure an effective regulated public procurement system is of great benefits to entire population and public institutions in particular even though this has its own challenges.

Kenyan public procurement has undergone some metamorphosis since pre-colonial period to date with a key purpose of adhering to internationally acceptable standards. This growth and development has been propelled by changes in regulatory policies. Initially, there were no regulations during 1960s but the situations changed in 1970 to 1980 when it was regulated through treasury circulars (Mwendwa, 2013). According to Mwendwa (2013) procurement regulation in Kenya has undergone three phases which are colonial period (1978-2001), reform period (2001 to 2010) and new constitution period (2010 to date). Despite the public procurement oversight authority (PPOA) efforts to enhance procurement compliance, most public entities have not embraced it (Mwendwa, 2013).

### **Kiambu County Health Facilities.**

Kiambu County constitutes twelve constituencies the County relies mostly on agriculture and industries to sustain its economy. Although majority of residents are small scale farmers growing tea and coffee, there are several large-scale coffee and tea farms which are serviced by local industries.

Kiambu county hold around 364 health facilities with a reliable health service network comprising one level-5 hospital namely Thika district hospital, three level-4 hospitals, Gatundu south, Kiambaa and Kikuyu, four level-3 hospitals and Limuru found within their respective constituencies (County government of Kiambu, 2017). Also, to widen the access to good health, a total of 20 health centres and about 57 dispensaries are distributed normally. To add to this, there are well established 17 private mission hospitals, 5 nursing homes and 169 private clinics (County government of Kiambu, 2017). The ratio of doctors to population stands at 1 doctor is to 17000 populations while nurse to population is roughly 1 is 1300.

Mwangi (2017) affirms that compliance in Kenya public facilities stands at 60% and is expected to have gone lower than this with decentralization. A repercussion has been loss in public funds and commitment of resources longer than expected (Aketch, 2011). Similar situation was reported by ethics and anticorruption committee in a survey which documented those public officials restricts firms to participate in a procurement process with the sole purpose of awarding procurement contracts to biased individuals (Mwangi, 2017). Kiambu facilities has been selected due to continued mention by patients who grapples with the shortages of drugs hence being referred to buy drugs from private chemists (Omoro, 2017). This comes as the government cancels a non-repayment of 150 million debts for procurement that did not follow due diligence.

### **Problem Statement**

According to Ondigi and Muturi (2015) the procurement act and regulations provide a number of rules of conduct for the whole tendering process. Despite the public procurement and disposal Act 2005 being in place with an aim of guiding the procurement function in public institutions, specific internal procurement factors affect the determinants of public procurement compliance on procurement performance in public health facilities.

Several health facilities in Kiambu county have not followed the aims of the PPOA directives majority of the health facilities have involved discrimination in the procurement systems this lead to excessive budget deficits, huge contractual payment arrears, poor procurement performance leading to long order turn around and corruption which has forced the county government to commit to a reform of public procurement, which culminated in the enforcing application of the Public Procurement Act compliance (Aketch, 2011).

Dumber (2011) points out that there is lack of consensus between Public procurement compliance on procurement performance in public health facilities and public institutions. The increase in rate of expired drugs and wastage in public health facilities portray inability to plan successfully. Therefore, this clearly demonstrates inefficient procurement processes as outline by (WHOM, 2007). Country procurement Assessment report has shown that public procurement has failed to achieve the principle of the value of money. Moreover, report by Gatonye (2015) has shown that poor Kenyans continue to suffer in the hands of grappling hospitals as medical supplies are either running out or are wasted hindering the expected services in the hospitals. Audit report have also revealed unethical practices in public procurement where process is characterized by escalated prices, adulterated purchase of goods, late or no delivery of goods.

According to studies carried by (Aketch, 2011). On public procurement compliance no empirical studies can be found into the reasons that could explain the (none) compliance with the directives. Clearly, there is a need for a sound procurement regulation approach the empirical study to the factors with an alleged impact on the compliance with public procurement compliance directives there are changes in technology has made Procurement Act systems a necessity, reviews of policies and audit are required to ensure proficiency in public procurement yet limited study have been conducted to show whether they help health facilities towards procurement compliance or not

In guise of this questions and evidence highlighted herein, the researcher wishes to carry out a study on Determinants of public procurement compliance on Procurement performance in Public Health Facilities in Kenya. In Kiambu County, the largest component of about 70% of the county budget is spent on procurements and on emoluments of public worker and delivery of service Gatonye (2015). Audit report have also revealed unethical practices in county procurement

## **Objectives of the Study**

### **General Objective**

Influence of Procurement Process Audit on Procurement Performance in Public Health Facilities in Kiambu County, Kenya

### **Specific Objectives**

The specific objectives of the study were:

- i. To determine the effect of internal auditors on Procurement performance in Public Health Facilities in Kenya.
- ii. To establish the influence of External auditors on Procurement performance in Public Health Facilities in Kenya.
- iii. To find out effects of Reporting on Procurement performance in Public Health Facilities in Kenya.

## LITERATURE REVIEW

A theory is a set of interrelated constructs (concepts), propositions and definitions that present a systematic view of phenomenal by specifying relations among study variables with the purpose of explaining and forecasting phenomena (Matson & Ronald, 2008).

### Social Economic Theory

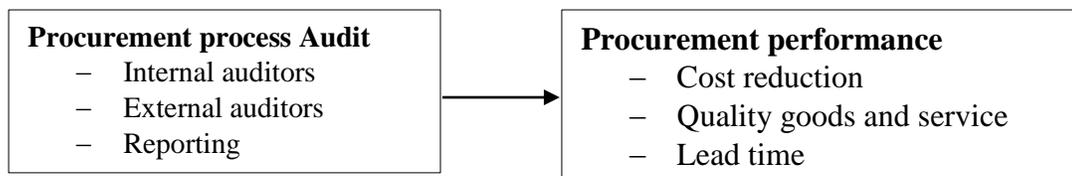
Sutinen and Kuperan (1999) propounded the socio-economic theory of compliance by integrating economic theory with theories from psychology and sociology to account for moral obligation and social influence as determinants of individuals' decisions on supply chain compliance. According to Lisa (2010) psychological perspectives provide a basis for the success or failure of organizational to meeting the required set standard Wilmshurst and Frost (2000) also add that the legitimacy theory postulates that the organization is responsible to disclose its practices to the stakeholders, especially to the public and justify its existence within the boundaries of society.

### Procurement process Audit

Procurement process Audit is necessary to check the balance and conformity to the rules and standards sets by regulatory bodies. On this basis a firm that is strategic will possess an internal auditor who helps to examine issues related to business or institution practices and risk from time to time in a year. As an oversight the external auditors are hired to carry out single audit and give their opinion on the records and statements of the organisation or the companies. Therefore, procurement compliance is subject to audit reports. According to Bota-Avram, Popa and Stefanescu (2010), the performance of auditing can be narrowed down based on; employee experience; auditing viewed by the audit committee; management expectations of internal auditing; level of audit recommendations implemented; and auditor education levels.

### Procurement process Audit and Procurement performance

An investigation of factors affecting Procurement Audit practices amongst savings and credit cooperative societies was put forth by Kiama (2014). The study specifically sought to find out the influence of strategic planning, enforcement and organization culture on procurement practices. Descriptive research design was adopted and stratified sampling was applied to select 86 respondents who were drawn from managerial positions. Quantitative data collected was analysed using descriptive statistics and presented in figures and tables. Results of the study revealed that 55% believed that the impact of Procurement Process Audit was too high. Secondly, the management had created a culture of adhering to acceptable procurement ethics. Thirdly, the management decisions were based on accurately available information and they condoned procurement malpractices within their organizations. This calls for regular auditing of procurement process in government to enhance compliance with Public Procurement Act.



**Materials and methods** the current study adopted descriptive research design. The research design is appropriate since the study seeks to examine determinants of Public Procurement Act compliance in public health facilities in Kiambu County. In this study the target population comprised of 117 health facilities which

comprises of public health institutions in Kiambu County. There a level-two (Health Centers) and level-ones also known as dispensaries which are well distributed within the county. The rest of the facilities are private with 17 Mission Hospitals, five nursing homes and 30 dispensaries. The researcher collected data using questionnaires method. Drop and pick approach was adopted whereby respondents was given adequate time to fill the questionnaires. The questionnaires were well structured, with the aim of collecting specific information. Presentation of data was done in form of quantitative and qualitative reports which were presented in forms of tables and essay. For the quantitative reports, the tables consisted of mean and standard deviation values that were used to make interpretation of the analysis. Percentage, mean and standard deviation were used to show the frequency of responses. Tables were used to display the rate of responses and to facilitate comparison. Qualitative reports were presented in form of essay which was discussed as per the study objectives aligned with the theories and empirical study. These data were analyzed using descriptive analysis such as frequency, percentage, mean and standard deviation. Qualitative data was collected from open ended questionnaires. Qualitative data was transcribed and summarized according to themes and contents. These themes and contents were used to confirm or refute quantitative responses drawn from closed ended questions in the questionnaire.

## RESEARCH FINDINGS, ANALYSIS AND DISCUSSION

### Introduction

This chapter presents analysis and findings of the study as set out in the research methodology. The study sought to establish Determinants of public procurement compliance on Supply chain performance in Public Health Facilities in Kenya. The data was gathered exclusively from questionnaire as the research instrument designed in line with the objectives of the study.

### Response Rate

The study targeted a population of of 117 procurement officer in procurement department in all levels of the Public Health Facilities in Kiambu. Out of the 117 distributed questionnaires 103 were filled and returned. This translated to a response rate of 88.03%. This response was good enough and representative of the population and conforms with Mugenda and Mugenda (2013) that a response rate of 70% and above is excellent. Based on the above assertions, the studies 88.03% response rate was considered adequate for the study

**Table 1. Response Rate**

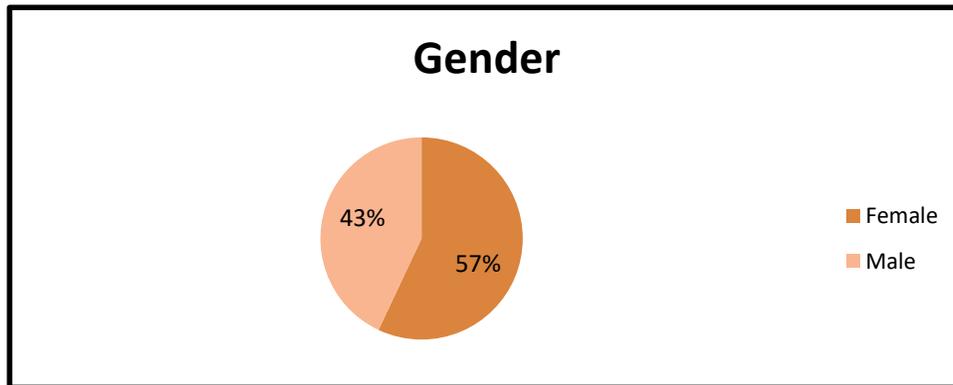
<b>Response</b>	<b>Frequency</b>	<b>Percentage</b>
Returned questionnaires	103	88.03
Unreturned questionnaires	14	11.96
<b>Total</b>	<b>117</b>	<b>100</b>

### Demographic information

The study sought to determine the background of the respondents in order to have an understanding of their suitability to undertake the study on supply management in Public Health Facilities in Kenya. The findings are in the subsequent sections.

### Gender Distribution

The respondents were asked to indicate their gender. The finding is shown in Figure 2. The finding shows that 44% of the respondents were male while 59% were female. This shows that all genders were included thus provided a good representation for the study. Therefore, information sought by the study was diverse (Bobbie, 2013) the demographic profile of the respondents is an important aspect of gender equality which show that unselectively people are involved in the management of organisation operations including supply management.



**Figure 2: Gender Distribution**

### Age of the Respondents

From the findings in Table 3, the respondents were requested to indicate on their age bracket. Majority 41% of the respondents were aged between 31-40 years, 32% of the respondents were aged between 21-30 years and 12% of the respondents were over 50 years of age while 17% of the respondents were aged between 41-50 years. This implies that majority of the employee working in the public health facilities were people who are of age hence provided reliable information based on the public procurement compliance which was of material to this research. Reza, (2013), those Demographic variables on age form an integral part of consumer segmentation that provides consumer insights after geographic population on sex.

**Table 1. Age of the Respondents**

Age	Frequency	Percentages
Between 51-60	13	12
Between 41-50	17	17
Between 31-40	42	41
Between 21-30	31	32
<b>Total</b>	<b>103</b>	<b>100</b>

### Level of Education

As indicated in Table 4, the study sought the respondent’s level of education, from the findings, 42% of the respondents had attained Post graduate, 33 % of the respondents attained University level education while 28% of the respondents had attained College level of education. This implied that the respondents were qualified and understood the objectives of the study as well as offering relevant information Supply chain performance in the public health facilities in Kiambu County. The findings concurred with Bobbie (2013) who indicated that educated respondents were in a position of understanding what they were required to answer based on the public procurement compliance as required by the procurement regulations and procurement act.

**Table 2. Level of Education**

<b>Education</b>	<b>Frequency</b>	<b>Percent</b>
Post graduate	43	42
University level	32	33
College level	28	28
<b>Total</b>	<b>103</b>	<b>100</b>

**Respondent’s years of service**

Respondents were requested to indicate the number of years they have been in service at the public health facilities in Kiambu from the findings as indicated in Table 5, majority of the respondents indicated that they had been in service at the health facilities for over 9 years, 6-8 and years, 1-5 years as indicated by as indicated by 52%, 30% and 21% of the respondents. This clearly indicated that the information on procurement compliance was collected from respondents who had been in the health facilities for a long period of time and had experience on the effects of public procurement compliance on Supply chain performance in Public Health Facilities in Kiambu County. The finding is in line with that of Dehghan (2013), Competencies are identified to clearly define the essential functions of the job Competencies are the knowledge, skills abilities personal characteristics and public procurement compliance regulations that help differentiate procurement act from average performance under specified circumstances.

**Table 3. Respondents’ years of service**

<b>Years Of Service</b>	<b>Frequency</b>	<b>Percentages</b>
9-above	54	52
6-8 years	31	30
1-5years	18	21
Total	110	100

**Descriptive Analysis**

**Procurement process Audit**

The respondents were required to indicate the extent of the influence of Procurement Process Audit on the compliance of public procurement at the Kiambu County Government of Kenya. From the finding internal auditing has the mandate to ensure all procurement personnel undertake regular procurement training prior to undertaking any procurement project had the highest mean score of 4.23 and standard deviation of 0.92 an implication that the right skills were required in supply chain operations .to a great extent the respondents agreed to the statement that Regular internal audit procurement reports are prepared to evaluate procurement process with a mean of 4.07 and standard deviation of 1.03 this indicated that spot checking of the procurement process was required. The study provided that Internal and external auditors must procurement tools are regularly updated and any change communicated to relevant stakeholders with a mean of 4.23 and standard deviation of 0.92 indicating that external experienced auditors are required to authenticated the procurement process transparency.to a great extends the respondents further indicated that Health facility organization structure is regularly audited to ensure that it maximizes compliance with Public Procurement Act which was supported by a mean of 3.96 and standard deviation of 0.87 .this implied that the organisation required audit records at every stage of procurement to provided openness and identify malpractices in early stages. The finding in this research agree with those of (Aberé & Muturi, 2015) that Procurement Process Audit encourage competition, innovative ideas and solutions while respecting trade agreement obligations;

**Table 6 Procurement process Audit**

Statement	Min	Max	Mean	Std
Regular internal audit procurement reports are prepared to evaluate procurement process.	2.00	3.00	4.07	1.03
Health facilities develops annual procurement plans to enhance accountability and transparency in procurement planning.	1.00	4.00	3.94	0.80
Internal auditing has the mandate to ensure all procurement personnel undertake regular procurement training prior to undertaking any procurement project.	1.00	3.00	4.23	0.92
Internal and external auditors must procurement tools are regularly updated and any change communicated to relevant stakeholders	2.00	4.00	3.74	0.71
Internal auditors reviews health facility procurement procedures and ensures that it adheres to PPA	1.00	4.00	3.86	0.59
Health facility organization structure is regularly audited to ensure that it maximizes compliance with procurement act.	2.00	4.00	3.96	0.87

**Procurement performance**

The study sought the extent to which indicators of level of procurement performance experienced by public health facilities in Kiambu County. In the last five years in terms of Cost reduction, defective goods and service (%) and lead time (day) on achievement of operating Cost reduction, a 5 – point Likert scale was adopted. The level of operating Cost reduction in public health facilities in the year 2013 was at 45.50 %, in the year 2014 it was 22.17%, in year 2015 it was 13.10% in the year 2016 was 6.73 % and in the year 2017 1.82. % by the end of the financial year the cost reduction was up to the county cost reductions expectations of below 10 % in all county operations this implied that through the effective implementation of the act 2015 provided by the PPOA there was significance reduction in the operating cost of the health facilities in Kenya. This was in line with (Kiama, 2014) studies stating that when evaluating a bid, the public sector entity I obtains best value and is not limited solely to purchase price and life-cycle cost considerations, but may also consider environmental and social factors, delivery, servicing and capacity of the bidder to meet criteria as stated in the bid received.

County against the set minimum days of 2-4 days for the pharmaceuticals and 4-5 days for the machines. Average lead time in days of 12 days in 2013, 8 days in 2014, 6 days in 2015 and further to 6 days in 2016 and finally 4days in 2017. This implied that Public Procurement Act compliance ensured supplier we competitively selected through openness and transparency.

The results indicated public health facilities in Kiambu County registered a decrease in quality defects of the products delivered as indicated from the 2013 with 14-10%, of defects in every delivery, year 2014 10-12%, with the year of 2015 further decreasing to 10-8 % and the year of 2017 reducing to 4-0 % against the set ISO 9000 service charter of Kiambu county of 0-4% defects for every delivery. This indicated that through public procurement compliance evaluation and selection of supplier was competitive and only supplier who met quality standard were selected.

**Table 7. Procurement performance levels**

Statements	2013	2014	2015	2016	2017
Cost reduction	45.50 %,	22.17%,	13.10%	6.73 %	1.82. %
Defective goods and service (%)	14-10%	10-12%	10-8%	7-4%	4-0%
Lead time (days)	12	8	6	7	4

**Inferential Analysis**

**Regression Analysis Results.**

A multiple linear regression analysis was done to examine the relationship of the independent Variables with the dependent variable. The R2 is the coefficient of determination. This value explains how Procurement process Audit varied with Internal auditors, External auditors, reporting The model summary table shows that four predictors can explain 68.4 % of change Supply chain performance namely Internal auditors, External auditors, reporting an implication that the remaining 31.6% of the variation in Procurement process Audit could be accounted for by other factors not involved in this study. This shows that the variables are very significant therefore need to be considered in any effort to boost Procurement process Audit on Supply chain performance in Public Health Facilities in Kenya:

**Table 8. Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics	
					R Square Change	Sig. F Change
1	.834a	.684	.643	.236	.684	.000

**a. Predictors:** (Constant), Internal auditors, External auditors, reporting

**b. Dependent Variable:** procurement performance

**4.6.4 Coefficient Analysis**

The study found that Internal auditors, has significance positive influence in Supply chain performance as indicated by  $\beta_1=0.549$ ,  $p=0.002<0.05$ ,  $t=7.544$ . The implication is that a unit increase in Internal auditors would led to a significant increase in Supply chain performance by  $\beta_1=.549$ ,

From coefficient results the study found that External auditors, has a significance positive influence on Supply chain performance as indicated by  $\beta_2= 0.390$ ,  $p=0.001<0.05$ ,  $t=3.474$ . The implication was that a unit increase in External auditors, would results into increase in Supply chain performance by  $\beta_2= 0. 390$ .

From the regression coefficient findings, the study revealed that reporting would have a significant positive influence on Supply chain performance in Public Health Facilities as indicated by  $\beta_3= . .024624$ ,  $p = 0.00<0.05$ ,  $t=1.788$ . The implication is that an increase in reporting would lead to an increase in Supply chain performance in Public Health. The findings concurred with (Khadija, & Kibet, 2015) that respecting procedures on advancing an issue for determination before the domestic review process and prescribing additional matters that may be the subject of a review arising from trade agreement.

**Table 9. Coefficient Analysis**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.704	.361		8.795	.000
Internal Auditors	.549	.597	.162	7.544	.002
External Auditors	.390	.317	.482	3.474	.001
Reporting	.024	.130	.591	1.788	.000

**a. Predictors:** (Constant), Internal auditors, External auditors, reporting

**b. Dependent Variable:** procurement performance

$$Y = 0.934 + 0.149X_1 + 0.410X_2 + 0.624X_3 + 0.376X_4 + e$$

**Where:** Y = Procurement performance

$\beta_0$  = Constant Term;

$\beta_1, \beta_2,$  and  $\beta_3$

Beta coefficients;

$X_1$  = Internal auditors

$X_2$  = External auditors

$X_3$  = reporting

$\varepsilon$  = Error term.

## SUMMARY, CONCLUSION AND RECOMMENDATIONS

### Introduction

The study also determined the influence independent variables Public Procurement Act, Procurement professionalism, Procurement process Audit and Procurement procedures on the dependent variable (supply chain performance of Public Health Facilities in Kenya).

### Summary of the Study

The current study was carried out in August 2018. The study drew respondents amongst procurement personnel's in public health facilities from Kiambu County. Kiambu County is of particular interest case study due to a number of reasons including that it is a county in metropolitan area thus serving a large and ever-growing population from all over the country in their health needs. A census survey of 117 respondents was carried out from data are collected for all units in the population major involved in the supply chain management. With 103 respondents, fully filled questionnaires.

### Procurement process Audit and Procurement performance

The study revealed that the audit of procurement procedures involves both compliance audit and performance audit in most cases. Compliance criteria, against which the process is to be assessed, are based on the legal framework applicable in the particular context of the procurement law. Public procurement procedure must be designed so as to permit maximum competition for public contracts as well as to ensure the best value for

money. Public procurement procedures are necessary because the public sector cannot always be presumed to behave as a normal customer in the market with a focus on choosing best quality at lowest price. Government auditing standards place strong emphasis on strengthening internal controls and ensuring compliance with laws and regulations

### **Conclusion**

The study concludes that in addition to reviewing the paperwork side of purchasing, audit procedures also include an evaluation of employee functions during the purchasing process. Auditors check if a list and samples of authorized signatures exists and if employees are using the list when verifying purchase orders. Review steps in the formal bidding process to make sure they are being followed. Accounts payable and receiving checklists are being implemented. Determine if conflict-of-interest policies and opportunities for training and purchasing certification are available for employees

### **Recommendations**

The study recommends Audits provide an opportunity for companies to assess the effectiveness and efficiency of their procurement process. A prepared report illustrates problem areas and cites contracted with a firm specializing in audits, a common end-of-audit procedure offer suggestions for improvement. Corrective action can be implemented based on the suggestions to improve the purchasing function, reduce fraud and enable cost savings. Audit identifies that paper purchase orders are being lost or misfiled, resulting in a suggestion and opportunity for automation of the process. Hence minimizing the input of such public resources for a given output of goods or services of the procedure. Effectiveness assesses whether the performance obtained, as an output of goods or services procured, meets the objectives that were set.

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