

## The Effect of procurement process on procurement performance of public tertiary institutions in Ghana

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### Abstract

The purpose of the study was to investigate the effect of procurement process on tertiary institutions in Ghana. The objectives of the study include examining the effect of procurement planning on procurement performance of public tertiary universities, assessing the effect of procurement controlling on procurement performance of public tertiary universities and ascertaining the effect of procurement monitoring on procurement performance of public tertiary universities. A casual research design and cross-sectional data were collected from employees of various tertiary institutions in Ghana to answer the questions the study wanted to address. The data was collected from the respondents was entered into SPSS. The SPSS output was then used to run the regression output as well as the descriptive statistics for data analysis. The results were then presented using tables. The study finds that procurement planning, procurement control and procurement monitoring has a positive and significant effect on the procurement performance of the tertiary institutions used for the study. The study recommends that steps are taken to train the members of staff of all public institutions on the relevance of the procurement process to the success of these institutions. It is further recommended that auditors in public tertiary institutions take steps to uncover any procurement breaches that occur in these institutions so that action is taken to correct such procurement breaches.

**Keywords:** Procurement Practices; Procurement Performance; Planning; Monitoring

### 1. Introduction

According to [1], the nerve center of quality in every organization, whether public or private, is procurement. "At the best possible cost of ownership, goods and/or services purchased at the right time, in the right quality and quantity and from the right place and origin for the direct benefit or use of companies, people, or even governments" [2]. Procurement is defined as purchasing services or goods at the most suitable total price in the appropriate amount and quality [3]. The distinction between procurement on the one hand and acquisition on the other is therefore extremely important. Purchase is the process of ordering and receiving services and good. Therefore, sales can be classified as a subdivision of purchases. The purchase procedure generally denotes the order process, such as demand for, accept and build a record of purchase orders and the receipt of products. [4]. Although procurement involves activities that set basic requirements, activities for procurement such as market study, seller assessment and contract negotiation play a critical part in the effective procurement process.

How to procure goods and services by means of public sector agencies, including ministries and local authorities is described by [5], as Public Procurement. The guidelines and records of public procurement indicate that basic mechanisms for reviewing tenders must be followed, the volume of packages for tender, request and contract awards. [6]. "Procurement can involve the entire business including the requisitioning, transport, storage, and reception processes of a company" [7], where process efficiency is the dominant objective [8].

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According to [9], accountability is a fundamental principle of good procurement practice, where effective processes have to be in place to allow procurement companies to carefully invest limited resources, understanding very well that they account to the general public; competitive supply, that needs competitive procurement, if there are compelling reasons for single procurement; and consistency, emphasizing identical treatment for all bidders regardless of race, citizenship and public attachment.

Many procurement activities continue to be neglected, finding the right direction, mismanagement, slow with much bureaucracy, lack of transparency and free competition, different levels of bribery and not having the capacity of qualified and skilled procurement officers with the ability to conduct and control the procurement procedure, timely and cost-effective manner [10].

## 2. Material and methods

Research design is the total data collection strategy to address questions of the researcher and/or test hypothesis, the specific data analysis techniques and methods the researcher plans to use in the research process. It denotes all the stages and the process involved in reaching the respondents.

A causal research design was employed to investigate the impact of the procurement process on public tertiary institutions' procurement results. The development of causal analysis helps to analyze the relationship between the selected variables. Causal study tries to maintain that something else will happen when we do one thing. This analysis can be defined as explanatory since it measures the relationships between the variables such as procurement planning, controlling, and monitoring and procurement performance.

### 2.1. Population of the study

The target population of this study is 95 employees from management, staff of procurement, staff of finance and staff of audit shown in table 3.1 who are one way or the other involved in the procurement process in Ghana's public tertiary institution.

**Table 1** Summary of the sample and data collection

Department	Sample frame	Sample size	%
Management	20	16	21
Procurement	45	37	48
Finance and audit	30	24	31
Total	95	77	100

### 2.2. Sampling Procedure

This is the act of making conclusions about the entire population using parts of an entire population. Samples are used for practical reasons, so that correct and dependable results can be found and to avoid destruction of all test units [11].

The sample size for the research was 77 employees. It was obtained through using the formulae for sample size determination by [12] which states that

$$n = \frac{N}{1 + Ne^2}$$

Here;

Sample size is n

Target population is N

Error of point (5%) is e

Estimated to be;

The probability sampling technique was employed for sampling purposes to give equal chances of being involved in the study. The stratified probability sampling technique was therefore employed. This is because the respondents belonged to different strata based on the departments from which they work. These departments are the procurement

department, the finance department, the audit department and the heads of the entities and the stratified sampling technique is appropriate for such instances.

By adopting the simple method of random sampling for the analysis, the list of names of all respondents were first obtained and reordered into a random order. Random numbers were assigned to the list of names and the respondents were chosen based on the assigned random names and numbers.

### 2.3. Data Collection Instruments

To obtain primary data, questionnaires were employed. The questionnaire used in this research study consisted of two parts: Parts one and two. Part 'One' contained questions to establish the respondent's biographical information. This was to allow the researcher to determine a sample group profile in relation to sex, educational qualification, age, and how long respondents have lived in the host community. The demographic variables assisted in establishing relationships with other variables in the study.

Part two of the questionnaire focused on the measurement of variables. It looked at the measurement of procurement planning, controlling and monitoring adopted from [13]; measurement of procurement performance adopted from [14]. Part two of the questionnaire was presented with a five-point Likert scale. And employees were requested to show their preference by rating the statements on a scale of 1 to 5.

To improve the validity of the study instrument, the questionnaire was made accessible to the supervisor of the researcher to review and comment to determine the validity data. Under the supervisor's direction, documents were changed or discarded that the study found unreliable or that the research felt infringed on the respondents' privacy.

## 3. Results and discussion

**Table 1** Descriptive Statistics for Demographic Data

		<b>GENDER</b>	<b>AGE</b>	<b>EDUCATION</b>	<b>DEPARTMENT</b>	<b>EXPERICNE</b>
N	Valid	77	77	77	77	77
	Missing	0	0	0	0	0
MEAN		1.4935	1.9481	1.5325	2.1948	1.9091
Std Error of Mean		0.05735	0.07599	0.08181	0.09962	0.09459
Median		1.0000	2.0000	1.0000	2.0000	2.0000
Mode		1.00	2.00	1.00	2.00	2.00
Std Deviation		0.50324	0.66681	0.71790	0.87418	0.83006
Variance		0.253	0.445	0.515	0.764	0.689
Skewness		0.026	0.332	0.979	0.819	01.024
Std Error of Skewness		0.274	0.274	0.274	0.274	0.274
Kurtosis		-2.053	0.260	-0.384	0.197	01.742
Std Error of Kurtosis		0.541	0.541	0.541	0.541	0.541
Range		1.00	3.00	2.00	3.00	4.00
Minimum		1.00	1.00	1.00	1.00	1.00
Maximum		2.00	4.00	3.00	4.00	5.00
Sum		115.00	150.00	118.00	169.00	147.00

From the Table, the mean score for the variable gender is 1.4935. This mean score has a deviation of 0.50324. The results therefore infer that, male employees dominated the study.

Also from the table, the Mean score for the variable age is 1.9481. This mean score has a standard deviation of .66681. This suggests that employees in the 31 to 40 age group dominated the study.

The results from the Table also indicated that employees with a bachelor’s degree dominated the study. This can be seen from the mean score of 1.5325 recorded for this variable with a degree of variability measured through the standard deviation of 0 .71790.

Furthermore, the results from the study indicate that the majority of the employees used for the study are those who worked in the procurement department of the various tertiary institutions from which data was collected. This is evident from the mean score of 2.1948 recorded for the variable education and deviation of 0.87418.

The results from the Table shows that respondents with 5 to 10 years of work experience dominated the study. The mean score recorded for this variable is 1.9091 with a standard deviation of .83006

**Table 2** Descriptive statistics for items measuring procurement planning

<b>Procurement planning</b>	<b>Mean</b>	<b>Std. Dev</b>
Procurement Planning sets in motion the entire Procurement process in the organisation	4.5325	0.61952
The business needs is clearly defined by the responsible personnel in the Unit/Department	4.4805	0.52841
Thorough needs assessment is undertaken by respective Heads for goods and services needed	4.4675	0.59790
Market capability analysis is carried out to determine where to Procure from	4.5325	0.55213
The user Departments clearly specify when to utilise the required goods and services	4.4675	0.59790
Budget approval is obtained for the required items before Purchase in the organisation	4.4805	0.50290
Delivery schedules that fit in the organisation requirements are drawn with the Suppliers	4.4416	0.57339
Funds are availed before Planning is done	4.4026	0.63370
Top Management is involved in procurement planning	4.6623	0.52841

From the table, The Statement of Planning sets the whole process of procurement in motion in the organization has mean to be 4.5325, with a standard deviation of 0.61952. And suggests majority of employees agree that procurement schedule sets the organization's entire procurement process in motion.

From the table, the statement the business needs of the unit/department's responsible workers are clearly defined has a mean of 4.4805, with a standard deviation of 0.52841, majority of employees agree that the organisations needs are well-defined by the personnel responsible in the department.

From the table, a thorough assessment of the needs of the claim is conducted the heads of services and goods needed has a mean of 4.4675, with a standard deviation of 0.59790. It indicates that most workers accept that the respective heads of goods and services required conduct a thorough assessment of needs.

From the table, the marketability analysis of the claim is performed to decide where to buy from has mean to be 4.5325 and with a standard deviation of 0.55213, most employees believe that the study of business potential is done to decide from where to purchase.

From the table, the client department’s state clearly when to use the goods and services needed have mean of 4.4675, with a standard deviation of 0.59790, suggests the majority of the respondents agree that the user departments clearly agree when to utilise the required goods and services.

From the table, the statement budget authorization for the required items is obtained in the company before purchase has a mean of 4.4805, with a standard deviation of 0.50290, this indicates that most employees accept that for the required items prior to purchase, the budget approval is obtained in the business.

From the table, the declaration delivery schedules are drawn with the suppliers that suit the organizational requirements has mean of 4.4416, with a standard deviation of 0.57339, this indicates that most of the works negotiate with the vendors to draw up production schedules that satisfy the organizational requirements.

Before planning, the statement funds are used from the table with an average score of 4.4026 with a deviation of 0.63370. It means that most respondents believe that prior to planning, funds will be used.

From the table, the top management has a mean 4.6623 with standard deviation of 0.52841 in procurement planning. This means that most respondents believe that in procurement strategy the top management is involved.

**Table 3** Descriptive Statistics for items measuring procurement control

<b>Procurement Control</b>	<b>Mean</b>	<b>Std Dev</b>
The organisation periodically reviews the existing procurement policies	4.2468	0.67191
Bids are opened by an independent committee	4.5325	0.66063
Bids are evaluated by an independent committee	4.4545	0.61869
The technical abilities of the suppliers are evaluated before contract awarding	4.6494	0.48030
Received goods and services are checked against local purchase order	4.4156	0.65596
Periodic supplier audits are undertaken to correct compliance	4.5658	0.54980
Invoices are checked against the local purchased order and delivery note before	4.3896	0.56559
Losses are prevented through continuously checking the purchase processes	4.5844	0.59273

From the table, the organisation updates the existing procurement policies regularly has mean of 4.2468 with a standard deviation of 0.67191. It means that most employees believe the organisation updates its procurement practices on a regular basis.

A sovereign committee makes the bid declaration from the table with a mean score of 4.5325, having a standard deviation of 0.66063.

A standard deviation .61869 is calculated by an independent committee with a mean score of 4.4545, which means, most respondents agree that an independent committee will evaluate bids.

The assertion of suppliers ' technical capabilities is evaluated from the table before the contract award with a mean score of 4, 6494, standard deviation of 0.48030, which means that most employees believe that suppliers ' technological capabilities are evaluated prior to contract award.

The statement offered goods and services were checked with an average score of 4, 5844 and a standard deviation of 0.59273 against the local purchase order from the table. It ensures many respondents agree that the provided goods and services will be checked against the regional purchase order.

The statement Periodic Supplier Audits from the table has a mean score of 4.5658 and a standard deviation of 0.54980 to correct compliance errors.

The claim Invoices is checked against the local purchase order from the table and the delivery note has an average score of 4.3896 before payment and a standard deviation of 0.56559. It means that most respondents agree that invoices against the local purchase order and delivery notice will be updated prior to payment.

From table 4.3, an average score of 4.5844 and a standard deviation of 0.59273 was prevented from reporting losses by constantly reviewing the purchasing processes. This suggests that most respondents accept that errors are avoided by monitoring the purchasing processes continuously.

**Table 4** Descriptive Statistics for items measuring procurement monitoring

<b>Procurement monitoring</b>	<b>Mean</b>	<b>Std. Dev</b>
Reviews of the Procurement System are done at regular intervals	4.4545	0.67950
Corrective actions are taken once Discrepancy is identified in these processes	4.3636	0.68651
The organisation examines the Procurement cycle to prevent fraud	4.4675	0.71790
Supplier Evaluation is Periodically undertaken to ensure good quality of the goods and services.	4.5065	0.57636
Obstacles in the Procurement Process are mitigated in a timely manner	4.5065	0.52874
Close supervision of Purchases is done as a way of controlling costs	4.5065	0.59876

The Procurement Process Reviews claim is conducted at regular table intervals with an average score of 4,4545 and a standard deviation of 0.67950. This means that most respondents agree that reviews of the procurement process are performed at regular intervals.

Once a disparity is found in these systems, the corrective actions are taken from the table with a mean of 4,3636, standard deviation of 0.68651, which means that most respondents believe that corrective actions are taken once a difference in these processes is established.

The business tests the procurement process from the table to prevent fraud with an average 4.4675, deviation of 0.71790. This indicates that most respondents believe that the company monitors the procurement process in order to prevent fraud.

The Supplier Assessment Statement is annually conducted from the table to ensure good performance of the goods and services has an average score of 4.5065 and a standard deviation of 0.57636. It means that most respondents accept that the assessment of the product is conducted annually to ensure the goods and services are of good quality.

From the table, there is a mean of 4.5065 with standard deviation of 0.52874, minimizing the claim Challenges in procurement process in a timely manner. This means that most respondents believe the prompt avoidance of challenges in the process.

The claim close procurement tracking is done from the table as there is a mean score of 4.5065 and a standard deviation of 0.59876 as a way to control costs. This indicates that most respondents agree that closer oversight of procurement is being carried out as a means of controlling costs.

**Table 5** Descriptive statistics for non-financial measures of procurement performance

<b>Non-Financial Measures</b>	<b>Mean</b>	<b>Std. Dev</b>
Our organisation ensures safety of employees	4.5714	0.59446
Our organisation ensures purchasing efficiency	4.4286	0.57190
Our organisation ensures the safety of products	4.5455	0.61869
Our employees have knowledge of supply market	4.4805	0.59847
Our organisation ensures purchasing effectiveness	4.6494	0.60189
Our organisation ensures customer satisfaction	4.5325	0.55213
Our organisation is highly dependability	4.5714	0.49812
Our organisation is highly flexibility	4.4416	0.65882
Our organisation ensures quality of employees	4.5195	0.55275
Our organisation ensures cycle time	4.5195	0.57607
Our organization ensures safety of employees	4.3506	0.66424

Our organization's claim from the table guarantees workplace health, a mean of 4.5714 with standard deviation of 0.59446. This means that most workers believe that our company ensures employee safety.

Our organization's statement from the table guarantees that procurement performance has an average score of 4.4286, with standard deviation of 0.57190. This means that most of the respondents believe that our company ensures productivity in purchasing.

The statement from the table from our company ensures product safety has an average score of 4.5455 and a standard deviation of .61869. This ensures that most workers believe that our company guarantees product safety.

From the table, the statement our employees have Knowledge of supply market has mean of 4.4805 with standard deviation of .59847, which infers majority of the workers agree that our employees have Knowledge of supply market.

From the table, the statement our organization ensures purchasing effectiveness has mean score of 4.6494 with standard deviation of .60189, suggests majority of workers agree our organization ensures Purchasing effectiveness.

From the table, the statement our organization ensures Customer satisfaction has mean of 4.5325 and deviation of .55213. Which suggests that majority of employees agree that our organization ensures Customer satisfaction

From the table, the statement our organization is highly Dependability has a mean of 4.5714 and a deviation of .49812. This infers that the majority of workers agree that our organization is highly Dependability.

From the table, the statement our organization is highly Flexibility has a mean of 4.4416 and deviation of .65882, which suggests the majority of employees agree that our organization is highly Flexibility.

From the table, the statement our organization ensures Quality of employees has a mean of 4.5195 and deviation of .55275, suggests the majority of workers agree our organization ensures Quality of employees.

From the table, the statement our organization ensures Cycle time has a mean of 4.5195 and a standard deviation of .57607, suggests the majority of employees agree that our organization ensures Cycle time.

From the table, the statement our organization ensures safety of employees has mean of 4.3506 and standard deviation of .66424. This means most of the employees believe that our company guarantees employee safety.

**Table 6** Descriptive Statistics for financial measures of procurement performance

Financial Measures	Mean	Std. Dev
Our organization has high Profit returns	4.1688	0.78477
Our organization has Purchasing ratios	4.4416	0.78629
Our organization has high Vendor rating	4.2727	0.59904
Our organization has high Cost accounting	4.4026	0.63370
Our organization has high Budgetary controls	4.2597	0.65700
Our organization has high Purchasing audit	4.4805	0.68076

From the table, the statement our organization has high Profit returns has mean score of 4.1688 and a standard deviation of 0.78477. This suggests that most of the employees believe that our organisation has high returns on investment

From the table, the statement our organization has Purchasing ratios has mean score of 4.4416 and a standard deviation of 0.78629. This means that most employees believe that our organisation has purchasing ratios

From the table, the statement our organization has high Vendor rating has mean score of 4.2727 and a standard deviation of 0.59904. This infers that majority of the workers agree that our organization has high Vendor rating.

Our organization's claim has high-cost accounting from the table has mean score of 4.4026 and a standard deviation of 0.63370. This means that most of the workers believe that our company has high accounting costs.

From the table, our organization's assertion has high budget controls has an average score of 4.2597 and a standard deviation of 0.65700. This means that most of the employees believe that our company has tight budgetary controls

From the table, our organization's statement has a good buying audit has an average score of 4.4805 and a standard deviation of 0.68076. This means that most of the employees believe that our company has a good procurement audit

### **3.1. The Effect of Procurement Planning on Procurement Performance**

The study finds that procurement planning has a positive and significant effect on the procurement performance of tertiary institutions. This confirms earlier work by [15], who studied the effect of procurement practices on the procurement quality of public sugar manufacturing firms in Western Kenya and reported a positive and negligible impact on procurement efficiency. It also provides support to [16] who concludes that procurement planning enhances supplier's performance in service delivery. The results also agree with [17], who claims that procurement management has had a positive and significant impact on service delivery in Kenya's state corporations. The findings are not different from the earlier studies done by [18] who found that all facets of procurement planning were positively correlated to organizational performance. Ultimately, the findings are consistent with [19] as they conclude that a significant statistical relationship exists between the planning of procurement and quality.

### **3.2. The Effect of Procurement Control on Procurement Performance**

The study shows that the regulation of procurement has a positive and significant impact on the procurement quality of tertiary institutions used for the study. these findings are consistent with [20] who argues that, because of the significant share in the company's turnover of procurement quality controls and procurement costs, procurement quality controls to minimize them will have a tremendous effect on procurement costs and, consequently, on service delivery. It is also consistent with [21] the study concludes that efficiency, cost savings and the best procurement feature can be accomplished by quality control preparation, policies, processes and monitoring for continuous process improvement and added value to the activities. The study concludes that due to the significant share of an organization's turnover in the quality control process and procurement costs, any action to reduce them will have an enormous impact on costs and hence on service delivery.

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## **4. Conclusion**

It is inferred from the study results that procurement preparation has a major and positive effect on the quality of the tertiary institutions used for the research in procurement. There was also a positive and negative correlation in tertiary institutions used for the analysis between procurement quality and procurement preparation.

The report also suggests that the regulation of procurement has an important and positive effect on the quality of the tertiary institutions used for the research in procurement. There was also a strong and positive relationship in the tertiary institutions used for the analysis between procurement control and procurement quality.

Ultimately, it is also inferred from the study results that the control of procurement has an important and positive effect on the quality of tertiary institutions used for the research in procurement. There has also been a positive and negative correlation between the monitoring of procurement and the quality of public institutions used for the report.

### *Recommendations*

It is recommended that steps are taken to train the members of staff of all public institutions on the relevance of the procurement process to the success of these institutions. This would help staff members take the necessary steps to ensure that good public procurement practices are always followed.

It is also recommended that auditors in public tertiary institutions take steps to uncover any procurement breaches that occur in these institutions so that action is taken to correct such procurement breaches. This would ensure that the gains obtained from practicing good procurement management are realized.

It is also proposed that Ghana's financial institutions and fund managers implement and sell annuities as retirement services that are capable of meeting the financial needs of retirees than most other sources of pension funding.



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## Compliance with ethical standards

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### *Disclosure of conflict of interest*

No conflict of interest.

### *Statement of informed consent*

Informed consent was obtained from all individual participants included in the study.

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## References

- [1] Wanyonyi SC, Matur W. Factors Affecting Performance of Procurement Function among Public Technical Training Institutions in Kisumu County, Kenya. *International Journal of Economics, Commerce and Management United Kingdom*. 2015; 3(1).
- [2] Njoroge PK. *Effects of Public Procurement Procedures on Financial Performance of Farmers' Cooperative Societies in Kiambu County*. Unpublished Masters Research Project Work. University Of Nairobi. 2012.
- [3] Manyenze N. Procurement Performance in the Public. 2013.
- [4] Chartered Institute of Procurement and Supply [CIPS] (2013). *The Definitions of Procurement and Supply Chain Management*. 2013.
- [5] Asante E. *Factors affecting Procurement performance in Public Sectors in Ghana: A Case of Kintampo Municipal Assembly*. Unpublished master's Thesis Kwame Nkrumah University of Science and Technology. 2016.
- [6] Mensah T. *A Study into Public Procurement Procedures in Colleges of Education in Ghana*. Unpublished Master's Thesis Kwame Nkrumah University of Science and Technology. 2015.
- [7] Nevalainen A. *The e-Business Dictionary*, Rockbend Books, Alaska. New York: Pearson FT Press. 2001.
- [8] Aldin N, Brehmer PO, Johansson A. Business development with electronic commerce: refinement and repositioning, *Business Process Management Journal*. 2004; 10(1): 44-62.
- [9] Thai KV. "Public procurement re-examined", *Journal of Public Procurement*. 2001; 1(1): 9-50.
- [10] Mburu S, Njeru A. Factors Affecting Procurement Performance in the Milk Processing Firms in Kiambu County. *International Journal of Science and Research*. ISSN (Online). 2014; 2319-7064
- [11] Kothari, R.C. (2012). "Sampling techniques, Methods and techniques: Research Methodology. New Jersey: Pearson Prentice Hall.
- [12] Park, J.W. and Jung, M.S., 2009. A note on determination of sample size for a Likert scale. *Communications for Statistical Applications and Methods*, 16(4), pp.669-6732
- [13] Makabira DK, Waiganjo E. Role of procurement practices on the performance of corporate organizations in Kenya: A Case Study of Kenya National Police Service. *International Journal of Academic Research in Business and Social Sciences*. 2014 Oct 1;4(10):369
- [14] Kakwezi P, Nyeko S. Procurement processes and performance: Efficiency and effectiveness of the procurement function. *International Journal of Social Sciences Management and Entrepreneurship (IJSSME)*. 2019 May 23;3(1).
- [15] Anane A, Adoma V, Awuah G. The effect of procurement practices on service delivery: a case study of VRA, Ghana. *Asian Journal of Economics, Business and Accounting*. 2019; 1-23.
- [16] Chepkesis K, Keitany P, Kipler M. Effect of Procurement Planning on Suppliers Performance in Public Institutions: A Case of Moi University. *European Journal of Logistics, Purchasing and Supply Chain Management*. 2018;6(2):1

- [17] Jackson JG, Ombui K. Effects of procurement planning on service delivery in state corporations in Kenya: A case of Kenya agricultural and livestock research organization. *Strategic journal of Business and Change Management*. 2018;5(2):1326-59.
- [18] Ogwang, Waweru. Influence of Procurement Planning on Performance of Kisumu Water and Sewerage Company Limited, Kenya. *International Journal of Economics, Commerce and Management*. 2017; 5(5).
- [19] Munyawera S, Mulyungi DP, Ismail DN. Role of Procurement Planning Practices on Performance of State Corporations in Rwanda: A case of Rwanda Energy Group. *International Journal of Management and Commerce Innovations* ISSN 2348-7585 (Online). 2018;6(1):709-18.
- [20] Munyimi TF. The role of procurement quality controls in procurement performance in the energy sector in Zimbabwe. *Cogent Engineering*. 2019 Jan 1;6(1):1631563.
- [21] Siongok WC, Noor SI. Role of quality control system on procurement performance in Kenyan State Corporation: A case of Kenya National Highways Authority. *International Academic Journal of Procurement and Supply Chain Management*. 2016; 2(2): 149-178.