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Effects of Procurement Strategies on Procurement Performance of Sugar Industry in Pakistan

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This investigation aims to analyze the effect of procurement planning, staff competency, and green purchasing on procurement performance in the sugar industry of Pakistan. Procurement planning, staff competency, and green purchasing are independent variables and procurement performance is the dependent variable. The study employed a descriptive survey research design. Primary data was collected using questionnaires targeting employees of sugar industries in Pakistan. The quantitative research method was used to collect data. The study findings revealed that procurement planning had a positive and significant impact on the procurement performance whereas staff competence and green purchasing also had a strong positive and significant impact on the procurement performance of sugar manufacturing firms in Pakistan studied. The study recommends that all sugar manufacturing firms in Pakistan must implement efficient procurement practices to become more efficient in their operations. Particularly the study recommends that the organizations should enhance their planning and also ensure that procurement plans are adhered to, staff employed in the procurement department should be competent, and that there should be training opportunities for the staff.

1. Introduction

Current research is carried out on the Pakistani sugar industry. After the textile sector, this industry is the 2nd biggest sector in Pakistan. The result of one survey indicates that the Pakistani sugar sector contributes about 20% of GDP and generates 3-million job opportunities (Pakistan MOF, 2019). The farming of sugar cane has been decreased in Pakistan about 0.4 percent as compared to the past fascial year (Pakistan MOF, 2019). Hence, this will result in poor procurement performance of this sector has been decreased the economic growth. Procurement performance this sector is decreased due to bad procurement policies and current environment a smaller number of sugar mills are planning for procurement of cane (Qureshi, 2020).

The province of the Punjab is the key produce of sugar-cane in Pakistan. There is significant potential and advancement in production and area of the sugar cane. Due to prevailing unfavorable conditions, low number mills are not planning to procure cane. The crop of sugarcane reaped deprived of any procurement plan (Qureshi, 2020). Other is prosperous at a high pace speed is the procurement in term of sugar cane production at large scale. Earlier this unprincipled rivalry, the proportion of inessential substantial did not upsurge from 4 to 5 while nowadays there is no attention that how much inessential quantifiable things are bought (Qureshi, 2020).

All farmers reported that a high price of inputs was an acute problem in the way of practicing the production of sugarcane. High procurement problems were another major problem for the growers in the study area. Lack of resources was also an important problem for sugarcane growers and low prices of output (Nazir, 2013).

Procurement plays an important role to help the achieve organization its goals and prepare for the uncertainty ahead. Part of its purchases will be needed to focus on processing costs from a cost basis. However, according to (Weeks and Namusonge, 2016) there's a prime opportunity function to add value much more in a strategic way while attaining the strategic goals. (Brammer and Walker, 2011) describe two types' objectives in the procurement system: outside the acquisition Purchase objectives and objectives. Procurement performance is the analysis of effectiveness and efficiency of the outcome of procurement activities, where the accomplishment of a given task is measured against preset known standards such as; accuracy, completeness, cost, speed, flexibility, quality of supplies, and supplier profile among many others (Daniel, 2013). Green procurement is adding environmental aspects to price and performance criteria when making purchasing decisions. The ultimate goal of GP is reducing the environmental impact of sourcing to increase resource efficiency (Nawire and Kiarie, 2014). Competency is a long-term, subconscious existence of the characteristics of employees, and it is closely related to each employee's work environment, performance standards, and assessment system (Fu, 2018).

1.2 Research Objectives

This research aims to find the factors that affect procurement performance in the sugar industry of Pakistan. The research objectives intended to be completed are:

Objective 1- To determine the association between green purchasing and procurement

performance with the help of correlation and regression analysis in the Sugar Industry of Pakistan.

Objective 2- To analyze the association between staff competency and procurement performance with the help of correlation and regression analysis in the sugar industry of Pakistan.

Objective 3- To investigate the association between procurement planning and procurement performance with the help of correlation and regression analysis in the sugar industry of Pakistan.

2. Literature Review

In the view of Mangan et al. (2008) "procurement is a process of identifying and obtaining goods and services". It comprises of purchasing, sourcing, and includes all the actions from recognizing probable contractors to transfer to the receivers. Planning of procurement is the process of the obtaining the things by which firms gain services and goods from outside sellers (Burt et al, 2004). Kavua and Ngugi (2014) examined a positive significant relationship between planning of procurement and performance in Kenya. They explained that developing and in developing countries, there's effective and efficient facility distribution is due to the influence of procurement planning at local and the central government.

Mukopi and Iravo, (2015) referred that for implementation of efficient performance measurement, the aims of measurement essential epitomize the useful areas, and metrics chosen must reflect a balance between the financial and non-financial measures that can help in decision making. According to (Wittig, 1999) improvements in public procurement systems can have a direct and beneficial effect on a country's overall economic situation. In most countries, a large part of government resources is consumed on the procurement of goods, services, and works that are required in government departments. Procurement performance evaluation has been a problem for the procurement professionals in Kenya's public practice. Procurement performance is an outcome of purchasing effectiveness and purchasing efficiency (Dubey et al., 2013).

Competency is the claim of skills, performance transfer, knowledge, the behavior compulsory to get things perform in impressive manner. Also, capability specifies the competence of skills and knowledge that allow somebody to perform in diverse conditions. In the view of Russell, (2004), the unavailability of satisfactory knowledge in procurement issues, may result in considerate consequences numeration breaches of codes of conduct. Numerous organizations do not have staff with the right competence critical to good procurement procedure administration. Consequently, substantial and incessant investment is experienced in training and development) and there is a need for wide outside training for human resources to be able to improve and contribute to the efficiency of organizations (Appiah, 2010). Green purchasing is defined as "affirmative selection and acquisition of products and services that most effectively minimize negative environmental impacts over their life cycle of manufacturing, transportation, use and recycling or disposal". The attributes which products and services, must include are their ability to conserve energy and water, minimize generation of waste and releases of pollutants, and can be recycled. In simple words, in green purchasing, the environmental aspect is taken into consideration along with other dimensions like quality,

cost, delivery, technology, service, and other strategic importance variables while making procurement decisions. The ultimate goal is to reduce the environmental impacts of sourcing and to increase resource efficiency (O'Connor et al., 2011).

2.2 Theories

RBV supporters claim that valuable, rare, unique, and irreplaceable resources can be a source of outstanding performance and can lead to a lasting company competitive advantage. RBV is a theory that says that the tangible and non-tangible assets are So RBV is the right approach to understand. The dynamics of competition in which the company's resources are intangible and tangible. Related to its semi-permanently, including technological, human, and physical assets. Resources alone are not enough, so the RBV theory adds a group of capabilities that derives from complex patterns of interaction and coordination of resources (Yew Wong and Karia, 2010). The theory of resource-based view was used to explain the relationship between procurement planning and procurement performance of the firms. It was significant in explaining how firms can adopt excellent procurement practices as a form of capabilities and sources of competitive advantage to improve their performance especially when such capabilities are applied alongside the resources allocated by the firms.

Employees involved in procurement planning are the resources that must be used in order to give the business a competitive edge, which is reflected in the provision of high-quality, effective, and efficient services. As a result, this theory affected budgeting, logistics management, procurement portfolio, rules, and processes, among other things. The distinctive qualities that will allow a company to gain a competitive edge despite limitations in the business environment are also examined under this approach. In order to gain a competitive edge, Pakistan used this idea to identify its own strengths and integrate green purchasing into its supply chain management.

2.3 Theoretical Model Development

The resources that must be utilised to provide the company a competitive edge—which is demonstrated in the delivery of excellent, efficient, and effective services—are the employees engaged in procurement planning. Budgeting, logistics management, procurement portfolios, regulations, and procedures were all impacted by this approach. This method also looks at the unique characteristics that will give a business a competitive advantage in spite of obstacles in the marketplace. Pakistan adopted this concept to pinpoint its unique advantages and include green buying into its supply chain management in order to obtain a competitive advantage.

Kilonzo (2014) investigated procurement performance and best practices using Cadbury's Kenya Limited as a case study. Since a single organisation serves as the unit of analysis, the research design for this study was a case study. According to the report, the business has implemented procurement best practices, which were adhered to while making purchases. In order to achieve price variance, effective contract utilisation, inspiration management, increased procurement personnel skills, improved procurement cycle time, and effective payment processing time, the study found that the organisation prioritised performance through procurement best practices.

Odero1 (2017) established the effect of procurement practices on procurement

performance of public sugar manufacturing firms in Western Kenya. The specific objectives of the study were to establish the effect of procurement planning and staff competence on the procurement performance of public sugar manufacturing firms in western Kenya. The study findings revealed that procurement planning had a positive and insignificant impact on the procurement performance whereas staff competence had a strong positive and significant impact on the procurement performance of sugar manufacturing firms in Western Kenya studied. Yang and Zhang (2012) Green purchasing is a key strategy for enterprises to reduce waste and improve efficiency and enhance competitiveness. Based on the survey of 144 companies, five Principal components of green purchasing practices were extracted through factor analysis using SPSS statistic software. And then, regression analysis was conducted to verify the hypothesis, it concluded leaders' support will boost the green purchasing practices and the cost of environmental management will hinder the green purchasing practices of Chinese enterprises. According to Barsemoi et al. (2014) examined factors influencing procurement performance in the private sector in Kenya. The procurement process was the most related factor affecting procurement performance measured in terms of service delivery compared to staff competence, organization management, whereas quality management was the least related factor affecting procurement performance.

Based on the literature, the hypothesis is formulated as:

H1: There is a significant relationship between procurement planning and procurement performance in the sugar industry of Pakistan

H2: There is a significant relationship between green purchasing and procurement performance in the sugar industry of Pakistan

H3: There is a significant relationship between Staff competency and procurement performance in the sugar industry of Pakistan.

3. Methodology

A questionnaire instrument-based survey technique was used to collect data from organizations operating in Pakistan; Data were collected from organizations working in the locality of Pakistan. Primary information will be prepared for a particular purpose to clear the difficulties. The questionnaire was developed and emailed as well as fill it with physical visits with respondents. The first part consists of general information covering the main areas of respondents‟ demographics: gender, age, qualification, industry type, shift hours, and managerial level. Responses of employees on the variables of the hypothesized model were obtained on a five-point Likert-type scale (1=strongly disagree to 5=strongly agree). The details of the measures are given below. To measure Procurement performance, a scale based on (Masiko, 2013) was used. The items were rated on a five-point scale ranging from 1, "strongly disagree", to 5, "strongly agree", by workers who were aware of procurement performance. The items of procurement planning were assessed by using the scale of five points and adapted from studies of (Nyaboke, T. M., 2016). The items of staff competence were assessed by using the scale of five points and adapted from (Studies of Influence of Employee Competence on Procurement Performance in Almasi Beverage Limited, Eldoret, Uasin Gishu County, Kenya). The items of green purchasing were assessed by using the scale of five points

and adapted from studies of (Yang, W., & Zhang, Y. 2012). As the background concerned, the questionnaire in this study was developed based on the domestic and international relevant study, the questionnaire scales include two parts: the basic information, green procurement practices. among which, the latter was extended based on the given literature and it included 20 items. Scale items were measured on a 5-point Likert scale, where 1 denotes To No Extent and 5 denotes To A Very Great Extent. The target population of the current study will be Sugar business associations.

Using information obtained from sugar business associations, a total of 400 questionnaires will be distributed to Pakistani sugar business associations and a key informant in each company was contacted with a request to complete the questionnaire. From sample results, researchers generalize the findings or make claims about the population. The list of employees was acquired from companies and contacts were maintained to their dependents via emails and phones. We research Probability sampling because this research is quantitative and gave equal chance to all the respondents to participate in the research. A simple random sampling technique has been used. A self- administered survey approach was used that resulted in a high response rate of 90.92%. SPSS statistical software was used for investigation and analysis as well as interpreted in form of tables and graphical representation. Some descriptive analyses were applied in data analysis that displays the collected data in graphical representation although inferential analysis describes the relationship among dependent and independent variables. Different test like frequency distribution, reliability, KMO & Bartlett's test, correlation, and regression was applied in research. Interpretation of analysis showed complete information regarding data. For getting a consistent result, apply the test on the collected data and avoid the error of missing data and check the validity and reliability. All questions were arranged on basis of the Likert scale having five options in the arrangement. To test for the hypothesis, reliability, KMO, correlation, and regression analysis were conducted to examine whether the hypothesis was accepted or rejected.

4. Analysis of Survey Data

4.1 Descriptive Analysis:

This descriptive analysis performed on the survey data is presented in this section.

Table No 1: Demographics Information

Respondents Demographics		Frequency	Percentage
Gender (N=350)	Male	242	69.1
	Female	108	30.9
Age (N=350)	21-30 years	213	60.9%
	31-40 years	117	33.4%
	41-50years	18	5.1%
	51-60years	1	0.3%

	above 60 years	1	0.3%
Education (N=350)	less than 14 years	14	4.0%
	14 years	41	11.7%
	16 years	259	74.0%
	above 16 years	36	10.3%
Managerial Level (N=350)	Top Level	90	25.7%
	Middle Level	217	62%
	Low Level	43	12.3%
Shift Hours (N=350)	Morning	318	90.9
	Evening	32	9.1
Industry Type (N=350)	Public	28	8.0
	Private	294	84.0
	International	28	8.0

The table shown above is the frequency distribution table of demographic profiles for respondent's frequency distribution purposes. There are 350 respondents in this survey and the response is 100% with no missing value. 108 female respondents are having 30.9% of the total 350 respondents and male respondents are 242 having 69.1% in total 350 respondents. From the age profile, The results show us that the first group is in between 21-30 years which is 213 (60.9%) of all respondents. The second group is 31-40 years which is 117 (33.4%) of all respondents. The third group is 41-50 years which is 18 (5.1%) of all respondents. The fourth group is 51-60 years which is 1 (0.3%) of all respondents and the fifth group is above 60 years which is 1 (0.3%) of all respondents. From the education profile, The results show us that the first group is in between less than 14 years which is 14 (4%) of all respondents. The second group is 14 years which is 41 (11.7%) of all respondents. The third group is 16 years which is 259 (74%) of all respondents. The fourth group is above 16 years which is 36 (10.3%) of all respondents. From the managerial level profile, Top-level management has 90 (25.7%) of all respondents. Middle-level management has 217 (62%) of all respondents. Low-level management is low have 43 (12.3%) of all respondents. After analyzing the results we can say that respondents with middle-level management categories are more than other participants. From the employee shifts profile, The result shows us that the First group is the morning which is 318 (90.9%) of all respondents. The second is an evening which is 32 (9.1%) of all respondents. From the industry type profile, the First group is public which is 28 (8%) of all respondents. Second is the private industry type which is 294 (84%) of all respondents. The

third is international industry type which is 28 (8%) of all respondents.

4.3 Reliability

Table No 2: Reliability

Variables	Cronbach's Alpha	N of Items
Procurement Planning	0.755	11
Staff Competency	0.754	5
Green purchasing	0.853	13
Procurement Performance	0.812	5

In the quantitative analysis procedure, one most important part is to check the reliability of the data. The value of Cronbach's Alpha shows the reliability of the instrument. It should be above 0.7 for a reliable instrument. This study involved four variables as Procurement Planning, Staff Competency, Green Purchasing, and Procurement Performance were measured with the help of several items adopted from earlier studies. Table 5.7 shows the Cronbach's Alpha value of different variables. The Cronbach's Alpha value for the items of Procurement Planning was found to be0.755. It implied that those items were reliable. The variable of Staff Competency was measured through adopted items and the Cronbach's Alpha value for those items was 0.754. It is also found to be reliable. While the Cronbach's Alpha value for the items measuring green purchasing is 0.853. It also reflects the reliability of items. While the Cronbach's Alpha value for the items measuring Procurement Performance is 0.812. It also reflects the reliability of items. Thus, items of all the variables in this construct are found to be reliable.

4.4 KMO and Bartlett's Test

Table No 3: KMO Matrix

Constructs	No. of Items	KMO A measure of sample adequacy	Bartlett's Test of Sphericity Chi-square	Bartlett's test of sphericity Sig.
Procurement Planning	11	.867	141.703	.000
Staff Competency	5	.774	585.627	.000
Green Purchasing	13	.834	169.603	.000
Procurement performance	5	.790	576.334	.000

The KMO measure of sampling adequacy indicates the suitability of employing factor analysis. The value of KMO varies between 0 and 1. A value of 0 indicates that there is larger dispersion in the pattern of correlations; hence, the application of factor analysis becomes inappropriate. A value of 1 indicates that the patterns of correlation are relatively compact, so the application of factor analysis becomes appropriate. It is a general rule of thumb that a KMO value of 0.5 is poor, 0.6 is acceptable and a value closer to 1 is better and more desirable (Hinton et al., 2004). Furthermore, values between 0.5 and 0.7 are mediocre, values between 0.7 and 0.8 are good, values between 0.8 and 0.9 are great and values above 0.9 are superb (Hutcheson and Sofroniou, 1999). The results suggest (Table 5.8) that the value of KMO for each construct is well above the recommended acceptable level of 0.6 except for procurement planning (KMO

= 0.867), for staff competency KMO = (0.774), for green purchasing, KMO = (0.834) and procurement performance KMO = (0.790). This shows that it is worth conducting a factor analysis in the case of the present data. Bartlett's test of sphericity is conducted to check the significance of the relationship between the items of a construct. If there is no relationship among the items of a construct, then it will be pointless to go ahead with the factor analysis. Bartlett's test assumes a null hypothesis of no correlation. Generally, a p-value <0.05 confirms the significance of the relationship among variables. Table 8 reflects that the p-value of Bartlett's test in the case of all constructs is less than 0.001 which provides evidence against the null hypothesis of no correlation. So, we can continue with factor analysis.

Table No 4: Eigenvalues and Total Variance Explained

Construct	**Components**	**Initial Eigenvalues**		
		Total	***% of Variance explained***	***Cumulative % of Variance explained***
Procurement Planning	**Comp 1**	4.691	42.642	42.642
Staff Competency	**Comp 2**	2.870	57.391	57.391
Green Purchasing	**Comp 3**	5.149	39.607	39.607
Procurement performance	**Comp 4**	2.866	57.324	57.324

Generally, those components of a construct considered to be the principal components are those that have an eigenvalue greater than 1 and they are used for further analysis. Table 5.9 contains all eigenvalues and also shows total variances explained for the constructs. Only one principal component was extracted from each of the constructs by using the PCA extraction method: Procurement planning (consisted of eleven items explaining 42.64% variance), staff competency (consisted of five items explaining 57.39% variance), and green purchasing (consisted of thirteen items explaining 39.60% variance) and procurement performance consisted of five items explaining 57.32% variance.

4.5 Factor Loadings

Table No 5: Factor Loadings

Procurement planning	**PPL**
Budget approval is obtained for the required items before purchasing material.	.694
Delivery schedules that fit the organization's requirements are drawn with the suppliers.	.465
Strategies and tactics based on industrial strength and opportunities.	.458
Reviews of the procurement system are done at regular intervals.	.791
Procurement planning helps budgetary proposals that seek approval services	.783
Procurement planning identifies sources of funding service delivery	.681
Procurement planning sets in motion the entire procurement process of acquiring services in a government corporation	.266
Procurement planning integrates the Industry operations and improved service delivery	.729
Procurement planning drives expected results which impact service delivery	.700
Effective procedures to control wasteful spending in the procurement of goods/services.	.778
Management and staff adhere to the procurement system for service delivery.	.694
Staff Competency	**SC**
Your Industry provides a challenging environment for employees learning.	.792

Employees are trained to perform according to their job description,	.659
Employees are well aligned with procurement functions and the PPADA 2015.	.763
Your Industry focuses on nurturing employee's talents in individual departments and the entire Industry.	.845
High employee pieces of training can reduce wastage.	.715
Green Purchasing	**GP**
Your Industry follows environmental protection laws and regulations.	.573
Your Industry looks at some potential environmental regulations.	.631
Your Industry takes the potential liability of disposal of hazardous materials.	.666
Your Industry focuses on the green image of your corporate.	.768
Competitor's green strategy will influence your Industry.	.565
The commitment of top leadership is strong for environmental management.	.728
The middle management provides support for green management.	.749
Your enterprise has its corporate environmental vision.	.659
In the future, the purchase cost of environmentally friendly materials (green products) will increase.	.443
Suppliers play a crucial role in promoting environmentally friendly products improvements.	.612
Your company focuses on buying less polluting or green products.	.431
Based on ecological factors, your enterprises can consider selecting raw materials or parts of other	.559
Your Industry intends to switch to a green version product recently.	.689
Procurement Performance	**PP**
The Industry procurement strategy leads to quality goods and services being offered by suppliers to the Industry	.712
The procurement measurement plan continuously gives progress on procurement activities hence improved procurement productivity	.808
Supplier relationship management leads to the delivery of goods and services just in time as planned by the Industry.	.686
The Industry's procurement strategies leverage strengths which leads to high procurement productivity.	.731
Supplier relationship management leads to the reliability of supplies to the Industry.	.838

According to Straub and Gefen (2004), the minimum value for the loading of all items should be greater than 0.40 and the cross-loading of the items should not be above 0.40. For all constructs (i.e. procurement planning, staff competency, green purchasing, and procurement performance) all related items are loaded on just one component with varied factor loadings above 0.40 respectively, as shown in Table 5.10. The above-illustrated results satisfy the criteria of construct validity including both discriminate validity (loading of at least 0.40, no cross-loading of items above 0.40) and convergent validity (eigenvalues of at least 1, loading of at least 0.40 for items that load on posited constructs). This means that the collected data, which is obtained from the instrument, are valid.

4.6 Correlation

Correlation shows the relationship of variables and the degree of their interdependence. Table 6 shows the relationship of variables involved in this study.

Table No 6: Correlation

		Procurement Performance
Procurement Planning	Pearson Correlation	.366**

	Sig.	.000
Staff Competency	Pearson Correlation	.286**
	Sig.	.000
Green purchasing	Pearson Correlation	.893**
	Sig.	.000

The matrix of correlation implies that Procurement Planning and Procurement Performance have an estimated value of r is 0.366 at the significance level of 0.01. This value implies a positive as well as strong relation among Procurement Planning and Procurement Performance. The matrix of correlation implies that Staff Competency and Procurement Performance have estimated value of r is 0.286 at the significance level of 0.01. This value implies a positive as well as weak relation among Staff Competency and Procurement Performance. The Staff Competency and Procurement Performance value with positive symbols determine positive as well as weak relation among variables and implied that due to increment in Staff Competency directly contribute in Procurement Performance. The strength of the relationship is weak. The matrix of correlation implies that green purchasing and Procurement Performance have an estimated value of r is 0.893 at the significance level of 0.01. This value implies a positive as well as strong relation between green purchasing and Procurement Performance. The green purchasing and Procurement Performance value with positive symbols determine positive as well as strong relationships among variables and implied that increment in green purchasing directly contributes to Procurement Performance. The strength of the relationship is strong.

4.7 Regression Analysis

Regression analysis is done to check the dependence of the dependent variable on the independent variable.

4.7.1 Procurement Planning and Procurement performance

Table No 7 (a): Value of R Square for Procurement Planning and procurement performance

Model	R Square
1	0.134

Table 7 (a) shows the value of R Square. It is used to measure the variation in dependent variables due to independent variables. Here the value of R Square is 0.134. It shows that Change in Procurement Planning causes a 13.4% change in procurement performance.

Table No 7 (b): ANOVA Table for Procurement Planning and procurement performance

Model	Sum of Square	D .f	Mean Square	F	Sig

Regression	26.522	1	26.522	53.679	.000[a]

The following table 5,11(b) shows the fitness of the model. The result shows that it is significant at 0.000 level. The value of F for this model is 53.679. It reflects the fitness of the model as the value of F is above10.

Table No 7(c): Beta value for Procurement Planning and procurement performance

Model	Unstandardized coefficients	T	Sig.
	B		
(Constant)	1.997	9.032	.000
Procurement Planning	.420	7.327	.000

The value of B represents the variation in the dependent variable due to one unit change independent variable. The value of B in table 5.11 (c) is 0.420. It shows that one unit change in Procurement Planning causes a 42% change in procurement performance. The relationship between these two variables is also found to be significant at the 0.00 level. The value of "t" shows the direction of the relationship. The value of" t" for this relationship is found to be 7.327. It is positive and above 1.96, thus it shows the positive and significant relationship between Procurement Planning and procurement performance. Therefore, the H1 hypothesis is accepted for this relationship.

4.7.2 Staff Competency and Procurement performance

Table 8 (a): Value of R Square for Staff competency and procurement performance

Model	R Square
1	0.82

Table 8 (a) shows the value of R Square. It is used to measure the variation in dependent variables due to independent variables. Here the value of R Square is 0.082. It shows that Change in Staff competency causes an 8.2% change in procurement performance.

Table 8 (b): ANOVA Table for Staff competency and procurement performance

Model	Sum of Square	D .f	Mean Square	F	Sig
Regression	16.232	1	16.232	30.997	.000[a]

The following table 8 (b) shows the fitness of the model. The result shows that it is significant at 0.000 level. The value of F for this model is 30.997. It reflects the fitness of the model as the value of F is above 10.

Table 8 (c): Beta value for Staff competency and procurement performance

Model	Unstandardized coefficients	T	Sig.
	B		
(Constant)	2.475	12.109	.000
Staff competency	.304	5.567	.000

The value of B represents the variation in the dependent variable due to one unit change independent variable. The value of B in table 5.12 (c) is 0.340. It shows that one unit change in Staff competency causes a 30.4% change in procurement performance. The relationship between these two variables is also found to be significant at the 0.00 level. The value of "t" shows the direction of the relationship. The value of" t" for this relationship is found to be 5.567. It is positive and above 1.96, thus it shows the positive and significant relationship between Staff competency and procurement performance. Therefore, the H1 hypothesis is accepted for this relationship.

4.7.3 Green purchasing and Procurement performance

Table 9 (a): Value of R Square for Green purchasing and procurement performance

Model	R Square
1	0.893

Table 9 (a) shows the value of R Square. It is used to measure the variation in dependent variables due to independent variables. Here the value of R Square is 0.0893. It shows that Change in Green purchasing causes an 89.3% change in procurement performance.

Table 9 (b): ANOVA Table for Green purchasing and procurement performance

Model	Sum of Square	D .f	Mean Square	F	Sig
Regression	158.243	1	158.243	136.903	.000[a]

The following table 9 (b) shows the fitness of the model. The result shows that it is significant at 0.000 levels. The value of F for this model is 136.903. It reflects the fitness of the model as the value of F is above 10.

Table 9 (c): Beta value for Green Purchasing And Procurement Performance

Model	Unstandardized coefficients	T	Sig.
	B		
(Constant)	-.195	-1.878	.061
Green purchasing	1.051	37.002	.000

The value of B represents the variation in the dependent variable due to one unit change independent variable. The value of B in table 5.13 (c) is 1.051. It shows that one unit change in Green purchasing causes a 1.51% change in procurement performance. The relationship between these two variables is also found to be significant at the 0.00 level. The value of "t" shows the direction of the relationship. The value of" t" for this relationship is found to be 37.002. It is positive and above 1.96, thus it shows the positive and significant relationship between Green purchasing and procurement performance. Therefore, the H1 hypothesis is accepted for this relationship.

5. Conclusion

The findings of the research showed H1 is accepted. There is a positive and significant relation between procurement planning and procurement performance. The findings are found consistent with studies by (Kennedy and Kiarie, 2015) who found a positive and significant association between procurement planning and performance. The findings of the research showed H2 is accepted. There is a positive and significant relationship between staff competency and procurement performance. These results were consistent with (Kiage, 2013) who studied factors affecting procurement performance in the Ministry of Energy. In his findings, he found that procurement staff competencies affected procurement performance since if they carried out their responsibilities unprofessionally it leads to resource wastage. The findings of the research showed H3 is accepted. There is a positive and significant relation between green purchasing and procurement performance. The findings are found consistent with studies of Shang et al. (2010) as they found a positive and significant relation between green purchasing and procurement performance. It is concluded that green design helps in developing environmentally caring products and designing a supply chain concurrently with

the product is a supply chain best-practice and it would be made eco-friendlier by implementing the concept of green in each process of their supply chain. Staff awareness through training should be carried out to achieve superior knowledge in the entire procurement process in Company. The study recommends that firms could carry out environmental audits regularly to determine the effectiveness of the operations undertaken on green procurement practices. The study also recommends that the company could organize training workshops for their employees and managers on the implementation of environmental policies and goals and come up with incentive and subsidies for investors in environmental ventures. The study further recommends that the organization need to explore the usage of best value procurement methods other than relying heavily on price-based procurement methods. Policy makers will need to consider a review of the law governing procurement in the organization and put more emphasis on the environmentally preferred goods.

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