

Factors Contributing to Adoption of E-Procurement in County Governments: A Case Study of County Government of Bomet

Ngeno Kipkorir Ronald

College of Human Resource Development, Jomo Kenyatta University of Agriculture and Technology, Kenya

Dr. Jane Queen Omwenga

College of Human Resource Development, Jomo Kenyatta University of Agriculture and Technology, Kenya

DOI: 10.6007/IJARBSS/v5-i10/1871 URL: <http://dx.doi.org/10.6007/IJARBSS/v5-i10/1871>

Abstract

The Public Procurement sector in Kenya has evolved from a crude and old system characterized by manual and paper work with no regulations to an orderly legally regulated system characterized by e-commerce and procurement procedures laid out in the Public Procurement and Disposal Act, 2005 and the Public Procurement and Disposal Regulations. National government, county governments and a number of public sector agencies in Kenya 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.

The objectives of the study were; to determine the influence of technology on progress of e-procurement in the county, to assess how organizational culture affects the implementation of e-procurement and to establish how environment influences the use of e-procurement system in the County Government of Bomet. The research study employed a cross sectional survey design that use simple and stratified random sampling methodology with the simple frame being constructed from the departments which are concerned with the use of e-procurement. The sample size was drawn from a population of 45 staff members working in procurement, accounts and IFMIS/ICT departments. In this regard, 45 questionnaires were administered to all the staff working in the said departments and a total of 41 questionnaires were successfully filled and returned representing a 91% response rate.

The research established that preferred way of procurement is e-procurement with 76% of the respondents supporting while 24% preferred the manual way. The research found out that technology, environment and organizational culture greatly influences the adoption of the e-procurement system. Among other recommendations the study recommends that county governments should do more on equipping staff in terms of ICT.

Key Words: E-procurement, E-tendering, Technology adoption, County Governments

1.0 Introduction

County Government of Bomet is one of the 47 counties in Kenya created by Constitution of Kenya 2010 (CoK 2010). There is concern being raised regarding the capacity for counties to manage the functions and the funds that they are receiving. This necessitated enactment of the Public Procurement and Disposal Regulation (County Government edition) in August 2013 to govern the management of public fund under the new dispensation i.e. in county Governments. Article 227(1) of the Constitution requires that state organs must procure in accordance with a system that is fair, equitable, transparent, competitive and cost-effective.

County Governments must explore the use of ICT as procurement option so that they can enhance their competitiveness in order to improve service delivery. Nowadays, local and global sources are electronically connected and dynamic in nature. Therefore, County Governments are trying to improve their agility level with the objective of being flexible and responsive to meet the changing requirements through E-Procurement.

E-procurement system mirrors the procurement process through the provision of two distinct, but connected infrastructures, internal processing (intranet) and external communication processing (internet based platforms). The critical difference is that these systems allow individual employees to order goods directly from their personal computers through the web on real-time. Requests and orders are channeled through various forms of hubs or database. It also allows individual employees to search for items, check availability, place and track orders and initiate payment of deliveries made. In an effort to achieve seamless communication, County Governments must be integrated with suppliers/partnering firms in Supply Chain Management (SCM) through use of information systems. E-procurement enables “just in time” strategy, streamlining of supply chain by removal of inefficient intermediaries, better access to information and transparency in markets and removal of market barriers like time difference and geography (Leonard and Cochran, 2003).

2.0 Statement of the Problem

Conventional wisdom suggests that government procurement differs from private procurement. Public sector procurement is large and complex, accounting for between twenty and thirty percent of gross domestic product (Thai & Grimm, 2000) and traditionally attempts to meet many social and political objectives (Tether, 1977). Governments procure goods and, in order to preserve accountability and transparency services, use a complex contractual system designed to protect the public interest (Rasheed, 2004). While private sector procurement is practiced under the sponsorship of each individual firm’s governance policies, public sector procurement must operate within a range of regulations and policies established to accomplish desirable social (Tether, 1977) as well as economic, financial, and public audit requirements. The shift from manual to e-procurement helps to enhance transparency and credibility in the management of public finances and tendering process. Hence, this study looked at the factors affecting adoption of e-procurement in the County Government of Bomet.

3.0 Literature Review

3.1 E-Procurement Defined

Procurement refers to a process in which organizations establish agreements for the acquisition of goods or services (contracting) or purchase of goods or services in exchange of payment (purchasing) (Robinson et al, 2010, Rolstadas et al, 2011). E-procurement refers to the use of information technology in the procurement process (Abu-Elsamen et al., 2010; Garriddo et al., 2008; Gunasekaran & Ngai, 2008; Muffato & Payaro, 2004.) According to Croom & Brandon-Jones (2004), e-procurement refers to the use of Internet-based (integrated) information and communication technologies (ICTs) to carry out individual or all stages of the procurement process including search, sourcing, negotiation, ordering, receipt, and post-purchase review. According to Koorn, Smith and Mueller (2001), there are three types of e-Procurement Systems: Buyer e-Procurement Systems, Seller e-Procurement Systems and Online Intermediaries. According to Gunasekaran and Ngai (2008), e-procurement works in such way that buyer software enables users to automate transactions and focus mostly on buying organizations activities such as order placement, catalogue management, payment, reporting and so on. As noted by Quinnox (2012), e-procurement is a very comprehensive phenomenon which includes making strategic initiatives and it can be used in reorganizing the entire purchasing process. A properly implemented e-Procurement system can connect companies and their business processes directly with suppliers while managing all interactions.

3.2 Technology

E-procurement application requires good and supportive soft and hard technological infrastructure across the country for it to be effectively applied (Kalakota et al, 2006). IT infrastructure available within an organization can impact on the adoption. IT infrastructure e.g. computers, databases and communication networks need to be available. There should be stable power supply, undisputed network infrastructure, e-procurement software, adequate servers and backups. A country e-procurement readiness report evidenced that few of these do exist in the country but the Government is trying to make changes such as the installation of the national broadband. Hypothetically, it is believed that there is a direct relationship between supportive technological infrastructure and the application of e-procurement in the country. Organizations are more likely to use e-procurement if they believe that e-procurement results in benefits. Such benefits include reduction of transaction errors and transaction costs, enhancing customer service, reduction of paper transactions, minimize order cycle and improved relationships with suppliers are e-procurement benefits.

3.3 Organizational Culture

The importance of adequate human resources capacity in procurement cannot be stressed enough. The number and professional qualifications of procurement staff are of utmost importance in ensuring effective and efficient procurement processes. Competent staff is critical to improving the procurement function. The complex nature of procurement operations requires staff to have a broad range of generic procurement skills and special expertise in many technical areas. Employee knowledge about technology enables organizations to manage

effectively the risks associated with investing in a technology (Mata, Fuerst, & Barney, (1995). Conversely, inadequate knowledge about technology hinders technology and use (Gunasekaran & Ngai, 2008; Hawking & Stein, 2004; Teo et Al., 2007). Staff knowledge on information technology promotes technology implementation and use.

Top management support & employee knowledge are main factors that impact on the adoption. Support from top management is key to ensure that resources needed to adopt a technology or to expand its use are available (Grover, 1993) and to overcome resistance to change (Teo et al., 1998). Lack of top management support may result in failure of implementation (Grandon & Pearson, 2004). Organizations are more likely to adopt & use technology when top management support for the technology adoption and use is strong.

3.4 Environment

Environment in this context refers to the external environment in which a county government conducts its business with other organizations it interacts with and the relevant standards and regulations. Partner or supplier readiness and external pressure impacts on the adoption. E-procurement functions are available only when both the County Government and suppliers implement the relevant technology and can use it effectively. Benefits of e-procurement can be realized by the County Government only if suppliers are ready to engage in information exchanges or transactions via e-procurement. External pressure e.g. the presidential directive on e-procurement affects its adoption.

4.0 Methodology

This study employed a descriptive design to assess how the internal factors affect adoption of e-procurement system in county governments; a case study of Bomet County Government. The study applied random sampling procedures to obtain the respondents for questionnaires. According to data from Bomet County government office, there were 45 employees working in finance, ICT and procurement offices. The researcher took the whole population of 45. The respondents were selected from the headquarters and each sub county. The respondents were informed about the intended study through e- mail and a personal visit.

A semi structured questionnaire was administered to the respondents by the researcher. A pilot study was done in Kericho County because it neighbors Bomet County and they share the same socio-economic factors. The county thus gave an almost identical result to those from the procurement and finance office in Bomet County. The researcher used descriptive statistics such as frequencies, percentages and means to analyze the data. Thereafter, correlation data analysis was employed which involves computing a correlation.

5.0 Findings

A majority of the respondents with 76% prefer the use of e-procurement compared to 24% of those supporting the use of manual procurement. This is well in line with Aberdeen benchmark research by participants conducted in 2004 which showed that e-procurement produces cost reductions, higher productivity, and better management. Only 12.20% of the respondents agreed that there's enough ICT infrastructure for all the staff while 9.76% weren't sure.

Majority of 63.41% of the respondents disagreed while 14.63% of the respondents strongly disagreed that there's enough ICT infrastructure for all the staff in the county government. The study also found out that ICT infrastructure availability contributes to the adoption. Particularly, it noted that availability of the IFMIS system, the platform used in e-procurement isn't available at all times. The downtime of the system greatly impacts on its adoption. This concurs with study carried out by Wong and Sloan (2004) and quoted in Eadie et al (2007) that lack of ICT infrastructure is a challenge of e-procurement.

The study found that environment tends to affect the adoption of the e-procurement system. It was found out that pressure from both suppliers and the national government greatly impacts on the adoption. 58.54% of the respondents strongly agreed that there's pressure from the national treasury to use e-procurement as a standard purchasing practice while 41.46% agreed on the same.

The study found that organizational culture tends to affect the adoption of the e-procurement system. Influence of top management and the culture of information sharing tend to influence effective adoption. The study found out that top management wasn't really interested in the adoption of the e-procurement system. The study found out that majority of the staff weren't yet conversant with the system and enough training is yet to be done.

6.0 Recommendations

The study recommends that county governments should do more on equipping staff with ICT facilities, and ensure that the system is available at all times. Also county governments should initiate forums where suppliers can be taught on the advantages of using the system. Top county management should be encouraged to be more interested in the adoption of e-procurement because of the benefits it provides.

For further research, the study recommends investigation of risks associated with the adoption of e-procurement and the impact of e-procurement on suppliers.

Corresponding Author

Ngeno Kipkorir Ronald

Email: ronykips@gmail.com

College of Human Resource Development, Jomo Kenyatta University of Agriculture and Technology P.O Box 62000-00200 Nairobi, Kenya.

References

- Arbadeen Group. (2005). Best practices in E-procurement: Reducing costs and increasing value through online buying. Aberdeen Group Publication.
- Chan, S.C.H & Ngai, E.W.T. (2007) A qualitative study of information technology adoption; How ten organizations adopted web based training, *Information Systems Journal*
- Croom, S.,R., Johnston, R. (2003) E-service: enhancing internal customer service through e procurement. *International Journal of Service Industry Management* 14, 5, 539-555
- Croom, S., R., Brandon-Jones, A. (2005) Key issues in e-procurement: procurement implementation in the public sector. *Journal of Public Procurement* 5, 3, 367-387

- Dai, Q. and Kauffman, R.J. (2000). Business models for Internet-based E-Procurement systems and B2B electronic markets: An exploratory assessment, Proceedings of the 34th Hawaii International Conference on Systems Science, pp.10-20.
- Davila, A., Gupta, M. and Palmer, R.J. (2003). Moving procurement systems to the internet: the adoption and use of E-procurement technologies models. *European Management Journal*, Vol. 21, No. 1
- Electronic Commerce: A Managerial Perspective' Turban, Lee, King, Chung. USA 2000, Prentice Hall
- Jennings D. (2001). Secure Trading, Supply Management, pp.52-53.
- Mose, P.N (2012). An Assessment Of The Extent Of Compliance With Public Procurement And Disposal Act 2005 In Level 5 Hospitals In Kenya: A Study Of Kisii Level 5 Hospital. Unpublished MBA Report, Egerton University, Kenya
- Mugenda, O & Mugenda, A. (2009). *Research Methods: Quantitative and Qualitative Approaches*. Nairobi: Acts Press.
- Mzoughi, N., Bahri, N. and Ghachem, M. (2008) "Impact of Supply Chain Management and ERP on Organizational Performance and Competitive Advantage: Case of Tunisian Companies", *Journal of Global Information Technology Management*, 2(17), 24-46.
- Odhiambo, W. & Kamau, P. (2003). Public Procurement Lessons from Kenya, Tanzania and Uganda. Research programme on the Integration of Developing Countries into the World Trading System. OECD
- O'Dell and Elliot (2009) *Actualizing Organizational Memory with Information Systems*", *Information Systems Research*, Pearson Education Limited, Essex.
- Ogula, P. (2005). *Research Methods*. Nairobi: CUEA Publications.
- Orodho, J. (2003). *Essentials of Educational and Social Sciences Research Method*. Nairobi: Masola Publishers.
- Oliveira, T. and Martins M.F. (2010b) Understanding e-business adoption across industries in European countries, "*Industrial Management & Data System*", Vol. 110, No. 9, pp. 1337-1354.
- Palvia, M., Klingenberg, N., & Kronhamn, K. (2000) "Collaborative supply chain using electronic market-places", *Integrated Manufacturing Systems*, Prentice Hall, New Jersey.
- Pearson, J.M. & Grandon, E.E. (2005). An empirical study of factors that influence e-commerce adoption/non-adoption in small and medium sized businesses. *A Journal of internet commerce*
- Porter M.E., Millar V.E. (2005), "How information gives you competitive advantage," Harvard: Harvard University.
- Public Procurement Oversight Authority, (2009). Trends in Electronic Procurement. *Kenya Procurement Journal*.4
- Quesada, G., Gonzalez, M. E., Mueller J., Mueller, R. (2010) Impact of e-procurement on procurement practices and performance. *Benchmarking: An International Journal* 17, 4, 516-538
- Rankin J., Chen Y. and Christian A. (2006). E-procurement in the Atlantic Canadian AEC industry. *ITcon* Vol. 11, Pp. 75-87

Saleemi, N. A. (2000). Purchasing and supplies Management Simplified. Nairobi: Saleemi Publications Limited.

Vinit Parida, Kittipong Sophonthummapharn, Upasana Parida Journal on Understanding E procurement: Qualitative Case Studies

Walczuch, R., Van Braven, R. & Lundgren, H. (2000). Internet adoption barriers for small firms in the Netherlands. European Management Journal 18