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**ABSTRACT**

This research assessed the effect of legal framework specifications on procurement performance in water and sewerage companies in Kiambu. Descriptive research design was used, with the target population being 983 staff in all water and sewerage companies in Kiambu. It adopted stratified proportionate sampling in selecting the respondents where a sample of 259 respondents was obtained. Data collection was done using questionnaires. Data analysis was done using inferential statistics and results were presented in cross-tabulations, frequency, and percentages. Regression analysis was used. The results revealed a significant relationship between legal framework specification and procurement performance in water and sewerage companies in Kiambu at a 5% significance level. The study recommends that water and sewerage companies should leverage focus on proper legal specification to enhance procurement performance of their firms. The study will form a basis of policy formulation on procurement matters in water and sewerage companies in Kenya and provide a basis for further research in the field.

**Keywords:** Procurement performance, Legal framework, Tender specifications.

**INTRODUCTION**

The performance of a procurement activity depends on the specification being a true and accurate statement of the buyer's specifications (Forsgren & Rahkonen, 2014). A specification forms part of any future contract that might result from offers presented. The specification forms part of an invitation to offer document and conditions of the offer that is conditions of arrangement, supply, contract and response lists (Queensland Government, 2014). If an organization ensures effectiveness in the product requirement, it is able to ensure effective procurement performance (World Procurement Congress, 2018). There are several consequences that institutions are likely to face when they are not specifying their quality of products and services correctly when ordering. These consequences include; institutions experience high costs in form of dormant stocks, disruption of the production process due to the use of poor inputs as well as increasing wastage in the production process (World Procurement Congress, 2018). In order to avoid these, the appropriate specification should be developed to define the need in such a manner that complies with the specification ensures the acceptability of product purchased (World Procurement Congress, 2018).

According to Queensland Government (2016), a legal specification indicates all requirement clearly and logically in functional and performance terms unless where there are specific technical requirements needed; for goods, state what are the uses of the item; contain enough and relevant information for offerors to decide and cost products they intend to offer and at what level of quality; permit offered goods or services to be evaluated against the defined criteria by inspection, sample, assessment or proper documentation; state the process for acceptance of products by inspection, sample, assessment or proper documentation; provide equal opportunity for potential suppliers to offer products which satisfies the requirements of the user, including goods or services and incorporating alternative solutions; form the fundamentals of the contract between buyer and seller; not to over-specify requirements; not to contain features that discriminate against suppliers (World Procurement Congress, 2018).

In Kenya, the regulatory framework governing material specification is The Public Procurement and Asset disposal act (PPADA), 2015 which provides public entities with guidelines on material specification. The act establishes the procedures and due diligence on technical and material specifications. However, a study done by Koelsch and Rahkonen (2016) on the water and sewerage firms in Kenya (Nyeri County) shows that proper material specification

has a positive effect on the productivity of a firm. The study further states that firms sometimes ignore to do proper material specification, therefore, causing disruptions and procurement underperformance in the public sector. It is difficult for a procuring entity to initiate and prepare all specifications despite having the final say on the suitability and competitiveness of a specification (Forsgren & Rahkonen, 2014). The procurement department has a principal duty of ensuring that items purchased using contracts that do not limit the quantity as well as those whose quantities are planned. (Kovács, 2014). Procurement can only satisfy the needs of the customer and enhance the competitiveness of both the product and the price by providing specifications that do not restrict certain supplies (Thomas, 2011). The procuring entity is also responsible for the final certification of the specifications from the user

departments by ensuring that proper language is used to ensure clarity in communicating the firm's needs to the suppliers (Randall, 2014). There has been continuous pressure on public institutions to ensure that quality commensurate to price by inquiring about proper products as well as infrastructure. This means that public procuring entities should be strategic in their procurement in order to reduce wastes for the company in the future (Institute for Sustainable Development, 2013). The materials management function in conjunction with the procurement function should make clear specification to ensure that correct products are acquired and that suppliers have an easy time in interpreting the specifications (Kumar, 2014). If specifications are misinterpreted by the procurement function, it leads to the acquisition of the wrong product because suppliers also misinterpret the specifications and this ultimately leads to delivery of products that not required for the production purpose and thus disruption of the entire operation process of the plant (Drurry, 2011). Errors and omissions in the specifications lead to the acquisition of undesired materials, which leads to extra costs being incurred and causing delays in the production process of an operation firm (Shina, 2011).

In a bid to promote the performance of the procurement sector, the PPADA (2015) and the PPDAR (2006) were implemented. However, in spite of these laws being enacted, public procuring entities have not strictly adhered to prescribed practices especially on the material specification (Galloway, 2015) therefore causing poor procurement performance. Procurement audits by PPOA show that out of 322 contracts audited at the end of 2015, only 7 (2%) were compliant on material specifications. Successive audit checks show that compliance in materials specification in Kenya is still low and inadequate (PPOA compliance reports, 2016,2017; PPOA Baseline survey report, 2016; PPOA Capacity Building Strategy Report, 2015-2016; World Procurement Country Procurement Assessment Report, 2015). This is also supported by a report by African Peer Review Mechanism Country Review (APRM) Report (2016), which indicates that noncompliance with the regulations on product specification is very high in Kenyan Public Companies. Despite this evidently low public procurement compliance on material specification, not much has been done in terms of ensuring that public entities comply with the procurement Act and the Regulation in Kenya and its effect on public procurement (Forsgren & Rahkonen, 2014). It is noted that state corporations tendering committees alter regulations to limit the involvement of bidders in procurement and sometimes may be directly involved in the outcomes of such bids (District Audit report 2010-2011).

The research objective of this study was to assess the effect of legal framework specification on procurement performance in water and sewerage companies in Kiambu. The research hypothesised that legal framework specification has no significant effect on procurement performance in water and sewerage companies in Kiambu.

## **LITERATURE REVIEW**

### **Legal Framework on Material Specification**

The drive towards quality products and services delivery and procuring goods and services in a lawful and ethical manner which encourages participation and sustainable economic growth has been a challenge so far to most procurement officers (Artley, & Stroh, 2001). The public procurement and asset disposal regulations, 2016 provides a guideline on technical and material specifications of materials in order to ensure that the goods and services bought are of high quality. It provides that public institutions shall include an assessment and availability of a supplier's capacity including public assets, equipment and labour, preparation of relevant bills of quantities, cost estimates and technical drawings where appropriate; the buying of materials/services to be used as inputs under force account method shall be in compliance with the provisions of the PPADA (2015) and the PPDR (2006).

Procuring Entity must satisfy itself that it is uneconomical and inefficient to outsource the goods or works or services; a procuring entity should cost the items that will be procured are at the prevailing competitive market price. Where a procuring entity intends to use the services of a community-based service provider, that procuring entity shall prepare a request for quotation or proposal or tender to source and identify the service provider, indicating a brief description of goods, works or non-consultancy services, technical specifications or scope of work, closing date for bid submissions, contract terms and conditions and any other aspect which is necessary. Management of quality is concerned with the quality of the products as well as the methods of achieving this quality. The aim of the theories that are concerned with quality improvement is to ensure that quality is continuously improved through control and assurance as well as ensuring that quality is consistent within the firm (Pal, Gupta and Garg 2013) observed that the basic criteria typically utilized for selecting the suppliers are pricing structure, delivery, product quality, and service, etc. While most buyers still consider cost to be their prime concern, few more interactive and interdependent selection criteria are increasingly being used by the manufacturers.

### Legal framework on Procurement Performance

Results of a study by Puddephatt and Kaspar (2012) point out that a regulatory framework that is clear and comprehensive can enhance the competitive position of firms in the purchasing process. A study by Wright (2015) also notes that the lack of a comprehensive legal framework can pose a challenge in procurement performance. A study by Kipkorir (2013) points out that despite Kenya having a legal framework to guide public procurement, the benefit of this framework has not been tangible. A study by Brammer & Walker, (2011) concluded that most enterprises failed to comply with the procurement laws and regulations because they were not familiar with them and those who were, their interpretation of the same was subjective. A study carried out by Naomi (2016) on the “Regulatory Framework role on procurement performance by State Corporations in the Ministry of Agriculture in Kenya”, found out that the current procurement framework in Kenya lacks adequate policies on procurement materials specification, electronic documentation and this hinders the extent of procurement automation by suppliers. A study by Nicholas (2009) concluded that a procurement law should not just address the administrative aspects of procurement, for example, electronic contracts by the government, but rather, it should address the procurement process and supply of products in the public procuring entities. A good specification should be practically describing the equipment in terms of their intended function and the required level of procurement performance, rather than by a general description or brand name. It should be concise and specific, but sufficiently enough to enable bidders to take all costs into consideration, and also to offer alternative solutions.

Ullum (2013) examined how Source International Inc would develop effective product specifications and quality requirements for outsourced suppliers. The study established that suppliers who replaced the outsourced international manufacturers who supplied the company with components, supplies and finished products remained cost-effective after conducting a comprehensive make or buy analysis. Make or buy analysis requires a supplies manager to control quality from the supplies source to ensure that only acceptable products flow through the supply chain. Another research by Chueh and Kao (2004) details that major dimensions of product conformity to quality include factors such as performance features, reliability, conformance to quality, durability and serviceability, aesthetics, and appearance aspects tangibles, assurance, empathy and value, involvement and responsiveness. Their research, however, concludes that consumer perception as a major contributor in determining material performance.

### RESEARCH METHODOLOGY

#### Research Design

Descriptive research design was used since both quantitative and qualitative data were used to assess the effect of legal specifications on procurement performance in water and sewerage companies in Kiambu County in Kenya. The study considered this design appropriate since it facilitated the gathering of reliable and accurate data. The population of this study encompassed employees who are currently working in water and sewerage companies in Kiambu County in Kenya. The study population targeted a section of employees in water and sewerage companies in Kiambu County in Kenya regional offices which are divided into six administrative regions, namely: Northern, Eastern, North Eastern, Central, Southern and Western which are further devolved into 25 zones. According to the water services regulatory board in Kenya (2015), the companies have 983 employees. The study focused on a population of 983 employees who are involved in procurement and make decisions at various levels. Part-time and casual employees were excluded from this study. The study stratified the population into the top, middle, and low-level management staff.

**Table 59: Target population**

Description	Top management	Middle level employees	Low level employees	Total
Limuru Water and Sewerage Company	6	17	94	117
Kikuyu Water Company	3	15	89	107
Karuri Water and Sanitation Company	2	11	106	119
Ruiru Juja Water and Sewerage Company	6	19	97	122
Thika Water and Sewerage Company	8	21	129	158
Kiambu Water and Sewerage Company	8	17	106	131
Githunguri Water and Sanitation Company	3	13	98	114
Gatundu Water and Sanitation Company	3	27	85	115
Total	39	140	804	983

(Source: Water Services Regulatory Board, 2017)

### Sampling Procedure and Sample Size

Sampling procedure refers to the technique or the procedure the researcher would adopt in selecting items for the sample (Kothari, 2004). This study used proportionate sampling because it was a convenient and bias-free selection method. A sample for staff working in water and sewerage companies in Kiambu County in Kenya was obtained using guidelines given by Nassiuma (2001).

$$n = \frac{NC^2}{C^2 + (N-1)e^2}$$

Where, n = sample size, N = population, C = covariance, e = standard error.

It is suitable to use a coefficient of variation that lies between the range of 21% < C < 30% and a standard error that lies between the range of 2% < e < 5 %. This study, therefore, took a coefficient of variation of 21% and a standard error of 0.05 (5%) out of a target population of 983, a sample of 259 was obtained.

### Data Collection Procedure

This study used both primary and secondary sources of data. Semi-structured questionnaires were used to collect data. The researcher checked the filled questionnaire for completeness and consistency. Descriptive analysis of weighted means, standard deviation, relative frequencies, and percentages were used. SPSS version 24 was used for data analysis, it has descriptive statistics features that assisted in variable response comparison and give clear indications of response frequencies. ANOVA data analysis method was applied to analyze the data using open-ended questions where the respondents gave their opinions on the research topic. Simple regression analysis was employed to obtain an equation that summarized the research variables based on the regression model (Patton, 2002). This helped in determining the level of influence on the variables. The simple regression equation for predicting legal framework specifications was expressed as:  $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$

Where; Y = Procurement performance,  $\beta_0$  = Constant Term,  $X_1$  = Tender document specification,  $X_2$  = Legal framework specification,  $\beta_1$ = regression coefficient,  $\varepsilon$  = Error Term

**Table 60: Sample size**

Description	Top Management	Middle Level	Low Level Employees	Total
Limuru Water and Sewerage Company	4	14	15	33
Kikuyu Water Company	2	13	15	30
Karuri Water and Sanitation Company	1	14	16	31
Ruiru Juja Water and Sewerage Company	4	13	16	33
Thika Water and Sewerage Company	5	14	16	35
Kiambu Water and Sewerage Company	5	14	16	35
Githunguri Water and Sanitation Company	2	14	16	32
Gatundu Water and Sanitation Company	2	13	15	30
Total	25	109	125	259

(Source: Water Services Regulatory Board, 2017).

## RESULTS AND DISCUSSION

### Measurement of Legal Framework Specification

The public procurement and asset disposal regulations, 2016 provides a guideline on technical and material specifications of commodities with an intention to maintain a high quality of the commodities bought. It provides that public institutions must follow these specifications to improve procurement performance. This study aimed to find out how legal and ethical specifications are implemented. This is presented in Table 3. From the results of the table above, 100% of the respondents agreed that Lawful and ethical procurement is a challenge for most procurement officers and it influences procurement performance. None of the respondents either were neutral or disagreed that Lawful and ethical procurement is a challenge for most procurement officers and it influences procurement performance. Findings also showed that the majority (80 %) of the respondents agreed that Public procurement and asset disposal regulations, 2006 provides a guideline on technical and material specifications that influence legal framework requirements on procurement performance. Only 10.0 % were neutral and 10% disagreed that Public procurement and asset disposal regulations, 2016 provides a guideline on technical and material specifications influencing legal framework requirements on procurement performance.

Results also showed that a majority of 90 % of the respondents agreed that a procuring entity should cost the items that will be procured at the prevailing competitive market price and that this influence procurement performance while 10 % were neutral about procuring entity should cost the items that will be procured are at the prevailing competitive market price and influence procurement performance. None (0%) disagreed that a procuring entity should cost the items that will be procured at the prevailing competitive market price and that this influences procurement performance. From the results of the table above, majority (90 %) of the respondents agreed that buying of materials/services is in compliance with the provisions of the PPADA (2015) and the PPDR (2006) and that this influence procurement performance. 10 % of the respondents were neutral about buying of materials/services being in compliance with the provisions of the PPADA (2015) and the PPDR (2006) influence on procurement performance. None of the respondents disagreed that buying of materials/services is in compliance with the provisions of the PPADA (2015) and the PPDR (2006) influences procurement performance.

Results showed that a majority of 90.0 % of the respondents agreed Procuring entity prepare a request for quotation or proposal or tender to source and identify the service provider, indicating a brief description of goods, works or non-consultancy services, technical specifications or scope of work, closing date for bid submissions, contract terms and conditions and any other aspect which is necessary and that this influences procurement performance. Findings also showed that none disagreed that procuring entity should cost the items that will be procured at the prevailing competitive market price and that this influenced procurement performance. In general, results showed that 92 % of the respondents said that they agreed that legal framework is needed in procurement performance while only 2 % disagreed with the need for a legal framework on procurement performance. 6 % were neutral about this matter.

**Table 3: Measurement of Legal Framework Specification**

Measurement of Legal Framework specification	1	2	3	4	5	Mean	Std. Dev.
Lawful and ethical procurement is a challenge for most procurement officers	40.4	59.6	.0	.0	.0	1.595	.491
Public procurement and asset disposal regulations, 2016 provides a guideline on technical and material specifications	40.0	40.0	10.0	10.0	.0	1.900	.945
The buying of materials/services is in compliance with the provisions of the PPADA (2015) and the PPDR (2006).	30.0	60.0	10.0	.0	.0	2.100	.539
A procuring entity should cost the procurement items at the prevailing competitive market price.	30.0	60.0	10.0	.0	.0	1.800	.601
Procuring entity prepares a request for quotation or proposal or tender to source and identify the service provider, indicating a brief description of goods, works or non-consultancy services, technical specifications or scope of work, closing date for bids, contract terms, conditions and any other aspect necessary	49.6	50.4	.0	.0	.0	1.504	.501
Average	38	54	6	2	0	1.78	0.62

#### **Association of Legal framework and Procurement Performance**

Descriptive statistics of percentages and chi-square test were used to further analyses the data in order to establish the association of legal framework specification and procurement performance. The results are presented in Table 10. Results showed that the majority (39.6 %) of the respondent strongly agreed that Legal framework specification influenced procurement performance to a great extent of while 20 % indicated that Legal framework specification influenced procurement performance to a very great extent. Generally, results indicated that a majority of 69.6 % strongly agreed that Legal framework specification influenced procurement performance. None of the respondents disagreed while only 10% were neutral that Legal framework specification influenced procurement performance. The data was further statistically analyzed using the chi-square test at a 5% significance level.



**Table 61: Association of Legal framework and Procurement Performance**

Count		Legal framework specification			Total
		Strongly agree	Agree	Neutral	
Procurement performance	Very great extent	20.0%	10.0%	10.0%	40.0%
	Great extent	39.6%	10.4%	0.0%	50.0%
	Moderate extent	10.0%	0.0%	0.0%	10.0%
% of Total		69.6%	20.4%	10.0%	100.0%

Pearson Chi-Square 51.964<sup>a</sup> , df 4, Asymptotic Significance (2-sided) .000

The computed chi-square value 51.964<sup>a</sup> and p-value = 0.000 implied that there was a significant association between legal framework specification and procurement performance. The implication of these results is that Legal framework specification should drive towards quality products and services delivery and procuring goods and services in a lawful and ethical manner that encourages participation and sustainable economic growth has been a challenge so far to most procurement officers.

### Correlation between Legal Framework Specifications and Procurement Performance

To determine the degree or strength of the linear relationship among the variables, Pearson correlation (r) was used. A correlation of  $r > +0.7$  implies that the variable is strongly related negatively or positively.

**Table 5: Correlation**

	Y	x2
Pearson Correlation Procurement performance (Y)	1.000	-0.126**
Sig. (2-tailed)	.	0.025
Legal framework specification (x2)	-0.126**	1.000
Sig. (2-tailed)	0.025	.

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Pearson correlation was used to determine the relationship between legal framework specifications and procurement performance of water and sewerage companies in Kiambu County, Kenya. The correlation coefficient was 0.126 with p-value (0.025) which was found to be significant at a 1 % significance level this implies a strong positive relationship between legal framework specifications and procurement performance of water and sewerage companies in Kiambu County, Kenya. An increase in the use of legal framework specifications will lead to an increase in the performance procurement performance of water and sewerage companies in Kiambu County, Kenya. The results were contrary to Randall (2014) in his study Ensuring clarity and minimizing procurement risks in Petróleos Mexicanos through strong tender documents and model contracts He found out that there was no significant relationship between legal framework specification and procurement performance; this can be explained by the fact that in his study, adoption of legal framework specification in most his population was low.

### Test of Significance of Regression Coefficients

In determining the cause-effect relationship between the dependent variable and the explanatory variables the regression coefficients were tested at the 5% level of significance using t-test. Table 6 shows the intercept and slope coefficients for the model. The study aimed at determining the effect of legal framework specifications on procurement performance in water and sewerage companies in Kiambu County, Kenya. The coefficient obtained from regression 0.308, with (p-value, 0.000, <0.05) thus all the null hypothesis that were rejected. Therefore, there is a statistically significant positive relationship between legal framework specification and procurement performance in water and sewerage companies in Kiambu. A unit increase in legal framework specification will lead to a 0.308, units increase in procurement performance in water and sewerage companies in Kiambu, respectively.

**Table6: Test of significance of Regression Coefficients**

Coefficients <sup>a</sup> Model	Unstandardized coefficients		Standardized coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	.772	.177		4.356	.000
Legal framework specification	308	.056	-.246	-5.481	.000

a. Dependent Variable: Y( Procurement Performance)

## CONCLUSIONS

The study concluded that there was a significant relationship between legal framework specification and procurement performance in water and sewerage companies in Kiambu County. Therefore, legal framework specification does significantly predict the procurement performance of water and sewerage companies in Kiambu. Lack of a good legal framework on the material specification will lead to increased costs, lead times and poor quality products. Therefore, procuring goods and services in a lawful and ethical manner improves procurement performance. The results were contrary to Randall (2014) in his study Ensuring clarity and minimizing procurement risks in Petróleos Mexicanos through strong tender documents and model contracts. He found out that there was no significant relationship between legal framework specification and procurement performance; this can be explained by the fact that in his study, adoption of legal framework specification in most of his population was low.

## RECOMMENDATIONS

Water supply companies should educate stakeholders on proper legal requirements especially on technical specifications, material specifications and due diligence required. This will ensure the legal requirements are followed. Water and sewerage companies should ensure legal framework specification is in compliance with the law such as doing business with only legally authorized businesses, financially sound businesses, affirmative action requirements, checking on history of non-performing contracts, all information on fully settled disputes or litigation, all pending litigation shall in total not represent more than fifty percent of the applicant's net worth, submission of audited balance sheets and other financial statements as required by law acceptable. This will promote a positive culture of following the required laws and hence enhance procurement performance.

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