Electronic procurement practices at Kenya power limited

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Abstract

E- procurement is the use of computer technologies and the internet to conduct procurement operations and is one of the emerging procurement becoming popular: for business case it cannot be denied that, significant improvement in transparency: traceability of all transactions, enhances value for money: enhances competition through improved accessibility; reduces procurement costs and transaction costs; facilitates online catalogue based purchases, such as framework contracts; improved market intelligence and resource allocation management effective for preventing fraud and corruption; provides audit trail, improved work efficiency: reduces disputes; better enforcement of regulations; reduced procurement time; standardization and streamlining of procurement process. The objective of this paper is to highlight the factors leading to E-procurement success and showcase Kenya Power as a role model for E- procurement practices. The study adopts a meta-synthesis, descriptive research design. A review of five recent studies from Kenya Power website revealed that e-procurement processes are efficient and effective.

Keywords: Electronic Procurement; Supply Chain Management; Supply Chain Performance; Diffusion of Innovation Theory; Technological Acceptance Theory

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1. Introduction

Electronic procurement began in the early 1980s with the development of electronic data interchange (EDI). This allowed customers and suppliers, most often in the fast moving consumer goods business, to send and receive orders and invoices via secure store and call forward networks. These EDI systems allowed businesses to exchange data files on products, prices, specifications and information about each other's locations and trading practices then in 1990s internet software started to become available, and software companies began to develop buyer managed electronic catalogue for use by vendors (Charted Institute of Purchasing & Supply, 2013).

E-procurement is the use of computer technologies and the internet to conduct procurement operations and is one of the emerging trends in procurement becoming popular: for business case, it cannot be denied that, significant improvement in transparency: traceability of all transactions, enhances value for money: enhances competition through improved accessibility, reduces procurement cost and transaction costs; facilitates online catalogue based purchases, such as framework contracts; improved market intelligence and resource allocation management effective from preventing fraud and corruption; provides audit trail, improved work efficiency: reduces disputes; better enforcement of regulations; reduced procurement time; standardization and streamlining of procurement process (UN, 2011). The process of e- procurement covers the initial identification of a requirement, tendering process to the payment (Corsi, 2006).

E-procurement is the use of internet system used to carry out procurement process such as search, sourcing, negotiation; ordering, receipt and post purchase review. As noted by Nelson et al. (2001), purchasing account for the majority of organizational spending. As such, the advent of electronic procurement has been welcome as a change because of its potential to reduce the total cost of acquisition. With the emergence of Information and Communication Technology (ICT), companies have been forced to shift their operation from the traditional style to e-Business, e-procurement and e-supply chain philosophy in order to sustain themselves (Lee et al., 2007). Over the past decade, both public and private sector organizations have been using Information Technology (IT) to streamline and automate their purchasing and other processes (Koorn et al., 001).

Kenya as a country has not been left behind in this. The government of Kenya commissioned procurement regulation in 2013, which required all public entities to adopt and implement e-procurement. In connection to that, there have been efforts to ensure that government agencies implement e-procurement, procurement Regulation (2013) and it is not long ago that the introduction of e-procurement in Kenya was being praised as a big success. Like many other countries in Africa, and indeed other parts of the world, corruption has been a major problem I public procurement (The National Youth Service Scam, Tokyo Embassy Scam, Cemetery land Acquisition scam and the NHIF conspiracy among others), and the introduction of e-procurement was seen as one way of countering this. The system included, for instance built-in price referencing, so bids that were above a benchmark could not be accepted.

E-procurement helps mostly by providing a clear audit trail for bidding and supplier selection. Everything is documented and it is easy to see which suppliers have bid and what they have bid. Aspects such as ensuring bids are "opened" at the same time can be managed more easily than with manual processes.

However, it appears that all is not well now with the system in Kenya, and the leaders of the 47 counties within the country have suggested the system should be suspended. The council of governors even wanted the national government to suspend implementation of e-procurement systems in counties citing the system's ineffectiveness in service delivery due to lack of infrastructure to support the system (Daily Nation 11, 2015). Most public entities have embraced e-procurement and have adopted it. Others are faring well while others have flopped like the county governments. Kenya Power is one state corporation that has implemented and adopted e-procurement systems. It is against this problem that the study describes how each E-procurement pillar plays a role for a successful e-system and to show case at Kenya Power for best practice.

1.1. E-procurement pillars

1.1.1. Value for money

Department must justify a procurement outcome. Price is often used as an indicator and departments may never obtain the best value for money by accepting the lowest price offer that meets mandatory requirements. Best value for money means the best available outcome when all relevant costs and benefits over the procurement cycle are considered. The procurement function itself must also provide value for money and must be carried out in cost effective way.

1.1.2. Open and effective competition

The procuring entity has to ensure potential suppliers have reasonable access to procurement opportunities and that available opportunities are notified at least in the Government Tender Bulletin. Where market circumstances limit competition departments recognize that fact and use procurement methods that take account of adequate and timely information is provided to suppliers to enable them to bid and bias and favouritism are minimized. The entity should also ensure the costs of bidding for opportunities do not deter competent suppliers and costs incurred in promoting competition are at least commensurate with the benefits received.

1.1.3. Ethics and fair dealings

Ethical standards allow parties to deal with each other on a basis of mutual trust and respect; and conduct their business in a fair and reasonable manner and with integrity. All procurement entity, particularly those dealing directly with suppliers or potential suppliers, are required to recognize and deal with conflicts of interest, to deal with suppliers evenly across board while ensuring they do not compromise the standing of the state through acceptance of gifts. It is also prudent to be scrupulous in their use of public property providing all assistance in the elimination of fraud and corruption.

1.1.4. Accountability and reporting

This involves ensuring that individuals and organizations are answerable for their plans, actions and outcomes. Openness and transparency in administration, by external scrutiny through public reporting, is an essential element of accountability. Within the procurement framework, all heads of departments are accountable for the overall management of procurement activities and Head of procurement and senior procurement officers are accountable to their bosses for various high-level management and co-ordination activities. It also implies that individual procurement officers are accountable to Heads of procurement, and to their clients, for the services they provide and all people exercising procurement functions must be aware of these guidelines to be accountable to management.

1.2. Factors necessary for e-procurement success

1.2.1. Technological factors

Availability of IT infrastructure (Technology) and IT skills that provide a number of technical options and solutions for the delivery of an e-procurement system; however, it was noted that the focus should not be on the system only, but also on the quality and integrity of the data. The data and information collected in the system provides the foundation for any analysis and monitoring system that can be derived from a system in the future.

1.2.2. Organizational factors

Much previous researches on e-procurement points to a positive relationship between leadership and organizational innovation, particularly the application of information technology in government organizations. Wahid (2012) also found out that leadership was an important factor affecting e-procurement institutionalization process in developing countries. The top management teams must involve the project managers, consultants working with the committee, and agency staff to develop an implementation strategy (ECOM Group, 2002). Organization perceived usefulness and perceived use of ease according to Technological Acceptance Model (TAM). The attitude to use is triggered with the user's perception of the desirability of employing a particular information system application. Behavioural intention is the measure of the likelihood of a person employing the application (Kamel, 2004).

1.2.3. Change management

Change management strategy is one of the factors affecting the successful e-procurement project mentioned by the most researchers. Many users are resistant to change simply due to human nature and habit no matter how successfully or administratively perfect a proposed change may be, individuals in an organization implement or break the change due to certain form of influence. Even though organizational change generally can be initiated by managers or imposed by specific changes in policy and procedures or through external pressures; organizational change is a management's attempt to have organization members behave and

perform differently (Kreitner and Kinicki, 2010). However, people differ in regard to their perception towards change; some of them may consider change with a lower tolerance (Carnall, 1999). Some organizational members embrace change initiatives readily, while others resist the change (Burke, 2008) therefore changing nature of technology force organizations to change as regards structural and functional aspects.

1.2.4. Human resources

The adoption of e-procurement in the government requires the support of human resources. More capable human resources affect the speed of implementation and success of e-procurement. In order to reap the benefits of e-procurement, P&SM professionals should ensure that they undertake appropriate training and ensure their skills, knowledge and competencies are continuously developed. Skills relating to e-procurement include wider management skills such as those involved with change management. Where it is not practicable for a P&SM professional to lead an e-procurement project, they must ensure that they are consulted by the e-commerce project team involved in decision making and kept abreast of developments. New technology is not a substitute for good professional knowledge and abilities.

1.2.5. Environmental factors

Government policy and regulations on resource usage, supply of hazardous items. Environmental impact in procurement process can only be achieved through embracing green procurement through the entire life cycle of the product right from acquisition to disposal.

1.2.6. Economic factors

The initial cost of the economic set up and training and the availability of adequate funds for the project. It focuses on efficiency, productivity and profit.

1.2.7. Innovation diffusion theory

Diffusion research examines how ideas are spread among groups of people. Diffusion goes beyond the two step flow theory, cantering on the condition that increase or decrease the likelihood that members of a given culture will adopt an innovation, a new idea, product or practice. In multi-step diffusion, the opinion leader still exerts a large influence on the behaviour of individuals, called adopters, but there are also other intermediaries between the media and the audience's decision- making. One intermediary is the change agent, someone who encourages an opinion leader to adopt or reject an innovation (Infante et al., 1997).

Innovation theory categorize adopters of innovation into five categories: innovators, individuals who want to be the first to try the innovation, Early Adopters, people who represent opinion leaders, Early majority individuals who need to see evidence that the innovation works before they can adopt it, Late Majority, sceptical individuals who only adopts an innovation after it has been by the majority Late Majority, sceptical individuals who only adopts an innovation after it has been tried by the majority and Laggards, individuals

who are very sceptical of change and are the hardest group to involve in the innovation process. The figure below shows the five categories.
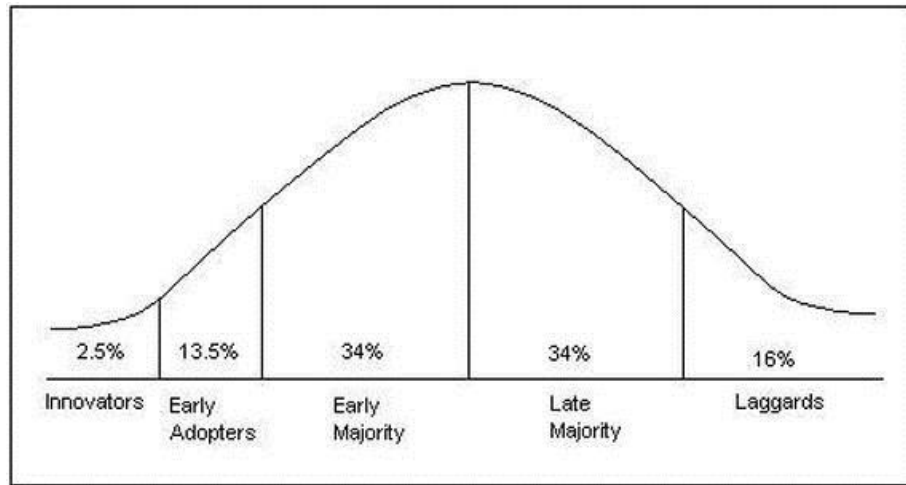

Figure 1. Categories of adopters (Source: Boston University School of Public Heath, 2013)

1.2.8. Technological Acceptance Theory /TAM

Technology Acceptance Model (Davis, 1989) is one of the most popular research models to predict use and acceptance of information systems and technology by individual users. In TAM model, there are two factors perceived usefulness and perceived ease of use is relevant in computer use behaviours. Davis defines perceived usefulness as the prospective users subjective. Probability that using a specific application system will enhance his/her job or life performance. Perceive ease of use (EOU) can be defined as the degree to which the prospective user expects the target system to be free of effort.
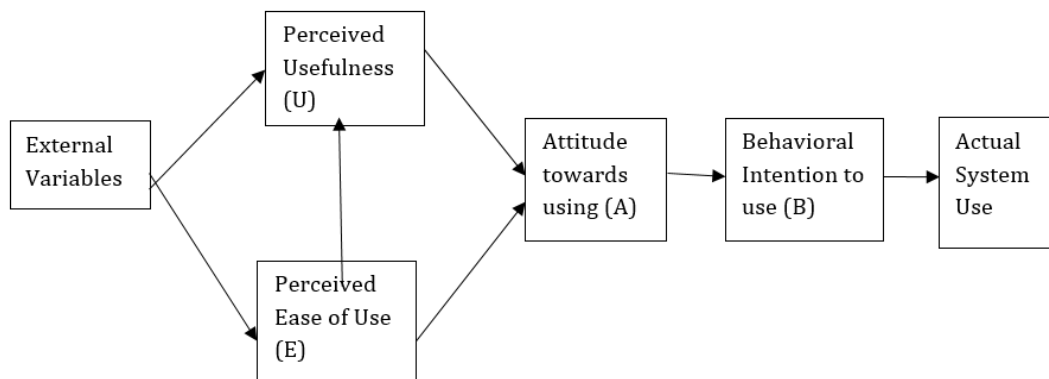

Figure 2. Technology Acceptance Model (TAM) Source: Kamel (2004)

According to TAM, ease of use and perceived usefulness are the most important determinants of actual system use. These two factors are influenced by external variables. The main external factors that are usually manifested are social factors, cultural factors and political factors. Social factors include language, skills and

facilitating conditions. Political factors are mainly the impact of using technology in politics and political crisis. The attitude to use is concerned with the user's evaluation of the desirability of employing a particular information system application. Behavioural intention is the measure of the likelihood of a person employing the application.

2. Literature review

Electronic Procurement is a technology based system whose importance is measured in terms of cost and time which are yielded in an environment of greater efficiency and effectiveness. (CIPS, 2006). The theoretical framework of this research will be based on Technological Acceptance Model and Diffusion of Innovation theory.
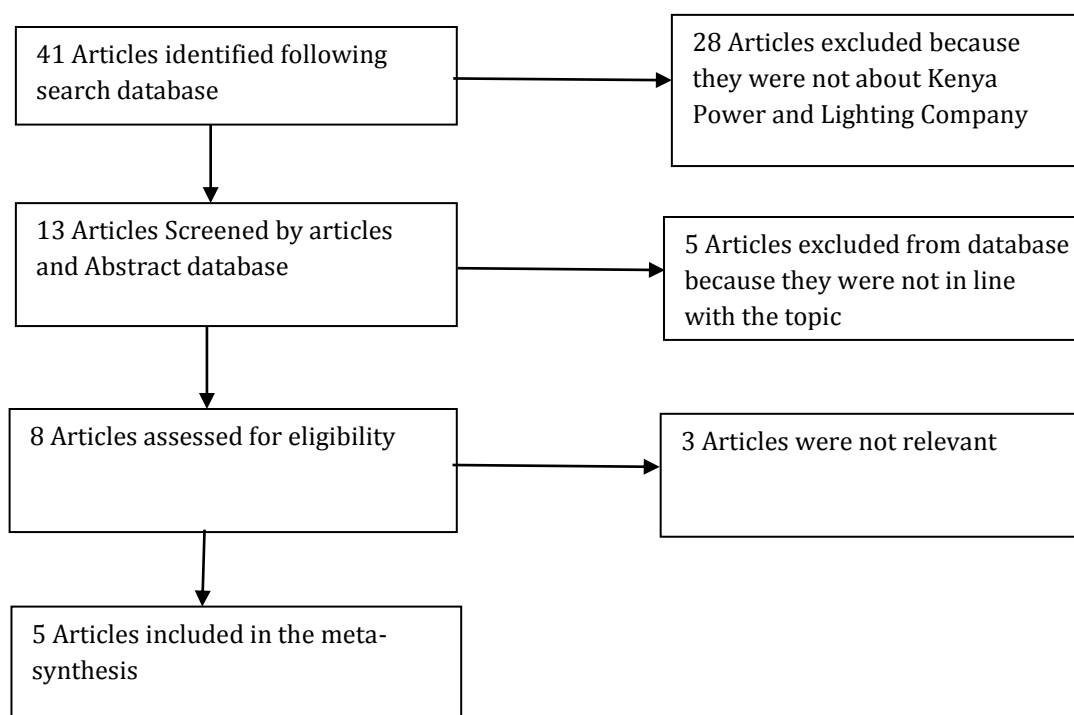

Figure 3. Flow chart summarizing search Criteria (Authors, 2018)

The government of Kenya considers ICT as a key pillar in implementation of vision 2030 which targets to transform this country into an industrialized nation. As a step to achieving this, the Government moved to set up ICT centers in addition to the laptop project for primary schools. A full ICT board has been set up by the government to spearhead the ICT change in the country which is a positive signal to e-procurement. Recently the ministry of Finance with the support of Public Procurement Oversight Authority (PPOA) came up with a mandate of establishing e-procurement alongside Integrated Financial Management Information Systems (IFMIS) in public sector. The government of Kenya is currently advocating for adoption of e-procurement by all public procuring entities to enhance transparency, effectiveness, accountability and reduction in corruption. Further, it is argued that there is need to have a robust automated procurement system which is

interlinked and this will lead to enhanced competitiveness and lowered costs. There have been efforts to ensure that government agencies implement e-procurement, Procurement Regulation (2013) and not long ago, initiatives of implementing e-procurement by the government of Kenya were hailed as a success. The lack of transparency in the manual procurement process has made it impossible for the government and state corporations to realize their objectives leaving e-procurement as the major alternative. All in all, procurement function in Kenya has been characterized by huge scandals which have been attributed to incorrect handling of procurement processes thus leading to excessive corruption. The devolved units in Kenya are now advocating for the suspension of the implementation of e-procurement systems in counties citing its ineffectiveness in service delivery due to lack of the required infrastructure. Currently, the performance of the devolved units in delivering services to the stakeholders is minimal due to the numerous challenges they are facing and complaints on their procurement processes. This study is therefore designed to determine the relationship between electronic procurement adoption and performance of supply chain management in state corporations.

Table 1. Summary of concluded studies

S/No.	Authors	Year	Title	Country	Method Used
1.	Mjomba Martin	2015	Effects Of Enterprise Resource Planning On Organizational Performance On Kenya Power And Lighting Company: A Case Study Of Kenya Power And Lighting Company Voi Branch	Kenya	Descriptive research design
2.	Kinuthia Samwel	2015	Influence Of Information And Communication Technology (ICT) Implementation Factors On Procurement Performance In Public Sector: A Case Study Of Kenya Power And Lighting Company Limited	Kenya	Descriptive research design
3.	Korir Simon	2015	Constraints To Effective Implementation Of E-Procurement In The Public Sector: A Survey Of Selected Government Ministries In Kenya	Kenya	Descriptive research design
4.	Muriithi Benson	2015	Challenges And Opportunities In Changing From Credit To Prepaid Meters: A Case Study Of Kenya Power And Lighting Company	Kenya	Descriptive research design
5.	Muriithi Stephen	2014	Determinants Of Timely Completion Of Projects In Kenya: A Case Study Of Kenya Power And Lighting Company, Thika	Kenya	Descriptive research design
6.	Oginda Elijah	2013	Challenges Of Implementing Procurement Strategy At The Kenya Power And Lighting Company Limited	Kenya	Descriptive research design
7.	Ntabo Kennedy	2013	Improving The Quality Of Customer Service Through ICT Use In The Kenya Power And Lighting Company	Kenya	Descriptive research design
8.	Aketch Edward	2015	Stakeholders Involvement In Change Management At Kenya Power And Lighting Company Limited	Kenya	Descriptive research design

Source: Synthesis from past Researches Kenya Power Limited (2018)

3. Methodology

This study used secondary data by searching literature from recent studies from Database using the criteria of keywords. The keywords used were Electronic Procurement, Supply Chain Management, Supply Chain Performance, Diffusion of Innovation Theory and Technological Acceptance Theory. The study settled on six studies on the basis of relevance to the topic, sector and type of economy. The study looked at public sectors both in developed and developing economy, with a focus on countries in the UK, State corporations in Kenya and sisal factories in Nakuru, as illustrated in the cases below.

Meta-synthesis is the technique used to integrate, evaluate and interpret the findings of multiple qualitative research studies. Such studies may be combined to identify their common core elements and themes is deciding which of the topically similar studies to include in one research with the aim of accounting for all important similarities and differences in language, concepts, images and other ideas around a target experience.

4. Discussions

According to Kenya Power (2006) Information Communication Technology (ICT) Services continued to support the business by maintaining and enhancing efficiency in billing, revenue collection, customer care, supply chain management, power systems operations and maintenance. ICT was also instrumental in development and implementation of the E -bill facility and it has resulted to other innovations that will enable customers to pay their bills through mobile telephony as well as though other partners, such as selected supermarkets. The upgrading of the ICT structure is one of the main organizations strategies which enable the company to enhance customer service and satisfaction. This agrees with Mjomba (2015) who establishes the effects of Enterprise Resource Planning on reduction of costs, managerial efficacy, and competitiveness instrumental mentality in relation to organizational performance of Kenya Power Ltd with a case study of Kenya Power Voi Branch.

Similarly, Aketch (2015) in the study of stakeholders involvement in change management at Kenya power limited reiterate that the stakeholders at Kenya Power were involved through giving their feedback to the management on the change process and developing of sound procedures necessary to ensure that the change are effective. This implies that organizational factors necessary for E-procurement success are taken into consideration. However, Kinuthia (2015) acknowledges Emergency teams not being familiar with prepaid metering technology and proposes a mitigation of carryout a sensitization campaign for O&M emergency teams while encouraging the use of online vending some of which are expected to be introduced like cell phone merchant (and full automation of MPESA/ZAP), SMS or Voucher/Scratch Card, Web/internet Based, Terminals and third parties thus, payment of bill by M-pesa.

Oginda (2013) suggests that procurement function at Kenya Power Limited adopts various practices in implementing its strategies. Among the action plans earmarked in the function include strict implementation

of procurement plan, material specification and quality, tender evaluation and management of framework contracts among others.

5. Conclusion

The study concludes that e-procurement processes at Kenya Power Ltd departments are sufficient and effective. Given the vital role of transparency, traceability of all transactions, value for money, competition through improved accessibility, reduced procurement costs and transactions costs that procurement plays, all departments that have been trying and failing on e-procurement implementation should emulate Kenya Power to succeed.

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