ROLE OF E-REQUISITION ON PROCUREMENT PERFORMANCE OF NORTH RIFT COUNTY ASSEMBLIES IN KENYA

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ABSTRACT

Electronic procurement systems represent an important development for the purchasing process offering benefits to the organization through purchase process efficiency gains and price reductions enhanced collaborative relationships and significant opportunity for improving the internal service and statues of the purchasing function. The examined the role of e-requisition on procurement performance of North Rift County Assemblies in Kenya. The research was guided by Resource Based Theory. The research used descriptive survey design. The study targeted a population was 468 respondents. The researcher used stratified method in sampling the data. After data collection, the data were coded, organized and edited to remove any inconsistencies, repetitions or errors. The Statistical Package for Social Sciences (SPSS) version 24 was used in the analysis. The study analyzed data using both descriptive statistics and inferential statistics (multiple regressions). The study findings rejected that null hypotheses because there was a significant role of e-requisition on procurement performance ($p<0.05$), and procurement performance of North Rift County Assemblies in Kenya ($p<0.05$). The study recommended that county assemblies should improve rate of adoption of e-procurement in order to improve their procurement performance. This will help in minimizing constant focus on transparency and visibility of all the operations in the procurement departments. The study recommends that department of procurement should gather information from both customers and suppliers in real time. The effect of this is that procuring entities are able to address and manage customer specifications better. Customer feedback is used by the procuring entity to help suppliers improve their products while supplier communication enables the procuring entity to manage customer expectations and concerns.

Key Words: *e-requisition, procurement performance*

INTRODUCTION

Operation and status of organizational procurement has changed since the arrival of the internet as a means of doing business. Information technologies have totally transformed the way organizations and governments operate (Bashuna, 2013). Majority of organizational expenses consists of money used to purchase various products and services. In order to decrease the total costs spent on purchasing process, internet technologies has been used and E-procurement has become popular to implement in the latest era by both governments and enterprises. Although the opportunities for improvement seem to flourish, both private and public sector organizations are still guarded as far as the adoption of electronic technologies is concerned (Siricha & Theuri, 2016).

There has been growing interest in the adoption of e-procurement by private and public sector organizations in the last decade (Amin, 2012). However, this interest has been with many

reservations since e-procurement is a recent phenomenon. According to George, Williams, and Henthorne, (2010), there is no doubt that the use of the internet in e-Procurement provides several advantages over earlier inter-organizational tools. For example, Electronic Data Interchange has been providing automated purchasing transactions between buyers and their suppliers since it was launched in the 1960s. Enterprise Resource Planning (ERP) followed in the 1970s, and then came the commercial use of the Internet in 1980s. This was followed by the universal application of the World Wide Web in the 1990s (Amin, 2012).

According to the Makanga (2017), adoption of e-procurement technology in an organization enables a firm to organize its interactions with its most crucial suppliers, a set of built-in monitoring tools to help control costs, assure maximum supplier performance and keeping an open line of communication with potential suppliers during a business process. The system allows managers to confirm pricing and leverage previous agreements to assure each new price quote is more competitive than the last. E-Procurement helps with the decision-making process by keeping relevant information neatly organized and time-stamped. Most are template-driven which makes all transactions standardized and traceable.

Globally, adoption of E-processes in the public sector internationally is emerging. Countries such as Denmark, Norway, Finland, Ireland, the United Kingdom, Spain, Germany, Portugal, Italy, Singapore, Brazil and the regions in the USA and Australia have embarked on e-procurement (Schmidt, 2016). Most or even all of the countries are still in the implementation stages. Not all countries diffuse e-procurement similarly; instead there are several diffusion patterns. For instance, the Danish central government has chosen a private e-market as the infrastructure for e-procurement. The Spanish ministry of public administration has taken the role of defining functional, technical and organizational specifications (Ramirez, 2010). The German government has invested 4.5 million Euro in developing a “flag ship” project e-vergabe, which it touts as the “model for public procurement in Europe.

In Africa, e- procurement systems represent an important development for the purchasing process Brandon, & Carey (2011), offering benefits to the organization through purchase process efficiency gains and price reductions, enhanced collaborative relationships and significant opportunity for improving the internal service and statues of the purchasing function (Oketch, 2016).

The current phase in the development of public procurement has seen the establishment of special public procurement bodies, whose task is to implement the new regulations. These bodies aim not just to bring domestic legislation, but to play a key role in the efficient implementation of the regulations. These bodies have also been given increasing responsibility for monitoring of public procurement procedures. In this phase the regulatory frameworks have completed by the adoption of all necessary secondary legislation, intensive training programs have been organized and needed manuals and instructions have been published aimed to inform widest range of

procuring entities and potential bidders on how to implement the law provisions properly (De Nicola, Missikoff, & Smith, 2012).

Some of the commonly used tools in the public sector are e –Requisition,e-Authorization-Tendering, e-RFQ, e-Auctions, e-Catalogues, and e-Invoicing. These tools, including complete marketplace technologies, have been developed by the key players in the e-Procurement market such as Ariba, ComerceOne, Oracle, and SAP. Regardless of the various shapes and sizes of e-Procurement systems in the market, it has been argued that the basic procurement process is the same across the public sectors and can be addressed with straightforward technology to automate standard processes (Kamotho, 2014).

Indeed Kenya's Public Procurement and Oversight Authority (PPOA 2015) (PPDR, 2006), indicate that public procurement entities are different stages of implementation whilst many have no form of e-procurement. That most of the Public Procuring and Disposing Entities' (PDE) tender notices, evaluations and award notices are either not at all or not well published and not all records of the procurement process are kept. Procurement data storage and information dissemination can be improved by an e-procurement information system implemented on web technology which will allow data to be stored electronically. Since the internet is penetrating every corner of our society, an e-procurement information system will enable the public to have access to relevant information about public procurement on time and in a correct format at a minimum cost, providers will have access to the PDE's procurement plans and bidding documents through the internet hence competition among potential providers will increase. This will promote economic development (Odago, &Mwajuma, 2013).

STATEMENT OF THE PROBLEM

The need to curb corruption and reduce fraud in public procurement needs a tight system to be followed and adopted (Manyenze, 2013). Many public institutions are facing challenge even after the adoption and implementation of the procurement Act of 2005. Further the subsequent regulations and guidelines have faced several challenges (Onsongo, Okioga, Otieno & Mongare, 2012). Experience has shown that an effective procurement process is one in which efforts are made at all times to have a transparent and corruption-free process and use good procurement practices (Wanyonyi & Muturi, 2015). Public procurement has, for long, been overshadowed with inefficiency, corruption and disregard of fundamental "value for money" considerations. Ngugi & Mugo (2012) notes the irregular procurement activities in public institutions provide the biggest loophole through which public resources are misappropriated. Accountability is government's obligation to demonstrate effectiveness in carrying out goals and producing the types of services that the public wants and needs (Amemba, Nyaboke, Osoro&Mburu, 2013). Lack of accountability creates opportunities for corruption. Government officials and elected leaders have increasingly come to realize that public agencies must utilize ICT in order to enhance the procurement processes in the public sector. Faced with tight budgets and a retiring workforce, today's government agencies are operating in an environment defined by the need to

do more with less. Various studies done outside Kenya, have demonstrated that one sure way of enhancing procurement performance is embracing e-processes (Eadie et al., 2011; Gunasekaran & Ngai, 2012; Croom, 2013). However, in Kenya the adoption of e-processes is still at the inception stages Kyunguti & Makau (2014). Although various studies have been done on e-procurement in the retail industry in Kenya, most of the studies have focused on the level of assessing factors that influence e-procurement adoption. Therefore, this study sought to generate empirical evidence on e-procurement and procurement performance of county assemblies in North Rift County Assemblies.

GENERAL OBJECTIVE

The objective of this research was to evaluate the role of e-requisition on procurement performance of North Rift County Assemblies in Kenya.

THEORETICAL REVIEW

The resource-based theory was developed by Wernerfelt in 1984. The theory proposes that resources of the organization go beyond finances and materials to encompass methods and processes. According to Vieru (2015) holds that a competitive advantage for a firm can be coined on its resource based theory. The internal capacity of an organization matters a lot. When an organization has requisite resources, it has capacity to innovate and deal creatively with arising challenges in the market. In this study, e-procurement is viewed as an approach that optimizes use of available resources to enhance efficiency and effectiveness in procurement and hence deliver a competitive advantage. The theory assumes that there is insufficient focus on depreciating resource value, i.e. the negative effect of external change on the resource/asset base of the SBU. There is the assumption that a firm can be profitable in a highly competitive market as long as it can exploit advantageous resources, but this may not necessarily be the case. It ignores external factors concerning the industry as a whole; a firm should also consider Porter's industry structure analysis (Porter's five forces). There are several criticism of this theory. The theory defined a competitive advantage as a value-creating strategy that is based on resources that are, among other characteristics, valuable. This reasoning is circular and therefore operationally invalid (John, Awino, Pokhariyal, & Beatrice, 2013). Again the theory does not constitute a theory of the firm. The conditions of law like generalizations of empirical content, economic necessity and generalized conditionals are not met. Different resource configurations can generate the same value for firms and thus would not be competitive advantage, the role of product markets is underdeveloped in the argument, limited focus on capabilities, Retrospective causality issues: any current success could be attributed to a number of reasons (e.g. unique resources), but the causality is not always clear.

EMPIRICAL LITERATURE REVIEW

E-requisition and Procurement Performance

E-procurement platforms refer to the different mechanisms used to manage online procurement activities in an organization (Roman, 2013). There are various types of software or online platforms deployed in organizations to facilitate e-procurement practices. Some of the commonly used platforms include Enterprise Resource Planning Software (ERP), Maintenance, and Repair Operations (MRO) software, E-sourcing software, E-reverse auctioning software, E-informing software and E- Market websites Turban, King, Lee, Liang, & Turban, 2015). An e-sourcing platform is characterized by use of ICT to manage sourcing of suppliers. E-procurement enhances performance of procurement by reducing transaction costs but most critically by reducing fragmentation in procurement (Wang, Musau, Guo, & Abdullahi, 2015).

A study by Amin (2012) indicated that many public sector organizations in Kenya have adopted e-procurement. However, only certain procurement functions are performed electronically while many procedures are still performed manually. He indicated that some of the procedures still done manually despite existence of e-procurement platforms are short-listing of suppliers, the call for Projects, and the tendering process. Odoom (2012) pointed out that the initial costs of implementing e-procurement tend to be prohibitive. The study revealed that adoption of e-procurement in parastatals in Kenya was determined by technology, public procurement regulation, Employee's competence, and Managerial commitment. Very few companies and public organizations have or can afford the necessary ICT infrastructure required for full implementation of E-procurement.

Apart from costs, as discussed by Matunga, Nyanamba, & Okibo, (2013), lack of change management and adequate training for staff makes adoption of e-procurement difficult. Other challenges have been slow network connectivity or lack of internet connectivity in some areas, and limited number of ICT savvy SMEs. Consequently, organizations tend to, selectively, adopt the e-procurement system thus limiting its impact on overall organizational performance. Kinoti (2013) did a study, which revealed that suppliers play an important role in determining adoption of e-procurement system. The attitude of the suppliers and their capability defines whether they participate in e-procurement processes or not. In the case of parastatals, the new levels of transparency and integrity required by the e-procurement system make traditional suppliers to be opposed to it. This is because the e-procurement platform disrupts the traditional relations between procurement departments and suppliers. Therefore, adoption of e-procurement is not just dependent on organizational resources but also the resources available to other stakeholders: especially the suppliers.

CONCEPTUAL FRAMEWORK

Conceptual framework indicated the relationship between independent variables and dependent variable as shown in Figure 1.

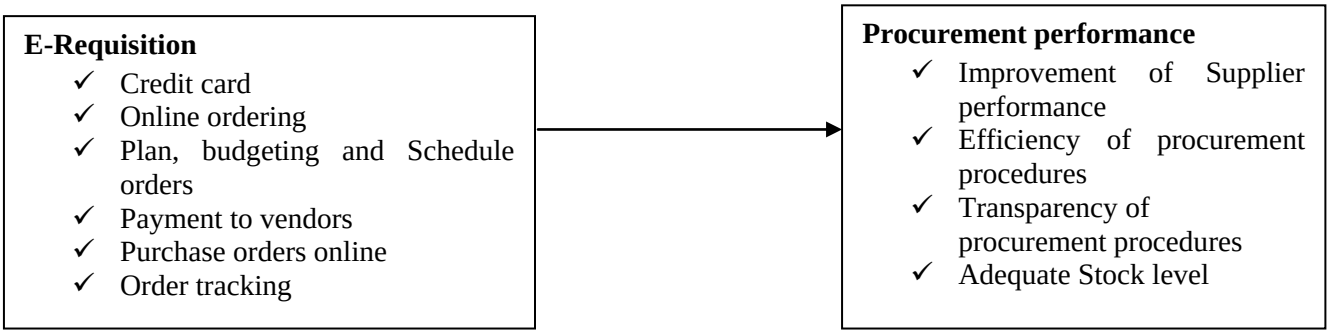

Figure 1: Conceptual Framework

RESEARCH METHODOLOGY

Research Design

The research design used in this study was descriptive cross sectional survey method aimed at establishing the E-requisition and procurement performance of county assemblies in North Rift County Assemblies.

Population of the Study

The study targeted eight north rift counties comprising of Uasin Gishu, Nandi, Elgeyo Marakwet, Baringo, Trans Nzoia, Turkana Samburu and West Pokot. The study population mainly consisted of the management, head of departments and the employees associated to e-procurement at the county assemblies. There are a total of 468 respondents from the selected North Rift County Assemblies who formed the population of the study.

Sample Size

The researcher obtained sample size using Yamane formulae (1967).

$$n = \frac{N}{1 + N(e)^2}$$

Where: n is the sample size required, N was the population size =468, e was the level of precision =0.05

$$n = \frac{468}{1+468(0.05)^2}$$ n = 215 respondents

Research Instruments

The questionnaires were used to collect data for the study to evaluate e-requisition and procurement performance of county assemblies in North Rift County Assemblies various respondents on the subject in question.

Pre-testing of Research Instruments

A pilot study was carried out to test for reliability and validity of the research instruments. Reliability was determined by use of Cronbach's alpha coefficient where a coefficient value of 0.70 or above was accepted (Hair et al., 2007). To ensure face validity, content validity test was used where research instruments were availed to the supervisors to read and analyzed them and ensure they were making sense (Saunders & Lewis, 2007).

Data Processing, Analysis and Presentation

Both descriptive and inferential statistics was used for data analysis. Descriptive statistical tools included frequencies, percentages, means, variances, and standard deviations. Inferential statistics included Pearson's Product Moment Correlation and multiple regression analysis. Results were presented in tables.

RESEARCH FINDINGS

This study established that e-requisition system has enhance purchase office supplies by u use of credit card, that online ordering has been enhanced by use of E-requisition system, that plan and schedule orders has been made easy by the use of e-requisition system, that payment to vendors has been made easy by use of E-requisition system and lastly of respondents agreed that order tracking has been enhanced by use E-requisition system. This implies that e-requisition has a role in procurement performance by enhancing purchase office supplies using of credit card, sourcing for vendors, online ordering, planning and scheduling orders, paying of vendors, easy approvals of purchase, order tracking and enhancing the use of software services of an electronic procurement solution.

Descriptive Statistics

The study also sought to find out role of e-requisition on procurement performance of North Rift County Assemblies in Kenya. The findings are presented in Table 1.

Table 1: Role of e-requisition on procurement performance

Statement	N	Mean	Std. Dev
E-requisition system has enhance purchase office supplies by u use of credit card	205	4.2488	1.10771
Online ordering has been enhanced by use of E-requisition system	205	3.8683	1.20750

Plan, budgeting and Schedule orders has been made easy by the use of E-requisition system	205	4.2049	1.19105
Payment to vendors has been made easy by use of E-requisition system	205	3.8390	1.28278
E-requisition system has enhance easy approvals of purchase orders online	205	3.9415	.91098
Order tracking has been enhanced by use E-requisition system	205	4.0585	.97342
Aggregate score	**205**	**4.03**	**1.1122**

This study established that majority of the respondents agreed that e-requisition system has enhance purchase office supplies by u use of credit card (mean =4.24 and Std. Dev =1.107). Also the study finding revealed that majority of respondents agreed that online ordering has been enhanced by use of E-requisition system (mean =3.86 and Std. Dev =1.207). The study established that majority of the respondents agreed that plan and schedule orders has been made easy by the use of e-requisition system (mean =4.20 and Std. Dev =1.19).Further, the study revealed that majority of respondents agreed that payment to vendors has been made easy by use of E-requisition system (mean =3.83 and Std. Dev =1.28). Also the study results indicated that majority of respondents agreed that E-requisition system has enhance easy approvals of purchase (mean=3.94 and Std. Dev =0.910). Lastly of respondents agreed that order tracking has been enhanced by use E-requisition system (mean=4.06 and Std. Dev =0.97). This implies that e-requisition has a role in procurement performance by enhancing purchase of office supplies by use of credit card, online ordering, planning and scheduling orders, payment to vendors has been made easy by use of E-requisition system, easy approvals of purchase and tracking of orders.

Inferential Statistics

Correlation analysis was done to examine the relationship between e-requisition and procurement performance. The findings are presented in Table 2.

Table 2: E-requisition Correlation Analysis

		Procurement Performance
E-requisition	Pearson Correlation	.0394
	Sig. (2-tailed).	.000

**. Correlation is significant at the 0.05 level (2-tailed).

From Pearson Correlation the study findings indicated that E-requisition was positively correlated with and Procurement performance (N=205, r = 0.394; P-value = 0.000). This means that E-requisition has positive role towards achieving high procurement performance.

Regression Analysis

Through regression analysis, the study examined the roles of e-requisition on procurement performance of North Rift County Assemblies in Kenya. The relevant results of analysis are presented in Tables 3.

Table 3: Regression Analysis

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.762	.360		4.892	.000
	E-Requisition	.194	.054	.243	3.584	.000

From Table 3 the results illustrated that the coefficient of the predictor variables was significant. E-requisition (β=0.194, P-value = 0.000). This implies that a unit increase in E-requisition will cause a 0.194 increase in procurement performance. Thus the regression equation model as follows;

$$\mathbf{Y = 1.762 + 0.194}x_1 \quad \textbf{.....Equation 1}$$

CONCLUSIONS

From the study it was concluded that there is a role played by e-requisition on procurement performance. E-requisition enhance purchase office supplies using of credit card, sourcing for vendors, online ordering, planning and scheduling orders, paying of vendors, easy approvals of purchase, order tracking and enhancing the use of software services of an electronic procurement solution.

RECOMMENDATIONS

The study recommended to the county assembly forum to implement e-procurement in their assemblies in order to improve procurement performance. Also to the public procurement regulatory authority to implement this study in all the procuring entities. The study recommended the governments to improve rate of adoption of e-procurement in order to improve their procurement performance. This will help in minimizing constant focus on transparency and visibility of all the operations in the procurement departments.

REFERENCES

Amemba, C. S., Nyaboke, P. G., Osoro, A., &Mburu, N. (2013). Challenges affecting public procurement performance process in Kenya. *International Journal of Research in Management*, *3*(4), 41-55.

Amin, A. K. (2012). Electronic procurement and organizational performance among commercial state corporations. *Unpublished MBA Project, University of Nairobi, Nairobi, Kenya*.

Awuor, E. O., &Muthoni, G. B. (2014). The Influence of Purchasing Maturity on Ethical Procurement in Kenya: A Survey of Procurement Professionals in Kenya.

Barnes, S., & Hunt, B. (Eds.).(2013). *E-commerce and v-business*.Routledge.

Bashuna, A. (2013). Factors affecting effective management of the procurement function at Nakuru North Sub-County. *International Journal of Business and Management*, *1*(7).

Bayne, L. (2015). *The Spread of Environmental Sustainability Practices in Business Networks* (Doctoral dissertation, University of Western Australia).

Bertot, J. C., Jaeger, P. T., & Grimes, J. M. (2010).Using ICTs to create a culture of transparency: E-government and social media as openness and anti-corruption tools for societies. *Government information quarterly*, *27*(3), 264-271.

Brandon-Jones, A., & Carey, S. (2011). The impact of user-perceived e-procurement quality on system and contract compliance. *International Journal of Operations & Production Management*, *31*(3), 274-296.

Croom, S., & Johnston, R. (2013). E-service: enhancing internal customer service through e-procurement. *International Journal of Service Industry Management*, *14*(5), 539-555.

Daudelin, J., & Burges, S. (2011). Moving in, carving out, proliferating: The many faces of Brazil's multilateralism since 1989'. *Pensamientopropio*, *33*, 35-64.

De Nicola, A., Missikoff, M., & Smith, F. (2012).Towards a method for business process and informal business rules compliance. *Journal of Software: Evolution and Process*, *24*(3), 341-360.

Dick, B. (2006). Action research literature 2004-2006: Themes and trends. *Action research*, *4*(4), 439-458.

Donaldson, S. I. (2012). *Program theory-driven evaluation science: Strategies and applications*. Routledge.

Eadie, R., Perera, S., & Heaney, G. (2010).Identification of e-procurement drivers and barriers for UK construction organizations and ranking of these from the perspective of quantity surveyors. *Journal of Information Technology in Construction*, *15*, 23-43.

Eadie, R., Perera, S., & Heaney, G. (2012).Electronic procurement in the construction industry. *Public sector transformation processes and internet public procurement: Decision support systems*, 118-61.

Eadie, R., Perera, S., Heaney, G., & Carlisle, J. (2011).Drivers and barriers to public sector e-procurement within Northern Ireland's construction industry. *Journal of Information Technology in Construction*, *12*, 103-120.

Fernandes, T., & Vieira, V. (2015).Public e-procurement impacts in small-and medium-enterprises. *International Journal of Procurement Management*, *8*(5), 587-607.

Fernandes, T., & Vieira, V. (2015).Public e-procurement impacts in small-and medium-enterprises. *International Journal of Procurement Management*, *8*(5), 587-607.

Fiedler, F. E. (1964). A Contingency Model of Leadership Effectiveness1.In *Advances in experimental social psychology* (Vol. 1, pp. 149-190).Academic Press.

George, B. P., Williams, A. J., &Henthorne, T. L. (2010). E-procurement in the hospitality industry: an exploratory study. *International Journal of Procurement Management*, *4*(1), 37-55.

Gunasekaran, A., &Ngai, E. W. (2012). Adoption of e-procurement in Hong Kong: an empirical research. *International Journal of Production Economics*, *113*(1), 159-175.

Hassan, H. (2013). *Factors affecting the extent of e-procurement use in small and medium enterprises in New Zealand: a thesis presented in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Business Information Systems at Massey University, Manawatu Campus, New Zealand* (Doctoral dissertation, Massey University).

John, M., Awino, Z. B., Pokhariyal, G. P., & Beatrice, O. (2013).The influence of external stakeholders and expansion strategies on the relationship between organizational resources and firm performance. *Journal of Emerging Trends in Economics and Management Sciences*, *4*(5), 449.

Kamotho, K. D. (2014). E-Procurement and procurement performance among state corporations in Kenya. *An unpublished master's thesis of the University of Nairobi*.

Kiiru, G. W. (2015). *Dynamic capabilities, strategic orientation and competitive advantage of small and medium-retail enterprises in Kenya* (Doctoral dissertation).

Kim, J., Jin, B., &Swinney, J. L. (2009).The role of entail quality, e-satisfaction and e-trust in online loyalty development process. *Journal of retailing and Consumer services*, *16*(4), 239-247.

Kingori, M. (2013).The effect of e-procurement on supply chain management at teachers' service commission. *International Journal of Social Sciences and Entrepreneurship*, *3*(4), 17-20.

Kinoti, J. T. (2013). E-procurement Adoption By Government Parastatals In Kenya: The Supplier Perspective. *The School of Business, University of Nairobi*.

Kyunguti, E. M., &Makau, G. (2014). Factors influencing implementation of business process management systems among tour operators in Kenya. *International Journal of Social Sciences and Entrepreneurship*, *1*(13), 37-57.

Makanga, R. O. (2017). Influence of strategic management practices on performance of Kenya power and lighting company ltd, Nairobi county, Kenya. *Strategic Journal of Business & Change Management*, *4*(4).

Malhotra, R., &Temponi, C. (2010). Critical decisions for ERP integration: Small business issues. *International Journal of Information Management*, *30*(1), 28-37.

Manyenze, N. O. E. L. (2013). Procurement performance in the public universities in Kenya. *Masters Unpublished Thesis, University of Nairobi [Online] Available at: http://chss. uonbi. ac. ke/sites/default/files/chss/Noel% 20Manyenze% 20D61-72964-2009. pdf (Accessed 25th October, 2014)*.

Matunga, D., Nyanamba, S., &Okibo, W. (2013). Effect of E-Procurement Practices Effective Procurement In Public Hospitals: A Case Of Kisii Level 5 Hospital. *Unpublished MBA Report, Jomo Kenyatta University of Agriculture and Technology, Kenya*.

Mohamed, K. A., &Milimu, C. (2016).Factors Contributing To Adoption of E-Procurement in County Governments (A Case Study of County Government of Mombasa). *Imperial Journal of Interdisciplinary Research*, *2*(10).

Mose, J. M., Njihia, J. M., &Magutu, P. O. (2013). The critical success factors and challenges in e-procurement adoption among large scale manufacturing firms in Nairobi, Kenya. *European Scientific Journal, ESJ*, *9*(13).

Mugenda, O. M., &Mugenda, G. A.(2003). *Research methods Quantitative and Qualitative Approaches. Nairobi: ACTS*.

Mwongela, S. M. (2014). E-Procurement Adoption and Supply Chain Performance Among Commercial Banks in Nairobi, Kenya. *Unpublished Masters of Administration Research Project, University of Nairobi, Nairobi, Kenya*.

Ndunge, M. C. (2016). *E-procurement and performance of government ministries in Kenya* (Doctoral dissertation, School Of Business, University Of Nairobi).

Ngugi, J. K., &Mugo, H. W. (2012).Internal factors affecting procurement process of supplies in the public sector; a survey of Kenya government ministries. In *5th International Public Procurement Conference was held on August 17th*.

Noori, M. (2017). *A Research on Afghanistan Public Procurement System's Reform* (Doctoral dissertation, Indian School of Business).

Nyangaresi, E. N. (2016). *Stakeholder perception on implementation of public E-procurement in Kenya* (Doctoral dissertation, Strathmore University).

Odago, M. O., &Mwajuma, A. A. (2013). Factors affecting effective implementation of e-procurement in county governments: a case study of Kajiado County, Kenya. *International Journal of Business & Law Research*, *1*(1), 94-109.

Odoom, C. K. (2012). Logistics and supply chain management in the hotel industry: Impact on hotel performance in service delivery.

Oketch, D. (2016). Determinants of e-procurement implementation in kenyan state corporations within the ministry of finance. *Strategic Journal of Business & Change Management*, *3*(4).

Omondi, D., &Namusonge, G. (2015). The Role of Supply Chain Leadership in Retail Institutions‟ Performance: The Case of Nakumatt Holdings Limited. *International Journal of Humanities and Social Science*, *5*(2), 135-142.

Omondi, D., &Namusonge, G. (2015). The Role of Supply Chain Leadership in Retail Institutions‟ Performance: The Case of Nakumatt Holdings Limited. *International Journal of Humanities and Social Science*, *5*(2), 135-142.

Onsongo, E. N., Okioga, C. K., Otieno, R., &Mongare, O. (2012). Challenges facing procurement committees in implementing the procurement act, a case of secondary schools procurement committees in Kisii County, Kenya. *Elixir International Journal*, *48*, 9186-9191.

Pernot, E., &Roodhooft, F. (2014). The impact of inter-organizational management control systems on performance: A retrospective case study of an automotive supplier relationship. *International Journal of Production Economics*, *158*, 156-170.

Piotrowicz, W., &Irani, Z. (2010).Analysing B2B electronic procurement benefits: information systems perspective. *Journal of Enterprise Information Management*, *23*(4), 559-579.

Ramirez, Y. (2010). Intellectual capital models in Spanish public sector. *Journal of Intellectual Capital*, *11*(2), 248-264.

RobatyShirzad, S., & Bell, D. (2013).A systematic literature review of flexible e-procurement marketplace. *Journal of theoretical and applied electronic commerce research*, *8*(2), 49-70.

Roman, A. V. (2013). Public policy and financial management through eprocurement: A practice oriented normative model for maximizing transformative impacts. *Journal of public procurement*, *13*(03), 337-363.

Salter, K. L., & Kothari, A. (2014).Using realist evaluation to open the black box of knowledge translation: a state-of-the-art review. *Implementation science*, *9*(1), 115.

Schmidt, M. (2016). *The effect of supply and demand on management education: an analysis of MBA teachings*(Doctoral dissertation, University of South Australia).

Schnitzler, M., &Osterlund, O. (2015).Evaluation of implementing e-Procurement in the Swedish construction industry.

ShuHui, W., Othman, R., Hj Omar, N., Abdul Rahman, R., &HusnaHaron, N. (2011). Procurement issues in Malaysia. *International journal of public sector Management*, *24*(6), 567-593.

Siano, A., Confetto, A. V., Vollero, A., &Siglioccolo, M. (2011). A framework based on the structure-system paradigm for governance and management of corporate communication. *Various Authors.) Contributions to Theoretical and Practical Advances in Management: A Viable Systems Approach (VSA)(International Printing, Avellino, Italy)*, 175-198.

Siricha, P. S., &Theuri, F. S. (2016). The Effects of Electronic Procurement on Organizational Performance In Kenya Ports Authority. *Imperial Journal of Interdisciplinary Research*, *2*(11).

Stephens, J., &Valverde, R. (2013). Security of e-procurement transactions in supply chain reengineering. *Computer and Information Science*, *6*(3).

Turban, E., King, D., Lee, J. K., Liang, T. P., & Turban, D. C. (2015).Overview of electronic commerce.In *Electronic Commerce* (pp. 3-49).Springer, Cham.

Turban, E., King, D., Lee, J. K., Liang, T. P., & Turban, D. C. (2015).Business-to-business E-commerce.In *Electronic Commerce* (pp. 161-207).Springer, Cham.

Van Weele, A. J. (2010). *Purchasing and supply chain management: Analysis, strategy, planning and practice*. Cengage Learning EMEA.

Van Weele, A. J. (2010). *Purchasing and supply chain management: Analysis, strategy, planning and practice*. Cengage Learning EMEA.

Vieru, D. (2015). Towards a multi-dimensional model of digital competence in small and medium-sized enterprises.

Wang, G., Musau, F., Guo, S., &Abdullahi, M. B. (2015). Neighbor similarity trust against sybil attack in P2P e-commerce. *IEEE transactions on parallel and distributed systems*, *26*(3), 824-833.

Wanyonyi, S. C., &Muturi, W. (2015). Factors affecting performance of procurement function among public technical training institutions in Kisumu County, Kenya. *International Journal of Economics, Commerce and Management*, *3*(5), 1-35.

Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic management journal*, *5*(2), 171-180.

Yamane formulae (1967). Sample size calculation in studies. *Gerontologija*, *7*(4), 225-231