Analysis of Sustainable Procurement Practices and the Extent Of Integration In Lake Victoria South Water Services Board, Kenya

Mayi Martin Ochieng¹, Dr. Moses Oginda(PhD)², Evans Biraori Oteki³

¹(Master of Business Administration, Department of Management Science School of Business and Economics, Maseno University, Kenya)

²(Senior Lecturer, Department of Management Science School of Business and Economics, Maseno University, Kenya)

³(PhD Student, Supply Chain Management, Jomo Kenyatta University of Agriculture and Technology, Kenya)

Abstract: Sustainable procurement has close connection to sustainable development. It advocates for acquisition and disposal practices that maximise economy and facilitate economic development while having little or no negative environmental impacts. The main objective of the current study was therefore to establish the extent to which sustainable procurement is integrated into the public procurement processes. The main aspect under study included environmental sustainability. A stratified random sampling method was used to pick 106 participants. Data was analysed through the use of descriptive statistics with the assistance of SPSS. The study indicated that environmental aspects are included within the product specification in addition to specifying such aspects in tender documentation and that Lake Victoria south Water Services Board (LVSWSB) continues to influence the quality in service provision through the use of sustainable procurement processes. It is recommended that all public sector procuring entities should enhance integration of the environmental concepts within the procurement processes. The results of this study will be found useful by all actors in the supply chain, relevant policy makers and scholars.

Keywords: Acquisition practices, Disposal practices, Economic development, Environmental impacts, Procurement processes, Sustainable development, Sustainable procurement.

I. Introduction

Public procurement is a complex phenomenon of growing global importance (Evenett & Hoekman, 2005). According to Afonso et al. (2005), public procurement accounts for around 45% of GDP among developed countries, albeit with considerable variation in the level and composition of expenditures. The importance of public procurement within the world economy has stimulated an established interest in how public money is spent, with an emphasis on transparency and openness within public expenditure processes (Heald, 2003), the scope for privatizing public sector activities and the stabilization, allocation and distribution effects of public expenditure attributable to purchases of goods and services has been the subject of significant recent attention (Brülhart & Trionfetti, 2004). As with total public expenditure, this interest arises in part from the absolute scale of public procurement with between 8% and 25% of the Gross Domestic Product (GDP) of Organization for Economic Co-operation and Development (OECD) countries (OECD, 2002) and 16% of European Union (EU) GDP being attributable to government purchases of goods or services (European Commission, 2006). Furthermore, public procurement is also a significant activity in the developing world with a study of 106 developing countries finding that the purchases of their governments account for approximately 5.1 percent of their combined national outputs (Evenett & Hoekman, 2005).

Weiss and Thurbon (2006) assert that within evolving discussions concerning public procurement, the role of government purchases as a stimulus for sustainable development has been a topic of particular interest in recent years. McCrudden (2004) describes sustainable procurement as procurement that is consistent with the principles of sustainable development, such as ensuring a strong, healthy and just society, living within environmental limits, and promoting good governance. This places government in two roles by participating in the market as purchaser and at the same time regulating it through the use of its purchasing power to advance conceptions of social justice (McCrudden, 2004). The advocacy for sustainable public procurement heightened in 2002 when the World Summit on Sustainable Development (WSSD) called for governments to promote public procurement policies that encourage development and diffusion of environmentally sound goods and services (WSSD, 2002). Sustainable procurement has had particular salience among supranational organizations and this has prompted the initiation of significant responses among some government such as those in the European Union (McCrudden, 2004). For instance, in Canada, the federal government procurement policies emphasize on similar economically-oriented aspects of purchasing as those found in Europe including

mandates concerning promotion of competition and value for money. Outside Europe and in particular Japan, moves to integrate environmental and social criteria in public procurement practices have so far emphasized environmental aspects. A case in view is a law on Green Purchasing that was passed in 2001 and compelled all government bodies to develop and implement green purchasing policy (ECCJ, 2007).

II. Statement Of The Problem

Public procurement is an important function of governance since associated expenditure has a great impact on the economy. It is utilized as an important tool for achieving economic, social and environmental objectives. Despite its long existence, however, sustainability is yet to gain prominence in developing countries. The slow adoption pace implies that economies face hurdles in realizing goals set in the World Summit for Sustainable Development (WSSD) which identified public procurement as a necessary ingredient for social, economic and environmental sustainability. While public agencies in Kenya have embraced significant milestones in public procurement, it is still evident that sustainability is a major concern given the underperforming states of primary sustainability indicators such as unemployment, public project completions, and policy failures. However, the extent to which LVSWSB has adopted this and related environmental is yet to be studied. Based on this, this study will analyze the extent to which sustainable procurement has been integrated in public procurement using the Triple Bottom Line approach.

III. Broad Objective

Broadly, the study seeks to establish the extent to which sustainable public procurement is integrated in public procurement by analyzing the case of the Lake Victoria South Water Services in Kenya.

Specific objective

To establish the extent of environmental sustainability through public procurement at the Lake Victoria South Water Services

Research Question

What is the extent of environmental sustainability through public procurement at the Lake Victoria South Water Services?

Significance of the Study

The findings of this research study are expected to be applied entirely in the procurement functions of both public and private companies in aid of rationalizing short and long term objectives in line with sustainable procurement policies.

Conceptual Framework

The study presupposes that sustainable public procurement is dependent on ability of the LVSWSB to integrate environmental dimensions in the public procurement process.

Fig. 1.1 illustrates that environmental sustainability is functionally interrelated and collectively predict a procuring entity's procurement sustainability. This conceptualization is based on the Triple Bottom Line (TBL) approach advanced by Elkington (1994), cited by Wirtenberg (2012).

IV. Literature Review

The Concept of Sustainable Procurement

The concept of sustainable procurement has recently acquired a high degree of salience in policy circles internationally (Brammer & Walker, 2011). The concept builds on the traditional procurement practice which it seeks to extend through the adoption of sustainability principles. Procurement is defined as acquisition of goods, works and/or services from the supplier. The procurement process is viewed as involving sourcing, contracting, monitoring and evaluation, and expediting. Sustainable procurement is a process of acquiring goods, works and services from a supplier that provides the optimum combination of whole life costs and benefits to meet the customer's requirements. It is a process whereby organizations meet their needs for goods, services, works and utilities in a way that achieves value for money on a whole life basis in terms of generating benefits not only to the organization, but also to society and the economy, while minimizing damage to the environment (Coggburn, 2004) Price Waterhouse Coopers (PWC) (2010) describe sustainable procurement as a process of purchasing goods and services that takes into account environmental impact that such purchasing has on people and communities. It is about considering what the products are made of, where they have come from, who has made them, how they are transported and how they are eventually disposed of.

The Triple Bottom Line and Sustainable Procurement

Triple Bottom Line (TBL) sustainability is the premise that public procurement should take economic, social, and environmental impacts into consideration. The concept has been applied widely by scholars and practitioners as widespread interest in public procurement grows. As such, many definitions for the TBL are used to explain this three-pronged approach. Simply put, the TBL is an accounting framework that incorporates three dimensions of performance: social, environmental, and financial. It can also be thought of as the three Ps: people, planet, and profit (Slaper, 2011). A more elaborate definition comes from Krajnc and Glavic (2005), who explain TBL as the creation of goods and services using processes and systems that are non-polluting, conserving energy and natural resources, economically viable, safe and healthful for employees, communities and consumers, socially and creatively rewarding for all working people.

A relationship in the literature on the triple bottom line is that between environmentalism and entrepreneurship. Anderson (1998) argued that environmentalism and entrepreneurship share key commonalities in that they are both founded on social processes and attitudes. Environmentalism can be the basis for entrepreneurial opportunity, as entrepreneurs are agents of change who are most likely to address environmental concerns. Entrepreneurs can give real substance and form to environmentalism (Anderson, 1998). Dixon and Clifford (2007) coin the term "ecopreneurship" to describe people and organizations that create economically viable businesses while retaining their core environmental and social values. They generate economic value as a by-product of social and environmental value and filter the potential of resources through the lenses of environmental and social commitment.

Dimensions of Sustainable Procurement

Traditionally, business has focused on shareholder wealth maximization. However, due to globalization, a company's license to operate is no longer granted by a single interest group but by public stakeholders who have access to a company's financial and non-financial information. Consequently, there is a growing recognition that the value of corporate activity is defined too narrowly in that it influences the environmental factors that it sustains. This recognition has led to the increasing popularity of the Triple Bottom Line (TBL) or sustainable procurement, in the supply chain perspective (Hens, 2010).

Environmental Sustainability

The purchasing function is today an important contributor to strategic success, helping firms meet the challenges of an increasingly competitive and dynamic environment. Suppliers not only are instrumental in the value creation of the firm, they also significantly influence its environmental impact (Paulraj, 2011). Because purchasing is at the beginning of a green supply chain, a firm's environmental efforts cannot be successful without integrating environmental goals into purchasing activities. Given its gate-keeper role, purchasing could foster green product or process innovation among supply chain members (New, Green & Morton, 2000). Srivastava (2007) defines environmental or green procurement as purchasing involvement in supply chain

management activities in order to facilitate recycling, reuse, and resource reduction. Bowen et al. (2001, p. 42) expanded on this definition and defined green supply as "supply management activities that are attempts to improve the environmental performance of purchased inputs, or of the suppliers that provide them. They include activities such as co-operative recycling and packaging waste reduction initiatives, environmental data gathering about products, processes or vendors, and joint development of new environmental products or processes." From these definitions, sustainable procurement implies strategic intent of minimizing environmental damage without compromising on attainment of desired value from a supply chain.

Anecdotal evidence suggests that green purchasing and supply, by reducing disposal and liability costs, conserving resources, and improving public image, improves a firm's economic position. Carter et al. (2000) provided the first empirical examination of the relationship between environmental purchasing and firm performance. Using questionnaires from original equipment consumer products manufacturers and compustat-reported financial data, they found that environmentally friendly purchasing policies led to increased firm performance as measured by net income. This contradicted Min and Galle's (1997) previous findings according to which the two most highly rated obstacles to effective green purchasing were purchasing managers' perceptions that environmental programs were costly and that recycling was uneconomical. Zhu and Sarkis (2004) considered both green purchasing and cooperation with customers regarding environmental requirements as external green supply chain management (GrSCM) and investigated them along with other practices like internal environmental management, investment recovery, and eco-design. Using a sample of manufacturing firms in various industries in China, these researchers reported positive relationships of external GrSCM with environmental performance, positive economic performance, and negative economic performance. However, these findings did not hold true when green purchasing was considered an individual GrSCM practice. Based on surveys in the Chinese automotive industry, Zhu et al. (2007) found that green purchasing had a negative

influence on environmental performance, whereas no significant impact was detected on other performance aspects.

Vachon and Klassen (2006) assessed the impact of environment-related or green project partnerships, that is, the extent of interaction between a plant and its primary suppliers and major customers in developing and implementing pollution prevention technologies, at the plant level. Using US and Canadian plants in package printing industry, they reported that, as the extent of green project partnership with primary suppliers increased, delivery performance and environmental performance improved. However, no significant relationship was found regarding other dimensions of manufacturing performance, such as cost, quality, and flexibility.

Using case studies of seven Small and Medium-Sized (SME) suppliers in Korean automobile industry, Lee and Klassen (2008) examined how the GrSCM strategy of a large buying firm influences the development and deployment of suppliers' environmental capabilities. These researchers conjectured that buyers' monitoring-based GrSCM positively influenced the initial development of suppliers' internal environmental management capabilities (EMCs), and that buyers' support-based GrSCM was positively related to improvement of suppliers' internal EMCs. Further, Iraldo (2010) surveyed facility managers from all manufacturing sectors in seven countries (Canada, France, Germany, Hungary, Japan, Norway, and US), and found that making specific requests to suppliers to assure a certain performance level, and involving them in GrSCM practices could enable a firm to better manage its own environmental performance.

Sustainable Procurement Policy Frameworks around the World

The policy context concerning public procurement in the United Kingdom is based on a set of guiding principles, including transparency, competitiveness, accountability, efficiency, legality, and integrity, that have the ultimate aim of supporting the delivery of best value for money in public procurement. Best value for money is defined as the optimum combination of whole life cost and quality to meet the customer's requirement. Significantly, through the focus on whole life costing, the definition of best value of money gives scope to public bodies to take social and environmental policy objectives into account in their procurement activities (McCrudden, 2004). To further support and encourage this recognition, the UK Government, as part of the implementation of its 2005 Sustainable Development Strategy, stated its ambitious goal to be amongst the leaders in the EU on sustainable procurement by 2009. In order to stimulate the development of sustainable public procurement, a Sustainable Procurement Task Force was established in 2005 and since then regions of the United Kingdom (Northern Ireland, Scotland, Wales) and various areas of the public sector (Education, Health) have provided sustainable procurement guidance and policy that reflects their interpretation of how principles of sustainability can be applied to their particular contexts (McCrudden, 2004).

Public procurement in the European Union is governed by a set of similar national policy frameworks concerning the objectives of public procurement, coupled with an overall policy framework that is designed to open up the EU's public procurement market to competition, outlawing "buy-national" policies and to promote the free movement of goods and services. Regarding the state of policies in EU countries concerning sustainable public procurement, there is considerable variation both in the extent to which countries have developed and implemented policy, and in the character and focus of such policy frameworks where they exist.

In Japan, moves to integrate environmental and social criteria in public procurement practices have so far emphasized environmental aspects. For example, a law on Green Purchasing was passed in 2001 that compelled all government bodies to develop and implement green purchasing policy. The law requires government agencies to establish annual goals, integrate these with purchasing decisions and to report on performance relative to goals (ECCJ, 2007). In South Africa, as in the United States, public procurement was seen as an important policy lever in the post apartheid world. Specifically, the Black Economic Empowerment initiative means the public sector prioritizes buying from black-owned businesses in order to redress the economic advantages of white-owned businesses attributable to apartheid.

Empirical Literature

Steurer and Konrad (2007) examined the state of development of national action plans regarding green or sustainable public procurement in the EU, arguing that these are not only one of the most comprehensive instruments fostering green or sustainable public procurement, they are also the type of instrument applied most often in EU member states. Of the 27 EU member states, their analysis showed that only a third of governments had adopted an action plan concerning sustainable public procurement by April 2007, with a further 5 countries having a draft policy concerning sustainable public procurement that hadn't yet been adopted. The emphasis of much of the policy that has been implemented in the EU is environmental rather than social in character. For instance, in Italy there is a mandate that 30% of goods purchased by public administration complies with ecological criteria, while Denmark, France, Netherlands and the United Kingdom have public procurement policies specifically for wood and paper products, and in Belgium there is an initiative to ensure that 50% of government vehicles comply with specific environmental criteria (Steurer & Konrad, 2007).

According to Kinyanjui (2010) developing countries in Africa, such as Nigeria, Ghana, Malawi, and Kenya have failed to achieve infrastructure development goals due to application of poor procurement processes. The study found that poor state of many roads in Kenya and other public infrastructures is greatly influenced by low emphasis on the employed procurement process and major reforms on public procurement processes could play an important role towards development of country's road infrastructure. Kirungu (2009) found that while the legal and regulatory framework is demand adequate, the most significant risks in procurement are found in the institutional environment and performance of the procuring entities in complying with the procurement law and its regulations.

V. Research Methodology

The study adopted a descriptive survey research design and the Yamane model was used to obtain the sample size of 106. Research data was obtained from both secondary and primary sources. Data analysis involved both quantitative/metric data (nominal, ordinal and scale forms of data) and the other involving qualitative/non-metric data (textual data). The quantitative data was analyzed using descriptive statistics which involved measures of distribution (percentages) and measures of central tendency (mean scores and standard deviations). The study's qualitative data obtained was analyzed using content analysis procedure, whereby the pool of diverse responses were reduced to a handful of key issues in a reliable manner. Data was presented using frequency tables and bar charts.

VI. Results And Analysis

The research question of the study sought to find out the extent of environmental sustainability through the public procurement at Lake Victoria South Water Services. The results of the responses coupled with the analysis of the same are illustrated in the descriptive statistics.

Table 1 shows that on average, the respondents claimed that Lake Victoria South Water Services has a moderate extent to which environmental issues have been incorporated in the product specifications (M = 1.76, SD = 0.823). The results also indicated that averagely, the respondents confirmed that in every tender document there are environmental components that are specified (M = 1.20, SD = 0.399). Incorporating environmental issues within the tender document is an essential way through which a firm may enhance environmental sustainability within the procurement process. With respect to policy of recycling infrastructural input, the respondents confirmed that the LVSWSB moderately encourage such policies (M = 1.72, SD = 1.042). Moreover, the results of the study also indicated on average, the respondents confirmed that unlike in many organisations, Lake Victoria South Water Services LVSWSB conducts environmental sustainability assessment prior to tender award (M = 1.29, SD = 0.457). Lastly, in regards to the methods used in disposing off of wastes, the study established from the participants that averagely, the LVSWSB uses burying as the main disposal method (M = 2.11, SD = 0.847) even though other methods were also identified as useful ways of getting rid of the wastes by the LVSWSB. From these results, it is evident that Lake Victoria South Water Services LVSWSB engages in environmental sustainability within its public procurement process.

VII. Discussions

On the basis of the results of the study, different aspects have been identified to be responsible for meeting the needs for goods, services, works and utilities within the Lake Victoria South Water Services in a way that ensures better living standards by generating benefits to the LVSWSB whilst minimizing damage to the environment. Some of the factors that help in attaining environmental sustainability as proposed by Carter et al. (2000) include emissions to air, land and water, climate change, biodiversity, natural resource use and water scarcity over the whole product life cycle. From the study, it was established that Lake Victoria South Water Services has adequately incorporated environment issues within the product specifications as well as inclusion of the Environmental Impact Assessment reports as part of all consultancy contracts Terms of Reference (TOR) . Zhu and Sarkis (2004) confirm that it is the product that finds its way into the environment. Therefore, every producer, manufacturer, or distributor should ensure that the products are developed in a way that minimizes negative environmental impacts. By incorporating environmental issues within products, LVSWSB is very conscious about the environment. As a result, the procurement process within the LVSWSB aims at enhancing environmental sustainability. Besides incorporating environmental issues in the product specifications, LVSWSB also ensures that environmental components are also specified within the tender documents. Indisputably, LVSWSB has effective policies for recycling infrastructural inputs through engaging in various disposal processes such as burying, fire destruction, and sell for recycling as some of the ways for disposing off wastes. From this perspective, it is evident that LVSWSB has enhanced environmental sustainability within the public procurement process.

VIII. Conclusions And Recommendations

Conclusions

Indisputably, public procurement has become an essential element in promoting sustainable economic development besides protecting the environment. In addition, public procurement remains an essential policy tool. Notably, sustainable procurement relates to principles aimed at achieving sustainable development such as the aspects of making sure that there is strong, healthy, and just society. Sustainable procurement has close connection to sustainable development and the former advocates for consumption behaviours that have little or no negative environmental impacts. The study concentrated on establishing the extent of environmental sustainability through public procurement at the Lake Victoria South Water Services. According to the results, it is evident that Lake Victoria South Water Services LVSWSB has, to a wider extent incorporated specific aspects that will ensure that the procurement process is environmentally sustainable.

Recommendations

Public entities need to ensure that environmental issues are incorporate within the specifications of their products and services in addition to ensuring that all tender documents have specified environmental components in a bid to enhance environmental sustainability of the public procurement process. There is a need for public entities to develop effective and adequate policies regarding environmental protection. Environmental protection can be attained in numerous ways including through recycling of waste products on one hand and emphasis on EIA reports for all works contracts on the other. By developing effective and adequate environmental protection policies, such public entities will enhance the sustainability within the procurement process.

Areas for Further Research

There is need for further research to confirm the findings and results of the study. Further studies should be conducted on a wider perspective that contains numerous factors of the sustainability concept.

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Conceptual frame work Independent Variables

Dependent Variables



Integration Fig. 1.1: Sustainable Public Procurement Practices Source | Adapted from Elkington (1994)

Descriptive Statistics				
	Ν	Mean	Std. Deviation	Variance
Environmental Issues	106	1.76	.823	.677
Environmental Components in Tender Doc	97	1.20	.399	.159
Policy to Recycling	105	1.72	1.042	1.086
Environmental Sustainability Assessment	106	1.29	.457	.209
Disposal of Materials	105	2.11	.847	.718
Valid N (listwise)	96			