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SEVERITY OF FACTORS HINDERING SUCCESSFUL IMPLEMENTATION OF E-PROCUREMENT IN PUBLIC SECTOR

A CASE OF PUBLIC INSTITUTIONS-VOI CONSTITUENCY, KENYA

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Abstract

The purpose of this study is to explore challenges faced by public sector in the implementation of e-procurement. The project highlights the key factors that hinder successful implementation of e-procurement. The methodology used was survey design. Random sampling was used in collecting data. This data was analyzed using descriptive statistics. Findings of the study indicate that the public sector procurement in Kenya is facing challenges in the process of implementation of technology supported systems, deterring effective service delivery. These factors in order of their severity include but not limited to: lack of resources, corruption, lack of management support, government policies, and fear of the unknown, dynamic IT environment, security and job creation objective. This study, through the recommendations, will help ensure the customer/tax payer get the best value for their money. Through effective handling and management of materials in the supply chain, costs are contained and this means favorable prices will be passed to the end customers.

Keywords: E-procurement, severity, information technology, corruption, supply chain

INTRODUCTION

This study intend to assess the factors that were likely to influence the success of e-Procurement initiatives in the public sector. The main overall objectives of the research project was to gain an exploratory understanding of e-Procurement issues in the public sector and identify factors which hinder successful implementation and factors for adopting and implementing e-Procurement in the public sector.

Croom and Brandon-Jones, (2004) defines e-procurement as the automation of many procurement processes via electronic systems, especially the Internet. It can also refer to the use of electronic communications and transaction processing by government institutions and other public sector organizations when buying supplies and services or tendering public works. E-Procurement has the potential to yield important improvements in the efficiency of individual purchases, the overall administration of public procurement and the functioning of the markets for government contracts.

Over 50% of Government expenditure covers a vast range of equipment, goods and services. This therefore calls for an insight into the background and context of government procurement procedures and the dynamic and competitive nature of such procurement activities in the light of commercial best practice (Baily, Farmer, Crocker, Jessop & Jones, 2008). A review of e-Procurement literature, primarily from the last five years, shows a lack of proper implementation of e-procurement in the public sector. The reason for this might be that implementation of e-Procurement initiatives in the public sector is still in the early stages. Through a survey of the e-Procurement literature, this research project identified factors such as: lack of resources (labor, skills and capital), corruption (Embezzlements, bribes, godfathers), lack of management support, government policies (laws, political system), and fear of the unknown/ uncertainty, volatility of the Information Technology environment, security and job creation objective

Baily, Farmer, Crocker, Jessop and Jones (2008) points out that considerable amount of money is spent annually in the public sector on goods and services and equipments. The procurement of these items for the government and the public sector is generally complex and it's for the good of the population at large and the expenditure that is incurred is in effect to taxpayers' money. On one hand there is need to ensure best value for money on behalf of the taxpayer and the processes to achieve this are fair and open to scrutiny. On the other hand there is considerable pressure to make savings and utilize some or all of the best practices. This has led to many challenges to those undertaking procurement. Many observers will comment that procurement in the public sector is about following procedures and yet many say if the

procedures are followed then innovation and improvement in cost performance in line with commercial best practice can be stifled.

The introduction of the Public Procurement and Disposal Act (PPDA) of 2005 and the Procurement Regulations of 2006 has set new standards for public procurement in Kenya. In line with the country's public procurement reform agenda, Kenya in 2006 committed itself to become one of the 22 countries participating in the pilot testing of a new Methodology for Assessment of National Procurement Systems (version 4). (Public Procurement Oversight Authority, October 2007). In the past decades, the public procurement system in Kenya has undergone significant developments. From being a system with no regulations in the 1960s, and a system regulated by Treasury Circulars in the 1970s, 1980s and 1990s. The public procurement in the Kenyan perspective has been undergoing reforms starting with the Public Procurement and Disposal Act 2005 that saw the creation of Public Procurement Oversight Authority (PPOA). 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 has been very slow. The manual processes are costly, slow, inefficient and data storage and retrieval poor.(E-government strategy paper, 2004)

The public procurement system in Kenya has been undergoing reforms consistent with the global trend since the mid 1990s, most notably within the periods covering 1997-2001 and 2005. Previous to these reforms, the legal framework governing public procurement was very amorphous, providing a conducive environment for the perpetration of various malpractices in public procurement including the endemic corruption that characterized the system. (Public Procurement Oversight Authority, October 2007).Public sector procurement can be broken down into project specific procurement and general consumable procurement. Project specific procurement deals with goods, works or services sought for a particular initiative like a new road, whereas general consumable procurement relates to items that are required for a ministry or authority to perform its duties like the fuel (Public procurement oversight authority, August 2009).

Findings show that most of the government procurement processes are still manual with the internet only being used for communications like e-mails and web browsing. The factors for slow adoption include limited legislation, poor infrastructure, lack of awareness and top management support, integration with internal systems/solutions, lack of technical standards, lack of cooperation on the part of suppliers, costs associated with adapting web-enabled purchasing system (IRC, August 2007)

LITERATURE REVIEW

Theoretical literature

DOI theory (Rogers, 1962; Rogers, 2003) describe the process of spreading an innovation via communication channels over time among the member of a social system, the theory suggests the attribute of an innovation (relative advantage, compatibility, complexity, trialability and observability). The theory also suggests the major categories of adopters (innovators, early adopters, early majority, late majority and laggards). The category of an adopter and the attribute of an innovation affect the rate of adoption. DOI theory suggests that organization structure (e.g. centralization, complexity and formalization) and organization openness affect the rate of adoption.

Network effect theory (Katz & Shapiro 1986; Chwelos, Benbasat & Dexter 2001) suggests that the action of a firm may depend on the collective actions of other firms. The value of a technology with network effect is dependent on the number of others using it. The size of the network of firms using a particular technology with network effect is affected by the benefits that adopters derive from using the technology while the benefits in turn depend on the size of the network. Examples of technology with network effect are e-mail and EDI.

Path dependency theory (Arthur 1989; Cohen & Levinthal 1990) suggests that organizations need prior knowledge and experience to assimilate and use new technology. Prior knowledge includes basic skills and shared languages and may also include the knowledge of recent development in the information technology field. Absorptive capacity refers to a firm's ability to recognize the value of new information, assimilate it and apply it to commercial ends. Absorptive capacity is similar to categories of adopters in DOI theory, but emphasizes organizational aspects, rather than disposition of individuals. Prior knowledge and experience affect a firm's absorptive capacity which in turn affects adoption.

Empirical literature

E-commerce is becoming a major element of competitive advantage in the modern business environment. Survey after survey conducted by a variety of companies indicated an accelerating volume of transactions in business-to-consumer (B2C) and particularly in business-to-business (B2B) e-commerce (Gartner, 2003).A Country Procurement Assessment Review (CPAR) carried out in 1997 and funded by the World Bank through the Public Procurement Assessment Reform and Enhanced Capacity Project, revealed that there were serious shortcomings in the Kenyan public procurement system, unearthing the centrality of public procurement in the economy and laid ground for Public Procurement Reforms launched on 25th November, 1998 whose pillars of strengths were transparency, accountability and value for money. (CPAR, 1997)

A number of public sector agencies worldwide have identified Electronic Procurement (e-Procurement) as a priority e-Government agenda and have implemented or are in the process of implementing buy side e-Procurement systems. However, the scholarly evaluation of e-Procurement initiatives, especially in relation to the use of Critical Success Factors (CSFs) in e-Procurement is very limited (Birks, Bond & Radford, 2001). Tonkin (2003) argues there was little history of extensive use of e-Procurement in the public sector and, therefore, the academic literature covering early public sector adoption of e-Procurement is limited. The reason for this might be that implementation of e-Procurement initiatives in the public sector is still in the early stages.

Although a number of studies have looked at some of the prospective and realized benefits e-markets offer organizations in the private sector, to date, few studies have examined the procurement benefits that public sector organizations gain from e-market participation. This exploratory study uses an e-market procurement benefits framework to examine the types of benefits local authorities gain from procuring through e-markets that operate in the local government sector. E-markets were found to provide a number of benefits to local authorities that correspond to the operational, managerial and strategic components of the e-market procurement benefits framework (International Journal of Services Technology and Management, 2011)

Soete and Weehuizen (2003) further support this notion that public sector organizations often lack innovation and are resistant to change they tend to emphasize conformity and defend status quo instead of focusing on creativity, improvement and change. This is especially evident when implementing innovative information technologies such as e-Procurement systems. As the implementation of e-Procurement initiatives in the public sector demands exchange of information within and among users (specialist-users and end-users) and suppliers (large suppliers and local/regional SMEs), the procurement organization must have capacity to exercise organizational learning and share the lessons learnt.

The implementation of Government-to-Business, (G2B) services, such as public e-procurement, takes time and is expensive, since it entails complex, laborious and expensive interoperation of interspersed and/or disparate applications, such as ERP systems, ordering, invoicing, billing systems, etc, at both national and international level. Therefore, reduction of development costs and time is a vital prerequisite for the realization of public e-Procurement services. A second problem is the complexity that results from the strict regulatory and legal framework that developers of such services should respect (Croom & Brandon, 2007)

Development of efficient, effective and lawful public e-Procurement services should be based on recognized best practices and EC policies and directives, so that they guarantee non-

discriminatory and transparent awarding processes that comply with national and EU regulatory, legal and financial systems (Croom & Brandon, 2007). Available application interoperation architectures have limitations in terms of language and platform independence, as well as in terms of complexity of implementation and use. The technology that promises to provide an easy and inexpensive way to share interspersed and/or disparate applications on the Internet and make them available for interoperation is offered by Web Services. As Web Service-based public e-Procurement processes can be assembled quickly, they can be tailored to the needs of individual recipients with a degree of granularity not previously possible or economically viable. (Tschammer, Henriksen, Ramfos & Renner 2003)

Public sector organizations use e-procurement for contracts to achieve benefits such as increased efficiency and cost savings (faster and cheaper) in government procurement and improved transparency (to reduce corruption) in procurement services. E-procurement in the public sector is emerging internationally; initiatives have been implemented in Singapore, UK, USA, Australia and European Union. Often, such e-procurement projects are part of the country's larger e-Government efforts to better serve its citizens and businesses in the digital economy. For example, Singapore's GeBIZ was implemented as one of the programs under its e-Government master plan. (Stein and Zwass, 1995)

It provides a transparent, accountable, reliable, feasible, and affordable technological solution to reduce corruption and increase transparency and accountability in the purchasing process of the public sector. There is very little research available that investigates the implementation of e-Procurement initiative from the organizational learning point of view. In this regard, organizational learning can be viewed as organizational activities that improve the chances of success of the implementation of e-Procurement initiatives which cannot be achieved at an individual level (Stein & Zwass, 1995).

RESEARCH METHODOLOGY

Survey research design method was used to determine the facts researched and to explain the existing status of the variables affecting successful implementation of e-procurement in the public sector. This research was a case study of the ministry of local government- Voi county council. The main area of study was the procurement department. The sample was drawn from the population that represented the staff and management of the ministry. Random sampling was used where each unit was given an equal chance to being selected into the sample. The target population was 300 and the sample size was 125

The data for this study was collected using two techniques. Both primary and secondary data was used, for primary data questionnaires were administered to the respondents. The

questionnaire had both open ended and closed questions, and it was administered directly by the researcher which took one month to collect. The secondary sources of data were collected from such sources as professional magazines, journals on factors influencing procurement in Kenya, books and the internet. The collected data was integrated in such a way that they conformed to the objective of the study i.e. Management, information technology, resources and government policies and regulations. Measurement of central tendency such as frequency and percentages was used to determine the typical or expected scores from a sample of measures or a group of scores in the study. Data was analyzed using quantitative methods i.e. by use of percentage mean and mode and use of tabulation. The results were presented in form of graphs, frequency tables and charts

ANALYSIS AND DISCUSSION OF FINDINGS

Analysis of the Factors Hindering E-Procurement Implementation

This analysis highlighted the factors hindering e-procurement implementation, which included government practices, management support, resources availability and ICT infrastructure. It further analyses the severity of this factors in the actual implementation process.

Table 1. Factors hindering implementation of e-procurement

Rating	Government practices	Top management	Resources	ICT
Non-response	1 (1.0)	1 (1.0)	0 (0)	0 (0)
Strongly disagree	9 (8.8)	7 (6.9)	5 (4.9)	11 (10.8)
Disagree	15 (14.7)	6(5.9)	8 (7.8)	26 (25.5)
Neutral	23 (22.5)	14(13.7)	21 (20.6)	21 (20.6)
Agree	36 (35.3)	35 (34.3)	14 (13.7)	28 (27.5)
Strongly agree	18 (17.6)	39 (38.2)	54 (52.9)	16 (15.7)
Total	102 (100)	102 (100)	102 (100)	102 (100)

(*The figures indicated in brackets represent the percentages of the variables*)

As indicated in table 1 above, government practices received a rating of 35.3% who agreed, 22.5% were neutral about the idea, 17.6% strongly agreed, 14.7% disagreed and 8.8% strongly disagreed that this factor hindered the implementation of e-procurement. This evidently shows that the government practices do hinder implementation because the highest percentage (35.3) represents the agreement. The government practices in question here might include inflexible

policies and strict rules which bring about bureaucracy, becoming a bottleneck to any development.

38.2% of the respondents strongly agree that the management support hinders implementation process. 34.3% agree, 13.7% were neutral, 6.9% strongly disagreed while 5.9% disagree to this statement. As with the highest percentage of 34.3% that are in agreement, it's evident that lack of management support hinders e-procurement implementation. This is because for every decision to be approved in a firm, top management support must be sought after and for reasons beneficial to the firm or themselves, they might approve or disapprove. Corruption is evidently a factor as shown by more than half the sample, 52.9% strongly agreeing. 20.6% are neutral, 13.7% agree, 7.8% disagree and 4.9% strongly disagree. Cases of bribery, god fathers, embezzlement of funds and tribalism are some of the corruption factors that slow down the implementation process. Most people do agree with the fact that changes in technology are a hindrance to its implementation (27.5%). 25.5% disagree, 20.6 are neutral, 15.7% strongly agree while 10.8% strongly disagree. It's therefore evident that the dynamic nature of information technology pose a challenge to implementers who try to catch up with the fast pace.

Table 2. Severity of factors hindering implementation of e-procurement

Rating	Top management	Resources	ICT	Government practices
Non-response	2 (2.0)	3 (2.9)	3 (2.9)	2 (2.0)
Strongly severe	21 (20.6)	24 (23.5)	30 (29.4)	19 (18.6)
Moderate severe	36 (35.3)	31 (30.4)	24 (23.5)	22 (21.6)
Severe l	19 (18.6)	20(19.6)	24 (23.5)	30 (29.4)
Fairly severe	15 (14.7)	17 (16.7)	14 (13.7)	23 (22.5)
Not severe	9 (8.8)	7 (6.9)	7 (6.9)	6 (5.9)
Total	102 (100)	102 (100)	102 (100)	102 (100)

As shown in table 2 above, 35.3% of the respondents agree that top management is a factor hindering implementation but with moderate severity, 20.6% view it as a factor with strong severity, followed by 18.6% severe, 14.7% fairly severe and finally 8.8% not severe. It's therefore an indication that top management play an active role in the implementation of the e-procurement but with a moderate severity since a greater percentage of the respondents voted for the same. Availability of resources also is a factor with respondent's perception of its severity

as follows: 30.4% moderately severe, 23.5% strongly severe, 19.6% severe, 16.7% fairly severe and finally 6.9% of the respondents view the availability of resources as not severe factor in e-procurement implementation.

As a matter of great response as per percentages, availability of resources for implementation is of moderate severity to implementation of e-procurement (30.4%). ICT infrastructure is also a factor hindering the successful implementation of e-procurement with respondents having different views about its severity. 29.4% indicate that ICT infrastructure has strongly severe effects, 23.5% of the respondents both indicate that ICT severity range from moderately severe to severe, 13.7% view that it is fairly severe and 6.9% think that it is not severe at all. The above results therefore indicate that ICT infrastructure is a strong factor with great severity in hindering the implementation of e-procurement. This is because ICT infrastructure is the back bone of any technological facilities to be used in e-procurement therefore if not sufficiently in place, will to a greatest instant affect e-procurement implementation.

A government practice is a factor among the factors affecting successful implementation of electronic procurement in public institutions. 29.4% of the respondents view this factor as severe, 22.5% as fairly severe, 21.6% moderately severe, 18.6% strongly severe and finally 5.6% as not severe. This gives a conclusion that government practices have a severe impact on the implementation of e-procurement by virtue of provision of resources, provision of basic infrastructure and the various laws and regulations that may deter a smooth implementation.

Table 3. How ICT infrastructure facilitate procurement

Rating percentage	Frequency	Percentage	Cumulative
Non-response	1	1.0	1.0
Strongly disagree	2	2.0	2.9
Disagree	12	11.8	14.7
Neutral	33	32.4	47.7
Agree	45	44.1	91.2
Strongly agree	9	8.8	100
Total	102	102	

As shown above in table 3, 44.1% of the respondents agree that ICT infrastructure facilitates procurement. 32.4% are indifferent about the idea, 11.8% disagree, 8.8% strongly agree while 2.0% strongly disagree. These findings therefore show that ICT infrastructure facilitates implementation of e-procurement by the virtue of percentages (44.1). Presence of established networks and cabling systems and hardware and software means that procurement over the internet will be facilitated and enhanced. From the findings, a great percentage of 32.4% of the respondents are neutral maybe because they do not have the knowledge of ICT because it is a novel idea to most developing countries.

Table 4. Rate of services offered by the procurement department

Rating	Frequency	Percentage	Cumulative percentage
Non-response	6	5.9	5.9
Very poor	2	2.0	7.8
Poor	6	5.9	13.7
Fair	31	30.4	44.1
Good	48	47.1	91.2
Excellent	9	8.8	100
Total	102	102	

From table 4 above, 8.8% of the respondents indicate that the services offered by the procurement department are excellent. 47.1% think the service is good, 30.4% fair, 5.9% poor and 2.0% very poor. The average shows that the services offered are good. This might be because of the advantages that e-procurement bring along. Like quick customer response, lack of paper work and overall cost reduction. 31 out of 102 respondents view the services offered as fair maybe because the model is still in adoption stages in most organizations and have not yet picked on its full advantages.

Table 5. Assessing the contribution of resources in implementation of e-procurement

Rating	Frequency	Percentage	Cumulative percentage
Strongly disagree	9	8.8	8.8
Disagree	9	8.8	17.6
Neutral	17	16.7	34.3
Agree	44	43.1	77.5
Strongly agree	23	22.5	100
Total	102	102	

Table 6 above shows that 43.1% of the respondents agree that lack of resources contribute to slow or no implementation of e-procurement in the public sector. 22.5% strongly agree, 16.7% are neutral, 8.8% disagree while the same percentage strongly disagree. The percentage on the positive side is 65.6 (22.5+43.1). this is more than the desired half therefore indicating that lack of resources negatively affect the implementation process.

This indicates that resources like human resource, capital and the exploitation of natural resources slow down the implementation. Lack of expertise on the technological field, to install the hardware and the software means, that no e-procurement can be achieved. Capital is also a major factor for procurement of the desired materials to achieve successful implementation.

Table 6. Assessing the positive impacts of e-procurement implementation to the organization

Rating	Frequency	Percentage	Cumulative percentage
Strongly disagree	1	1.0	1.0
Disagree	2	2.0	2.9
Neutral	9	8.8	11.8
Agree	32	31.4	43.1
Strongly agree	58	56.9	100
Total	102	102	

As shown above in table 6, 56.9% of the respondents strongly agree that e-procurement has a positive impact on the economy. This may be because of the advantages enjoyed after installation of e-procurement. 31.4% agree, 8.8% are neutral, 2.0% disagree and finally only 1% strongly disagree. Being more than half, 56.9% carries the day indicating to the affirmative that e-procurement has a positive impact to the economy. The impacts are derived from the fact that e-procurement brings along the following advantages: efficiency and effectiveness in the utilization of public funds, ubiquity, lower prices, shorter cycle time to time to market, among others.

Correlation Coefficient Analysis of The Variables Hindering Implementation and Services Quality

This analysis was to help the researcher find out the correlation of different factors hindering implementation and the service quality offered by the procurement department. The factors discussed here are: government practices, resources availability, top management support, level of education of respondents and ICT infrastructure. The section further analyses the rate of use of IT in correlation with the quality of services offered by the procurement department and the severity of the factors hindering implementation.

Table 7. Relationship between service quality offered by the procurement department and the severity of the factors affecting implementation of e-procurement

Variables	Correlation coefficient	Significant level
Dependent variable		
Service quality		
Independent variables		
Top management support	-0.018	(0.860)
Resources availability	-0.101	(0.314)
ICT infrastructure	-0.049	(0.625)
Government practice	0.091	(0.363)
N = 102		

From table 7 above it indicate that the severity of the various factor that affect the quality of service offered in the procurement department. The severity of resources is more negatively related to services offered with correlation coefficient of (-0.101), followed by ICT (-0.049), then top management (-0.018) and lastly government practices which is positively related to the level of service (0.091). This shows that severity of resources affect more the quality of service offed in the procurement department while the severity of government practices does not affect the service offered. On the other hand severity of ICT and top management also affect the quality of services offered in procurement department to a moderate extent.

The quality of service is therefore determined by the severity of various factors which affect the implementation of e-procurement, resources being the most affecting factor show that for service to offer well then enough and right resources must be in place for efficiency. Due to technological changes ICT infrastructure showed also be in place so that they may facilitate the services offered for customer satisfaction, they include computers, internet and connectivity. On the other hand for all this to be successful and work well there should be some people who are responsible to insure effectiveness and efficiency and this is the top management. The management should be involved and responsible and this is very crucial to ensure achievements. Hence the more severe the factor the more it affects the quality of service offered in the procurement department. It is also shown that the quality of service is not affected by government practices hence the institution can still offer quality services even if they are controlled by the government.

Table 8. Relationship between service quality offered by the procurement department and the level of education of the respondents.

Variables	Correlation coefficient	Significant level
Dependent variable		
Service quality		
Independent variables		
Education level	0.130	0.938
N = 102		

Table 8 above shows how the level of education of the respondents may affect service offered in the procurement department. It shows that the level of education and the service offered are positively correlated with a correlation of 0.130 but with significance level of 0.938 which means that the level of education does not affect the quality of service offered in the procurement department. This shows that the level of employees education does not affect the quality of service they offer to the customers or users it depend with their hard work, personality, dedication and availability of resources. Hence certificate holders, diploma holders and degree holders can offer the same quality of service.

Table 9. Relationship between the rate of information technology use and the severity of the factors hindering implementation of e-procurement

Variables	Correlation coefficient	Significant level
Dependent variable		
Rate of IT use		
Independent variables		
Top management support	-0.135	0.177
Resources availability	0.000	1.000
ICT infrastructure	-0.008	0.935
Government practice	0.201	0.043
N = 102		

Table 9 above shows how severity of factors affects the use of IT in procurement. Top management has a correlation coefficient of (-0.135), resources (0.000), ICT (-0.008), government practices (0.201). This shows that severity of top management affect more the use of it in the procurement department followed by the severity of ICT. Resources are neutral to use of IT while government practices is positively related to the use of IT this means that it does

not affect the use of IT in the procurement department. It is seen that if there is no top management support then there will be no use of IT this is because they will not support its implementation and proper functioning. Hence for anything in an organization to succeed the top management should be at the forefront and take full responsibility. IT can also not be implemented in the organization if there is no ICT infrastructure hence this infrastructure should be in place to ensure the use of information technology. Severity of resources is neutral to the use of IT hence it does not affect it nor favor it. Severity of government practices is positively related to the use of IT hence it does not affect the use of IT in the procurement department.

Table 10. Relationship between the rate of use of IT and changes in information technology

Variables	Correlation coefficient	Significant level
Dependent variable		
Rate of IT use		
Independent variable		
Changes in IT	-0.008	0.938
N = 102		

Table 10 above shows how the changes in IT affect the use of IT in the procurement department. The two are negatively related with a correlation coefficient of (-0.008), which means that changes in IT affect the use of IT in the procurement department. Technology is continually changing due to the new inventions made every day which make work easier, hence for IT to be effective in an organization it should be well updated with the development and advancement in technology to ensure competitiveness and proper services to customers. This changes have posed a great challenge to organizations because for an organizations because for an organization to be well updated it requires a lot of capital outlay and changes are very drastically, hence difficult to adapt them.

Table 11. Relationship between quality of service offered by procurement department and the age of respondents

Variables	Correlation coefficient	Significant level
Dependent variable		
Service quality		
Independent variable		
Age of respondents	0.112	0.265
N = 102		

Table 11 shows how age affects the level of services offered by the procurement department. The two are positively related with a correlation coefficient of (0.112), this means that age does not affect the quality of service in the procurement department. Young, adult and the age can offer quality services wherever they want, hence the quality of service in an organization does not depend on the age of employees, young employees can also offer quality services than the aged provided they have resources and skills needed to affect them.

CONCLUSION

It is evident from the study that there exist several factors that hinder the implementation of e-procurement in the public sector and these factors vary their severity. From the study, it was established that ICT infrastructure is the main hindering factor because its availability or non availability affected the rate at which technology is adopted in the nation. The infrastructure here refers to the software, hardware and network in place. Availability of resources for the government to acquire and implement these services is also crucial, resources being both capital and human factors. Top management support, especially at the higher level of the public institutions also determines whether e-procurement will be adopted over the traditional way of purchasing. Managers should be ambassadors of change and the stumbling block.

Government practices to play a great role in the implementation process through its aggressiveness in search of capital and also the rules and regulations imposed, especially on the public procurement. These rules can create a lot of red tape and stifle the process of adopting e-procurement. From the correlation data we can conclude that the in efficiency in the procurement department is mostly caused by the three main factors which include insufficient resources, poor ICT infrastructure and lack of top management support and effectiveness. As seen from the findings the quality of services in the procurement department is affected by three factors and also technological changes. These three factors are the ones which also affect the implementation of e-procurement with their effect having different magnitudes. If there will be sufficient resources, proper infrastructures and good management support then e-procurement will be implemented and quality services will be offered while good use of information technology will be in place.

In this study, the limitations encountered are that e-procurement is a new area of study and therefore getting resources and materials of study pose as a challenge. Also, the Public Procurement Act in itself posed as a stumbling block because of its rigidity and thus not much of creativity and innovation can be practiced.

RECOMMENDATIONS

Based on the findings, we strongly recommend that the government should invest in provision of efficient and effective ICT infrastructure as it is the main factor of hindrance. Setting aside funds from the annual budget to procure up-to-date networks and ensuring its availability round the clock would boost its appreciation and use. This practice should also be adopted by each institution in the public sector. Adequate training and practical workshops should be given to public servants to ensure that they are informed on the use and the importance of e-procurement both to the institutions and the government.

It is also of paramount importance that the governments revise their rules and regulations to allow liberalization of markets and thus globalization. This would encourage many firms to go online. It is a challenge to the global community that there are no standard and universal regulations governing online transactions. This could be a major reason for shying away from e-commerce. From correlation I will recommend the public sector to gather enough resources, ensure proper allocation of resources and direct the resources where they are needed for the benefit of the organization for example in the procurement department so that they use electronic way of doing things which is more reliable than manual and to ensure that they are not left behind. Government practices should also be in place to co-ordinate the control and activities of the procurement department in the public sector as they involve large sums of money which must be accounted for and ensure efficiency.

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