CHALLENGES FACING ADOPTION OF ELECTRONIC PROCUREMENT IN PUBLIC SECTOR IN KENYA: A CASE OF NAIROBI WATER AND SEWERAGE COMPANY

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ABSTRACT

Despite government initiative for public organization to adopt e procurement, the process has been slowly adopted among many public organizations .E procurement is a practice if adopted can lead to efficiency, transparency, reduction in costs among public organizations in Kenya. Its slowed adoption raises questions as to what challenges face its adoption in public sector. This underlined the need to carry out the study on challenges facing its adoption in public sector in Kenya. Like other public institutions, Nairobi water and sewerage company (NWSC) has not fully adopted e procurement and there for continue to miss the benefits.This study established the challenges facing adoption of e procurement in public sector in Kenya. The specific objective was to investigate whether technology is a challenge on adoption of e procurement in the public sector. Also to find out whether public procurement regulations and employee's competence in information communication technology (ICT) are challenges on adoption of e procurement in public sector. Lastly, the study sought to find out the extent in which managerial commitment is a challenge on adoption of e procurement in public sector in Kenya. The study is of benefit to the NWSC, Government of Kenya and other researchers. The study adopted a descriptive research design with a target population of 203 NWSC staff which generates a sample of 86 respondents. Questionnaires were the main data collection instruments. The study employed both quantitative and qualitative research in its data analysis. Data was presented using tables, pie charts and bar graphs. The study was limited by confidentiality and uncooperative respondents. In data analysis and presentation, the study adopted both ANOVA and multiple regression.

Key Words: electronic procurement, public sector, Kenya, Nairobi Water and Sewerage Company

Introduction

The study seeks to find out the challenges facing adoption of e procurement in public sector in Kenya. According to Public Procurement and Disposal Act (PPDA) Act (2005) "procurement" means acquisition by purchase, rental, lease, hire purchase, license, tenancy, franchise, or any

other contractual means, of any type of works, services or supplies or any combination.. Procurement is the acquisition of goods and services at the best possible total cost of ownership, in the right quality and quantity, at the right time, in the right place and from the right source for the direct benefit or use by corporations, individuals, or even governments (Gilbert A, 2010). Sound public procurement policies and practices are among the essential elements of good governance (World Bank, 2002).

According to Lysons (2006), the procurement process consist of three main phases, the identification phase which consist of notification of the need to purchase and this is done by either requisition issued by the stores or potential user or bill of materials issued by the drawing office. The second phase is the ordering phase. The requisition or bill of materials is checked for accuracy, and conformity to specification and purchase records to ensure whether it's a rebuy or new buy. If it's a rebuy a repeat order will be issued. However if it is a new buy a request for quotation is sent to possible suppliers, and a quotation will be received in response to the enquires. A purchase order is then issued to the vendor that gave the quotation. Thirdly there is the post ordering phase. There is little history of extensive e-procurement use in the public sector except perhaps in certain entities in the military and public health sectors. As would therefore be expected, the academic literature covering public sector e-procurement is very limited. However, there are some useful examples including, (Allen 1998; Arnold & Essig 2002; Cater 2001; Harink& Van Rooijen 2002). Information about public procurement initiatives are most commonly elicited through relevant conferences or through unpublished reports, for example, (Griffith & Cattroll 2003; Parker & Lawes 2003; Ritchie 2003).

Much of the commentary on public sector e-procurement arises from the popular press announcing forthcoming projects or the awarding of related contracts to supply "solutions", (Denton 2002; Moodie 2000). In addition, various government agencies advise public sector entities on the uptake of e-procurement. One of the most thorough approaches in this regard has been that of the United Kingdom Government through the Office of Government Commerce, (Birks, Simon & Radford, 2001). There is also evidence of networks supporting the development of electronic commerce in procurement, for example the Australian Procurement and Construction Council, (Anonymous 2002), and the European Commission sponsor relevant networks.

It has been suggested that the public sector is likely to benefit more from the use of electronic commerce for the purpose of sourcing than for transaction management, (Baker 1999), and that electronic commerce promotes economic efficiency in public sector procurement, (Arnold &Essig, 2002). The implications for supply chain transformation from the perspective of transaction cost optimization have been considered, (Croom 2001; Essig& Arnold 2001; Rasheed& Geiger, 2001). The use of e-procurement is thought to have implications for information asymmetries or impactedness in inter-organizational relationships and in particular for search and monitoring costs. Alternative explanations for the benefits of e-procurement arise from the resource based perspective through which the resources of the firm may be leveraged to

achieve competitive advantage with electronic commerce presenting opportunities to enhance firm resources (Dhillon&Caldeira 2000).

Global Perspective on E-procurement

Forrester (2001 – 2003) of the Institute of Supply Management in the United States, quarterly assessed e-procurement between January 2001 and the third Quarter of 2003 by interviewing up to 700 of those involved in the purchase of goods and services. This has identified a number of benefits or drivers for e-procurement and maps the progress of usage within that country. Others like Minahan&Degan (2001), based in Boston USA, carried out case studies, looking at goods and services procurement.

The benefits include (after Forrester (2001 – 2003) and Minahan&Degan (2001)): cost savings, improved contract compliance, time savings, reduced administration costs, enhanced market data, improved responsiveness to changes in customer demand, improved collaboration / visibility with / of the supply chain, reduced operating and inventory costs, On-Line negotiated cost reduction, increased accuracy of production capacity and enhanced "Skill sets" and standardized strategies. However, neither of these studies ranked the benefits in any way. Davila et al (2003) was one of the first to rank six drivers in their study of US e-procurement. These, arranged in rank order with the most important first were; purchasing transaction costs, purchasing order fulfillment time, increased number of suppliers, purchasing cycle time, price paid for goods decrease and headcount to support purchase transactions.

Hawking, Stein, Wyld and Forster (2004) published work on general e-procurement in Australia. They ranked the following drivers in order of importance as: price reduction in tendering, negotiated unit cost reduction, improved visibility of customer demand, reduced administration costs, improved market intelligence, reduced operational and inventory costs, enhanced decision making, improved contract compliance, shortened procurement cycle times, improved visibility of supply chain management, increased accuracy of production capacity, and enhanced inventory management.

Hawking et al (2004) further investigated the barriers to e-procurement in Australia identifying and ranking these in order of importance as: inadequate technical infrastructure, lack of skilled personnel, inadequate technological infrastructure of business partners, lack of integration with business partners, implementation costs, company culture, inadequate business processes to support e-procurement, regulatory and legal controls, security, cooperation of business partners, inadequate e-procurement solutions and upper management support.

In a similar manner to the American studies, the Australian work gives an insight into what the drivers and barriers to e-procurement in construction might be but no construction specific studies exist there either. Westcott and Mayer (2002) show the linkage between European and UK legislation with regard to e-procurement in construction. The paper quotes two small undergraduate studies which show uptake of e-tendering at 24% and 15% of their respective

populations. Westcott and Mayer while referring to drivers and barriers do not rank them in any way.

Kenyan Perspective on e procurement

Most developing and developed countries governments would like to implement public e-procurement technology in such a way, as to enhance transparency and accountability in government procurement processes. The basic principle of the government procurement is straightforward: to acquire the right item at the right time with the right price. The process should be open, objective and transparent. However, corruption in public procurement processes leads to problems such as lack of accountability and transparency, lack of political control and auditing, weak professionalization of the bureaucracy and many more.

To overcome these concerns relating to corruption in the government procurement, information and communication technology (ICT) can play an important role to reduce corruption by promoting good governance (Jennings D, 2001) enhancing relationships between government employees and citizens tracking activities, monitoring and controlling the government employees and reducing potentiality of corrupt behaviors. ICT enabled technology especially public e-procurement plays an important role for minimizing the risk of corruption in public procurement processes (OECD, 2008).

Recently many least developed countries have focused on e-procurement systems as a key tool to reduce the corruption by opening competition in government procurement processes to the public. The public procurement in the Kenyan public sector has been undergoing reforms starting with the Public Procurement and Disposal Act 2005 that saw the creation of Public Procurement Oversight Authority. The next step was the implementation of e-procurement for the public sector. According to e-government strategy paper 2004, e-procurement was one of the medium term objectives which were to be implemented by June 2007, but the process was very slow. The manual processes are costly, slow, inefficient and data storage and retrieval poor (Malela, 2010).

E-procurement

E-procurement is the acquisition of goods and services without the use of paper processes (Panayiotou, Sotiris &Tatsiopoulos 2004). Procurement activities can be grouped and defined in three different ways: indirect procurement, direct procurement and sourcing (Minahan&Degan, 2001). Indirect procurement involves selecting, buying and management of supplies for the day to day running of the company. Direct procurement may sometimes be called supply chain management and involves buying goods and organizing activities to manufacture finished products. Sourcing can apply to both indirect and direct procurement and involves a four phase model (information, negotiation, settlement, and after-sales) (Kim &Shunk, 2003).

Tendering involves the first three stages of this model. Electronic procurement / tendering is not a strategy in itself but the use of electronic means to carry out the procurement / tendering

process (Minahan&Degan, 2001). The buying process has considerably changed with the introduction of the internet and e-procurement removing lost time and errors resulting from the exchange of paper and retyping of data (Egbu, Vines &Tookey, 2004).

Nairobi water and Sewerage Company

The Nairobi Water and sewerage Company is a water service provider charged with the provision of the water and sewerage services in Nairobi. Those services were previously offered by the Water and Sewage Department of the Nairobi City Council. Nairobi Water Company's formation arose from the enactment of the Water Act 2002, which created new institution to manage water resources in the country. The company is engaged purely in providing water and sewerage services to the residents of Nairobi. Currently, of the three million residents of Nairobi, only 50 per cent have direct access to piped water. The rest obtain water from kiosks, vendors and illegal connections. Of the existing customers, about 40 per cent receive water on the 24-hour basis.

Statement of the Problem

ICT enabled technology especially public e-procurement plays an important role for minimizing the risk of corruption in public procurement processes (OECD, 2008). Developed countries have adopted e procurement at a much faster rate and hence have thus enjoyed the benefits. For instance, in year 2010, over 60% of Korea's total public procurement (124 billion USD) was conducted through e-procurement system (Chang, 2011). The EU missed a previous target to make 50 per cent of all procurements electronic by 2010. It is currently between 5 and 10% (European commission 2012). More than 50% of procurement processes in Kenya public organization are carried out manually (davis e.t al 1989). The manual processes are costly, slow, inefficient and data storage and retrieval poor (Malela, 2010).

According to e-government strategy paper (2004), e-procurement was one of the medium term objectives which was to be implemented by June 2007, but the process has been very slow and Findings show that most of the procurement processes in public sector are still manual with the internet only being used for e-mails and web browsing (PPOA, 2013). This slowed adoption of e procurement in the public sector raises concern as to what challenges face adoption of e procurement in Kenya.

Locally Mburu (2011) did a study on the role of e procurement in enhancing efficiency in telecommunication industry while Mwangi (2011) studied factors affecting adoption of e procurement in telecommunication industry. As per researchers knowledge no study has been done on challenges facing adoption of e procurement in public sector. It is therefore in this light that the proposed study seeks to fill this knowledge gap by investigating Challenges facing adoption of E-Procurement in public sector in Kenya.

General Objective

The overall objective was to establish the challenges facing adoption of e procurement in public sector in Kenya with reference to Nairobi Water and Sewerage Company.

Specific objectives

1. To investigate whether technology is challenge in adopting e procurement in Kenya's public sector.
2. To find out whether public procurement regulation is a challenge on adoption of e-procurement at Kenya's public sector.
3. To examine whether employee's competence in information communication technology is a challenge on adoption of e-procurement at Kenya's public sector.
4. To find out the extent in which managerial commitment is a challenge on adopting e-procurement at Kenya's public sector.

Theoretical Review

Technology Acceptance Model

Governments face up to an increasing cost of procurement, while at the same time they have to reduce their budgets. Administrators have to provide safe and high quality services under the pressure of limited resources. Computers, information systems and technologies have penetrated to public organizations and enhanced their performance by providing better communication, access to information and knowledge and promoting innovation and efficiency (Dewett& Jones, 2001).

Electronic procurement (e-procurement), as an information technology application, consists of a useful tool for administrators to save money and increase organizations' effectiveness and efficiency. Process cost savings, reduced administration costs, decrease in costs through reduced staffing levels, increased quality through increased competition, reduction in time through improved internal workflow and shortened overall procurement cycle times compose some of the benefits that stem of e-procurement process (Eadie, Perera& Heaney, 2010; Davila, Gupta & Palmer, 2003).

Davis (1986; 1989; 1993) developed and validated the Technology Acceptance Model (TAM) to explain the mechanisms that influence and shape users' acceptance of new information technology. According to TAM, there are two specific variables that are fundamental determinants of users' attitude toward using information technology and actual use of the system: perceived usefulness and perceived ease of use relatively to new information system design features.

Usefulness is defined as the degree to which someone believes that using a system will enhance his performance and ease of use is defined as the degree to which user believes that benefits of systems' use are outweighed the efforts for using it. Before e-procurement adoption, administrators have to assess employees' attitude across to this new information technology, in order to prevent a failure in implementation and waste of resources.

A well designed process and policy willing can be essential pre-conditions for e-procurement implementation. However, there is a crucial variable which put at risk the success of the implementation. This variable tends to be users' acceptance of the new process. E-procurement consists of change for the organization and specifically for the employees of the procurement unit (Kaliannan, Awang, Raman &Dorasamy, 2008). Abolition of the traditional handwritten procedure and its replacement of new procedures based on the use of computer and information technology consist some of the major changes. Resistance to change is a barrier for e-procurement process construction and users' acceptance isn't considered given (Rahim, 2008).

Institutional theory

The institutional theory is the traditional approach that is used to examine elements of public procurement (Obanda,2010). Scott (2004) identifies three pillars of institutions as regulatory, normative and cultural cognitive. The regulatory pillar emphasizes the use of rules, laws and sanctions as enforcement mechanism, with expedience as basis for compliance. According to Scott (2004), institutions are composed of cultural-cognitive and regulative elements that, together with associated activities and resources give meaning to life.

The author explains the three pillars of institutions as regulatory, normative and cultural cognitive. The regulatory pillar emphasizes the use of rules, laws and sanctions as enforcement mechanism, with expedience as basis for compliance. The normative pillar refers to norms (how things should be done) and values (the preferred or desirable), social obligation being the basis of compliance. The cultural-cognitive pillar rests on shared understanding (common beliefs, symbols, shared understanding).

In Kenya, public procurement has is guided by the PPDA Act 2005, regulations and guidelines which are from time to time issued by the Public Procurement Oversight Authority only and which must complied with to the latter by all the public entities and providers. Public procurement regulations (2006) and guidelines directing procurement activities. From the three pillars of institutions propounded by Scott 2004, organizational culture, social influence, organizational incentives and enforcement are identified as antecedents of compliance to procurement rules. Hence this theory instigates the second research question Do public procurement regulations pose challenge in adopting e-procurement at Kenya's public sector?

Human resource theory

As from the theory of human resources it is important to note that those resources are fundamental for any organization whose goals is to be competitive in their line of business Brown's (1997) interpretation of human resources theory was that timing involves verbal resources at the perceptual/central stages, whereas search and tracking are 9 spatial tasks.

This argument, though, still fails to explain the asymmetry. If anything, there should be minimal interference, as the tasks draw on separate resource pools. In the event of an interference effect, it should affect both tasks in a similar manner, rather than affecting one task while leaving the other untouched. On the other hand, working memory, with its central executive, can offer an explanation. The central executive controls attention and coordination functions, such as allocating attention between dual tasks.

Mental arithmetic and timing both draw on the central executive, which is why bidirectional interference occurs between these two tasks. Simple visual search or tracking tasks, on the other hand, only use the Sketchpad. This theory led to the third research question: How is employee's competence in information communication technology a challenge in adoption of e-procurement at Kenya's public sector?

Management Theory

Management is the process of designing and maintaining an environment in which individuals, working together in groups, efficiently accomplish selected aims (belch, 2002). In its expanded form, this basic definition means several things. First, as managers, people carry out the managerial functions of planning, organizing, staffing, leading, and controlling. Second, management applies to any kind of organization. Third, management applies to managers at all organizational levels. Fourth, the aim of all managers is the same to create surplus. Finally, managing is concerned with productivity this implies effectiveness and efficiency.

Managing, like all other practices whether medicine, music composition, engineering, accountancy, or even baseball is an art; it is know-how. It is doing things in the light of the realities of a situation. Yet managers can work better by using the organized knowledge about management. It is this knowledge that constitutes science. However, the science underlying managing is fairly crude and inexact. This is true because the many variables with which managers deal are extremely complex. Nevertheless, such management knowledge can certainly improve managerial practice. Managers who attempt to manage without management science must put their trust to luck, intuition, or what they did in the past. In managing, as in any other field, unless practitioners are to learn by trial and error, there is no place they can turn for meaningful guidance other than the accumulated knowledge underlying their practice; this accumulated knowledge is theory. For practical purposes, all managers must develop three sets of skills, namely; conceptual, technical, and human (Perterson, 1994).

Research Methodology

Research Design

This study adopted a descriptive research design because it portrays an accurate profile of persons, events, or situations and allows in-depth examination of the problem (Cooper & Emory, 1995). According to (Tromp, 2006) a descriptive design is a description of the state of affairs, as it exists. It determines and reports the way things are .The study employed descriptive research design in establishing the challenges facing adoption of e-procurement in public sector in Kenya.

Target Population

The study population comprised the staff of NWSC in the different classes of employment: this being the top, middle and low level management staff.

Sample and Sampling Techniques

A proportionate, stratified sampling method was used. Stratified sampling involves separating the population into subgroups called "strata", and then randomly drawing a sample from each stratum (subgroup). Kombo and Tromp (2006) points out that it involves dividing your population into homogenous sub groups and then taking a simple random sample in each sub group. In this study the subgroups was determined according to staff category, that is, employees from top management, middle management and supervisory level. The researcher s obtained a sample ratio of 30% from each staff category to give a sample size of 86 respondents.

Data Collection Methods

The study collected both primary and secondary data. Different methods for the collection of primary data such as surveys, experiments, or observations are available for research (Denton, 2002). The type of data required was largely determined the most appropriate method to be used. In this study, the researcher decided to use the case study method which will employ the questionnaire. A questionnaire is a document comprising a set of questions, which is sent to a large number of respondents with a view to obtaining their input and opinions on the topic of the research study (Beer, 1988). The researchers used both structured and unstructured questions in the questionnaire. Structured questions provided different options for each question, and the respondent simply required to select and mark the applicable answer (Babbie, 1998). Unstructured questions require far more cooperation on the part of the respondents since they are required to answer the questions in their own words (Beer, 1988). In this research, the main reasons why the questionnaire was used as the method for collecting primary data, is because it is a relatively cheap method, it is relatively easy to distribute and collect questionnaires when respondents are from a single organization, as is the case in this study and the majority of can complete the questionnaire during office hours. Secondary data was obtained from journals, e-books, reports, magazines and any other available past published materials pertaining to the issue

at hand. In the distribution of questionnaires to the employees selected (respondents), a cover letter explaining the purpose of the questionnaire and signed by the NWSC human resource manager, accompanied each questionnaire.

Data Analysis and Presentation

Before processing the responses, the completed questionnaire was edited for completeness and consistency. Quantitative data was collected, entered and analyzed. Descriptive statistics analysis was done by measuring central tendencies which includes frequencies, means, standard deviations and regression. The results were presented by use of charts, graphs, and tables. This was done by tallying up responses, computing percentages of variations in response as well as describing and interpreting the data in line with the study objectives and assumptions through use of statistical package for social science (SPSS) software. In addition the study conducted inferential statistics whereby multiple linear regression analysis was applied in establishing the extent to which challenges facing adoption of e procurement in public sector in Kenya. Content analysis was used on data that was qualitative in nature.

Research Results

Regression analysis

The researcher conducted a multiple regression analysis so as establish whether a relationship exists between technology, public procurement regulation, Employee's competence in ICT, Managerial commitment and adoption of e procurement in public sector in Kenya with reference to Nairobi Water and Sewerage Company. The researcher applied the statistical package SPSS, to enter and compute the measurements of the multiple regressions for the study as presented below.

Table 1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.518[a]	.743	.766	.81475

a. Predictors: (Constant) technology, public procurement regulation, Employee's competence in ICT and Managerial commitment.
b.Adoption of e procurement in public sector in Kenya

Coefficient of determination explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable (Adoption of e procurement in public sector in Kenya) that is explained by all the 4 independent variables (technology, public procurement regulation, Employee's competence

in ICT and Managerial commitment). The four independent variables that were studied, explain 74.3% of variance in the dependent variable i.e. adoption of e procurement in public sector in Kenya as represented by the R2.This therefore means that other factors not studied in this research contribute 25.5% of variance in the dependent variable. Therefore, further research should be conducted to establish the challenges facing adoption of e procurement in public sector in Kenya**.**

Table 2: Analysis of Variance (ANOVA)

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	9.686	4	2.423	14.470	.000[b]
	Residual	79.193	315	.256		
	Total	88.879	319			

a. Predictors: (Constant) technology, public procurement regulation, Employee's competence and Managerial commitment.
b. Adoption of e procurement in public sector in Kenya

The F critical at 5% level of significance was 3.56.since F calculated is greater than the F critical (value 14.470); this shows that the overall model was significant. The significance is less than 0.05, thus indicating that the predictor variables, explain the variation in the dependent variable. If the significance value of F was larger than 0.05 then the independent variables would not explain the variation in the dependent variable.

Table 3: Multiple Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.078	.984		8.120	.000
	Technology	.260	.117	.262	2.302	.005
	Public procurement regulation	.033	.165	.024	.195	.004
	Employee's competence	.325	.148	.246	2.065	.003
	Managerial commitment	.301	.180	.274	2.175	.001

The regression equation ($Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4$) was interpreted to mean

$$Y = 7.978 + .270X_1 + .032X_2 + .305X_3 + .391X_4$$

Y= Adoption of e procurement in public sector in Kenya

X1 is Technology, X2 Public procurement regulation, X3 is Employee's competence and X4is the Managerial commitment.

According to the equation, taking all factors (Technology, Public procurement regulation, and Employee's competence in ICT and Managerial commitment.) constant at zero, overall Adoption of e procurement in public sector in Kenya will be 7.078. The data findings also show that a unit increase Technology will lead to a 0.260 increase Adoption of e procurement in public sector in Kenya; a unit increase Public procurement regulation will lead to a 0. 033 increase in Adoption of e procurement in public sector in Kenya; a unit increase in Employee's competence, will lead to a 0. 325 increases in Adoption of e procurement in public sector in Kenya and   a unit increase in Managerial commitment will lead to a 0.301 increase in Adoption of e procurement in public sector in Kenya. This means that the most significant variable is Managerial commitment followed by Employee's competence in ICT.

Summary of Findings

Technology
Based on the findings of the study, overwhelming majority of the respondents i.e. 95% indicated that technology was one of the challenges facing adoption of e procurement in Kenya's public sector while 5% was of the contrally view.   Majority of the respondents felt that the company does not have the IT infrastructure to carry out e-procurement. The Company can afford the technology required was supported by a number of the respondents and some felt that Internet was not reliable enough to facilitate e- procurement. Majority felt the Company cannot operate the e-procurement technology required.

The findings of the study concurs with Karplus (2007) in a study on technology adoption in China's energy revealed that technology was a major factor affecting Procurement management in China's energy sector. From the regression analysis, it was observed that every time technology is increased by one unit adoption of e procurement was increased by 0.270 units when all other variables are held constant.
The findings of the study was in agreement with Frohlich and Westbrook (2002) who observed that technology investments have clearly played a leading role in growth of firms who have invested substantial resources in new types of technology enabling them to improve efficiency in and coordination of operations, which gives them a competitive advantage.

Public Procurement Regulation

The study found that majority of the respondents 63% indicated that public procurement regulations was a challenge in adoption of e-procurement in public sector while few of the respondents 37% were of the contrary view .From the findings majority of respondents agreed to the statement that the government regulations have limits on the level of technology adopted and that Government policies on technology does not fully support e procurement adoption.. From the regression analysis, it was observed that every time public procurement regulation is increased by one unit adoption of e procurement was increased by 0.032 units when all other variables are held constant.

Employee's Competence

The study found out that majority of the respondents 53% indicated that employee's competence in ICT was a challenge in adoption of e procurement in public sector in Kenya while 47% disagreed with that view. A study by World Bank (2000) indicated that there was a strong relationship between employee's competences in ICTand adoption of e procurement in the public sector.

Respondents agreed to the statement that most employees have basic ICT knowledge which is not sufficient enough to support e procurement. Most Employees perceive e procurement as threat to their jobs and that Lack of E-Procurement Knowledge/Skilled Personnel has led to difficulties for many contracting firms. Respondents also felt that Lack of E-Procurement Knowledge/Skilled Personnel is a result of relying heavily on traditional forms and means of procurement From the regression analysis, it was observed that every time employee's competence in ICT is increased by one unit adoption of e procurement was increased by 0.0305 unitswhen all other variables are held constant.

Managerial Commitment

Finally the study found out that majority (74%) of the respondents attested that Managerial Commitment was a challenge in adoption of e procurement while minority (26%) disagreed. From the findings majority of respondents agreed to the statement that Managers fail to support activities which are aimed at enhancing e procurement and their policies do not favor adoption of e procurement. Also they were of the view that Top Management lacks strategies to manage change as a result of e procurement and lacks commitment towards adoption of e procurement. It does not have programs to train employees on e procurement.

From the regression analysis, it was observed that every time managerial commitment is increased by one unit adoption of e procurement was increased by 0.391 units .The findings of the study collaborated with Mathaba, Dlodlo, Smith and Adigun (2011) in a study on the use of management skills to improve inventory management in South African's enterprises found that management commitment was the backbone for almost all enterprises, to define the growth,

survival of the success of a business. Unfortunately, not all enterprises had proper Managerial Commitment in place.

Conclusions

Majority of the respondents felt that the company does not have the IT infrastructure to carry out e-procurement and thus it can be concluded that adoption of e procurement is impeded by the expensive nature of the IT infrastructure. This is confirmed by a study by ramfos(2003) who found out that adoption of government to business (g2b) services, such as public e procurement takes time and is expensive since it entails complex, laborious and   expensive interoperations of interspersed applications like ERP systems. From the study it can be concluded that government lacks well laid policies for e procurement adoption and that PPOA does not fully supports the adoption of e procurement. It can also be concluded that Top Management lacks commitment towards adoption of e procurement and it does not have programs to train employees on e procurement. Their policies do not favor e procurement and hence low rate in uptake of e procurement in Kenya's public sector. Most Employees perceive e procurement as threat to their jobs and thus reluctactant to embrace the technology. This may be as a result of relying heavily on traditional forms and means of procurement.

The study also concludes that adoption of e procurement in Kenya's public sector is highly depended on availability of the technology and also employees who are competent in ICT. Successful adoption of e procurement is accompanied by efficiency in use of IT on part of employees. They are likely to adopt e procurement if they have the right skills for the practice. It also requires managerial commitment on the part of the management. Clear legal framework to support its adoption is also very important. The current legal frame work advocates for centralization of procurement process leaving full responsibility of undertaking procurements to the tender committees and procurement unit at the level of individual. This leaves a milestone in adopting e procurement. (Williams, 2003).

Recommendations

There is need to establish clear legal frame work as this will create an environment in which e-procurement can be implemented. This can be achieved through establishment of the necessary legislations to support e- procurement strategy.eg by making it a requirement to all government ministries.

There is need to establish and develop IT skills possessed by the procurement staff so as to acquire the range of competencies, knowledge and skills which are necessary. This can be done through assessing the procurement and IT skills level possessed by the procurement staff and thus identifying training needs.

The government should provide continuing education and incentives to establish a career path in the profession. Government should play a crucial role in ensuring that IT infrastructure and thus technology is available to the public institutions so as to support e procurement strategy. This can be done through increased budget allocations.

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