Effect of Green Procurement Adoption on Procurement Performance in Devolved System of Government in Kenya

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Abstract
The main aim of the paper was to determine the effect of green procurement adoption on procurement performance in a devolved system of government in Kenya. A case of Uasin Gishu County government. The research incorporated a descriptive survey design whereby the target population comprised of the Uasin Gishu County procurement, human resource, operations, stores, and finance departments. The researcher adopted stratified random sampling and simple random sampling to select a sample size of 11 respondents. Questionnaires were the main data collection instruments which were incorporated in both closed-ended and open-ended questions. The collected data were checked for completeness and later coded into the SPSS software version 24 where descriptive and inferential statistics were determined. The findings show that eco-design practices have a positive and significant effect on procurement performance, $\beta_1 = 0.156$, $p = 0.03$ and waste management control has a positive and significant effect on procurement performance, $\beta_2 = 0.244$, $p = 0.004$. There is need to further relook at the policies on eco-design and packaging, there is need to consider review of the practices in relation to waste management control that will enable minimizing waste as well as encourage recycling, there is also need to address the structuring and restructuring of teams that are responsible for environmental improvements and putting in place a total quality environmental management plan and implementing it, finally, proper enforcement mechanisms for product re-usability would enhance its effect on procurement performance.
Keywords*; Eco-Design, Waste Management Control, Procurement, Performance, Green Procurement, Adoption, County Government*

Introduction

Green procurement is the process of acquiring environmentally friendly products and services; the selection of contractors and the setting of environmental requirements in a contract. Green procurement steams from pollution prevention principles and activities. According to Ondieki (2012), green procurement is also known as environmentally friendly purchasing where factors of price, technology, quality and the environmental impact of the product, service or contract to the surrounding are all considered. In this regard, the surroundings entail the surrounding environment as well as the community at large (Ondieki, 2012).

There has been increasing emphasis on environment-friendly corporate activity in today's business world, and many progressive companies are embracing green purchasing (Kamonya & Iraki, 2013). The rise in greenhouse emissions and pollution of the environments by firms has precipitated the need for organizations to realign their supply chain operations with a view to conserving the scarce resources. Green Supply Chain Management (GSCM) is an approach to improve the performance of the process and products according to the requirements of the environmental regulations (Kamonya & Iraki, 2013).

As customers begin to demand environmentally friendly products, managers have been faced with the challenge of developing decisions that support the integration and coordination of environmental practices throughout the supply chains (Ondieki, 2012). Consequently, a sudden rise of environmental movements, legislation, and concerns during the past decade have clearly outlined the need to address issues of environmental pollution

accompanying industrial development together with supply chain management, thus supporting the green procurement practice and initiative of Green Supply Chain Management (Ondieki, 2012).

The "green procurement" can be defined as the process of formally introducing and integrating environmental issues and concerns into the purchasing process, seeking to acquire goods and services characterized by a low environmental impact that is products environmentally friendly in nature and produced using environmentally friendly processes (Green *et al.,* 2012). The initiatives to minimize environmental impact in the inbound supply chain, according to the "green procurement" approach include eco-labeled product purchase, adoption of environmental criteria into the supplier assessment system environmental and collaboration with suppliers (Green et al., 2012).

Beyond requirements that procurement departments have traditionally been promoting over the years, such as the respect of work conditions and non-discrimination, new issues arise about reinforcing environmental requirements towards suppliers (Green *et al.,* 2012). Green Procurement enables better compliance with existing norms, improvement of brand image for consumers and better ranking by non-financial notation organizations Buyers will preferably choose suppliers with certified processes ISO 14001 for instance, to create a balance in green procurement companies will encourage suppliers who have low raw material consumption, controlled emissions and pollution levels and raw material tracking (Green *et al.,* 2012). Furthermore, they tend to select products made out of a large proportion of recycled and recyclable materials, and stamped by reliable eco-labels (Kamonya & Iraki, 2013).

In light of increasing costs of waste management, environmental degradation, public health concerns, climate change, resource depletion, and persistent global poverty, the supply management profession is increasingly being called upon to contribute to broader organizational goals of sustainable development through the inclusion of social and environmental criteria within procurement processes (Srivastava, 2013). According to Kenya Solid Waste Management (2013), industrial wastes constitute about 23% of the total waste generated in the Nairobi city, only about 25% of the estimated 1,500 tons of solid waste generated daily get collected.

Environmental issues have not been fully addressed and that there are still challenges facing effective implementation of green procurement in Kenya. These challenges to GP include; resistance to technology advancement adoption, lack of organizational encouragement**,** lack of suppliers of sustainable assets, or services**,** lack of IT implementation, a perception that the process and outcomes are more costly or time-consuming habit and the difficulty in changing procurement behavior, stakeholder involvement, principles, benchmarking and employee training among others (Lozano & Vallés, 2013). In 2010, for instance, a mere 14% of its agricultural supplies were sourced sustainably by its own definition. Now the share is 48% (UNEP, 2013).

Despite the important role green procurement plays in ensuring environmental performance and public health and safety, most of the studies on this subject had been conducted in developed countries, yet not much research had been conducted in Kenya leading to the insufficient empirical literature on green procurement (Stephen & Helen, 2011). Local studies so far done have focused on procurement in general (Otieno, 2004, Akech, 2005). the determinants of green public procurement adoption in Kenya with special focus to Kenya Pipeline Company by Ngugi (2014). The latest research was done by Catherine Gatari and Was (2014). It is against this background that this inquiry seeks to analyze factors affecting implementation of green procurement in the manufacturing sector in Kenya. Hence, the study strives to mitigate the gaps in research by analyzing answering questions on *what extent does eco-design and packaging affect procurement performance in a devolved system of government in Kenya*. *And does waste management control affect procurement performance in a devolved system of government in Kenya?*

Theoretical Review

The paper was informed by Sustainability Theory. Theory of sustainability attempt to prioritize, integrate social responses to environmental and cultural problems. An economic model looks to sustain natural and financial capital; an ecological model looks to biological diversity and ecological integrity; a political model looks to social systems that realize human dignity. Religion has entered the debate with symbolic, critical, and motivational resources for cultural change (Vermier and Verbeke, 2009). In its literal rudiments, sustainability means a capacity to maintain some entity, outcome, or process over time. Agriculture, forest management, or financial investment might be deemed sustainable, meaning that the activity does not exhaust the material resources on which it depends. An analogous use of the term "sustainability" refers to dependent social conditions; for example, a peace treaty, an economic policy, or a cultural practice may be called sustainable if it will not exhaust the support of a political community (Espinosa & Walker, 2011). In its increasingly common use, the concept of sustainability frames the ways in which environmental problems jeopardize the conditions of healthy economic, ecological, and social systems. On a global scale, the political challenge of sustainability raises a set of basic problems and comprehensive goals. By focusing on the ecological dependency of economic and social systems, sustainability illuminates the mutual effects between environmental degradation caused by human activities and the perils to human systems presented by global environmental problems (Elzen et al., 2004). This theory resonates accurately with this study in key aspects of its tenets. Stakeholder theory describes the purpose and strategic direction of the firm through the concept that managers need to simultaneous incorporate the legitimate interests of all appropriate stakeholders when making business decisions. Accordingly, one of the stakeholders in the environment stakeholders who champion green procurement to preserve the same.

Literature review

Eco-Design and Packaging

This is a GSCM practice which requires that manufacturers design products that minimize consumption of materials and energy that facilitate the reuse recycle and recovery of component materials and parts, and that avoid or reduce the use of hazardous products within the manufacturing process Green Jr *et al.,* 2012). Eco-design and Packaging will include packaging design for reduced environmental impact, packaging re-cycle or re-use and use of biodegradable materials (Green Jr *et al.,* 2012).

According to Jumadi and Zailani (2010), a reduction in the product environmental impact may be achieved not only through appropriate product design, but also a proper use by consumers. In this sense, consumers must become more aware of the environmental implications related to the products they are using, so that sustainability may be perceived as a value-added element for the society, as well as a distinguishing feature for companies (Jumadi & Zailani, 2010). Two main areas main identified addressing the available strategies towards sustainable product design and use, namely product design, and packaging design. As for product design, possible strategies lie in the reduction of product environmental impact within the supply chain and reduction of product environmental impact in the consumer use (Jumadi & Zailani, 2010).

Waste management control

This involves the use of Carbon dioxide refrigeration systems, treatment, and control of post-combustion emissions, use of alternative fuels (e.g., cleaner fuels), treatment and recycling of hazardous wastes, process optimization implementation of waste – to -energy process, waste reduction, reuse and recycling approaches (Mugabe, 2013). Waste management control may as well involve source reduction the recycle and re-use waste management programs focuses on management of waste after it has been created. On the same note, source reduction focuses on the prevention or the reduction of wastage during production rather than managing it after it has been generated with the aim of efficiently utilizing resources by examining how business is conducted,

how materials are used, and what products are purchased (Mugabe, 2013). Carbon dioxide capture and reduction of hydrofluorocarbons (HFC) and perfluorocarbons (PFC) and the use of carbon dioxide refrigeration systems (Colicchia *et al.,* 2011). Lean production practices and total quality management can lead to improved environmental performances and reduction of wastes and hazardous emissions to human beings and environment, e.g., solid and liquid wastes, air emissions and noise (King & Lenox, 2001).

The main objective of the study was to examine the effects of green procurement adoption on procurement performance in a devolved system of government in Kenya. A case of Uasin Gishu County government. From the literature review, the concept of green procurement adoption in Kenya is a common practice in both the public, private and even mobile sector. However, very few of these studies have particularly been undertaken in the Kenyan devolved system of government. The performance measurements in the aspect of green procurement adoption have not been fully explored. It is in this case that a study is needed to be carried out to investigate specifically the effect of green procurement adoption on procurement performance in a devolved system of government. This study was narrowed down to eco-design and packaging, waste management control, internal environmental management support and product re-usability to help develop a theoretical explanation on the effect of green procurement adoption on procurement performance in a devolved system of government in Kenya.

Based on the literature reviewed, it is evident that there are inadequate studies on the adoption of GPP in Kenya and especially in the counties. Local studies so far done have focused on procurement in general (Otieno, 2004; Akech, 2005) the determinants of green public procurement adoption in Kenya with special focus to Kenya Pipeline Company by Ngugi (2014). The latest research was done by Gatari and Was (2014).

This implies that the existing research works to cover green procurement strategy in developed countries and factors that affect its implementation but very little in developing countries. Studies conducted in Kenya in the area have focused more the on Green Public Procurement practice, the status of GP implementation among other aspects that are broad-based in the public sector but none is based on private sector. The literature reviewed shows there is inadequate literature on the green procurement implementation in the private sector in Kenya which has different dynamics like being typically motivated to reduce, not social, but organizational costs. As green procurement strategies may require significant capital investment.

Therefore, there lack conclusive studies in the area of effectiveness of the youth funds to address youth unemployment as the majority of reviewed studies focuses the general aspects of green procurement in the developed countries and the very little in developing countries is based on the private sector. This forms the research gap. It is for this research gap that this study wishes to establish factors affecting implementation of green procurement practices in the manufacturing sector in Kenya.

Methodology

The study used a descriptive research design to help in indicating trends in attitudes and behaviors and enable generalization of the findings of the research study to be done. This study targets 1140 employees of Uasin Gishu County and cut across the following department's Procurement, Finance, Human Resource, Operations, and Stores. The study targets the five clusters since these are more experienced and well versed with the effects of greening practices such as green procurement practice at Uasin Gishu County. Stratified random sampling was used to obtain a sample of 111 from a target population of 1140 from Procurement, Finance, Human Resource, Operations and Stores departments. to find the final adjusted sample size, allowing non-response rate of 10%, the adjusted sample size was 92+(92*0.1) =111.Suitable, usable and adequate data for the study was collected through administering questionnaires. The study adopted both quantitative and qualitative approaches, implying that both descriptive statistics and inferential statistics were employed. Quantitative data collected

from the document analysis was analyzed statistically using the Statistical Package for Social Scientist (SPSS version 24). The study tested the significance level of each independent variable against the dependent variable at 95% confidence level using ANOVA, Correlation and regression techniques. A 95% confidence interval reflects a significance level of 0.05. this shows that for an independent variable to have a significant effect on the dependent variable, the p-value should be below the significance level of 0.05. This regression model was used to test the relationship between implementation of green procurement as a linear function of the independent variables.

Findings And Discussion

Cronbach alpha test was used to determine the reliability of research instruments and the findings were presented in Table 1. Cronbach alpha test is a statistical procedure used to examine the extent to which all the items in the two set of questions measured the same construct.

Table 1: Reliability Values for the Research

	Cronbach's Alpha
Procurement Performance	0.761
Eco-Design Practices	0.822
Waste Management Control	0.971
Total	0.840

From the findings in Table 1, an overall coefficient alpha of 0.8403 was obtained with procurement performance scoring 0.761, Eco-design practices scoring 0.822, waste management control scoring 0.971. These findings were in line with the benchmark suggested by Hair et al. (2010) where the coefficient of 0.60 is regarded to have average reliability while the coefficient of 0.70 and above indicates that the instrument has a high-reliability standard. Although most researchers generally consider an alpha value of 0.70 as the acceptable level of reliability coefficient, the lower coefficient is also acceptable (Sekaran & Bougie, 2010).

Procurement performance

Procurement performance mainly involves two ways of looking performance in relation to GSCM practices: environmental performance and economic performance. The environmental performance deals with reducing substances that pollute the environment while Economic Performance emphasizes more on the element of cost. Thus, the study sought to establish the perceptions of the employees of Uasin Gishu County government on procurement performance based on the effect of green procurement adoption factors, and the findings were presented in Table 2. The responses were measured on a 5- point Likert scale.

The findings in Table 2 show that 46.3% (n = 44) and 22.1% (n = 21) of the employees agreed and strongly agreed that there is improved product compliance with order placed whereas 31.6% of them indicated otherwise giving a mean response of 3.71 (SD = 1.09) indicating overall agreement with the statement. The findings also show that 41.1% (n = 39) and 28.4% (n = 27) of the employees agreed and strongly agreed respectively that County experiences reduced inbound lead time while 30.6% indicated otherwise with a mean of 3.86 (SD = 0.970) indicating overall agreement with the statement. Furthermore, 35.8% (n = 34) and 47.4% (n = 45) of the employees agreed and strongly agreed that County had achieved improved requirement specification for purchased materials while 16.9% indicated otherwise with the mean response of 4.21 (SD = 0.940) indicating overall agreement with the statement. The findings also show that 38.9% (n = 37) and 25.3% (n = 24) of the employees agreed and strongly agreed respectively that County achieves timely submission of purchase requisitions by department for approval while 35.8% of the employees indicated otherwise with a mean response of 3.76 (SD = 1.050) indicating overall agreement with the statement.

Table 2: Procurement performance

		SD	D	N	A	SA	Mean	Std. Deviation
There is improved product compliance with an order placed	n	6	7	17	44	21	3.71	1.09
	%	6.3	7.4	17.9	46.3	22.1		
County experiences reduced inbound lead time	n	1	9	19	39	27	3.86	0.97
	%	1.1	9.5	20	41.1	28.4		
County has achieved improved requirement specification for purchased materials	n	0	9	7	34	45	4.21	0.94
	%	0	9.5	7.4	35.8	47.4		
County achieves timely submission of purchase requisitions by department for approval	n.	6	1	27	37	24	3.76	1.05
	%	6.3	1.1	28.4	38.9	25.3		
County achieves timely purchase requisition approval	n	6	1	27	37	24	3.94	1.17
	%	6.3	1.1	28.4	38.9	25.3		
County achieves timely bidding process initiation and closure	n	8	6	2	47	32	3.8	0.77
	%	8.4	6.3	2.1	49.5	33.7		
County achieves timely bids evaluation and supplier selection	n	6	1	24	37	27	3.76	1.05
	%	6.3	1.1	25.3	38.9	28.4		
The County has low percentage of defects	n	34	0	7	9	45	3.06	0.88
	%	35.8	0	7.4	9.5	47.4		
Procurement performance							**3.88**	**0.76**

In addition, 38.9% (n = 37) and 25.3% (n = 24) of the employees agreed and strongly agreed respectively that County achieves timely purchase requisition approval while 35.8% of the employees indicated otherwise with a mean response of 3.94 (SD = 1.170) indicating overall agreement with the statement. Further, 49.5% (n = 47) and 33.7% (n = 32) of the employees agreed and strongly agreed respectively that County achieves timely bidding process initiation and closure while 16.1% of the employees indicated otherwise with a mean of 3.80 (SD = 0.770) indicating overall agreement with the statement. The findings also show that 38.9% (n = 37) and 25.3% (n = 24) of the employees agreed and strongly agreed respectively that County achieves timely bids evaluation and supplier selection while 35.8% of the employees indicated otherwise with a mean response of 3.76 (SD = 1.050) indicating overall agreement with the statement. Finally, the findings also show that 9.5% (n = 9) and 47.4% (n = 45) of the employees agreed and strongly agreed respectively that the County has low percentage of defects while 43.2% of the employees indicated otherwise giving a mean response of 3.06 (SD = 0.880) that showed overall neutrality with the statement. The overall mean response for procurement performance was 3.88 (SD = 0.760) that shows that majority of the employees agreed with the level of procurement performance at the County government of Uasin Gishu.

Eco-Design and Packaging

The Eco-Design and packaging is a practice which requires that manufacturers design products that minimize consumption of materials and energy that facilitate the reuse recycle and recovery of component materials and parts, and that avoid or reduce the use of hazardous products within the manufacturing process. Eco-design and Packaging will include packaging design for reduced environmental impact, packaging re-cycle or re-use and use of biodegradable materials. Thus, based on these aspects of eco-design and packaging, the study sought to establish the perspectives of the employees working with Uasin Gishu County on the level of integration of eco-design and packaging and the findings were presented in Table 3. The responses were measured on a 5- point Likert scale.

Table 3: Eco-Design and Packaging

		SD	D	N	A	SA	Mean	Std. Deviation
we purchase products for reduced consumption of material/energy	n	0		17	65	13	3.96	0.563
	%	0		17.9	68.4	13.7		
The county purchase products which can be reused and recycled	n	0	2	36	32	25	3.84	0.842
	%	0	2.1	37.9	33.7	26.3		
The county purchase product which are supported by regulation	n	0	15	38	28	14	3.43	0.93
	%	0	15.8	40	29.5	14.7		
The county Uses eco-friendly cleaners and detergents	n	0	0	12	51	32	4.21	0.651
	%	0	0	12.6	53.7	33.7		
The county purchases the products that can be easily set up for the users in the most energy saving way	n	0	25	23	37	10	3.34	0.985
	%	0	26.3	24.2	38.9	10.5		
The county purchases product which has econ friendly packages	n	21	9	33	29	3	2.83	1.182
	%	22.1	9.5	34.7	30.5	3.2		
Eco-design practices							**3.62**	**0.678**

The findings in Table 3 show that 68.4% (n = 65) and 13.7% (n = 13) of the employees agreed and strongly agreed respectively that they purchase products for reduced consumption of material/ energy while 17.9% indicated otherwise. The mean response was 3.96 (SD = 0.563) indicating overall agreement with the statement. The findings also show that 33.7% (n = 32) and 26.3% (n = 25) of the employees agreed and strongly agreed respectively that the County purchases products which can be reused and recycled giving a mean of 3.84 (SD = 0.842) that indicated overall agreement with the statement while 40% of the employees indicated otherwise. Furthermore, 29.5% (n = 28) and 14.7% (n = 14) of the employees agreed and strongly agreed respectively that the County purchases products which are supported by regulation while 55.8% of the employees indicated otherwise giving a mean response of 3.43 (SD = 0.930) which shows overall neutrality with the statement and part of the reason might be that the employees do not actually know whether regulations are available or not. Further, the findings show that 53.7% (n = 51) and 33.7% (n = 32) of the employees agreed and strongly agreed respectively that the County uses eco-friendly cleaners and detergents while 12.6% of the employees were not sure of this giving a mean response of 4.21 (SD = 0.651) that shows overall agreement with the statement. In addition, the findings show that 38.9% (n = 37) and 10.5% (n = 10) of the employees agreed and strongly agreed that the County purchases the products that can be easily set up for the users in the most energy saving way while 50.5% of the employees indicated otherwise giving a mean response of 3.34 (SD = 0.985) that indicated overall neutrality with the statement and showed that this is one of the gaps. Finally, 30.5% (n = 29) and 3.2% (n = 3) of the employees agreed and strongly agreed respectively that the County purchases products which have eco-friendly packages while 66.3% indicated otherwise with a mean response of 2.83 (SD = 1.182) that shows that majority of the respondents are not sure whether the County purchases products which have eco-friendly packages thereby showing that there is an existing gap. The overall mean response was 3.62 (SD = 0.678) that indicates that majority of the employees actually affirm that the County uses eco-design and packaging practices. However, there are gaps in terms of purchase of products which are supported by regulation, purchase of products that can be easy set up for the users in the most energy saving way and purchase of products which have eco-friendly packages thus showing that although the County implements some of the eco-design and packaging strategies, there are some that it does not implement.

Waste Management Control

Waste management control comprises use of carbon dioxide refrigeration systems, treatment, and control of post-combustion emissions, use of alternative fuels (e.g., cleaner fuels), treatment and recycling of hazardous

wastes, process optimization implementation of waste – to -energy process, waste reduction, reuse, and recycling approaches. This may also involve source reduction the recycle and re-use waste management programs focuses on management of waste after it has been created. As such, the study sought to establish the level of implementation of waste management control at the County government of Uasin Gishu by assessing the views of the employees regarding waste management control and the findings were presented in Table 4.6. The responses were measured on a 5- point Likert scale.

Table 4: Waste Management Control

		SD	D	N	A	SA	Mean	Std. Deviation
The county has a program to minimize waste	n	9	14	28	22	22	3.36	1.254
	%	9.5	14.7	29.5	23.2	23.2		
The county Practice solid waste separation	n	1	6	40	33	15	3.58	0.87
	%	1.1	6.3	42.1	34.7	15.8		
The county uses recycled paper	n	0	1	34	31	29	3.93	0.841
	%	0	1.1	35.8	32.6	30.5		
The county has Installed recycle bins to encourage recycling	n	6	16	31	33	9	3.24	1.049
	%	6.3	16.8	32.6	34.7	9.5		
The county Purchases materials with recyclable properties	n	0	8	28	34	25	3.8	0.929
	%	0	8.4	29.5	35.8	26.3		
The county has Implement recycling programs	n	0	12	45	15	23	3.52	0.999
	%	0	12.6	47.4	15.8	24.2		
The county cooperate with recycling firms	n	0	8	28	34	25	3.8	0.929
	%	0	8.4	29.5	35.8	26.3		
The county has a waste-water treatment in place	n	0	1	34	31	29	3.93	0.841
	%	0	1.1	35.8	32.6	30.5		
Waste Management Control							**3.57**	**0.858**

The findings in Table 4 show that 23.2% (n = 22) and 23.25 (n = 22) of the employees agreed and strongly agreed respectively that the County has a program to minimize waste while 53.7% indicated otherwise. The mean response was 3.36 (SD = 1.254) that shows overall neutrality with the statement. Furthermore, the findings show that 34.7% (n = 33) and 15.8% (n = 15) of the employees agreed and strongly agreed respectively that the County practices solid waste separation while 49.5% indicated otherwise giving a mean response of 3.58 (SD = 0.870) indicating overall agreement with the statement. In addition, 32.6% (n = 31) and 30.5% (n = 29) of the employees agreed and strongly agreed respectively that the County uses recycled paper while 36.9% indicated otherwise giving a mean response of 3.93 (SD = 0.841) that shows agreement with the statement by the majority of the employees.

The findings also show that 34.7% (n = 33) and 9.5% (n = 9) of the employees agreed and strongly agreed respectively that the County has installed recycling bins to encourage recycling while 55.7% of the employees indicated otherwise giving a mean response of 3.24 (SD = 1.049) that shows that the County has not fully installed recycle bins that encourage recycling. In addition, 35.8% (n = 34) and 26.3% (n = 25) of the employees agreed and strongly agreed respectively that the County purchases materials with recyclable properties while 37.9% indicated otherwise with a mean response of 3.80 (SD = 0.929) showing overall agreement with the statement. The findings further show that 15.8% (n = 15) and 24.2% (n = 23) of the employees agreed and strongly agreed that the County has implemented recycling programs while 60%

indicated otherwise giving a mean of 3.52 (SD = 0.999) that shows that implementation of recycling programs was not optimal at the County.

Also, the findings show that 35.8% (n = 34) and 26.3% (n = 25) of the employees agreed and strongly agreed respectively that the County cooperates with recycling firms while 37.9% indicated otherwise with a mean response of 3.80 (SD = 0.929) that shows that majority of the employees agree that the County cooperates with recycling firms. Finally, 32.6% (n = 31) and 30.5% (n = 29) of the employees agree and strongly agree respectively that the County has a waste-water treatment in place while 36.9% of the employees indicated otherwise giving a mean response of 3.93 (SD = 0.841) showing that majority of the employees agree that the County has a waste-water treatment in place. The overall mean was 3.57 (SD = 0.858) for waste management control that shows that majority of the employees agree that the County practices waste management control.

Regression Findings on Causal Relationship Effect of Effect of Green Procurement Adoption on Procurement Performance In Devolved System

The findings in Table 5 show that eco-design practices have a positive and significant relationship with procurement performance, $\rho = 0.595$, $p < 0.01$ and this means that there is a probability of 0.595 that procurement performance will increase with increased eco-design practices. The findings also show that waste management control has a positive and significant relationship with procurement performance, $\rho = 0.631$, $p < 0.01$ indicating that there is a 0.631 probability that procurement performance will increase with an increase in waste management control. These findings provide enough evidence to suggest that there was a linear relationship between waste management co-design practices with procurement performance. The results in Table 5 showed that all predictors (waste management and eco-design practices) explained 50.6% variation of procurement performance. This showed that considering the four study independent variables, there is a probability of predicting procurement performance by 50.6% (R-squared =0.506). The findings in Table 5 indicated that the above-discussed coefficient of determination was significant as evidence of F (4, 90) ratio of 147.606 with $p < 0.001$. Thus, the model was fit to predict procurement performance using waste management and eco-design practices.

Effect of eco-design and packaging on procurement performance

The first specific objective of the study was to determine the effect of eco-design and packaging on procurement performance in a devolved system of government in Kenya. In line with this, the study aimed at answering the research question that: to what extent do eco-design and packaging affect procurement performance in a devolved system of government in Kenya? The findings show that eco-design practices have a positive and significant effect on procurement performance, $\beta_1 = 0.156$, $p = 0.039$ meaning that with each unit increase in use and implementation of eco-design practices, procurement performance increases by 0.156 units. In line with these findings, Jumadi and Zailani (2010) point out that a reduction in the product environmental impact may be achieved not only through appropriate product design, but also a proper use by consumers of the products and services. At the County government, the main clients are the public for which services are offered. So, it is not only the responsibility of the County government to come up and implement eco-design and packaging strategies but also a responsibility to the clients on being eco-conscious. In this sense, consumers must become more aware of the environmental implications related to the products they are using, so that sustainability may be perceived as a value-added element for the society, as well as a distinguishing feature for companies (Jumadi & Zailani, 2010).

Effect of waste management control on procurement performance

The second specific objective of the study was to establish the effect of waste management control on procurement performance in a devolved system of government in Kenya. This was mainly through answering the research question that: Does waste management control affect procurement performance in a devolved system of government in Kenya? The findings in Table 4.13 show that waste management control has a positive and significant effect on procurement performance, β_2 = 0.244, p = 0.004 meaning that increasing waste management control by 1 unit would increase procurement performance by 0.244 units. According to the Transaction Cost Economics theory, there is the address of why firms exist in the first place (that is, to minimize transaction costs), how firms define their boundaries, and how they ought to govern operations (Daddi *et al.,* 2010). According to Gatari and Were (2014), it was originally developed to help to determine the efficiency in producing goods and services at low cost to ensure low prices to customers. Thus, waste management support focuses on the prevention or the reduction of wastage during production rather than managing it after it has been generated with the aim of efficiently utilizing resources by examining how business is conducted, how materials are used, and what products are purchased (Mugabe, 2013). This means putting in approaches early to mitigate an adverse situation in the future due to late intervention.

Table 5: OLS results

	Unstandardized Coefficients		Standardized Coefficients			
	B	**SE**	**Beta**	**t**	**Sig.**	**correlation**
(Constant)	2.596	0.138		18.847	0	
Eco-design practices	0.103	0.05	0.156	2.073	0.039	0.595*
Waste management control	0.127	0.044	0.244	2.921	0.004	0.631**
R	0.712a					
R-Square	0.506					
Adjusted R-Square	0.501					
Std. Error of the Estimate	0.241					
F	147.606					
Sig.	0.000b					

a Dependent Variable: Procurement performance
** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Conclusion And Recommendations

The findings have showed that eco-design and packaging practices and waste management enhance procurement performance. There are also gaps identified in green procurement implementation in Uasin Gishu County that curtail procurement performance.Based on the findings of the study, the following recommendations are put forward: There is need to further relook at the policies on eco-design and packaging especially those that would enable the purchase of products which are supported by regulation, products that can be easy set up for the users in the most energy saving way and products which have eco-friendly packages Furthermore, there is need to consider review of the practices in relation to waste management control that will enable minimizing of waste as well as encourage recycling especially through installing recycle bins. Such measures call for collaboration with the public, business community and the deliberate investment of financial resources to enable these ideas.

This study main objective is to assess the effect of green procurement performance on supply management performance. From the study findings, the findings were only limited to green procurement practices. Thus, more research and studies should be carried out to determine other factors that affect procurement performance. Some of the factors can be those in legal constraints and spread of technology. This would enable the researchers and concerned investors to mitigate effects of such factors and hence enhance procurement performance

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