



The Strategic  
**JOURNAL of Business & Change**  
**MANAGEMENT**

ISSN 2312-9492 (Online), ISSN 2414-8970 (Print)



[www.strategicjournals.com](http://www.strategicjournals.com)

Volume 6, Issue 2, Article 150

**THE EFFECT OF GREEN TENDERING ON THE PERFORMANCE OF SUGAR FACTORIES IN WESTERN KENYA SUGAR ZONE**

**Machio, J., & Keitany, P.**

## THE EFFECT OF GREEN TENDERING ON THE PERFORMANCE OF SUGAR FACTORIES IN WESTERN KENYA SUGAR ZONE

Machio, J.,<sup>1\*</sup> & Keitany, P.<sup>2</sup>

<sup>1\*</sup> Master Candidate, Jomo Kenyatta University of Agriculture & Technology [JKUAT], Kenya

<sup>2</sup>Lecturer, Procurement and Logistics, University of Kabianga [UoK], Kenya

Accepted: May 28, 2019

### ABSTRACT

*The objective of the study was to assess the effects of green procurement practices on the performance of sugar factories in western Kenya. The specific objectives of the study were to establish the influences of green tendering on the performance of the sugar factories in western Kenya sugar zone. The study adopted a descriptive research design. The population targeted was the employees in the purchasing department of Butali Sugar Company (BSC), West Kenya Sugar Company Limited (WESCOL), Nzoia Sugar Company (NSC) and Mumias Sugar Company (MSC). The target population was 173 workers; this was according to the IUF Global Sugar Program and the Kenya Union of Sugar Plantation and Allied Workers and the Kenya Sugar Strategic Industry Plan. A sample of 121 employees was used in the study. The simple random sampling technique was used in the study. The primary data collection instrument was a structured questionnaire. The data were analyzed using the statistical package for social sciences (SPSS) version 23 software. The study findings showed that green procurement practices have a direct influence on the performance of the sugar firms in the Western Kenya Sugar Zone. This was shown by the R-square value of 0.806 implying that the independent variables studied accounted for 80.6% of the variation on organization performance. The study, therefore, concluded that green procurement practices studied have a strong positive influence on firm performance on sugar factories within the western Kenya sugar zone. The study recommended that western Kenya sugar zone embrace green practices since they had a sign on their performance.*

**Key Words:** Green Tendering, Performance of Sugar Factories

**CITATION:** Machio, J., & Keitany, P. (2019). The effect of green tendering on the performance of sugar factories in Western Kenya Sugar Zone. *The Strategic Journal of Business & Change Management*, 6 (2), 2208 – 2213.

## INTRODUCTION

Green procurement is becoming one of the most discussed topics among enterprises in recent times. This is due to the environmental, sustainability and climatic concerns and the fact that businesses contribute significantly to the pollution of the environment. Governments, local firms, and international bodies are gradual including environmental considerations in their purchasing processes. The erratic rain patterns, the deterioration of the environmental quality, increase of infectious diseases and the issue of natural resource scarcity has forced organizations to seek affordable, durable and environmental solutions. However, the third world countries and Kenya in specific has been slow in taking up green procurement.

According to Brendan (2004), green tendering is the office functions such as ICT procurement. Weeks (2016) found out that emerging information communication technology plays an important role in public finance management. The study reveals that technology promotes greater comprehensiveness and transparency of information across government institutions. Information technology increases efficiency and enables easy retrieval of records. The study found out that ICT in procurement is a significant contributor to organizational performance in improving service delivery, efficiency, effectiveness, continuous quality improvement, reduction in the purchase price and transparency. Similarly, Hong (2012) concurs that technology in procurement simplifies procurement processes, achieves cost efficiency and reduces waste of time and resources.

A study carried out by Mutinga (2013) found out that e-procurement reduced time used to source commodities lowers the administration costs. It also reduced the tendering price. Kimira et. al (2016) carried a study on the effects of sustainable procurement practices on the manufacturing sector in Kenya. The study concluded that automated

systems as a result of new technologies result in improved operations. The automated systems also enhance buyer-supplier relationships and communication. Therefore, to improve transparent procurement, the management of the manufacturing sector needs to emphasize on ICT adoption and embrace e-procurement systems that are conversant to both employees and suppliers.

A research conducted by Gabauer et al. (1998) found out that benefits can be reaped by automating operations but maybe even more from developing an infrastructure of e-procurement for end users. It establishes a close relationship with suppliers and business partners leading to streamlined processes and leveraged buying power. Gabauer, Beam, and Segev (1998) study find out that internet connectivity provides an opportunity to make procurement and services more transparent and efficient. It enables suppliers to make searches, set up business profiles and obtains automatic e-mail alerts.

Ruzindana and Kalasakar (2016) established that e-procurement offers opportunities for the business to communicate more efficiently. This was in particular with suppliers to improve the efficiency of the tender process. The research concluded that ICT helps firms to gain competitive advantage, reduce procurement costs and bring about profitability. It also offers exciting new opportunities to widen market places while saving substantial operational costs.

Mongare, (2014) established that ICT has simplified and speeded up the buying process and made it more efficient. ICT reduced the operational costs of purchasing activities like ordering expediting and requisitioning. The study furthermore found out that ICT is handy in formulating specifications, selecting suppliers, negotiating with suppliers, contracting and disposals. ICT leads to better access to information and transparency in markets through a simplified, standardized purchasing process. The study showed

that ICT led to reduced paperwork and enabled online reporting.

A study by Dixit (2009) reveals that through programmes like e-sourcing, e-tendering, e-reverse logistics, and re-informing, ICT plays a role in organizations to get the right supplier at the right price, and right product quantity and quality. ICT provides real-time information, reduces costs, and saves paper and the environment at large. ICT also automates the whole workflows. Similarly, Ruzindana (2016) found out that e-procurement as a positive effect on the performance on the employees. This was through time-saving, simplicity of the technology, easy understanding. ICT, according to the study has a positive impact on the organizations' performance.

The findings by Karungani (2017) established that ICT infrastructure plays an instrumental role in enhancing

an organizations performance with respect to procurement. ICT infrastructure enhances efficiency, improves monitoring and control, makes easier communication and enhances the delivery of services. Accordingly, ICT plays a role in improving coordination between members of the supply chain network. It ensures the timely delivery of goods and services between supply chain partners. The study recommended the utilization of ICT to enhance efficiency and effectiveness. It enhances value for money for all procurement related transaction.

## RESULTS

### Green Tendering

The study sought to determine the effects of green tendering on the factory's performance of sugar companies. The results are presented in Table 1.

**Table 1: Descriptive Statistics for Green tendering**

<b>Green Tendering Statement</b>	<b>SD</b>	<b>D</b>	<b>U</b>	<b>A</b>	<b>SA</b>	<b>N</b>	<b>Mean</b>	<b>Std. Dev.</b>
Our company has an established internet connection that is reliable	0.0	3.6	20.7	39.7	36.0	111	4.08	.844
The introduction and installation of the Internet-based infrastructure has enabled the firm to communicate with suppliers more easily and react where need be faster in solving challenges in transactions	0.0	3.6	10.9	40.9	44.6	111	4.26	.798
Ordering is done via e-mail (paperless)	0.9	1.8	12.6	37.9	46.8	111	4.28	.822
Internet installation has improved the quality of information sharing	0.0	3.6	6.3	44.2	45.9	111	4.32	.753
All communications to suppliers is done via e-mail	0.9	3.6	11.7	38.8	45.0	111	4.23	.863
Adoption and use of internet has reduced overall cost for the company	0.0	0.0	7.2	47.8	45.0	111	4.38	.619
The use of internet in purchasing has helped the sugar factory to get accurate information of the inputs as well as outputs from the firm	0.0	0.9	9.9	58.6	30.6	111	4.56	3.926
The installation of the of internet connection has helped the sugar factory to reduce losses	0.0	0.9	8.1	46.9	44.1	111	4.34	.667
Use of internet related practices in procurement resulted to reliable delivery of inputs	0.0	1.8	4.5	56.8	36.9	111	4.29	.638
Use of the internet in procurement resulted in improved quality of products	0.9	0.9	4.5	37.8	55.9	111	4.47	.711
<b>Grand Mean = 4.321</b>								
<b>Valid N (Listwise) = 111</b>								

The findings revealed that the respondents admitted by (Mean =4.08; StdDev =0.844) that their company had an established internet connection that was reliable. The respondents were also in agreement with (Mean =4.26; StdDev =0.798) that the introduction and installation of the Internet-based infrastructure had enabled the firm to communicate with suppliers more easily and react where need be faster in solving challenges in transactions. These findings further indicated with (Mean =4.28; StdDev =0.822) that ordering was done via e-mail (paperless). The respondents also concurred at (Mean =4.32; StdDev =0.753) with the statement that Internet installation had improved the quality of information sharing.

Findings on green tendering also revealed that respondents were in agreement with a (Mean =4.23; StdDev =0.863) that all communications to suppliers were done via e-mail. Further findings of the study revealed with (Mean=4.38; StdDev=0.619) that adoption and use of internet had reduced overall cost for the company; further findings of the study revealed with (Mean=4.56; StdDev=0.926) that the use of internet in purchasing had helped the sugar factory to get accurate information of the inputs as well as outputs from the firm. The study findings also revealed with (Mean=4.34; StdDev=0.667) that the installation of the internet connection had helped the sugar factory to reduce losses. Again, findings of the

study revealed with (Mean=4.29; StdDev=0.638) that the use of internet-related practices in procurement resulted in reliable delivery of inputs. Finally, the findings on green tendering revealed with (Mean=4.47; Std Dev=0.711) that the use of the internet in procurement resulted in improved quality of products.

The respondents generally agreed on the statements pertaining to Green tendering. These findings were supported by previous works by Gabauer (1998) which found out that benefits can be reaped by automating operations but might be even more from developing an infrastructure of e-procurement for end users. Similarly green tendering led to continuous quality improvement, reduction in purchasing price, transparency, cost efficiency, reduction of time for purchasing, ordering and expediting(Hong, 2012; Mong' were, 2017; Weeks, 2016). It established a close relationship with suppliers and business partners leading to streamlined processes and leveraged buying power. It enabled suppliers to make searches, set up business profiles and obtained automatic e-mail alerts.

### **Influence of Green Tendering on Organizational Performance**

The correlation analysis results of the effect of green tendering and organizational Performance of sugar processing companies in West Kenya Sugar Zone was presented in Table 2.

**Table 2: Green Tendering**

	Organizational Performance	
Green Tendering	Pearson Correlation	.821**
	Sig. (2-tailed)	.000

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

The findings of the study on Table 2 indicated that there was a positive and statistical relationship between Green Tendering and organizational performance of sugar processing companies in Western Kenya sugar zone (r =0.821; p <0.05). This

implied that the use of green tendering would significantly influence the organizational performance of sugar processing companies. These findings was emphasized by the studies done by (Dixit, 2009; Mongare, 2014; Weeks, 2016) which established that

ICT has simplified and speeded up the buying process and made it more efficient. The studies reiterated that ICT reduced the operational costs of purchasing activities like ordering expediting and requisitioning. The study furthermore found out that ICT was handy in formulating specifications, selecting suppliers, negotiating with suppliers, contracting and disposals. ICT leads to better access to information and transparency in markets through a simplified, standardized purchasing process. The study showed that ICT led to reduced paperwork and enabled online reporting.

#### **Hypotheses two stated that;**

H02: Green tendering has no significant effect on the performance of sugar factories in Western Kenya Sugar Zone.

The study results showed that there was a clear relationship between green tendering and performance of sugar factories in Western Kenya Sugar Zone by ( $t = 2.547$ ;  $p < 0.05$ ). The null hypothesis was therefore rejected at 95% level of significance. This finding concurred with Gabauer (1998) study which found out that internet connectivity provides an opportunity to make procurement and services more transparent and efficient. It enables suppliers to make searches, set up business profiles and obtains automatic e-mail alerts. The study also agreed with Dixit and Gupta (2009) who established that e-procurement offers opportunities for the business to communicate more efficiently. This was in particular with suppliers to improve the efficiency of the tender process.

However, the study disagreed with a study by Dixit (2009) revealed that through programmes like e-sourcing, e-tendering, e-reverse logistics, and re-informing, ICT plays a role in organizations to get the right supplier at the right price, and right product quantity and quality.

#### **CONCLUSION**

Green tendering was found to be an influencer of organization performance. It contributed to .821 of organizational performance. Green tendering as a factor reduces costs like ordering costs, expediting and requisition costs as well as simplifying the whole purchasing process. This reduces product prices and improves the efficiency of purchasing and operations thus significantly affecting the performance of sugar companies in Western Kenya Sugar Zone. The practices of green tendering have been embraced and have a significant positive influence in the performance of the sugar companies in Western Kenya Sugar Zone. The use of such green procurement practices is a move in the right direction in greening organizations operations. This is critical in controlling environmental issues associated with the companies and at the same time improvement in the companies' performance. The study recommended full implementation and use of paperless purchasing strategy. This involves the installation of an internet connection and its application in the procurement process. The implementation of green tendering reduces costs, its speeds up the procurement process, leads to transparency in procurement as well as improvement of the firms' performance.

#### **REFERENCES**

- Karungani, N.P., & Ochiri, G. (2017). Effect of ICT infrastructure support on organization performance: A case of Nairobi County, Kenya. *International Journal of Economics, Commerce, and Management*.v(6),604-611
- Kimura, C., Wangui, G . P., & Karioe, D. (2016). Effects of green procurement practices on the competitiveness of manufacturing firms in Kenya: A case of Unilever Kenya Limited. *journal of agricultural research*. ISSN: 2455-7668.

- Mongare, M.E., & Nasidai, S.E. (2014). The impact of information communication technology on inventory control systems in transport organizations: A case study of Kenya Ferry Services. *European journal of logistics and purchasing and supply chain management*, 2(1).
- Ruzindana, I., & Kalasakar, P.B. (2016). The adoption of e-procurement and its impact on procurement performance of selected telecommunication companies in Rwanda. *European Journal of Business and Management*. 8 (15) 125-133
- Weeks, M.P., & Namusonge, G.S. (2016). Influence of information technology practices in procurement on organization performance in public institutions in Kenya: A case of Jomo Kenyatta University. *International Journal of Environmental, Commerce, Economics, and Management*.