



**REVERSE LOGISTICS PRACTICE IN GREEN PROCUREMENT AND PERFORMANCE OF THE
TELECOMMUNICATIONS INDUSTRY IN KENYA**

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TELECOMMUNICATIONS INDUSTRY IN KENYA**

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ABSTRACT

Increased demand on energy supply, an increased burden on solid waste management and the pollution of water bodies, soil and air are among the high level of negative environmental effects in telecommunications industry. The industry generates reasonable amounts of solid and liquid waste especially e-waste. It consumes substantial amounts of water as well as energy. Green procurement therefore, plays an integral role, being one of the emerging issues in procurement today. It is about purchasing products and services that cause minimal adverse environmental impacts. It incorporates human health and environmental concerns into the search for high quality products and services at competitive prices. Therefore, this study sought to examine the influence of Reverse Logistics in Green Procurement on Organization Performance of the Telecommunications Industry in Kenya. The study adopted the descriptive survey design. The target population was the population of procurement staff from the Safaricom Company limited in Kenya. Purposive sampling was applied and Census Technique was used in the study. Data was collected using structured questionnaire administered through mailing. Validity was achieved through content validity while reliability was achieved through establishing the internal consistency of the instrument. Descriptive statistics and inferential statistics were used during data analysis with aid of SPSS version 21. The results were presented in tables and models. This study serves as a pointer to the efforts made by the industry in implementation of Reverse Logistics in Green Procurement and how these have impacted on the management of the environment. The study results reveal that Reverse Logistics in Green Procurement influenced Performance of the Telecommunication Industry in Kenya. The study, therefore, recommends that necessary efforts should be made to establish the Reverse Logistics Practice in Green Procurement to impart more knowledge and skills to the staff. Managers should also continue adopting the use of reverse logistics practices to improve performance. Supplier assessment is necessary for sustainable management of environmental concerns within the supply chain.

Key words: Green Procurement Practices, Reverse Logistics and Organization Performance

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INTRODUCTION

Globalization has resulted in pressure on organization to improve organization performance. As a consequence of this pressure, and the efforts to address it, environmental management issues have become relevant to operations management researchers (Murty and Kumar, 2013). Handfield et al. (2016) proposed six strategies for dealing with environmental issues, including resistant adaptation, embracing without innovating, and being reactive, receptive, constructive, and proactive. Given mounting public perception that corporate responses to environmental challenges have been inadequate, there is a mandate to move beyond constructive strategies. Companies need to adopt proactive strategies that shape a new vision of their short- and long-term environmental responsibilities.

As described by Moss et al, telecommunication is a critical component of the infrastructure for the 21st century, just as highways were central to the 20th century. Although telecommunications networks are central to modern urban life, scholars and policymakers have largely ignored the relationship of sustainability to telecommunications. Telecommunications can affect sustainability as a result of the complex, indirect effects that changes in telecommunications systems have on mobility, land use, locational decisions and energy consumption. During the past quarter-century, the construction of new telecommunications networks for communications across national borders, within metropolitan neighborhoods, and inside buildings, has transformed the way in which we use information. (Mitchell L. Moss, Anthony M. Townsend, & Sarah M. Kaufman, 2006).

In Africa, various studies have been done on green procurement policy according to research undertaken by Harpe, (2008) stated that, the municipalities of Cape Town, eThekweni Municipality, Ekurhuleni, Nelson Mandela Metro (Port Elizabeth), and Pretoria (Tshwane), all members of ICLEI (Local Governments for Sustainability), committed themselves at the World

Conference on Sustainable Development (2002) to some form of green procurement. Gauteng Provincial Government apparently also committed to implementing green public procurement.

Locally, green procurement has been a logical extension of this work (Brammer & Walker, 2011), yet Kenya as one of the developing countries has been slow in taking up structured and policy driven approach to enhancing adoption of green procurement, the benefits accruing notwithstanding (Bolton, 2006; 2008). 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 procurement practices.

Statement of the Problem

Green procurement practices have increasingly gained more supporters, specifically in sectors that concern climatic change and forest protection. However, none of the study have investigate green procurement and organization performance in the ICT sector hotel in Kenya. Islam, Turki, Murad and Karim (2017) no evidence of a significant direct impact of the summary measures of green procurement practices on financial performance, while the indirect impact of green procurement practices via organizational nonfinancial performance on financial performance was found to be statistically significant. Nderitu and Ngugi (2014) established the contribution of green procurement concepts to performance of the East African Breweries Limited (EABL) although the study did not reveal how it affected performance. Other studies have focused on the adoption of green procurement practices (Khisa 2011, Pembere, 2014; Nasiche & Ngugi, 2014; Omusebe, Iravo & Ismail, 2017). Otieno and Omwenga (2016) drew closer to the telecommunications industry by studying e-waste management in Kenya; challenges and opportunities.

The foregoing studies have paid attention to key green procurement factors such as reversed logistics, supplier evaluation, supplier relationships

and legislative frameworks. The studies are inadequate since they have paid little attention to e waste and the telecommunications industry. This study, therefore, sought to examine influence of green procurement practices on organization performance of the Telecommunications Industry in Kenya; a case study of Safaricom Limited.

Objective of the study

This study sought to determine the influence of Reverse Logistic in Green Procurement on organization performance of the Telecommunications Industry in Kenya. The study was guided by the following research hypothesis;

- **H₀**: There is no significant relationship between reverse logistic in green procurement on organization performance of the Telecommunication Industry in Kenya.

LITERATURE REVIEW

Theoretical framework

Institutional Theory

According to Scott (2004) Institutional theory is a widely prevalent theoretical posture that emphasizes rational mythology and legitimacy Institutional concept specializes in the deeper and further resilient factors of social structures.

The institutional theory is the ancient approach that's used to examine components of public procurement (Obanda, 2010). Scott, (2004) identified three pillars of institutions as regulative pillar, normative pillar and cultural cognitive organizational pillar. The regulative pillar emphasizes the utilization of rules and regulations as social control mechanism which ensures expedience as basis for supply chain management. The normative pillar is the organizational norms and values within the social institutions obligation as the basis of supply chain management. The cultural-cognitive organizations pillar rests on shared understanding on institutions common beliefs, symbols, and shared understanding. Critics of institutionalism have maintained that the thought of institution is so central as a consequence, the

meaning of institution has resulted in a never ending dispute which scholars are institutionalists or not and an identical confusion concerning what's purported to be the core of the theory. In alternative words, institutional economics have become well-known as a result of it means all things to all individuals, which in the end of the day is meaning of nothing. The institutional theory is relevant to the current study because it is used to examine the elements of green supply chain management.

Literature on Reverse Logistics

Reverse logistics stands for all operations related to the reuse of products and materials. It is "the process of planning, implementing, and controlling the efficient, cost-effective flow of raw materials, in-process inventory, finished goods and related information from the point of consumption to the point of origin for the purpose of recapturing value or proper disposal. More precisely, reverse logistics is the process of moving goods from their typical final destination for the purpose of capturing value, or proper disposal. Remanufacturing and refurbishing activities also may be included in the definition of reverse logistics." The reverse logistics process includes the management and the sale of surplus as well as returned equipment and machines from the hardware leasing business. Normally, logistics deal with events that bring the product towards the customer. In the case of reverse logistics, the resource goes at least one step back in the supply chain. For instance, goods move from the customer to the distributor or to the manufacturer.

When a manufacturer's product normally moves through the supply chain network, it is to reach the distributor or customer. Any process or management after the sale of the product involves reverse logistics. If the product is defective, the customer would return the product. The manufacturing firm would then have to organize shipping of the defective product, testing the product, dismantling, repairing, recycling or disposing the product. The product would travel in

reverse through the supply chain network in order to retain any use from the defective product. The logistics for such matters is reverse logistics.

METHODOLOGY

The study was carried out to determine the influence of reverse logistics on organization performance of the Telecommunications Industry, a case study of Safaricom Limited in Kenya.

Study Results

Reverse logistics

The study further sought to know the extent to which reverse logistics is practiced by the telecommunication industries in Kenya. The findings of the study are as shown in Table 1.

Table 1: Reverse Logistics

Reverse Logistic	Mean	SD
My organization recovers materials that are harmful to environment	4.23	0.96
My organization returns back its products to suppliers for recycling, retaining of materials, or remanufacturing	3.38	1.08
My organization collects back used packaging from customers for reuse or recycling	3.89	0.92
My organization returns back its packaging to suppliers for reuse or recycling	3.81	0.99
My organization collects back used products from customers for recycling, reclamation of materials, or reuse	3.75	0.90
My organization recovers waste materials and used up materials	3.71	1.05

First, majority of respondents strongly agreed (53.2%) that organization recovers materials that are harmful to environment, while only 21.5% agreed to the statement. A mean of 4.23 implies that the industry recovers materials that are harmful to environment. However, only 12.7% of the respondents strongly agreed that the company returns back its products to suppliers for recycling, retaining of materials, or remanufacturing while 43.0% agreed to the statement. The results further revealed that 51.9% agreed, and 24.1% strongly agreed that the industry collects back used packaging from customers for reuse or recycling. This assertion was supported by a mean score of 3.89 (agree) although there was significant deviation from the mean.

More so, majority of the respondents (51.9 %) agreed that the telecommunications industry has arrangements in place for direct and indirect returns of its packaging to suppliers for reuse or

recycling while 22.81% strongly agreed. This was also supported by a mean of 3.81. Similarly, 62 % of the respondents agreed and 13.9% strongly agreed that they collect back used products from customers for recycling, reclamation of materials, or reuse. Lastly, 57% (45) and 17.7% (14) agreed and strongly agreed respectively that the company recovers waste materials and used up materials. This assertion was supported by a mean of 3.71 with a significant standard deviation of 1.05.

Relationship Reverse logistics and performance of telecommunication industries

The study sought to link reverse logistics and telecommunication industry performance. The values of the variables to be collected were estimated by factor analysis and stored as dummy variables. The researcher then carried out a regression analysis to explain this relationship using SPSS version 21. The obtained findings are described in the table below;

Table 2: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	.838	.350		2.392	.019
	Green Training	.207	.097	.194	2.122	.037
	Supplier Assessment	.292	.092	.321	3.165	.002
	Reverse Logistic	.253	.076	.350	3.330	.001

a. Dependent Variable: Organization Performance

The results revealed that reverse logistic had significant positive influence on organization performance with $B=.253$, $P=.001$ implying that controlling of other variables in the model, a unit change in reverse logistic would result to significant change in organization performance by 0.253 units in the same direction ($P<0.05$). Therefore, reverse logistic has significant positive influence on organization performance of Telecommunications Industry in Kenya. The findings confirmed the work of Liao and Rittscher (2017), on green suppliers with organization performance in the supply chain perspective he found out that GSCM lead to material cycles in the supply chains managed in an environmentally, socially, and economically responsible manner that is, the product must have generated as little waste as possible and conserve energy at each stage of the product's life cycle. Agarwal and Vijayvargy (2012) found that introduction of green criteria into the framework of supplier selection criteria, hence this criteria is very important for organizational performance. Siyad and Marendi (2017) concluded that there existed a strong positive relation between supplier assessment and organizational performance of Coca-Cola Company. The study further concluded that the suppliers are also assessed based on their ability to control pollution and hence a safe environment.

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CONCLUSIONS AND RECOMMENDATIONS

The study showed that reverse logistic in green procurement practices has significant positive influence on organizational performance. Companies which have fully adopted reverse logistic in their green procurement would realize improved organization performance. Some recovered materials that are harmful to environment. Furthermore, some collected back used packaging from customers for reuse or recycling and few branches returned back their products to suppliers for recycling, retaining of materials, or remanufacturing.

The study therefore recommends that managers should adopt reverse logistics practices to increase organizational performance. The increased adoption of remanufacture and recycling reverse logistics practices with minimal adoption of reuse reverse logistics practice ensures maximization of resources.

Areas for Further Research

The study focused on organization performance against green procurement practices, however, due to global warming and climate change, it is imperative for future studies to examine relationship between green procurement practices and environmental performance.

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