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(JEPM) Influence of Green Procurement Practices on Environmental
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Influence of Green Procurement Practices on Environmental Compliance in Public Universities in Nairobi City County, Kenya

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ABSTRACT

Purpose: This study sought to examine the influence of green procurement practices on environmental compliance in public universities in Nairobi City County, Kenya. The specific objectives were to examine the influence of green purchasing policies, supplier environmental evaluation, eco-friendly product selection, and waste reduction and recycling practices on environmental compliance.

Methodology: The target population comprised 190 officers drawn from procurement, environmental management, facilities management, and administrative functions across seven public universities in Nairobi County. Proportional stratified random sampling was used to select 129 respondents. Primary data were collected using structured questionnaires. Validity was ensured through expert review, while reliability was assessed through pilot testing procedures. Data were analyzed using descriptive statistics, correlation analysis, and multiple regression analysis, and the findings were presented in tables.

Findings: The regression results showed that the four independent variables jointly explained 75.9 percent of the variation in environmental compliance, indicating that green procurement practices are strong predictors of environmental compliance in public universities.

Unique Contribution to Theory Practice and Policy: University management and procurement departments should develop, update, and fully institutionalize comprehensive green purchasing policies that explicitly integrate environmental criteria into procurement planning, specification development, tendering, and contract management.

Keywords: *Green Procurement Practices, Environmental Compliance, Public Universities, Sustainable Procurement*

INTRODUCTION

Environmental sustainability has become a global priority as governments, organizations, and communities seek to address the growing challenges of climate change, pollution, biodiversity loss, and resource depletion. Consequently, public institutions are increasingly expected to incorporate sustainability into their operations by balancing economic efficiency with environmental and social responsibility (UNEP, 2023). Green procurement has emerged as an important strategy for achieving this objective by integrating environmental considerations into the acquisition of goods, services, and works throughout their life cycle. Through practices such as environmentally responsible purchasing, supplier environmental evaluation, eco-friendly product selection, and waste reduction initiatives, organizations can reduce their environmental footprint while enhancing compliance with environmental regulations (OECD, 2025).

Across Africa, environmental sustainability remains a pressing concern due to increasing waste generation, pollution, deforestation, and unsustainable consumption patterns. Although many countries have adopted environmental policies and international sustainability commitments, the implementation of green procurement remains uneven because of financial, institutional, and technical constraints (Kariuki, 2023). Higher education institutions have increasingly embraced sustainability initiatives such as waste management, energy conservation, and campus greening; however, procurement functions are often insufficiently integrated into these efforts. Existing studies have largely focused on the adoption of green procurement or procurement performance, with limited attention given to how specific green procurement practices influence environmental compliance in public institutions, creating an important empirical gap within the African context (Mutai et al., 2025)

In Kenya, environmental sustainability is supported by regulatory frameworks such as the Environmental Management and Coordination Act (EMCA), the Public Procurement and Asset Disposal Act (PPADA), and sustainable public procurement initiatives that encourage environmentally responsible purchasing (NEMA, 2025). Despite these policy developments, many public institutions continue to prioritize cost considerations over environmental criteria, resulting in inconsistent implementation of green procurement practices (Kariuki, 2023). Consequently, the ability of public institutions to achieve and sustain environmental compliance remains a significant policy and management concern.

Public universities in Nairobi City County provide an appropriate setting for examining the relationship between green procurement practices and environmental compliance because they are among the largest consumers of public resources and generate substantial volumes of solid, hazardous, and electronic waste through their teaching, research, and administrative activities. Located within Kenya's most urbanized county, these institutions operate under increasing

environmental pressure while remaining subject to both procurement and environmental regulations. Their procurement decisions directly influence resource consumption, waste generation, and compliance with environmental standards, making them strategically positioned to demonstrate sustainable procurement practices (Muleya & Kihoro, 2020). However, despite growing policy emphasis on sustainable procurement, limited empirical evidence exists on how specific green procurement practices influence environmental compliance in public universities. This study therefore sought to examine the influence of green procurement practices on environmental compliance in public universities in Nairobi City County, Kenya, with the aim of generating evidence to inform institutional policy, procurement practice, and environmental sustainability initiatives.

Statement of Problem

Public universities in Kenya are expected to comply with environmental regulations by integrating sustainable practices into their operations in line with the Environmental Management and Coordination Act (EMCA), the Public Procurement and Asset Disposal Act (PPADA), and National Environment Management Authority (NEMA) guidelines. Green procurement is widely recognized as a strategic mechanism for achieving this objective by promoting environmentally responsible purchasing, supplier environmental evaluation, eco-friendly product selection, and waste reduction throughout the procurement cycle (OECD, 2025). However, evidence from NEMA (2025) indicates that public universities continue to experience challenges such as inadequate waste segregation, accumulation of electronic waste, inefficient energy and water use, and the use of non-recyclable materials, reflecting uneven environmental compliance despite the existence of supportive policy frameworks. These challenges affect public universities by exposing them to regulatory non-compliance, environmental degradation, inefficient resource utilization, and reputational risks while undermining their role as leaders in sustainable development.

Although several studies have examined green procurement in Kenya, they have largely focused on county governments, state corporations, and manufacturing firms or emphasized procurement performance rather than environmental compliance outcomes (Amemba et al., 2013; Kariuki, 2023). Similarly, studies involving African universities have mainly addressed broader sustainability initiatives such as waste management and campus greening without explicitly examining how specific green procurement practices influence environmental compliance (Muleya & Kihoro, 2020). Furthermore, existing studies rarely disaggregate green procurement into distinct practices or assess their influence on concrete environmental compliance indicators. Consequently, there is limited empirical evidence on how green purchasing, supplier environmental evaluation, eco-friendly product selection, and waste reduction and recycling procurement influence environmental compliance in public universities in Nairobi City County.

This study sought to fill this contextual and methodological gap by examining the influence of these specific green procurement practices on environmental compliance in public universities in Nairobi City County, Kenya.

LITERATURE REVIEW

Theoretical Framework

This study was anchored on four complementary theories that explain how green procurement practices influence environmental compliance in public universities. Institutional Theory, developed by Meyer and Rowan (1977) and later refined by DiMaggio and Powell (1983), posits that organizations adopt practices in response to coercive, normative, and mimetic pressures from their external environment. This theory underpins green purchasing policies by explaining how legal requirements, professional standards, and benchmarking against peer institutions encourage universities to integrate environmental considerations into procurement. Stakeholder Theory advanced by Freeman (1984), argues that organizations must respond to the expectations of stakeholders, including regulators, suppliers, employees, students, and surrounding communities. In this study, the theory supports supplier environmental evaluation by emphasizing that assessing suppliers' environmental performance enables universities to meet stakeholder expectations while reducing environmental risks within their supply chains.

The study further drew on the Natural Resource-Based View (NRBV), proposed by Hart (1995), which views environmental capabilities as strategic resources that enhance organizational performance and sustainability. The theory explains how eco-friendly product selection, including the procurement of energy-efficient, recyclable, and low-toxicity products, contributes to improved environmental compliance by minimizing pollution and resource consumption. In addition, Legitimacy Theory, developed by Suchman (1995), suggests that organizations adopt socially acceptable practices to gain and maintain legitimacy among stakeholders. The theory supports waste reduction and recycling procurement by explaining why universities invest in environmentally responsible procurement practices that demonstrate accountability and compliance with environmental regulations. Collectively, these four theories provide a comprehensive theoretical foundation for the study by illustrating that institutional pressures, stakeholder expectations, strategic environmental capabilities, and the pursuit of organizational legitimacy jointly influence the adoption of green procurement practices, which ultimately enhance environmental compliance in public universities.

Conceptual Framework

The conceptual framework links the independent variables to the dependent variable. The independent variables of the study comprise of green purchasing policies, supplier environmental

valuation, eco-friendly selection, and waste reduction and recycling processes. The dependent variable is Environmental compliance. Figure 1 presents the conceptual framework that is adopted in the study.



Figure 1: Conceptual Framework

Empirical Review

International studies provide substantial evidence that green procurement contributes to improved environmental outcomes. Testa et al. (2016), found that integrating environmental criteria into purchasing decisions, supplier evaluation, eco-friendly product selection, and waste reduction initiatives enabled public authorities to reduce waste generation, improve resource efficiency, and strengthen environmental performance. Similarly, the OECD (2025) and UNEP (2023) emphasize that environmentally responsible procurement supports regulatory compliance by encouraging the acquisition of recyclable, energy-efficient, and environmentally preferable products while promoting circular economy practices. However, these studies were conducted mainly in developed economies with mature regulatory systems and established green markets, making their findings less transferable to developing countries such as Kenya, where institutional capacity, supplier readiness, and enforcement mechanisms differ considerably.

Within Kenya, Amemba et al. (2013) established that green procurement practices improved procurement performance in public entities, although environmental compliance was not explicitly examined. Kariuki (2023), further observed that despite supportive policy frameworks, the implementation of green procurement remains inconsistent because environmental criteria are inadequately integrated into purchasing decisions, supplier evaluation, eco-friendly product selection, and waste reduction initiatives. Similar findings from studies in county governments and state corporations revealed that procurement decisions continue to prioritize cost over environmental considerations, thereby limiting the contribution of green procurement to environmental sustainability. Nevertheless, these studies primarily focused on procurement performance, awareness, or sustainability outcomes and largely examined public entities other than universities, leaving uncertainty regarding how specific green procurement practices influence environmental compliance in higher education institutions.

Studies conducted in Kenyan universities have similarly highlighted the importance of sustainable procurement while exposing important knowledge gaps. Mutai et al. (2025), reported that universities implementing green purchasing initiatives, eco-friendly products, and recycling programmes experienced improvements in resource utilization and waste management, although these practices were not systematically linked to environmental compliance. Muleya and Kihoro (2020), observed that universities had limited mechanisms for evaluating suppliers' environmental performance despite increasing sustainability commitments, while Nasiche (2024) found that green purchasing guidelines enhanced institutional sustainability practices without assessing regulatory compliance outcomes. Collectively, these studies rarely disaggregated green procurement into specific dimensions or employed multi-institutional designs to establish the influence of individual procurement practices on environmental compliance indicators.

Consequently, there remains limited empirical evidence on how green purchasing policies, supplier environmental evaluation, eco-friendly product selection, and waste reduction and recycling processes influence environmental compliance in public universities in Nairobi City County. This study sought to address these conceptual, contextual, and methodological gaps.

METHODOLOGY

The study adopted a cross-sectional descriptive survey design to examine the influence of green procurement practices on environmental compliance in public universities in Nairobi City County, Kenya. The target population comprised 190 officers responsible for procurement, facilities management, environmental management, and related administrative functions across the seven public universities in Nairobi County. Using Yamane's (1967) formula, a sample of 129 respondents was determined and selected through proportionate stratified random sampling based on hierarchical levels (top, middle, and support), followed by simple random sampling within each stratum to ensure proportional representation and minimize selection bias. Primary data were collected using a structured five-point Likert scale questionnaire administered both physically and electronically after obtaining the necessary institutional approvals. A pilot study involving approximately 6% of the target population was conducted to refine the questionnaire, with pilot participants excluded from the main survey. The collected data were coded and analyzed using descriptive statistics (frequencies, percentages, means, and standard deviations) to summarize the study variables, while Pearson's correlation and multiple linear regression analyses were employed to examine the relationships between green procurement practices and environmental compliance. The following was the overall regression model:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon \dots\dots\dots (i)$$

RESULTS

Descriptive Statistics

Green Purchasing Practices

Respondents were provided with statements regarding green purchasing and asked to indicate their level of agreement and results are shown in Table 1 below. Respondents generally agreed that green purchasing practices are implemented in public universities, as reflected by an overall mean of 3.96 (SD = 0.972). The highest levels of agreement were recorded for the routine consideration of environmental criteria during tender evaluation and award (mean = 4.33), the existence of documented green purchasing policies (mean = 4.31), and staff sensitization on green purchasing policies (mean = 4.27). Respondents also agreed that corrective actions are taken when procurement processes deviate from green purchasing requirements (mean = 4.11), while the application of green purchasing requirements in procurement specifications (mean = 3.91) and

regular monitoring of compliance with green purchasing guidelines (mean = 3.80) received comparatively lower ratings. Overall, the findings indicate that public universities have moderately to highly institutionalized green purchasing practices, although there remains room for strengthening policy implementation and monitoring.

Table 1: Descriptive Statistics on Green Purchasing Practices

Statement	Mean	Std. Dev
The university has a documented green purchasing policy that guides procurement decisions.	4.31	1.133
Staff are adequately informed and sensitized about the university's green purchasing policy.	4.27	0.884
Green purchasing requirements are consistently applied when preparing procurement specifications.	3.91	0.931
Environmental criteria are routinely considered when evaluating and awarding tenders.	4.33	1.026
Compliance with green purchasing guidelines is regularly monitored and reviewed by the university.	3.80	0.984
Corrective actions are taken when deviations from green purchasing requirements are identified in procurement processes.	4.11	0.875
Average	3.96	0.972

Supplier Environmental Evaluation

As shown in Table 2 below, respondents generally agreed that supplier environmental evaluation is practiced in public universities. With strong emphasis on maintaining records of suppliers' environmental compliance for future sourcing decisions (mean = 4.35) and requiring suppliers to comply with environmental regulations through contractual agreements (mean = 4.13). They also agreed that universities prefer environmentally certified suppliers (mean = 4.01), take corrective action against suppliers with poor environmental performance (mean = 3.98), monitor suppliers' environmental performance during contract implementation (mean = 3.89), and consider environmental performance during supplier evaluation and selection (mean = 3.71), although the latter received the lowest rating. Overall, the findings indicate that public universities have moderately integrated environmental considerations into supplier management through certification requirements, compliance monitoring, and record keeping, but there is still scope for strengthening the consistent application of environmental criteria in supplier selection.

Table 2: Descriptive Statistics on Supplier Environmental Evaluation

Statement	Mean	Std. Dev
The university prefers or requires suppliers who have recognized environmental certifications.	4.01	1.008
Environmental performance is used as a key criterion when evaluating and selecting suppliers.	3.71	1.258
Suppliers are required to comply with environmental regulations as part of contractual agreements.	4.13	1.090
The university monitors suppliers' environmental performance during contract implementation.	3.89	0.916
Poor environmental performance by suppliers leads to corrective action or reconsideration of future engagement.	3.98	0.856
The procurement unit maintains records on suppliers' environmental compliance for future sourcing decisions.	4.35	0.784
Average	4.58	1.022

Eco-Friendly Product Selection

As shown in Table 3, respondents generally agreed that eco-friendly product selection is practiced in public universities, with an overall mean of 4.03 (SD = 0.635). The highest levels of agreement were recorded for giving preference to products with environmentally friendly attributes such as recyclability and low toxicity (mean = 4.21), ensuring the availability of eco-friendly product options (mean = 4.15), and prioritizing energy-efficient products during procurement (mean = 4.12). Respondents also agreed that universities avoid products that generate excessive hazardous or non-recyclable waste (mean = 4.07) and encourage suppliers to provide eco-labelled products (mean = 3.82), while consideration of life-cycle costs received the lowest rating (mean = 3.76). Overall, the findings indicate that public universities have substantially integrated eco-friendly product selection into their procurement decisions, although greater emphasis on life-cycle costing could further strengthen sustainable procurement practices.

Table 3: Descriptive Statistics on Eco Friendly Product Selection

Statement	Mean	Std. Dev
The university gives preference to products that have environmentally friendly attributes (for example, recyclable or low toxicity).	4.21	0.541
Energyefficient products (such as lighting and ICT equipment) are prioritized during procurement.	4.12	0.995
Life cycle costs (purchase, operation, maintenance, and disposal) are considered when selecting products.	3.76	1.004
The university avoids products that generate excessive hazardous or non-recyclable waste.	4.07	0.871
Suppliers are encouraged to offer eco-labeled or certified green products.	3.82	0.928
There is an adequate range of eco-friendly product options available to support sustainable purchasing decisions.	4.15	0.810
Average	4.03	0.635

Waste Reduction and Recycling Practices

As shown in Table 4, respondents generally agreed that waste reduction and recycling procurement practices are implemented in public universities, with an overall mean of 4.34 (SD = 0.90). The highest levels of agreement were recorded for including supplier take-back, reuse, or recycling provisions in contracts (mean = 4.70) and procuring equipment that supports waste segregation and recycling (mean = 4.59). Respondents also agreed that procurement specifications emphasize minimal or recyclable packaging (mean = 4.29), reusable products (mean = 4.22), consideration of product recyclability at the end of its useful life (mean = 4.15), and procurement practices that reduce waste sent to landfills (mean = 4.11). Overall, the findings suggest that public universities have substantially integrated waste minimization and recycling considerations into their procurement processes, thereby supporting sustainable waste management and enhancing environmental compliance.

Table 4: Descriptive Statistics on Waste Reduction and Recycling Practices

Statement	Mean	Std. Dev
The university procures products that are reusable or designed for multiple uses where possible.	4.22	0.790
Procurement specifications emphasize minimal or recyclable packaging to reduce waste.	4.29	0.813
The university purchases equipment that supports waste segregation and recycling (for example, labeled bins and containers).	4.59	1.121
Procurement decisions consider the potential for items to be recycled or recovered at the end of their useful life.	4.15	0.708
Contracts with suppliers include provisions that support take back, reuse, or recycling of products and packaging.	4.70	0.931
Procurement practices contribute to reduced volumes of waste sent to landfill or uncontrolled disposal.	4.11	0.997
Average	4.34	0.90

Environmental Compliance

As presented in Table 4.7, the findings indicate that environmental compliance in public universities is generally moderate to high, particularly with respect to basic regulatory requirements. Most respondents confirmed that their universities hold valid environmental licenses and permits (86.5%), have documented waste management procedures (81.0%), and conduct environmental impact assessments for applicable projects (72.0%). In addition, 69.5% reported that pollution control measures are implemented, while 62.8% indicated that hazardous and electronic waste are managed according to prescribed standards. These findings suggest that universities have established key environmental management systems, although compliance with specialized environmental practices remains less consistent.

The results further show that more advanced compliance practices, particularly environmental auditing and reporting, are less institutionalized. Only 65.7% of respondents indicated that environmental performance reports are prepared and used for decision-making, 58.3% confirmed that regular environmental audits are undertaken, and just over half (52.0%) reported that environmental performance is regularly submitted to regulatory authorities. Overall, the findings suggest that while public universities demonstrate satisfactory compliance with fundamental

environmental requirements, there is a need to strengthen routine environmental audits, hazardous waste management, and formal environmental reporting to enhance overall regulatory compliance.

Table 5: Environmental Compliance Indicators

Indicator	Yes (%)	No (%)	N/A (%)
University holds valid environmental licenses and permits.	86.5	9.2	4.3
Environmental impact assessments conducted for applicable projects.	72.0	18.4	9.6
Regular environmental audits undertaken.	58.3	29.7	12.0
Documented waste-management procedures in place.	81.0	13.7	5.3
Hazardous and electronic waste handled according to prescribed standards.	62.8	24.9	12.3
Environmental performance reports and records prepared and used for decision making.	65.7	23.5	10.8
Regular reporting of environmental performance to relevant regulatory authorities.	52.0	31.8	16.2

Correlation Analysis

A correlation analysis was conducted to establish relationships between the independent variables (green purchasing practices, supplier environmental evaluation, eco-friendly product selection and waste reduction and recycling procurement practices) and the dependent variable (environmental compliance). The results show a positive and significant correlation between green purchasing practices and environmental compliance ($r = 0.421$, $p = 0.000$), implying that stronger green purchasing practices are associated with higher levels of environmental compliance in public universities. Supplier environmental evaluation also exhibits a positive and significant correlation with environmental compliance ($r = 0.389$, $p = 0.000$). This suggests that more rigorous environmental evaluation of suppliers is linked to better compliance with environmental requirements. Similarly, eco-friendly product selection shows a positive and significant correlation with environmental compliance ($r = 0.405$, $p = 0.000$), indicating that prioritizing environmentally friendly products contributes to improved compliance outcomes. Waste reduction and recycling procurement practices demonstrate the strongest positive and significant correlation with environmental compliance ($r = 0.452$, $p = 0.000$), implying that procurement strategies emphasizing waste minimization and recycling are closely associated with enhanced environmental compliance in public universities.

Table 6: Correlation Analysis

	Green Purchasing Practices	Supplier Environmental Evaluation	Eco-friendly Product Selection	Waste Reduction & Recycling Practices	Environmental Compliance
Green Purchasing Practices	Pearson Correlation Sig. (2-tailed)	1.000			
Supplier Environmental Evaluation	Pearson Correlation Sig. (2-tailed)	0.231*	1.000		
Eco-friendly Product Selection	Pearson Correlation Sig. (2-tailed)	0.184	0.267**	1.000	
Waste Reduction and Recycling Procurement Practices	Pearson Correlation Sig. (2-tailed)	0.206*	0.212*	0.244**	1.000
Environmental Compliance	Pearson Correlation Sig. (2-tailed)	0.421**	0.389**	0.405**	0.452**
N		135	135	135	135

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

Correlation is significant at the 0.05 level (2-tailed).

Regression Analysis

The multiple regression analysis was conducted to determine the combined influence of green purchasing practices, supplier environmental evaluation, eco-friendly product selection and waste

reduction and recycling procurement practices on environmental compliance. The analysis was carried out at a 95% confidence level.

Table 7: ANOVA (Model Significance)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	57.840	4	14.460	19.845	0.000
Residual	94.360	130	0.726		
Total	152.200	134			

a. Dependent Variable: Environmental Compliance

b. Predictors: (Constant), Green Purchasing Practices, Supplier Environmental Evaluation,

Eco-friendly Product Selection, Waste Reduction and Recycling Procurement Practices. The ANOVA results indicate that the regression model is statistically significant ($F = 19.845$, $p = 0.000$). This confirms that the set of green procurement practice variables jointly explains a significant proportion of the variation in environmental compliance in public universities.

Table 8: Model Coefficients

Predictors	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
(Constant)	0.305	0.081		3.765	0.000
Green Purchasing Practices	0.262	0.124	0.217	2.113	0.036
Supplier Environmental Evaluation	0.301	0.132	0.226	2.280	0.024
Eco-friendly Product Selection	0.348	0.119	0.273	2.927	0.004
Waste Reduction and Recycling Procurement Practices	0.416	0.104	0.332	4.000	0.000

The coefficient results show that all four green procurement practice dimensions have positive and significant influences on environmental compliance.

Green purchasing practices have a positive and significant effect on environmental compliance ($B = 0.262$, $\beta = 0.217$, $p = 0.036$). This implies that increasing green purchasing practices by one unit is associated with a 0.262-unit increase in environmental compliance, holding other variables

constant. Supplier environmental evaluation also positively and significantly affects environmental compliance ($B = 0.301$, $\beta = 0.226$, $p = 0.024$), indicating that more comprehensive environmental evaluation of suppliers leads to higher compliance levels. Eco-friendly product selection has a positive and significant influence on environmental compliance ($B = 0.348$, $\beta = 0.273$, $p = 0.004$). This suggests that increased focus on selecting eco-friendly products enhances environmental compliance in public universities.

Waste reduction and recycling procurement practices exhibit the strongest positive and significant effect on environmental compliance ($B = 0.416$, $\beta = 0.332$, $p = 0.000$). This implies that strengthening waste reduction and recycling practices in procurement contributes the most to improved environmental compliance among the four predictors. The model results indicate that waste reduction and recycling procurement practices bear the most significant influence on environmental compliance, followed by eco-friendly product selection, supplier environmental evaluation and green purchasing practices respectively.

Model Summary

Table 9: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.871a	0.759	0.742	0.852

a. Predictors: (Constant), Green Purchasing Practices, Supplier Environmental Evaluation, Eco-friendly Product Selection, Waste Reduction and Recycling Procurement Practices

The model summary shows a strong multiple correlation between the green procurement practice dimensions and environmental compliance ($R = 0.871$). The R Square value of 0.759 indicates that 75.9% of the variation in environmental compliance is explained by green purchasing practices, supplier environmental evaluation, eco-friendly product selection and waste reduction and recycling procurement practices. The adjusted R Square value of 0.742 confirms that the model remains robust after adjusting for the number of predictors

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary of Findings

The study established that green procurement practices significantly influence environmental compliance in public universities in Nairobi City County, Kenya. Descriptive findings showed that the universities have moderately to highly implemented green purchasing practices, supplier environmental evaluation, eco-friendly product selection, and waste reduction and recycling procurement practices. Inferential analysis further revealed that each of these green procurement dimensions has a positive and statistically significant relationship with environmental compliance, indicating that strengthening environmentally responsible procurement enhances compliance with environmental regulations and improves environmental performance. Although the universities demonstrated satisfactory compliance with fundamental environmental requirements, notable gaps remained in hazardous and electronic waste management, routine environmental audits, and environmental reporting. Overall, the findings confirm that integrating green procurement practices into institutional procurement systems is critical for improving environmental compliance and narrowing the gap between policy expectations and actual environmental performance in public universities.

Conclusions

The study concluded that green procurement practices significantly enhance environmental compliance in public universities in Nairobi City County, Kenya. Specifically, green purchasing practices, supplier environmental evaluation, eco-friendly product selection, and waste reduction and recycling procurement practices each exert a positive and statistically significant influence on environmental compliance, demonstrating that environmentally responsible procurement is a critical mechanism for achieving regulatory adherence and improving institutional environmental performance. These findings further affirm the relevance of Institutional Theory, Stakeholder Theory, the Natural Resource-Based View, and Legitimacy Theory by showing that institutional pressures, stakeholder engagement, strategic environmental capabilities, and organizational legitimacy collectively drive the adoption of sustainable procurement practices. Overall, the study establishes that strengthening green procurement systems enables public universities to translate environmental policies and regulatory requirements into effective compliance outcomes.

Recommendations

The study recommended that public universities strengthen the institutionalization of green procurement by integrating environmental considerations throughout the procurement cycle. Specifically, universities should enhance green purchasing policies, incorporate environmental criteria into supplier evaluation and contract management, prioritize eco-friendly products using

life-cycle costing, and align procurement decisions with waste reduction and recycling strategies. Procurement and environmental units should collaborate to monitor compliance, maintain supplier environmental performance records, and strengthen environmental reporting and audits. In addition, policymakers and regulators should provide sector-specific guidelines, capacity-building programs, and standardized green procurement frameworks for higher education institutions while incorporating green procurement indicators into institutional performance assessments. Collectively, these measures will enhance environmental compliance, improve institutional sustainability, and strengthen the role of public universities as models of environmental stewardship.

Suggested Area for Further Research

Future studies should extend this research by examining the influence of green procurement practices on environmental compliance in public and private universities across different regions to enhance the generalizability of the findings. Researchers should also adopt mixed-method and longitudinal research designs to provide deeper insights into the implementation of green procurement practices and to assess their long-term effects on environmental compliance. Additionally, further studies should explore emerging areas such as digital procurement systems, electronic waste management, circular economy practices, and environmental, social, and governance (ESG) frameworks to advance knowledge on sustainable procurement and environmental management in higher education institutions.

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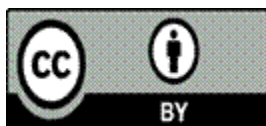
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