International Journal of Management and Commerce Innovations ISSN 2348-7585 (Online)
Vol. 4, Issue 2, pp: (550-553), Month: October 2016 - March 2017, Available at: www.researchpublish.com

Determinants of Performance in E-Waste Management Organizations: A Case of Computer for School Kenya

FREDRICK WAITHAKA MUNGAI

Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya

Abstract: **The ICT industry in Kenya is growing at a very fast rate leading to drastic increase in WEEE in the country. The main aim of the study was to establish what factors makes e-waste organizations to survive .Our findings contribute to an understanding of the determinants of performance in e-waste management organizations .the management practices alongside the human resource practices , policies / legislations and recycling practices contribute immensely to the performance of e-waste management organizations like Computer For School Kenya suggesting that operational strategies have significance effects on the performance of the organizations.**
The study revealed that, the organization deployed appropriate recycling technologies to ease the refurbishment of electrical waste. On the other hand, the Kenyan government was shown to have failed in adequately vetting imports and to have limited capacity in creating an enabling environment to encourage enterprises and organizations that deal with e-waste management into the e-waste management industry.

Keywords: **E-waste, WEEE.**

1. INTRODUCTION AND BACKGROUND TO THE STUDY

E-waste also known as 'waste of electrical and electronic equipment' (WEEE) is the electronic waste that results from discarded electronics or electronic devices. Davis and Heart (2008) define e-waste as obsolete, end-of-life or discarded appliances that use electricity. Waste Electrical and Electronic Equipment (WEEE) according to the European Community directive 2002/95/EC (European Community, 2010), is growing three times faster than average annual municipal solid waste generation.

Global perspective on e-waste management:

The global rate of e-waste recycling has been estimated at about 13% in 2009 (Jiang et al.) Many nations either lack adequate regulations applying to this relatively new waste stream, or lack effective enforcement of new e-waste regulations (BAN, 2011).

In addition to that Mureithi (2007) notes that the growth of e-waste has significant economic and social impacts and if proper mechanisms are not put in place the future generations will have a long term problem that may be costly to eliminate.

The costs of treating e-waste in industrialized countries, amidst strict environmental controls and regulations, are significantly higher than shipping bulk e-waste to developing countries, where strict laws and regulations are non-existent.

Kenya's perspective on e-waste management:

Currently Kenya lacks a comprehensive formal framework that can guide enterprises or collectors on the proper way to deal with this waste and so it is informal sector that is mainly active in managing e-waste through recycling processes.

The recyclers mainly consists of collectors , handlers, processors and end-users and every person in the chain plays a vital role in ensuring there is an effective recycling process. An end-user is any business or person that uses recycled products typically in a manufacturing business, producing finished products made of recycled feedstock or using the feedstock in a direct application.

Formalizing informal sectors is often not realistic, but connecting it to a formal system can be the first step in having a sustainable waste management strategy.

Most recyclers in Kenya are small and medium based enterprises (SMEs) and mainly are in form of handlers who mostly buy what they deem valuable and recyclable from collectors and then start by sorting and categorizing the waste(Hatton, 2009). Handling is a service industry that aims to do value addition to the waste they collect and so this is where most enterprises fall. Refurbishing ,segregation and assembling are some of the value addition processes that are done on the e-waste. Kenya has been deemed promising in terms of introducing processing technologies for capacity building for e-waste management in the informal economy(Nnorom and Osibanjo, 2008). The future of e-waste management requires a consolidated effort from recycling operators, the local government, local and regional initiatives and other stakeholders.

The Kenya Constitution enshrines the Right to a clean and healthy environment for all Kenyans and through proper e-waste management practices ,future generations can be able to benefit from a healthy environment .

Statement of the problem:

E-waste is currently the largest growing waste stream and it is hazardous, complex and expensive to treat in an environmentally sound manner and also the obsolescence rate is growing by the day as advancement in technology increases. High consumption rates as a result of the growing middle class who have a higher purchasing power has increased the consumption rates of electronic gadgets and household items like microwaves and refrigerators and eventually to increased e-waste production.

The increase in production of e-waste has seen the growth of enterprises specializing in e-waste management. They come in various forms ranging from electronic repair shops to enterprises that import used second hand computers and then sell them after modification. These enterprises have not fully reached the desired level of performance considering the immense potential that the industry provides.

These research project was aimed at identifying ways in which the performance of these e-waste enterprises and organizations can be improved.

Several studies have been conducted to investigate the reasons as to how e-waste is managed in Kenya , one such study is a baseline study on e-waste in Kenya between December 2007 and April 2008 conducted by Mureithi & Waema. The study estimated that the total e-waste generated from computers, monitors and printers alone were approximately 3,000 tonnes per year. It was envisioned that the amount of WEEE was likely to greatly increase because of the dynamics in the ICT industry and with the importation of more ICT equipment to satisfy the increasing demand.

Currently Kenya lacks a practical e-waste disposal system (Waema &Mureithi, 2008) and this is because of lack of a clear regulatory framework and enforceable legislations.

It is noted that improper disposal of e-waste can disrupt sensitive eco-systems leading to deterioration of the environment and thus poor human health (Waema &Mureithi, 2008).

CFSK as an e-waste management organization has the obligation of minimize the probable negative environmental impacts of e-waste through environmentally friendly processing strategies and within the current policy legislation and regulatory framework.

2. METHODOLOGY

In this paper, the researchers performed an exploratory study and analysis of the current strategies adopted by Computer for schools Kenya and used both quantitative and qualitative data. A semi-structure questionnaire was used to collect the data. A pilot study was carried out among 5 staff (11%) who did not take part in the main study.

3. RESULTS OF FINDINGS

The aim of the study was to establish the determinants of performance in e-waste management organizations and the case study was computer for school Kenya.

According to the findings of the research study, it was clearly evident that policies and legislations, management practices, recycling technologies and human resource practices play a major role in performance of organizations and enterprises, and there are impacts on performances of organizations doing e-waste recycling and refurbishing businesses.

Management practices were found to significantly affect the performance of Computer for schools Kenya . Likewise policies and legislations were also found to affect the performance of the organization (β=.077, p=.021).

Recycling practices was also found to be affecting the performance of Computer for schools Kenya (β=.077, p=.021). 92.7% of the respondents agreed that recycling practices affected the performance of the organization while 7.3% of the respondents were not sure.

Human resource practices were also found to be affecting the performance of computer for schools Kenya to a significant extent (β=.077, p=.021). The study results revealed that 85.4% of the respondents agreed that policies and legislations affected the performance of the organization while 14.6% of the respondents were of contrary opinion.

4. DISCUSSION

National Environmental Management Authority (NEMA) in 2010 formulated guidelines for e-waste management to assist the government, private sector, learning institutions and other stakeholders to manage WEEE effectively and to enhance environmental conservation. These guidelines include approaches to enhance environmental protection; environmental awareness; categories of e-waste and target groups; e-waste treatment technologies; and disposal procedures . These guidelines include approaches to enhance environmental protection; environmental awareness; categories of e-waste and target groups; e-waste treatment technologies; and disposal procedures.

A major human practice that has a significant impact on the performance of the organization is training which according to Flippo, (1984) is the systematic development of the knowledge, skills and attitudes required by an individual to perform adequately a given task or job. Other core human resource activities include performance appraisal and recruitment or selection.

The findings on polices and legislations on performance can be supported by Mundada, Kumar¢ and Skekdar, (2004) works which indicated that passing of laws pertaining to e-waste and their enforcement can improve the quality of e-waste produced which is much easier to re-use .

5. CONCLUSION AND RECOMMENDATIONS

Capacity building programmes should be launched in the WEEE management sector from the funds generated from fees levied on EEE imports.

The Kenyan government should partner with private firms through Public-Private-Partnerships (PPP) to build robust and sustainable infrastructure to facilitate an environmentally friendly e-waste management system and provide incentives for consumers to dispose their WEEE.

The government should also put in place mechanisms for tracking mass flow of WEEE in and out of the country by use of well-defined models so that it can identify their sources and distribution channels for effective management.

ACKNOWLEDGMENTS

Research assistants were also used to help in the distribution of questionnaires and to make clarifications in cases of queries.

Various studies have been conducted to find sustainable solutions to mitigating e-waste problems; some of the suggested strategies include methods and models for predicting the flow of e-waste and assessing impacts of ICTs. Shinkuma & Huong (2009) are of the view that a traceability system for tracking/tracing e-waste information is required. Therefore

models such as material flow analysis (MFA); a method applied to support the material and substance flow management (Dwivedy,G. Mittal R. K., 2009) are required for e-waste mitigation

REFERENCES

[1] Asiimwe, E. N., & Åke, G., 2012. E-waste Management in East African Community. Handbook of Research on E-Government in Emerging Economies: Adoption, E-Participation, and Legal Frameworks: Adoption, E-Participation, and Legal Frameworks, 307.

[2] Mureithi, M., & Waema, T., 2008. E-waste Management in Kenya. Nairobi: Kenya ICT Action Network (KICTANet).

[3] National Environment Management Authority (NEMA), 2010. Guidelines for E-Waste Management in Kenya

[4] Osibanjo, O., & Nnorom, I. C., 2007. The challenge of electronic waste (e-waste) management in developing countries. Waste Management & Research, 25(6), 489-501.