

EFFECTS OF GREEN PUBLIC PROCUREMENT ADOPTION IN PUBLIC SECTOR: A CASE STUDY OF PYRETHRUM AND OTHER INDUSTRIAL CROPS DIRECTORATE IN KENYA

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Abstract

Green public procurement has become a policy tool for many Governments due to the environmental concern that have been raised regarding sustainability and climate change. Many governments and private institutions are consciously including environmental and social considerations in their procurement processes. In Kenya, adoption of green procurement has been slow resulting in lower adoption rate. This study sought to assess factors that determine the adoption of green procurement in the public institutions, specifically pyrethrum and other industrial crops directorate. In particular, the study examined the effect of environmental compliance on green public procurement adoption. The target population constituted officers in P&OCD who were directly involved in the procurement function. Random cluster sampling method was employed to select a representative sample which yielded 92 members of staff from a population of 119. Semi-structured questionnaires were administered. Data was analyzed using descriptive statistics and regression analysis using SPSS (Statistical Package for Social Sciences) software. The relationship between environmental compliance and green procurement was established to be positive, strong and statistically significant. The study

recommended further examination of the factors influencing the green procurement adoption. The study also recommends further examinations on ways of enhancing green procurement policies compliance, minimizing costs associated with green procurement of raw materials, and stakeholder awareness improvement.

Keywords: Environmental compliance, green public procurement, public sector, P&OCD, Kenya

INTRODUCTION

Governments and other public institutions combined, purchase more than a trillion of goods and services each year. Many of these products contribute to problems in the overall environment, including contamination of the air and water, and depletion of environmental resources. In some instances, products require special waste disposal and reporting procedures which can be cumbersome and expensive. Furthermore, government employees using these products may be exposed to compounds that are potentially harmful to their health (Brammer, 2009).

According to Holt (2005), public institutions have an opportunity to serve as a community model for environmental leadership by incorporating a plan of action that will conserve precious resources such as water, raw materials and energy, in addition to reducing the use of hazardous substances and potentially improve the environmental quality of the region. By incorporating environmental considerations in public purchasing, public institutions can reduce its burden on the local and global environment, remove unnecessary hazards from its operations, protect public health, reduce costs and liabilities, and help develop markets for environmentally responsible products (Thai, 2006). Hence, the need for a green public procurement policy to address the common environmental problems that needed common solutions.

At the European level, the recognition of the fundamental role of green public procurement in decreasing environmental impacts and in promoting market awareness was firmly established in the Green Book of Integrated Products Policy (EC, 2001) and in the Sixth Environment Action Programme (EP, 2002). However, the European Communication 274/2001 represents the most important document concerning green public procurement (EC, 2001). This document highlights the opportunities for public authorities to integrate environmental considerations in their procurement procedures and to formulate many experimental initiatives aimed at supporting public authorities in the adoption of green purchasing practices (Iraldo & Testa, 2007). As it is commonly understood today that sustainability management has to be extended beyond the single enterprise and to the whole supply chain that also includes upstream (external) processes (Burrow, 2007). Close cooperation between all companies along

the supply chain and involved organizations are required to reach the goals of sustainability; environmental quality, social justice and economic prosperity.

Locally, green procurement has been a logical extension of this work (Walker, 2006), yet Kenya as one of the developing countries has been slow in taking up structured and policy driven approach to enhancing adoption of green public procurement, the benefits accruing notwithstanding. The Public Procurement and disposal Act, 2005 and subsequent regulations 2006 and 2009, which are the core points of reference on public procurement in Kenya were reviewed and makes only a very weak reference to Green Public Procurement.. In recognition of the level of green public procurement adoption, the government of Kenya has stipulated inclusion of green public procurement policy in its public procurement processes. This policy intervention is meant to guide the adoption of green public procurement not only to pyrethrum directorate but also in all other public institutions. Some of the key programmatic interventions spearheaded by the relevant government agencies include the assessments, sensitization of the extent of green public procurement policy uptake, training of key staff, the management, provision of information, education and communication. The objective of this is to make public institutions compliant with green procurement issues for the realization of the country's development goals as articulated in the vision 2030.

Despite these achievements, there is consensus that a lot more needs to be done. According to (Sirvastava, 2007), the response to this challenge is being institutionalized and the process has received the requisite goodwill from policy makers and programme implementers. The challenge now is to translate the goodwill and commitment into tangible and measurable results. The proposed survey among employees of pyrethrum Directorate is a central component in Pyrethrum Directorate since the findings are expected to form the benchmarks against which the success of the green public procurement policy adoption in other public institutions will be measured.

Statement of the Problem

Studies so far made have focused on public procurement in general and little has been done in regard to green public procurement policy adoption. Due to pressure from consumers, available evidence points to the issues of environmental procurement as being a critical function to most government institutions and international agencies agenda. Pyrethrum directorate has taken the imitative to spearhead the green public procurement policy. This has been triggered by the increasing complaints from consumers of Pyrethrum products. In the local market insecticides worth ten million shillings failed to comply with national environmental management Authority products standards due to poor packaging (Pyrethrum Marketing Report, 2012).

Last year alone, insecticides worth over hundred million shillings were recalled from UK and USA due to environmental related issues. The good performance of Pyrethrum Directorate is however marred by allegations of irregular procurement at the company, including non-adherence to environmental issues. A case at hand is the purchase of Freon R12 for industrial use though it has already been banned by the World Health Organization. Green oils from the processing plant which are drained through the sewer system have been found to pollute the nearby Nakuru River, which is a key resource for tourist attraction in Nakuru County.

Whereas Kenya is expected to be in this league, evidence available points to weak policy and institutional capacity. Scrap and residue handled by pyrethrum And Other Industrial Crops Directorate are highly inflammable with resultant effects on environment, economic and human catastrophes associated with leaks, which makes it a candidate for adoption of green public procurement. No study has ever been done with regard to effects of green public procurement adoption in Pyrethrum. This study therefore was intended to fill in this existing research gap.

Objectives of the Study

General Objective

To assess the effect of green public procurement adoption in public sector institutions

Specific Objective

To determine the effect of environmental compliance on green procurement adoption

Research Question

What is the effect of environmental compliance on Green Public Procurement adoption?

THEORETICAL REVIEW

Transaction Cost Economics (TCE) Theory

Theory Transaction Cost Economics is a central theory in the field of strategy (Stephen & Helen, 2011).It addresses questions about 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 Lozano and Valles (2013) TCE was originally developed to help to determine the efficiency in producing goods and services at low cost to ensure low prices to customers. Yet, Walker and Brammer, (2009) already addressed the importance of transaction costs in organizations when analyzing bidding process. Parties have to bid for the right quality of goods and services and the award has to go to the bidder offering the lowest

price. Walker and Brammer (2009) argue that the problems associated with contracting solutions in the types of environments encountered in manufacturing sector transactions are likely to be difficult to tackle. Competitive bidding can indeed be an effective way of determining the lowest cost supplier in supply of green products. Uncertainty about cost, prices and demand conditions of green products leave long-term and short term contracts for manufacturing of green products and services in pharmaceutical industry inevitably incomplete (Srivastava, 2013).

Systems Theory

Systems theory describes the interrelatedness of all parts of an organization and how one change in one area can affect multiple other parts (Li & Geiser, 2009). According to Walker & Brammer, (2009) organization act as systems interacting with their environment. Any equilibrium is constantly changing as the organization adapts to its changing environment. The foundation of systems theory is that all the components of an organization are interrelated, and that changing one variable might impact many others (Maignan et al., 2012). Organizations are viewed as open systems, continually interacting with their environment. They are in a state of dynamic equilibrium as they adapt to environmental changes. According to Lozano and Valles, (2013) system theory views organizational structure as the established pattern of relationships among the parts of the organization.

Of particular importance are the patterns in relationships and duties. These according to Maignan et al (2012) include themes of integration (the way activities are coordinated), differentiation (the way tasks are divided), the structure of the hierarchical relationships (authority systems), and the formalized policies, procedures, and controls that guide the organization (administrative systems). Menon (2013) posit that the relationship between the environment and organizational structure is especially important. Organizations are open systems and depend on their environment for support. The relationship between an organization and its environment is characterized by a two-way flow of information and energy (Marron, 2013). Most organizations attempt to influence their environment. While Stafford and Harthman (2010) were among the first to explain the adoption of practices within the environmental context, several scholars have subsequently investigated the positive impact of these institutional pressures on green procurement (Zhu et al., 2009). Jayaraman, Klassen and Linton (2013) stated that senior management support plays a pivotal role in the institutionalization of responsible behavior. This theory explains how changes in organizational structure affect the implementation of green procurement.

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 (McCarthy & Shrum, 2001).

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. 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. The concept of sustainability thus raises a basic question: can human activity successfully maintain itself and its goals without exhausting the resources on which it depends?

Asking that question directs attention toward the planetary impact of human activity and its durability over time. It therefore provokes reflection on the manner and purposes of global human society. Problems like biodiversity loss and climate change point to the global reach of humanity’s powers and the scale of its risk. Mitigating their impact and risk seems to require reform across many human systems, financial, political, production, energy, transportation, and even communication and education. Yet those reforms could complicate other goals of the international community, such as overcoming extreme poverty and protecting human rights.

EMPIRICAL REVIEW

Environmental Compliance

The organization initiative to implement GPP play crucial role in shaping the degree to which organization’s green policy is acted upon since green/socially responsible production methods are often perceived of as being inherently more expensive than other methods (Bowered al., 2006). Given the tight budget constraints and countervailing objectives faced by most public sector organizations, perceptions regarding the cost-effectiveness of GPP do play a particularly

important role in decision making. As such long term decisions that consume a large proportion of the organization's budget have to be made at the top management level. The key issue here is the extent to which the top management support is communicated to the other line managers and other staff there whose role is facilitating the adoption process (Bjorklund, 2011; Ashen Baum, 2008). In the public sector, the top management is the agent of the principal (the organization) to realize its goals and objectives.

Therefore, the goals of top management must be in conformity with that of the principal (the organization) in order to achieve efficient and effective GPPP adoption. Top management support is critical for any successfully sustainable green public procurement strategy. Bjorklund (2011) found that priorities among the top/middle management are important drivers in the green public procurement policy. There is therefore need to investigate in what direction the top management team influences GPPP adoption entirely and the benefits to the institutions undertaking the project. According to (Olson, 2008) GPP adoption should generally lead to cost effective transformation initiatives that meet or exceed top management expectations. This transformation is the key to ensuring that the management secures the competitive edge of the public institution that is adopting the GPPP while hedging against new cost structure, which can negatively affect the operations of the public institutions in the long run. By having this cost effective measure, the institution will save more and eventually be able to sustain itself and its operations hence achieving its objectives and goals on long-term basis.

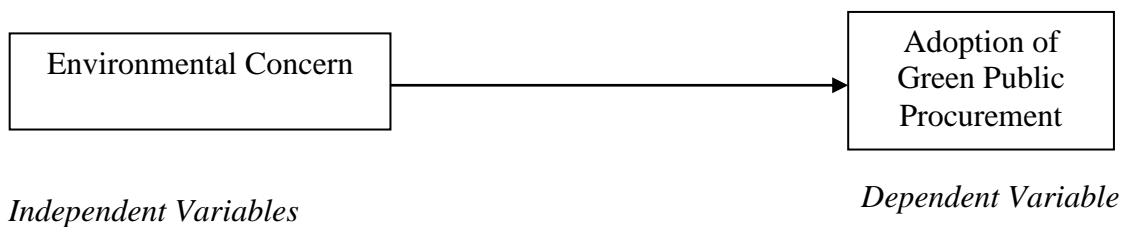
If the top management fails to spearhead the GPPP adoption process then, such a policy is unlikely to be adopted. On the other hand the power and the will of the top management can be an important factor to enable GPPP adoption. According (Freeman 1984), top management should pursue strategies that consider the parties affected by their decisions while trying to minimize damage or maximize benefits to the representative groups This calls for companies to think beyond financial performance but have obligations towards society and its constituent groups, (Jones,1980).In this interplay businesses' obligations go beyond the traditional fiduciary duties to the top management and extend to the customers, employees, suppliers and neighboring communities.

GPPP adoption is not about moral support alone as Donald claims, but a combination of strategic operations which are triggered by the top management expectation of direct financial benefits or competitive advantages. This is in line with Porter and Kramer (2006), who posit that companies should strive for environmentally or socially desirable activities if and only if there is a direct impact on the economic viability of the company. Here, the companies' ability to exploit new opportunities becomes crucial on the top management agenda as explained Teece, et al. (1997).

Conceptual Framework

According to Stratman and Roth (2004), conceptual framework is structured from a set of broad ideas and theories that help a researcher to properly identify the problem being focused on, frame questions and find suitable literature. The conceptual framework that guided the study as illustrated in Figure 1 indicates the relationship between the dependent and the independent variables. The independent variable was environmental compliance while, on the other hand, adoption of green public procurement was the dependent variable. The framework illustrates the relationship between the independent and dependent variables. It shows that green public procurement adoption is influenced by environmental compliance.

Figure 1: Conceptual Framework



METHODOLOGY

Research Design

The research design constitutes the blue print for the collection, measurement and analysis of data (Kothari, 2005). A descriptive research design was used in this study. Descriptive research is a method of collecting information by interviewing or administering a questionnaire to a sample of individuals. It can also be used when collecting information about people's attitudes, opinions habits or any other social issues (Orodho, 2003). The choice of this design was appropriate for this study since it utilizes a questionnaire as a tool of data collection and helps to establish the behaviour of employees towards embracing Green Public procurement.

Target Population

Target population is defined by Mugenda and Mugenda (2003) as an entire group of individuals, events or objects having observable characteristics. In this study, the target population constituted the 119 employees of Pyrethrum and Other Industrial Crops Directorate drawn from various sections according to the organizational organogram.

Sample Size and Sampling Technique

The sample of the population to be studied was determined using Yamane (1967) sample size formula. This provides a simplified formula to calculate sample sizes with a 95% confidence level and $P = 0.05$. The sample size was arrived at using Yamane's (1967) formula

$$n = \frac{N}{1 + N(e)^2}$$

$$n = \frac{119}{1 + 119(0.05)^2}$$

$$n = 92$$

Given that n is the sample size, N is the population size, and e is the level of standard error, the sample size was 92 employees.

Research Instrument

Mugenda and Mugenda (2003) assert that the accuracy of data to be collected largely depended on the data collection instruments in terms of validity and reliability. In order to obtain a reliable data, the researcher used both primary and secondary sources for this study. The primary data was deemed suitable due to its nearness to the truth and ease of control over errors (Mutai, 2000). The primary data was collected through the use of questionnaires. In this case, the researcher administered questionnaires; with mainly closed ended questions were distributed to the sampled respondents. Secondary data was obtained by making references to existing materials such as, financial reports, journals, and empirical researches in this area and other relevant document with related information.

Reliability Test

Reliability can be identified as the extent to which the measurement of a test remains consistent over repeated tests of the same subject under identical conditions. Research requires dependable measurements which are reliable to the extent that they are repeatable and any random influence which tends to make measurements different from occasion to occasion or circumstance to circumstance is a source of measurement error (Foster & Schindler 2010). For measuring reliability, the researcher used Cranbach's Alpha test method whereby the two variables (environmental concern and adoption of green public procurement) returned $\alpha = 0.792$ and $\alpha = 0.821$ respectively. This implied that the instrument was reliable.

Validity Test

Validity as noted by Foster (2001) is the degree to which result obtained from the analysis of data actually represents the phenomenon under study. Whenever a test or other measuring device is used as part of the data collection process, the validity, of that test is important. Just as we would not use a math test to assess verbal skills, we would not want to use a measuring device for research that was not truly measuring what we purport it to measure. After all, we have to test the results that are available to show support or a lack of support for our theory and if the data collection methods are erroneous, the data we analyze will also be erroneous. For validity test the researcher used subject opinion expert.

Data Analysis and Presentation

Once the questionnaires were received they were coded and edited for completeness and consistency. Quantitative data was analyzed by employing descriptive and inferential statistics with the help of Statistical Package for Social Sciences (SPSS) software. This technique gives simple summaries about the sample data and present quantitative descriptions in a manageable form, (Orodho, 2003). Together with simple graphics analysis, descriptive statistics form the basis of virtually every quantitative analysis to data, (Kothari, 2005). Correlation analysis to establish the relationship between the independent and dependent variables was employed. The purpose of doing correlation was to allow the study to make a prediction on how a variable deviates from the normal. The data was then presented using tables for easier understanding.

ANALYSIS AND FINDINGS

Descriptive Statistics for Environmental Compliance

Table 1 shows how the responses of the different environment compliance metrics on a five-point Likert scale with scales strong agree (SA), agree (A), uncertain (U), disagree (D) and strongly disagree (SD). When asked on whether the procurement department sets out a comprehensive green procurement policy, 8.3% of the respondents strongly agreed, and 27.4% agreed, 38.1% were neutral, 17.9% disagreed, and 8.3% strongly disagreed. On the question on whether the procurement department monitors adherence to its green procurement policy, 26.2% of the respondents agreed, 47.6% were neutral, 17.9% disagreed and 8.3% strongly disagreed. In relations to the procurement adhering to the set green procurement policy, 16.7% agreed to the statement, 48.8% were neutral, 26.2% of the respondents disagreed, and 8.3% strongly disagreed. On the aspect of the green procurement being a top management concern, 8.3% of the respondents agreed, 48.8% were neutral, 34.5% of the respondents disagreed and 8.3% of the respondents strongly disagreed. Finally, in relations to the green policy being easy

to understand and comply with, 8.3% of the respondents agreed, 29.8% were neutral, 44.0% of the respondents disagreed and 17.9% strongly disagreed.

Table 1: Distribution Frequency on Environmental Compliance

Statement	SA	A	N	D	SD	TOTAL
My department has set out a comprehensive green procurement policy	8.3%	27.4%	38.1%	17.9%	8.3%	100%
My department monitors adherence to its green procurement policy	0	26.2%	47.6%	17.9%	8.3%	100%
My department always adheres to the set green procurement policy	0%	16.7%	48.8%	26.2%	8.3%	100%
The green policy implementation and adherence is a top management concern	0%	8.3%	48.8%	34.5%	8.3%	100%
The green procurement policy is easy to understand and comply with	0%	8.3%	29.8%	44.0%	17.9%	100%

To enable a better understanding of the descriptive statistics, Table 4.8 summarizes the descriptive statistics through provision of the means and the standard deviation. The descriptive statistics correspond to the SPSS coding; strongly agree (0), agree (1), uncertain (2), disagree (3) and strongly disagree (4). In relation to the procurement department setting out comprehensive green procurement policy, the respondents tended to strongly agree as indicated through a mean of 1.9048. However, the respondents tended to be uncertain in relations to the other metrics. In this context, the procurement department monitoring of the adherence of the green procurement policy had a mean of 2.0833, procurement department adherence to set green procurement policy (mean of 2.2619), green policy being a top management concern (mean of 2.4286) and easy understanding of the green procurement (mean of 2.7143).

Table 2: Descriptive Statistics on Environmental Compliance

	n	Min	Max	Mean	Std. Dev
My department has set out a comprehensive green procurement policy	84	.00	4.00	1.9048	1.05988
My department monitors adherence to its green procurement policy	84	1.00	4.00	2.0833	.88097
My department always adheres to the set green procurement policy	84	1.00	4.00	2.2619	.83765
The green policy implementation and adherence is a top management concern	84	1.00	4.00	2.4286	.76498
The green procurement policy is easy to understand and comply with	84	1.00	4.00	2.7143	.85829

Descriptive Statistics for Green Procurement Adoption

Table 3 shows the responses of the different green procurement adoption metrics against a five-point Likert scales with scales strong agree (SA), agree (A), uncertain (U), disagree (D) and strongly disagree (SD). When asked on whether the department purchases environmentally friendly products and services, 9.5% of the respondents strongly agreed, 19.9% agreed, 36.1% were uncertain, 25.0% disagreed and 9.5% strongly disagreed. In relation to the department setting environment impact standards among contractors it deals with, 17.9% agreed to the statement, 38.1% were uncertain, 26.2% disagreed and 17.9% strongly disagreed. In regards to the department having formal green procurement policy document and working manual, 8.3% of the respondents strongly agreed, 27.4% agreed, 40.1% were uncertain, 15.9% of the respondents disagreed, and 8.3% strongly disagreed. On whether the respondent's department tracks and monitors environmental impact standards adherence by its contractors, 9.5% of the respondents agreed, 16.7% were uncertain, 42.9% disagreed and 31.0% strongly disagreed. Finally, in relations to the department paying premium price for services and products meet environmental impact standards, 17.9% of the respondents were uncertain, 51.2% disagreed, and 31.0% of the respondents strongly disagreed.

Table 3: Frequency Distribution of Green Procurement Adoption

Statement	SA	A	U	D	SD	TOTAL
My department purchases environmentally friendly products and services	9.5%	19.9%	36.1%	25.0%	9.5%	100%
My departments sets environmental impact standards among the contractors it deals with	0%	17.9%	38.1%	26.2%	17.9%	100%
My department has a formal green procurement policy documental and working manual	8.3%	27.4%	40.1%	15.9%	8.3%	100%
My departments monitors (tracks) that environmental impact standards are adhered to by its contractors	0%	9.5%	16.7%	42.9%	31.0%	100%
My department pays premium price for services and products that meet environmental impact standards	0%	0%	17.9%	51.2%	31.0%	100%

To enable a better understanding of the descriptive statistics, Table 4 summarizes the descriptive statistics through provision of the means and the standard deviations. The descriptive statistics correspond to the SPSS coding; strongly agree (0), agree (1), uncertain (2), disagree (3) and strongly disagree (4). In relation to the procurement department

purchasing environmentally friendly products and services, procurement department setting environmental impact standards among the contractors it deals with and procurement department monitoring that environmental impact standards are adhered to by its contractors, there was a tendency to be uncertain on these metrics. This was indicated through means of 2.0714, 2.4405 and 2.9524 respectively. On the other hand, in respect to the procurement department having a formal green procurement policy document and working manual and the department paying premium price for services and products that mean environmental impact standards there was a tendency to agree (mean of 1.9048) and disagree (mean of 3.1310) respectively.

Table 4: Descriptive Statistics on Green Procurement Adoption

	n	Min	Max	Mean	Std. Dev
My department purchases environmentally friendly products and services	84	.00	4.00	2.0714	1.09529
My departments sets environmental impact standards among the contractors it deals with	84	1.00	4.00	2.4405	.98606
My department has a formal green procurement policy documental and working manual	84	.00	4.00	1.9048	1.05988
My departments monitors (tracks) that environmental impact standards are adhered to by its contractors	84	1.00	4.00	2.9524	.93015
My department pays premium price for services and products that mean environmental impact standards	84	2.00	4.00	3.1310	.69038

Inferential Findings

Inferential analysis sought to outline the relationship between environmental compliance and green procurement adoption. Table 5 illustrates the results of pertinent correlation analysis.

Table 5: Relationship between Environmental Compliance and Green Procurement

Environmental Compliance	Green Procurement Adoption	
	Pearson Correlation	.585**
Sig. (2-tailed)	.000	

n = 84; **. Correlation is significant at the 0.01 level (2-tailed).

According to above results, it is clear that the relationship between environmental compliance and green procurement adoption is positive, strong and statistically significant ($r = 0.585$; $p <$

0.01). In other words, enhancement of environmental compliance is likely to boost the adoption of green procurement. This mirrors the results of Clemens and Douglas (2006) who noted that compliance drives green procurement since the firms are able to abide by the set initiatives and policies.

Summary

In relation to the procurement department setting out comprehensive green procurement policy, the respondents tended to strongly agree. However, the respondents were uncertain in relations to the other metrics. In this context, the procurement department monitoring of the adherence of the green procurement policy had a mean of 2.0833, procurement department adherence to set green procurement policy (mean of 2.2619), green policy being a top management concern (mean of 2.4286) and easy understanding of the green procurement (mean of 2.7143). It was further established that environmental compliance had a positive, moderately strong, and statistically significant effect on adoption of green procurement.

CONCLUSIONS AND RECOMMENDATIONS

It is clear from the findings that the relationship between environmental compliance and green procurement adoption is positive, strong and statistically significant. Essentially, therefore, the study inferred that it is important to comply with the environmental requirements if at all the organization concerned is keen to adopt green procurement.

Due to the absence of green public procurement Act, it is recommended that public institutions should adopt or include sustainable green procurement policies. Given that the Public Procurement and Disposal Act (PPDA) does not indicate green public procurement practice, then this aspect should be added to the Act in it by relevant policy makers. Public entities should adopt efforts of selecting green suppliers where possible to supply green goods and services to them in future.

LIMITATIONS OF THE STUDY

The study encountered a number of limitations. First, some respondents were skeptical to participate in the study for fear of being victimized in case they divulged certain data. Regarding this challenge, respondents were assured that their identities were to remain anonymous and that the data collected was to be treated confidentially. The time span for carrying the study particularly data collection was limiting. In order to address this limitation, some questionnaires used to collect data were emailed to the respondents and the filled ones collected through the same channel.

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