



Green Procurement and Service Delivery of County Governments in Western Region, Kenya

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Abstract

The framers of the Public Procurement Law envisaged to streamline how public procurement should be conducted in order to realize value for money in public procuring entities. The primary objective of the research thus was to determine the effect of green procurement on service delivery of County Governments in Western Region, Kenya. The study adopted a positivist research approach and was informed by ecological modernization theory. The study was conducted in Western Region, Kenya in the Counties of Kakamega, Busia, Vihiga, and Bungoma. The study's target population of 228 officials was broken down into chief officers, directors, finance officers, and procurement officers. The study selected 174 participants as its sample. Primary data was gathered through interview schedules and a questionnaire. A pilot study was carried out to test for validity and reliability. The data analysis made use of both descriptive and inferential statistics. SPSS version 26 was used to analyse quantitative data while qualitative data was analysed thematically alongside study objectives. Green procurement was found to be a significant predictor of service delivery in County Governments. Specifically the study's findings showed that Green Procurement explains 23% of variation in service delivery of County Governments in western Kenya Region. Green Procurement had unstandardized regression value of 0.368. This suggested that County Governments in the Western Region, Kenya will boost the delivery of services by 36.8% for each additional unit in green procurement. The study came to the conclusion that there is need for the County Governments to ensure legislation, enforcement and adherence to environmental laws and policies.

Keywords: Green Procurement, Public Procurement Law, Service Delivery and County Governments.

1. Introduction

The Effects of environmentally friendly supply chain administration strategies on environmental success of Vietnamese construction material manufacturing companies was studied by (Lea, 2019). The results of the study showed that while environmentally friendly purchases had a favorable effect on social and economic efficiency it did not have an influence on the environment's performance, green design and environmentally friendly production. Guo, Sarpong, and Antwi (2019) results of their research showed that how well purchasers actually applied their knowledge was more important for changing their behavior than whether or not they understood, for example, regulations, tools, and processes.

Njoroge, Mburu, and Getuno (2019) defined green procurement as an initiative of purchasing that aims to ensure that materials or products purchased meet environmental goals established by the purchasing organisation. Examples of such environmental goals include reducing resource waste, promoting reuse, recycling, resource reduction, and material substitution. Green procurement (or sustainable procurement), in the opinion of Chogo and Kitheka (2019), is based on the context of sustainability, decisions which maintain proper ecological, culture, and economic stability to ensure prolonged Organisational performance. Local purchasing, environmental friendly packing, reverse logistics, and Information Communication Technology adoption were used to gauge green procurement. Nyaboke (2018) claim that "green procurement," previously recognized as "affirmative procurement," refers to the buying of goods and services in line with more than one recognized "green" public purchasing and preference programmes.

2. Literature Review

In accordance with Shilungu and Mirona (2019), county governments' procurement departments should make sure that just qualified environmentally friendly providers are approved to supply environmentally friendly commodities and service within the county in order to boost sustainable purchasing operations. In addition, it was claimed that all county governments have to strictly enforce environmentally friendly purchasing laws in order to guarantee safeguarding of the environment and biodiversity.

Alshura and Awadeh (2016) state that picking environmentally friendly vendors involves selecting those whose products or services are ecologically sensitive. They assert that this results in superior price savings, high-quality goods, and customer support for an environmentally conscious reputation, assuring successful green procurement.

According to Omoruyi (2019), creating a system for managing the environment that is responsive towards both economic maximization and environmental advantages is the underlying justification behind the need and importance for environmentally friendly purchasing. That businesses must adhere to ecological rules in their operations to protect the environment. Deterioration of the environment might be caused in part by the absence of defined environmental legislation. He continued by stating that waste elimination is the goal of environmentally friendly procurement, and as a result, strategic measures are developed to assure effectiveness and reduce costs.

According to Mangula (2019), the government has the purchasing power to facilitate the achievement of policy objectives which can enable preservation of ecology through persuading environmental friendly buying.

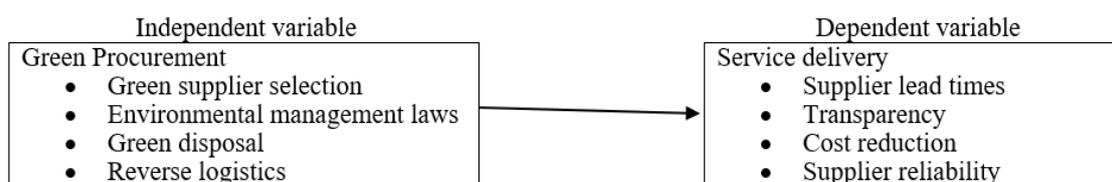


Figure 1: Conceptual framework

Source: Adapted from reviewed literature by the researcher (2023)

3. Methodology

3.1. Materials

The main objective of the study was to examine the effects of green procurement on service delivery of County Governments in Western Kenya Region. The hypothesis of the study stated that, H_{01} Adoption of green procurement has no statistical significant effect on service delivery of County Governments in Western Kenya Region.

3.2. Methods

Explanatory research method was utilized in research that looks at cause effect association. The method precast that there will be a systematic collection of data in a standardized manner from a known population or representative (Mugenda & Mugenda, 2015). The scope of the study was made up of County Governments in Western Kenya Region which is Bungoma, Kakamega, Busia and Vihiga. The target population was 228 officers obtained from Chief Officers, Directors, Finance officers and Procurement officers. Stratified random sampling was utilized in coming up with a representative sample of 174 respondents working in those Counties. The research gathered quantitative data through self-administered questionnaire while qualitative data was collected through interviews and open ended questions. Quantitative methods of data analysis was employed with both descriptive and inferential statistics being applied to explain each objective of the study. The regression model that represented the association between green procurement and service delivery was in the form of:

$$P = \beta_0 + \beta_1 X + \varepsilon \quad (1)$$

Where;

P represents service delivery, β_0 denotes the intercept (a constant), β_1 , denotes the slope that is associated to independent variable X_2 (green procurement) and ε denotes the error term that is assumed to be independent, identical, normally distributed random variable, with a zero mean and a constant variation.

4. Results and Discussion

4.1. Overall Reliability

The Cronbach's alpha coefficients for Green purchasing for the eight components are displayed in Table 1 below. Green purchasing Cronbach's alpha values were greater than 0.7 both prior to and after the items were taken out. All eight of the Green purchasing assertions were examined in the study. Item to total correlations were then examined in order to observe scale refinement. Indicators having an item-to-total correlation of larger than 0.3 were kept for further research (Hair et al., 2006).

Table 1: Reliability Results for Green Procurement

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Overall Cronbach's Alpha
GP1	24.15	27.829	0.422	0.840	0.842
GP2	24.44	25.701	0.548	0.827	
GP3	24.44	27.789	0.451	0.837	
GP4	23.14	25.360	0.677	0.813	
GP5	23.77	23.382	0.674	0.810	
GP6	23.90	24.666	0.562	0.825	
GP7	23.94	22.692	0.654	0.814	
Gp8	23.99	24.261	0.627	0.816	

Source: Field Data (2023)

4.2. Results of Green procurement

The goal of the research was to ascertain whether the county governments in western Kenya's delivery of services are impacted by environmentally friendly purchasing. Participants were asked to rate their responses on a variety of topics on a rating system ranging from 1 (strongly disagree) to 5 (strongly agree).

Table 2: Descriptive Statistics for Green Procurement and Service Delivery

Green Procurement	Response				Skewness		Kurtosis		
	N	Minimum	Maximum	Mean	Std. Dev	Statistic	Std. Error	Statistic	Std. Error
The county complies with written guidelines for environmental protection (i.e., Environmental Policy or Environmental Guidelines)?	161	1	5	3.39	0.828	-0.227	0.191	-0.113	0.379
Goods, works and services are procured from suppliers who are compliant to environmental Regulations.	161	1	5	3.10	0.992	-0.109	0.191	-0.020	0.379
Products that are procured are made from recycled materials.	161	1	5	3.09	0.794	-0.058	0.191	0.634	0.379
Goods procured have information about their effects to the environment.	161	1	5	3.40	0.888	-0.128	0.191	-0.307	0.379
The disposal committee ensures that materials are disposed in a manner that does not harm the environment.	161	1	5	3.77	1.150	-0.372	0.191	-1.221	0.379
The county considers working with suppliers who are ISO certified or are considering getting ISO certification.	161	1	5	3.64	1.124	-0.214	0.191	-1.131	0.379
There are environmentally friendly Technical specifications and/or award criteria for the works, supplies or services.	161	1	5	3.60	1.268	-0.299	0.191	-0.765	0.379
There is monitoring of environmental protection or efficiency during the execution of contracts or performance of goods or services.	161	1	5	3.55	1.092	-0.330	0.191	-0.698	0.379
AVERAGE	161	1.125	5	3.442	0.709	-0.217	0.191	0.489	0.379

Source: Field Data (2023)

The responses to the question regarding how green procurement practices influence county governments' ability to deliver services in Western Kenya ranged from 3.10 to 3.77 at a standard deviation of .709 to 3.442 on average. In terms of Skewness and Kurtosis values, both of these values were below 1.0, indicating that the pattern of distribution is within the normal range and can therefore be regarded as normal.

4.3. Results for Linear Regression Analysis

According to Hypothesis 1, there is no statistically significant impact regarding green purchasing on county governments' capacity to provide services in Western Kenya. A linear regression analysis was used to investigate how environmentally friendly purchasing affected County Governments' ability to deliver services in Western Kenya. The following equation 2 was used:

$$P = \beta_0 + \beta_1 X_1 + \xi \quad (2)$$

Where P stands for service delivery, β_0 represents the intercept (a constant), β_1 represents the slope related to the independent variable X1 (green procurement), and ξ represents the error term, that is believed to represent an independent, identical normal distributed random variable with mean that is 0 and a constant variation.

Table 3: Model summary on Green procurement

Model Summary				
Model	R	R Square	Adjusted R square	Std. error of the estimate
1	0.479 ^a	0.230	0.225	0.45589

a. Predictors: (Constant), GP

Source: Field data (2023)

The R^2 for the regression model between Green procurement and service delivery was 0.230 implying that Green Procurement explains 23% of variation in service delivery of County Governments in western Kenya Region while the remaining variation is explained by the error term.

Table 4: ANOVA table for Green Procurement and Service Delivery

Model		Sum of squares	df	Mean Square	F	Sig.
1	Regression	9.914	1	9.914	47.698	0.000b
	Residual	33.254	160	0.208		
	Total	43.168	161			

a. Subordinate Variable: SERV Del

b. Indicators: (Consistent), GP

Source: Field Data (2023)

The F test gave a value of $(161) = 47.698$, $P < 0.05$, that gives support to the goodness of fit of the model towards explaining variation in the dependent variable. It means also that Green Procurement is a useful predictor of service delivery.

Table 5: Coefficients for Green Procurement and Service Delivery

Coefficients ^a						
Model		Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	T	Sig.
1	(Constant)	2.615	0.193		13.538	0.000
	GP	0.368	0.053	0.479	6.906	0.000

Source: Field Data (2023)

The regression model obtained from the output was:

Service Delivery = 2.615 + 0.479 Green Procurement + error

Green Procurement had a standardized regression value of 0.479. This suggested that County Governments in the Western Kenya Region will boost the delivery of services by 47.9% for each additional unit in sustainable purchasing. The t-statistic for the regression coefficient for sustainable purchasing was significant ($t = 13.538$, $p < 0.05$) at the 5% level of significance, indicating that the null assumption is rejected. Based on these data, the study's results opine that there is a moderate and favorable relationship between sustainable purchasing and county government delivery of services in the Western Kenya Region. The alternative hypothesis, that suggested a statistically significant effect of green purchasing on the delivery of services by county governments in western Kenya, was thus embraced in place of the null hypothesis that suggested that there was no statistically significant impact of green purchasing on service delivery by county governments in western Kenya.

It is clear from the results presented above that purchasing sustainably has a favorable and considerable impact on performance. It states that adopting sustainable purchasing techniques, such as choosing eco-friendly vendors, complying with environmental regulations, eco-friendly disposal, and reverse logistics, is likely to improve service delivery. Shilungu and Miroga's (2019) conclusions, found a strong and favorable association between sustainable procurement and the county government of Vihiga's delivery of services, lend credence to this.

According to qualitative findings, insufficient funding to undertake environmentally friendly purchasing and a lack of employee education by organizations also lead to the absence of sustainability-minded procurement implementation. County governments must also make sure that their employees receive sufficient instruction in order to implement the environmentally friendly procurement idea successfully.

5. Conclusion

The conclusion was that organizations could achieve modernization without compromising the environment. In Counties of Western Region, Kenya, it was established that green procurement has been partially implemented due to lack of its awareness or just disregard of the environmental policy. Therefore the top management is considered as key in ensuring that the environmental laws are adhered to in the procurement processes of their Counties. This finding affirms the ecological modernization theory that asserts that joint benefit of modernization and environmental concern could be achieved if laws were implemented to their latter. Key was that laws need to be reinforced in order to achieve their implementation.

Green procurement was therefore established to have a significant relationship with service delivery of the County Governments in Western Region, Kenya. This depicts that an improvement in Green Procurement Practices in terms of its adoption and implementation would result to an improvement in service delivery levels of County Governments of Western Region, Kenya. Therefore this study concluded that Green Procurement has a significant influence on service delivery of County Governments in Western Region, Kenya.

Counties should avail design specifications to their suppliers which entails environmental requirement for procured items. In furtherance, there exist need for the Counties to conduct an audit on suppliers' internal environmental management and to ensure that there is cooperation between the Counties and suppliers with regards to cleaner production and green packaging. Further, there should also be a deliberate effort from the County Governments to ensure that the established environmental laws are adhered to by the procurement departments in terms of procuring environmental friendly products and proper disposal of obsolete products.

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