
**FACTORS INFLUENCING IMPLEMENTATION OF E- PROCUREMENT:
A CASE STUDY OF SMALL AND MEDIUM SIZE BUSINESSES IN VOI TOWN**

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ABSTRACT: *This paper has researched on the factors influencing implementation of e-procurement on small and medium sizes business in Voi town. The study has three objectives: To ascertain the effect of skills on implementation of E-procurement in SMEs; to establish the effect of Supplier compatibility on implementation of E-procurement in SMEs and finally determine the effect of cost of systems infrastructure on implementation of E-procurement in SMEs. The study adopted a descriptive approach in trying to establish on the factors influencing implementation of e-procurement on small and medium sizes business in Voi town and it targeted a population of one hundred employees. The study concluded that skills, supplier compatibility and the cost of systems infrastructure influence the implementation of E-procurement in the SMEs in Voi town.*

KEYWORDS: IT infrastructure, E- Procurement, Supply chain

INTRODUCTION

The rise of e-business in the late 1990's led to the development of new opportunities related to procurement: e-procurement, spend management, outsourcing and joint product design (Lancioni, Smith, and Oliva, 2000). E-procurement is defined as an Internet-based purchasing system that offers electronic purchase order processing and enhanced administrative functions to buyers and suppliers, resulting in operational efficiencies and potential cost savings

Statement of the problem

Overall, e-procurement adoption in SMEs in VOI may be below expectations due to a lack of understanding of the consequences from non-adoption and link to competitive advantage, a presumption that e-procurement is mostly for large businesses, and the notion that it is too early to assess conclusively (CFO Europe, 2003). In addition, there is evidence that the adoption process is complex and onerous, and intervention may be necessary to stimulate initial adoption and subsequent implementation. E-procurement adoption is an area of both threat and opportunity in terms of business productivity and competitiveness. Even if the benefits of adoption and the potential strategic implications of e-procurement are recognized, the list of impediments for SMEs includes items that are major potential barriers for an effective adoption: risk, uncertainty, inefficiencies from supplier and catalogue-content readiness, cultural change, staff resistance, need for firm wide training with likely disruption of on-going activities each one of these makes it difficult for SMEs to implement e-procurement strategies, to the possible extent that the implementation may be deemed too difficult. One possible explanation for a slow adoption process is that the adoption decision is complex— while many benefits arise in the

longer term, major impediments and associated potential costs may be very short term (e.g. extensive staff training). Associated benefits and costs are difficult to estimate in real terms. It is on this basis that the study examined factors influencing implementation of e-procurement in small and medium size business in Voi town Kenya.

General objective

The General Objective of this research project **is to** establish the factors influencing implementation of e- Procurement among small and medium size business in Voi town.

Specific objectives

1. To ascertain the effect of skills of SMEs employees and suppliers on implementation of E-procurement in SMEs.
2. To establish the effect of Supplier compatibility on implementation of E-procurement in SMEs.
3. To determine the effect of cost of systems infrastructure on implementation of E-procurement in SMEs.

Research Questions

1. What is the effect of skills on implementation of E-procurement in SMEs?
2. What is the effect of supplier compatibility on implementation of e-procurement in SMEs?
3. What is the effect of cost of systems infrastructure on implementation of E-procurement in SMEs?

Justification of the study

The study will be used by companies to get more knowledge on factors affecting use of e-Procurement in small and medium size business. The knowledge will be used by the researcher to develop more knowhow on e- Procurement; it will assist scholars interested in conducting research in e- procurement and related areas as a source of reference. The study will assist policy makers on e- Procurement in companies both for private and public sectors, which will help shape the procurement sectors to perform better with implementing e-Procurement in business activities.

Scope of the study

The study was carried out in Voi town in the selected small and medium size businesses. Voi town is situated along Nairobi- Mombasa road about 152 kilometers from Mombasa town. The town has a population of around 196,024 individuals according to 2012 updates on the census. Among the SMEs in Voi town three hundred (300) staff will be used to carry out the research to find out factors influencing implementation of E-procurement in the SMEs in Voi town.

LITERATURE REVIEW

Value of e- Procurement

Among different benefits the most common ones are transactional costs and buying price reduction, process shortening improvement of information exchange and control. Such benefits are grouped into taxonomies that include operational and strategic (Croom, 2006). E-procurement has a far greater potential for cost savings and business improvements than online retailing or enterprise resource planning systems, and will permanently and fundamentally reform the way we do business in the future (Neef, 2010). Another important and frequently mentioned result of e-procurement implementation is shorter product development cycles rooted in the improvements of shorter order cycles, significant improvement in project management and team collaboration across supply chains and integrated information sharing across supply chains, allowed by e-procurement systems

Theoretical framework/Conceptual Framework

The study seeks to consider several variables and how they are related. The independent variables in this case are the factors that influence implementation of e-procurement. Several researchers such as Birks et al., (2001); Angeles and Nath (2005) have come up with a number of factors that they consider as determinants of e procurement success. Among these factors are:- Lack of skills and knowledge of E-procurement; Infrastructure affordability of e-procurement system; Supplier compatibility; among others. The dependent variable is e-procurement implementation. It is considered dependent since the success of any e-procurement system depends on the outcomes from very many factors. Several single factors acting individually have a collective impact on the success on e-procurement implementation .Figure below shows the conceptual framework relationship between independent variables and dependent variable

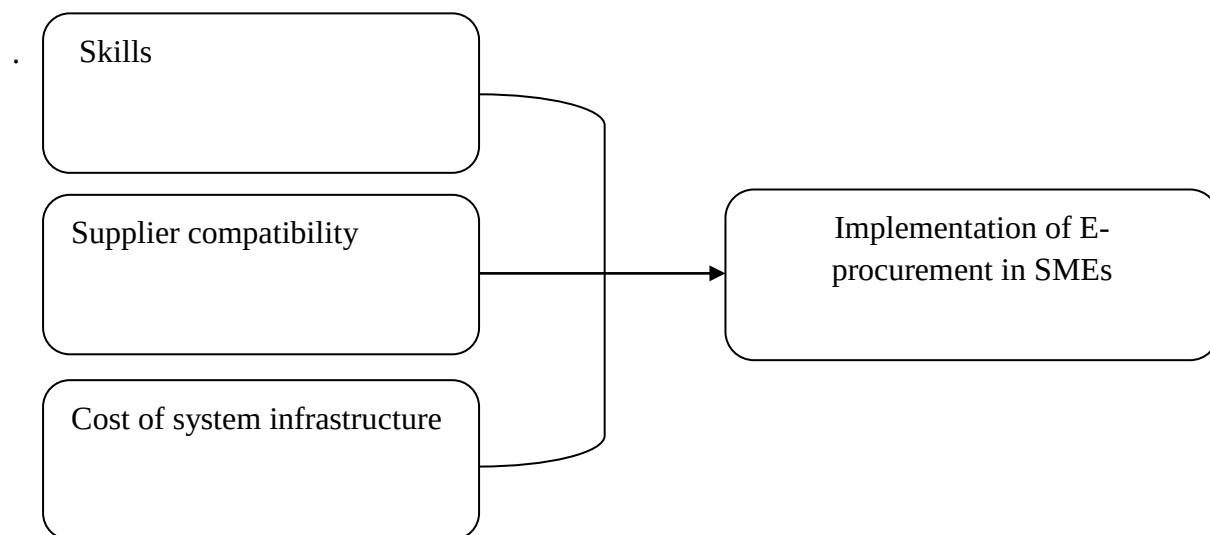


Figure A.
Skills

As e-Procurement includes new technologies and changes in traditional procurement approaches, training of staff in procurement practices and the use of e-Procurement tools are critical to the success of an e-Procurement initiative (WB, 2003). The staffs of an organization need to acquire the necessary skills that can enable them to operate effectively and efficiently while using the new e-procurement system. The two major obstacles to increasing support among users are their level of technological awareness and acceptance, and their willingness to change long-established internal business processes. As the implementation process develops, periodic user satisfaction surveys may identify the possible need for additional training.

Supplier Compatibility

Providing opportunities for suppliers to offer their feedback will allow the public procurement department to monitor areas for improvement and adjust practices accordingly. By involving suppliers at an early stage e.g. in developing a product is very important it helps to maintain good quality of products and good supplier relationship because many suppliers may be unwilling to conduct business electronically with the SMEs because they are unclear about the benefits to be gained, they might see e-Procurement as a means by which SMEs will simply attempt to force down prices.

Infrastructure affordability of e-procurement systems/platforms

Implementing e-procurement is a very expensive undertaking and requires heavy investments by SMEs. Equipments are very expensive to automate to make it possible for adoption of e-procurement. Most of the SMEs are not financially stable hence they do not have financial muscles to purchase the required information technology infrastructure that is required for e-procurement to be implemented, as a result most of the SMEs are finding it a big challenge to adopt E-procurement because the initial cost of implementing the required infrastructure is too high also after the implementation maintenance of the infrastructure is very critical

Research Gap

A gap exists on the factors that influence implementation of e-procurement among small and medium size businesses especially in developing countries. Most developing countries lag behind in terms of technology. It was be prudent to address the factors influencing implementation of e-procurement among small and medium size firms operating in developing countries such as Kenya. Implementing e-procurement is a very expensive undertaking and requires heavy Investments by organizations. Equipment's to support e-procurement are also very expensive for small and medium size businesses, the studies have not clearly brought out the implication of e-procurement on the costs of operation of small and medium size businesse

RESEARCH METHODOLOGY

Research Design

Kombo and Tromp (2009) define research design as the structure of research. It shows how all the major parts of the research project work together to try to address central research questions. The researcher used descriptive survey design which provides a clear presentation of the

variables under study. The design was suitable to establish the factors influencing implementation of e- procurement in SMEs. According to Sikurani (2008) a descriptive study is undertaken in order to ascertain and be able to describe the characteristics of variable of interest in the study.

Target Population

The target population of this project included one hundred (100) staff working in the small and medium size business in Voi from a population of three hundred (300) staff among the selected SMEs. The target population was collected from hardware stores, supermarkets and general stores, in Voi town. This presented thirty three point three three per cent (33.33%) of the entire SMEs employee population in Voi town.

Category	No of employees	Percentage
Hardware Stores	30	30%
Supermarkets	20	20%
General Stores	50	50%
Total		100%

Table A: Target Population

Sample size and Sampling techniques

Stratified random sampling technique was used. Population was divided into several sub-populations or strata that were individually more homogeneous than the total population. Employees were then selected from each stratum by simple random sampling in order to constitute a sample size. The strata in this case represented employees the lower level, middle level and finally the employees at the upper level of management; Proportion allocation method was used to arrive at the number of employees selected from each stratum. The researcher used a sample size of 33.33% of the target population translating into 100 employees in the SMEs from the 300 employees of total population of the SMEs

Data collection instruments

The researcher collected primary data by use of questionnaire, which is a set of questions, given to the respondents within the sample population to collect primary data. The questionnaires used were open and closed- ended questions; the tool was chosen because it helps to collect numerous data over a short period of time, cheap and easy to administer. The questionnaire was suitable due to it being standard

Data collection procedure

The researcher collected primary data from one hundred staff among the SMEs sampled in Voi town on the factors influencing implementation of e- procurement using semi- structured questionnaire. Respondents were assured of confidentiality of information provided. The data enhanced commitment and contact with respondents as they were given two weeks to respond to

the questionnaire items. The researcher made follow-up calls to ensure effectiveness of filling of questionnaires thereby clarifying questions which might have arisen

Pilot test

To establish the reliability of questionnaire, the researcher used pre-test involving test- re-test on the sample. The questionnaires was administered to five non-sampled target population perceived to be knowledgeable in procurement issues, after two weeks the same questions were given to them again and the scores recorded in each case.

Data processing and analysis

The researcher used descriptive statistical techniques including a summary of findings in form of charts, tables and graphs from coded numbers and percentages. This was done after checking the filled questionnaires to establish consistency of the data. Such a technique allowed inferences to be made that could be corroborated using other methods of data collection. The data was then analyzed using descriptive statistics involving frequencies and percentages.

RESEARCH FINDINGS AND DISCUSSION

This paper researched on the factors influencing implementation of e-procurement on small and medium sizes business in Voi town. The study has three objectives: To ascertain the effect of skills on implementation of E-procurement in SMEs; to establish the effect of Supplier compatibility on implementation of E-procurement in SMEs and finally determine the effect of cost of systems infrastructure on implementation of E-procurement in SMEs. The study adopted a descriptive approach in trying to establish on the factors influencing implementation of e-procurement on small and medium sizes business in Voi town and it targeted a population of one hundred employees. Data was collected from the respondents through a questionnaire. On the issue of how skills influence implementation of e-procurement system, the study found out the following results: On the issue of how skill factors influencing use of e-procurement 49.5% of the respondents said that to some extent lack of organization readiness influenced use of e-procurement, 26.5% of the respondents agreed that to a greater extent lack of organization readiness influenced use of e-procurement, From the data collected we are able to conclude that most organizations do not use e-procurement due to lack of organization readiness. Data collected from the respondents indicate that most of the respondents (63.3%) agree that to a greater extent lack of correct information influence the use of e-procurement. 24.5% of the respondents said that to some extent lack of information influence the use of e-procurement. From this we can conclude that most of the organizations have not implemented e-procurement due to lack of information. On the issue of training suppliers the study found out it is evident that most of the respondents (49%) said that training of suppliers greatly influenced the use of e-procurement, 40.8% of the respondents said that to some extent does training of the suppliers influence e-procurement. 4.1% of the respondents said that training of the suppliers does not influence use of e-procurement. We can conclude from this study that training of suppliers does influence the use of e-procurement.

On the issue of compatibility factors which influences use of e-procurement in SMEs the study found out the following results: From the data collected most of the respondents (51%) agreed to some extent that requirement of e-procurement system influences the use of e-procurement. 46.9% of the respondents greatly agree that requirement of e-procurement system does influence the use of e-procurement, while only 2% agreed that averagely do organizations require e-procurement system to influence e-procurement. We can conclude that most of the organizations in this town require e-procurement system in their organizations to influence the use of e-procurement shows that most of the respondents under study 46.9% said that licensing requirements of the suppliers greatly influence the use of e-procurement. 2% of the respondents said that licensing requirements did not influence the use of e-procurement. We can conclude from the study above that licensing requirements of the suppliers does influence the implementation of e-procurement in many organizations in this town. From the results it is evident that most of the respondents 65.3% agree that to a greater extent lack of internet access influences the use of e-procurement. 30.6% of the respondents agree that to some extent that lack of internet access influences the implementation of e-procurement. 2% of the respondents said that they averagely agree that lack of internet access influence of e-procurement. We can conclude from the study above lack of internet influences the implementation of e-procurement.

On the issue of cost factors which influences use of e-procurement in SMEs the study found out the following results: Figure 11 show that most of the respondents under study 61.2% agree that the cost of training staff influences the use of e-procurement in much organization. 28.6% of the respondents say that to some extent does cost of training staff influence the use of e-procurement. From the study we can conclude that cost of training the staff does influence the use of e-procurement. The cost of transaction on the e-procurement platform on day to day business influence implementation of the e-procurement, shows 46.9% of the respondents agreed that to a greater extent does transaction cost on e-procurement system influence the use of e-procurement. Only 2% of the respondents said that transaction cost on the e-procurement system does not influence the use of e-procurement. Maintenance cost of the e-procurement determines sustainability of implementation of the system, 36.7% of the respondents in this study indicate that maintenance cost averagely influence the use of e-procurement as shown above. 32.7% of the respondents said that maintenance cost greatly influence the use of e-procurement. Cost of Resourcing of the e-procurement requirements; the work of finding and providing the material, money & people needed for the implementation of the e-procurement, 65.3% of the respondents indicate that the cost of resourcing e-procurement requirements does influence the use of e-procurement. 24.5% of the respondents said that to some extent does the cost of resourcing the e-procurement requirements influence implementation of e-procurement. 2% of the respondents said that only to a little extent does the cost of resourcing e-procurement requirements influence the use of e-procurement. We can conclude from this study that in this region the cost of resourcing the e-procurement does influence the use of e-procurement in that high cost of resourcing these requirements then few organizations will implement the use of e-procurement. Cost of integrating the e-procurement with other systems & departments in the organization influences implementation of the system. Based on the above analysis, the study concluded that skills, supplier compatibility and the cost of systems infrastructure influence the implementation of E-procurement in the SMEs in Voi town.

CONCLUSIONS

The following conclusion was made based on the analysis of the data in this study. First the analysis of E-procurement is related to the SMES in Voi town. Therefore it is important to conclude that majority of the respondents agrees skills, supplier compatibility and the cost of systems infrastructure influence the implementation of E-procurement in the SMEs in Voi town. This implies that skill is a major aspect to implementation of e-procurement, both the buyer and the purchaser need to have e-procurement skills for them to operate the system. Most of the SMEs are not able to implement E-procurement as a result of lack of skills in that specific area. For E-procurement to be implemented successfully there must be a very good integration between the buyers and the sellers, even when the buyer has an e-procurement system and the supplier does not have then implementation of e-procurement cannot be successful. Systems like electronic data interchange assist in the integration between the buyer and the seller. Most of the infrastructure associated with e-procurement is very expensive and as a result of the small size of most SMEs they do not have the financial muscles to purchase such systems hence affecting implementation of E-procurement. The relationship between E-procurement implementation and skills, supplier compatibility, and cost of infrastructure is strong.

RECOMMENDATIONS FOR FUTURE RESEARCH

From the study some recommendations were suggested for improvement or practice and for further research by scholars or readers. These suggestions for improvement are aimed at improving the effectiveness of operations of SMEs to impact positively on performance of the SMEs.

The SMEs recruitment department/human resource department should ensure that the staffs recruited are qualified and competent to be able to ensure implementation of e-procurement. Especially procurement staff should be knowledgeable in e-procurement practices and requirements they should have the best skills and expertise on the systems.

The government should give subsidies that encourage the SMEs to implement E-procurement, for example they can offer trainings on the use of e-procurement systems at a cost that is affordable to most people working in the SMEs, through this most people can afford the trainings hence they will be empowered with the knowledge.

The SMEs buyers and seller should work together and develop very close relationships with each other through this they can be able to benefit from one other. Both the buyer and the supplier will be able to access skills, knowledge, expertise and technology from each other hence together they can develop a system that integrates their transactions.

The cost of E-procurement infrastructure is very expensive, for example implementing an ERP system can be very expensive for most of the SMEs. Most of the E-procurement systems have different licenses, the more the licenses the more expensive it is. SMEs can purchase license for few user hence they will be able to implement E-procurement at a very low cost.

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