



APPLICATION OF E-SOURCING AND E-INFORMING IN PROCUREMENT PRACTICES ON PROCUREMENT PERFORMANCE IN INDEPENDENT ELECTORAL AND BOUNDARIES COMMISSION IN KENYA

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Abstract: This study sought to determine the influence of e-sourcing and e-informing on procurement performance in Independent Electoral and Boundaries Commission. The study adopted descriptive research design. The population of interest was 82 officers working at Independent Electoral and Boundaries Commission who included procurement officer, supply chain officers and human personnel. Data was collected from a sample of 41 using drop and pick method. The research instrument was tested for validity and reliability by computing the Cronbach's alpha statistical tests. The data was cleaned and analyzed using descriptive and inferential statistics. Descriptive statistics like means, frequencies and percentages were used. In addition, Pearson correlation was used to show the correlation between the variables. Multiple regressions tested the relationship between variables. E-sourcing had a significant influence on procurement performance as ($\beta_1 = 0.572$, $PV = .001 < 0.05$). The outcome of the regression analysis indicates that e-informing had a significant influence on procurement performance ($\beta_2 = 0.416$, $PV = 0.002 < 0.05$). The study concluded that e-sourcing had a significant influence on procurement performance as it resulted into increase in successful procurement processes creation of value addition, cost effectiveness lowering spend costs, streamlining processes. E-informing enhances implementation of effective record management technology and distributes purchasing information both from and to internal and external parties, using the internet technology thus more efficiency and high performance of the procurement.

Key Words: E-Sourcing, E-Informing, Procurement, Performance

Introduction

A procurement system is a vital component of a company's Supply Chain system. Typically, a company's procurement function is subdivided into strategic and operational processes since activities and priorities in these two areas are entirely different (Kaufmann, 2009). Public sector agencies worldwide have identified Electronic Procurement (e-Procurement) as a priority of e-Government agenda and have implemented or are in the process of implementing buy side e-Procurement systems (Alves & Alves, 2015). Globally, e-sourcing and E-informing have gained popularity especially with the advent of technology. In United States of America for instance, rapid development of e-sourcing was reported in early 2000 just before the recession. By the end of the same year, it was reported that all state functions were maintaining web presence in at least some stage of their procurement processes with some participating in online bidding (Reddick, 2004). In Malaysia, the government at some point issued a statement calling for all suppliers to use the e-procurement system (Yossuf et al., 2011). Bwalya and Zulu (2012) pointed out that Malaysian public sector are going through a rapid change especially as far as adoption of technology is concerned. Studies by Chang, (2011) revealed that in the year 2010, over 60% of Korea's total public sourcing (124 billion USD) was conducted through e-procurement system. As a result, procurement performance of state corporations in Korea were greatly improved; thus yielding short procurement cycle-time, higher efficiency in service delivery, lower cost

of procurement and enhanced policy compliance.

E-sourcing constitutes forward and reverse electronic auctions and online bidding and tendering, which are also referred to as electronic requests for quotations or proposals (eRFx). In particular, electronic reverse auctions, in which online sellers compete to offer a product to a single buyer. Aberdeen Group (2011) in his study argues that E-sourcing is the process of identifying next supplies for a specific spend category, using internet technology usually the internet itself. By identifying new suppliers a purchaser can increase the competitiveness in the tactical purchasing process for this spend category hence improve procurement performance. E-sourcing is a way of decreasing the supply risk associated with this spend category. The types of products sourced through reverse auctions also should be stable purchases of nonstrategic products whose value is based primarily on the purchase price, such as those noted above (Chang, Tsai & Hsu, C. H. (2013). Suppliers were found to offer their best prices through either a strategic sourcing process *or* a reverse auction but did not offer significantly more value when the two were used together (for example, renegotiation). Particularly when potential suppliers experience low-capacity utilization, online reverse auctions can provide a useful way the level of pressure it feels to follow perceived industry norms (Barngetuny & Kimutai, 2015). E-sourcing technology does not equate to strategic sourcing, but rather represents one dimension of an overall corporate sourcing strategy. Strategic sourcing, while dependent on significant data mining and analysis, still relies heavily on negotiation and on creating and managing supplier relationships.

E-informing is a form of Enterprise Resource Planning (ERP) that is not directly associated with a phase in the purchasing process like contracting or ordering. E-informing is the process of gathering and distributing purchasing information both from and to internal and external parties, using the internet technology (Yen & Ng, 2013). For example publishing purchasing management information on an extranet that can be accessed by internal clients and suppliers is a way of e-informing. This form is also called purchasing intelligence or spend control and if used properly increases the performance of the procurement. Wojciech and Zahir (2010) mentioned that information sharing refers to the extent to which critical and proprietary information is communicated to one's procurement partner thus more efficiency and high performance of the procurement. Information sharing does not only share information with partners, but also provides adequate, timely and accurate information. In other words, information sharing should include the concept of information quality. Information quality includes such aspects as the accuracy, timeliness, adequacy, and credibility of information exchanged.

Till early 2000, Kenya like many of her counterparts in the developing world was marred by high inefficiency in spending of taxpayers' money, particularly in the area of public procurement. the integrated financial management information system (IFMIS) was also introduced as a major instrument to bolster e-procurement solution and to improve governance of Ministries and Departments (Miheho, 2013). To this end, the government of Kenya considers ICT as a key pillar in the success of vision 2030 which aims at transforming the country into an industrialized nation by the year 2030. Being one of the medium term objectives which were to be implemented by June 2007, e-sourcing and e-informing in e-procurement system among state corporations (Malela, 2010).

Statement of the Problem

In Kenya, government procurement amongst state corporations accounts for more than 11% of the GDP; thus revealing its significance in the economy (Kamotho, 2014). In spite of this, there is persistent public complaints among stakeholders over poor procurement performance in state corporations in Kenya which is characterized by long procurement lead-time; poor service delivery; noncompliance with procurement policy; inflated cost of acquiring goods and services motivating adoption of e-procurement in the public sector organizations (Barasa & Namusonge, 2017). Even

though empirical studies have been done on E-procurement adoption in public sector organization both in developed and developing countries, there is scarce empirical studies that have focus on its impact on procurement performance. The overriding objective of a state's public electronic procurement system is to deliver efficiency and value for money in the use of public funds, whilst adhering to requirements outlined in national laws and policies.

Today, government commissions is no longer technology centric, but it revolves more around customer relationship. Customer satisfaction and marketing intelligence with innovative promotional schemes and advanced technology are the drivers of business. Electoral and Boundaries Commission in Kenya has incurred approximately ksh 4million in implementing e-procurement such as e-sourcing and e-informing to streamline its procurement operations (Rotich, & Okello, 2015). Although in organizational level, previous studies suggested that implementing Web-based e-procurement system could make company's procurement process more efficient and effective through automating procurement process, reengineering the internal processes and enhancing inter-organizational coordination. Government commissions put a lot of resources in implementing e-sourcing and e-informing. Despite the role of e-sourcing and e-informing procurement implementation in independent commissions such as Electoral and Boundaries Commission, its impact in procurement performance has remained elusive and has not been empirically determined.

Objectives of the study

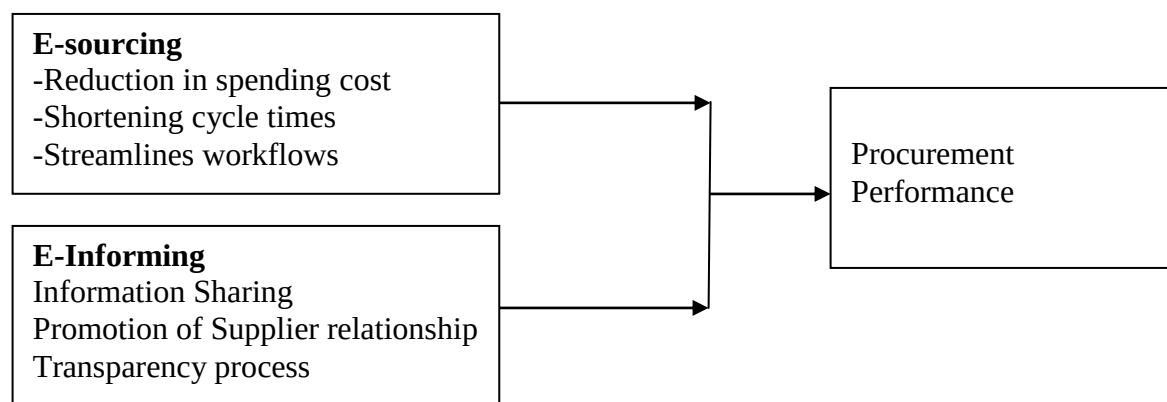
- i. To establish the influence of e-sourcing on procurement performance in Independent Electoral and Boundaries Commission.
- ii. To determine the influence of e-Informing on procurement performance in Independent Electoral and Boundaries Commission.

Theoretical Framework

The Innovation Decision Process theory (Nonaka & Konno, 1998) states that diffusion is a process that occurs over time. The Innovation diffusion theory (Rodgers, 1995) is a model grounded in business study. Since 1940's the social scientists coined the terms diffusion and diffusion theory (Dean, 2004). This theory provides a framework with which it can make predictions for the time period that is necessary for a technology to be accepted. According to Morteza, Daniel & Jose (2011) Constructs are the characteristics of the new technology, the communication networks and the characteristics of the adopters. Innovation diffusion can be seen as a set of four basic elements: the innovation, the time, the communication process and the social system (Wojciech & Zahir, 2010). As the adoption of e-Procurement as an innovation generates uncertainty, the procurement organization must be aware of the relative advantage and risk of implementing such innovation.

Although the attributes suggested by IDT include relative advantage, compatibility, complexity, trialability, and observability (Rogers, 1995), only two variables – relative advantage (i.e. degree to which an innovation is perceived as being better than the idea it supersedes) and compatibility of an innovation with existing practices and values) have been consistently found to be positively related and only variable – complexity that degree to which an innovation is perceived as relatively difficult to understand and use has been consistently found to be negatively related to adoption of innovation (Dawn, Delvon & Larry., 2010). As the different public sector agencies with different adoption intensity can perceive the characteristics of an innovation differently, Downs and Mohr (Morteza, Daniel & Jose, 2011) suggest taking perception-based characteristics of innovation into account rather than the inherent characteristics of the technology that do not vary across settings and organizations

Conceptual Framework



Independent variables

Dependent Variable

Figure 2. 1 : Conceptual framework

Literature Review

E-sourcing does more than establish an electronic venue for buyers and sellers to meet. It also streamlines workflows, enhances flexibility and drives transparency in the buyer seller relationship. That knowledge makes for more informed negotiations and richer arbitrage opportunities hence improving the procurement performance. Finally, E-sourcing frees up purchasing personnel to focus on more strategic concerns such as supply base development and relationship management, linking suppliers into up-front innovation processes and value chain restructuring (Boudijilda & Pannetto, 2013). E-sourcing solutions create value by lowering spend costs, streamlining processes and enabling new business development. While most of the electronic purchasing principles apply to all companies assessing e-sourcing, the market maker concept pertains primarily to buyers with significant market clout and/or first-mover advantage (Uba, Sharifai, Conrad & Leticia, 2013). These potential aggregators can use Web-based technology to move beyond their extended enterprise and create new virtual marketplaces within their industries thus improving their procurement performance.

The market sites they are developing not only increase competition among suppliers, but they extract value from others in the industry who may wish to participate. According to Boudijilda and Pannetto (2013) impact of electronic procurement is enormous. Companies that are the most successful at implementing e-sourcing are able to adopt a holistic approach, build on sound strategic sourcing capabilities, realize that arbitrage is not the name of the game, understand that this isn't alchemy but change supported by market logic, use e-sourcing as a total business proposition and are comfortable with controlling the market versus letting the market control them thus improving procurement performance. The lowest possible price, have attracted a great deal of research attention. A growing body of case research has brought to light several interesting insights. Potential benefits of reverse auctions include reducing direct costs, clearly establishing market prices, shortening cycle times and expanding reach, price visibility and market knowledge (Chang, Tsai & Hsu, 2013).

However, other research has identified risks and costs that might justify a reluctance to invest in reverse auctions: risks of interrupting good supply relationships or of developing a poor reputation with the supply base; costs of running the auction versus expected savings; limited potential for savings; and significant discrepancies between actual and bid prices. These observations prompt prudent caution by any manager considering adoption of these technologies. Reverse auctions are not

appropriate for every sourcing process. Boudijilda and Pannetto, H. (2013) in his study found out that e-sourcing solutions create value by lowering spend costs, streamlining processes and enabling new business development. Many of the benefits accrue to the bottom line through significant spend cost reductions. Indeed, much of the rush to migrate sourcing programs online is the widely held belief that there is a great deal of easy money left. E-sourcing can reduce costs by consolidating buying across an enterprise and help large companies capitalize on volume discounts through virtual scale. Bwalya and Zulu (2012) asserts that E-sourcing streamlines workflows, enhances flexibility and drives transparency in the buyer-seller relationship. By automating and speeding up the transaction end of the purchasing process, e-sourcing frees up purchasing personnel to spend more time on a strategic level tackling the total value chain for the business and delivering the right supply relationships hence improved procurement performance

Lamming (2005) invoked transaction cost economics in pointing out a number of risks associated with setting up electronic market mechanisms such as opportunism by unscrupulous market participants and asset specificity. The latter has to do with the need for a firm to commit certain resources to deploy IT applications and infrastructures needed to link its internal business processes with those of the e-marketplace trading platform. Other recent studies are also emphasizing the importance of organizational redesign, the organization of business units, the “extended enterprise” attributes (Wagner & Essig, 2016), and the rethinking the e-procurement business processes, which are really key to the success of the initiative. The study recommends the researchers to solve Kenya Medical Supply Agency challenges of procurement through full integration of e-tendering through training and development, acquiring new technology, developing proper policies and procedures and design of organization structure, systems and process to meet the new demands of e-tendering (Alves & Alves, 2015). In addition development of flexible organizational structure, open participative culture and all round communications systems among all organizations operating in the chain is significant in synchronizing e-tendering in the organizations. Information sharing includes both formal and informal information sharing with partners.

And the information must ensure the quality with accuracy, timeliness, adequacy, credibility, and criticality thus more noticeable procurement performance (Edwards, Peters & Sharman, 2011). Ensuring the quality of shared information has become a critical issue of effective Supply Chain Management supported by internet or internet tool can facilitate information sharing and more collaboratively with their partners. E-procurement is a kind of internet tool in their article. Eng (2004) also said that e-marketplace provides a shared internet-based infrastructure that enables participant organizations to communicate with one another effortlessly. Grey Olavson and Shi (2015) proposed that in the e-design stage, buyer and seller share information in real time to build specifications that add value to the resulting product. That communication helps to minimize design complexities and avoids building in unnecessary costs into the specification. E-procurement has played more and more central role in procurement management. E-procurement will enhance the flow of information along the procurement, improved the information sharing (Johnson & Klassen, 2005). As a result, if firms delivered e-procurement system in their procurement, they will enhance their information sharing. In the study of Presutti (2003), the real-time exchange of information in the e-design stage is crucial because of shrinking product life cycles and the competitive advantage that comes from reduced time-to-market thus improved procurement performance. E-design facilitates real-time collaboration among all internal members of the firm’s cross functional buying team, as well as with suppliers.

As mentioned before, the efficiency of information transfer, the timeliness of information availability, the openness and transparency of relevant information influence procurement performance. According to Lin and Shaw (2018) Information sharing is about the information flow, the timeliness of

information availability, and the openness and transparency. It will affect performance apparently. For instance, the e-marketplace provides a mechanism for companies to control, coordinate, and economize on transaction costs, as it improves information flows and helps reduce uncertainty. The use of IT enables far greater information to be more widely distributed, and in terms of the ability to offer access to large catalogues of suppliers, the range of products and services available to employees is reported to have provided far greater range flexibility (Presutti, 2013).

E-information technologies automate business processes, both within the organization and between a purchaser and existing suppliers which include electronic purchase-order systems, online catalogues and online linkages with suppliers to exchange information regarding fulfillment activities. While much of the research and the popular press tends to focus on e-sourcing, CPOs report greater use of e-coordination technologies; moreover, further implementation of such systems continues to be a high priority (Bwalya & Zulu, 2012). Managers are attracted to the benefits of improved productivity, faster response times and an overall perception of low risk in implementation. In a series of case studies, several drivers were observed to spur implementation of e-coordination. The adoption of technologies related to e-coordination is not solely driven by the purchaser. In fact, suppliers have been found to play an important role in eprocurement adoption and implementation. Survey research by Aberdeen Group (2011) found evidence that supplier support in terms of guidance, encouragement, incentives and convenient communication positively influenced adoption by customers.

Kamotho (2014) examined influence of e-procurement practices on performance in state corporations. The results revealed that state corporations have adopted various e-procurement procurement practices to enhance their procurement performance. E-informing practices adopted by state corporations have had a significant impact on their procurement performance. The impact of e-Procurement on procurement efficiency can be viewed in four dimensions: Cost efficiency benefits; the impact of e-Procurement on governance; e-Procurement implementation; and IT infrastructure issues. E-procurement leads to transactional and process efficiencies which ultimately lead to cost improvement. E-procurement allows for; greater opportunity for lower prices from suppliers; reduced work content in the total requisition to payment 'process; and significant reductions in the time taken to complete the procurement process in state corporation in Kenya.

Osir (2016) determined the role of e-tendering on procurement performance. The study focus on e-awarding, e-ordering and e-invoicing on procurement performance in state corporations in Kenya. Collected data was analyzed using mean and standard deviation was used to analyze e-tendering, e-award, e-ordering and e-invoicing adopted by state corporations. Inferential statistics correlation analysis was used to measure the degree of association between the dependent and independent variables; regression analysis was conducted to determine the statistical significance between the independent variables and dependent variable. The study revealed that state corporations have adopted e-tendering, e-award, e-ordering and e-invoicing to improve procurement performance. The regression analysis conducted revealed that the respective e-procurement procedures adopted had a significant influence on the procurement performance of state corporations

Research Methodology

Research Design

The study adopted descriptive research design. According to Cooper and Schindler (2011), a descriptive study is concerned with finding out the what, where and how of a phenomenon. According to Ngechu (2006), the descriptive survey method used provided reliable, valid and theoretical meaningful information. The design was suitable because the study sought to collect quantitative and

qualitative data that was used in answering research hypothesis or research questions. The descriptive research design was deemed fit in determining the influence of e-sourcing and e-informing on organization performance in Independent Electoral and Boundaries Commission in Kenya.

Target Population

For this study, the population of interest was 82 officers working at Independent Electoral and Boundaries Commission who included procurement officer, supply chain officers and human personnel. Stratified sampling and simple random sampling techniques was applied in selection of sample size. First, the functional units within the Independent Electoral and Boundaries Commission were treated as strata upon which the respondents were selected. Stratification was used because the population was structured into various non-homogenous units, hence the need for sample diversity. Secondly, a sample of 50% was drawn from each stratum through simple random sampling. According to Kothari (2014) a representative sample is one which is at least 30 units of the population thus the choice of 50% is considered as representative. The study had a sample size of 41 respondents.

Data Collection Methods

The primary data for this study was collected using the questionnaires. Questionnaire ensured that details and relevant information on the subject of study was collected. Questionnaires used in collecting data consisted of a mixture of open ended and close ended questions. According to Mugenda (2009) this allowed for intensity and richness of individual perceptions in respondent responses. The study used questionnaires because they were flexible and they facilitated the capture of in-depth knowledge of the respondents, promoted respondent cooperation and allowed the interviewer to probe further for clarification of issues.

Data Processing and Analysis

The collected data was well examined and checked for completeness and comprehensibility. The data was then summarized, coded and tabulated. The study adopted descriptive analysis which was based on mean score; standard deviation ensured that the entire sample base was represented throughout the analysis. Data presentation was done by the use of pie charts, bar charts and graphs, percentages and frequency tables for ease of understanding and interpretations. Descriptive statistics such as means, standard deviation and frequency distribution were used to analyze the data to establish the extent to which of e-procurement influences organization performance in Independent Electoral and Boundaries Commission in Kenya. Inferential statistics, regression analysis was done to establish whether there exists a significant relationship between e-sourcing and e-informing and organization performance in Independent Electoral and Boundaries Commission in Kenya.

Research Findings and Discussions

Introduction

This section presents the results and findings of the study based on the research objectives. The findings were given based on the information collected using questionnaire.

E-Sourcing and Procurement Performance

The study investigated on the extent to which respondents agreed on the given statement in respect to implementation e-sourcing in the organization.

Table 1: Effect of implementation of e- sourcing in on procurement performance

E- sourcing	Mean	Standard deviation
The commission electronically search for new suppliers	4.84	0.75
The commission electronically interact with international and local new supplier	4.45	0.43
The commission electronically evaluate new supplier capabilities	4.92	0.85
The commission electronically search for supplier location	4.36	0.35
Commission electronically search for new supplier client market area	4.21	0.30
The commission electronically categorize new suppliers	4.90	0.88

From the findings, majority of the respondents agreed that the commission electronically evaluate new supplier capabilities, electronically categorize new suppliers and electronically search for new suppliers to a very great extent M=4.93, 4.90 and 4.84. most of the respondents agreed that The commission electronically interact with international and local new supplier, electronically search for supplier location and electronically search for new supplier client market area to a great extent M=4.45, 4.36 and 4.21. This implies that IEBC has implemented e-sourcing solutions that has created value by lowering spend costs, streamlining processes and enabling new business development in the institution. This is in line with Alves and Alves (2015) that e-sourcing does more than establish an electronic venue for buyers and sellers to meet. It also streamlines workflows, enhances flexibility and drives transparency in the buyer seller relationship.

E-Informing and Procurement Performance

The study investigated on the extent to which respondents agreed with the given statement in respect to e-informing in the organization.

Table 2: Effect of e-informing in the organization

Statement on e- information	Mean	Standard deviation
The IEBC electronically gather information experiences	4.77	0.63
The commission electronically gather information on supplier previous client	4.86	0.88
The commission intellectual property protection lead to poor implementation of effective record management technology	4.06	0.21
The commission electronically distribute our information to the relevant suppliers	4.69	0.71
The commission electronically distribute information about pricing, and any other information online	4.73	0.76

From the findings, majority of the respondents agreed that the commission electronically gather information on supplier previous client, gather information experiences and electronically distribute information about pricing, and any other information online to a very great extent M=4.86, 4.77 and 4.73. Most of the respondents agreed that the commission electronically distribute our information to the relevant suppliers to a very great extent M=4.69. From the findings, most of the respondents agreed that the commission intellectual property protection lead to poor implementation of effective record management technology to great extent M=4.06. This implies that IEBC has an e-informing system that gathers and distributes purchasing information both from and to internal and external parties, using the internet technology thus more efficiency and high performance of the procurement.

This is in line with Aberdeen Group (2011) ensuring the quality of shared information has become a critical issue of effective Supply Chain Management; information sharing includes the concept of information quality with aspects such as accuracy, timeliness, adequacy and credibility of information exchanged. The study also concurred with Barngetuny and Kimutai G.(2015) that e-information technologies automate business processes, both within the organization and between a purchaser and existing suppliers which include electronic purchase-order systems, online catalogues and online linkages with suppliers to exchange information regarding fulfilment activities .

Relationship between E-Sourcing and E-Informing and Procurement Performance

Table 3: Extent has the organization performed as a result of adopting e-procurement

Statement on e- information	Mean	Standard deviation
Reduction of errors in order transmission	4.87	0.89
Reduction in inventory	4.73	0.71
Quality delivery of contracted good and services	4.62	0.52
Strong vender –buyer relationship	4.53	0.57
Continuous supply	4.56	0.53
Reduced work content in the total requisition to payment’ process	4.52	0.54
Reduction in transaction cost	4.63	0.65
Reduction in time taken to complete procurement process	4.69	0.76
Improvement in procurement resource utilization	4.77	0.65

The study sought the extent to which organization performed as a result of adopting e-procurement. From the findings, majority of the respondents indicated that as a result of adopting e-procurement the organization there has been reduction of errors in order transmission, improvement in procurement resource utilization, reduction in inventory and reduction in time taken to complete procurement process to a very great extent $M=4.87, 4.77, 4.73$ and 4.69 . Most of the respondents indicated that adopting e-procurement the organization has resulted in reduction of transaction cost, quality delivery of contracted good and services and continuous supply to a very great extent $M=4.63, 4.62$ and 4.56 . Most of the respondents indicated that adopting e-procurement the organization has resulted to having strong vender –buyer relationship and reduced work content in the total requisition to payment’ process to a very great extent $M=4.53$ and 4.52 . This implies that information and communication technologies have been changing the way IEBC do procurement processes as a result of e-procurement adoption. It implies that e-procurement has the potential to promote operating efficiency in IEBC procurement department and provide significant cost savings. E-information enables institution to extract management information using standard reporting software. E-procurement allows transparent management information therefore permitting the monitoring of compliance with service level agreements and measurement of many other elements of procurement performance. This is in line with Bwalya and Zulu (2012) who stated that procurement performance is considered to be the result of procurement effectiveness and efficiency representing different competencies and capabilities for the procurement functions.

From the model summary, The value of adjusted R^2 is 0.765 . This implies that, there was a significant variation of 76.5% of effect of e-procurement processes and procurement performance as $P=0.001<0.05$. The study established that there existed a significant goodness of fit between variable as F-test ($F=1.508, P=0.01<0.02$). The calculated $F=7.524$ far exceeds the F-critical of 1.508 This implied that the model formed within influence of e-procurement on procurement performance in Electro and Boundaries Commission as the model has a significance goodness of fit at 95%

confidence level.

Table 4. 1: Variables Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.051	.311		12.061	.000
	E-sourcing	0.572	.038	.484	9.990	.0017
	E-informing	0.416	.055	.331	8.437	.0023

a. Predictors: (Constant), E-sourcing and E-informing

b. Dependent : Procurement performance

From the regression results, the study found that e-sourcing had a significant influence on procurement performance as $r = 0.572$, $PV = .001 < 0.05$, $t = 9.990$. The study implied that implementing e-sourcing would significantly lead to increase in successful procurement processes. This is in line with Chang, Tsai, and Hsu (2013) that e-sourcing can reduce costs by consolidating buying across an enterprise and help large companies capitalize on volume discounts through virtual scale. The regression model revealed that e-informing had a significant influence on procurement processes as indicated by $r = 0.416$, $PV = 0.0023 < 0.05$, $t = 8.437$. This implied that implementation of e-ordering contribute positively to procurement in IEBC. The regression findings were consistency with Chepkwony (2015) findings, who sought to determine the effect of e-informing on procurement performance. From the findings, there was significant positive association between e-informing and procurement performance.

Summary

From the findings, IEBC electronically evaluated new supplier capabilities, categorized new suppliers and searched for new suppliers, their location and market area and interacted with international and local new supplier. E-sourcing had a significant influence on procurement performance as ($\beta_2 = 0.572$, $p = .001 < 0.05$). The compliments Dooley (2006) findings who asserts that E-sourcing streamlines workflows, enhances flexibility and drives transparency in the buyer seller relationships. From the findings, IEBC electronically gathered information on supplier previous client, information experiences and distributed information about pricing, and any other information online. The study further established that IEBC electronically distributed information to the relevant recipients. The outcome of the regression analysis indicates that e-informing had a significant influence on procurement processes ($\beta_4 = 0.416$, $p = 0.0023 < 0.05$). In conformity with the findings Osir (2016) that adoption of e-informing system enhance their information sharing leading to efficiency of information transfer, timeliness of information availability, openness and transparency of relevant information hence influencing procurement performance.

Conclusions

The study concluded that e-sourcing had a significant influence on procurement performance as it resulted into increase in successful procurement processes creation of value by lowering spend costs, streamlining processes and enabling new business development in the institution, enhance interaction with international and local new supplier, electronically search for supplier location and electronically search for new supplier client market, lowering spend costs, streamlining processes and enabling new business development in the institution.

The study concluded that e-informing had a significant influence on procurement processes as the commission electronically gather information on supplier previous client, gather information experiences and electronically distribute information about pricing, and any other information online and distribute our information to the relevant suppliers to a very great extent E-informing enhance implementation of effective record management technology and distributes purchasing information both from and to internal and external parties, using the internet technology thus more efficiency and high performance of the procurement.

Recommendations

In light of the aforementioned findings, the following recommendations are made. The study recommends adoption of e-procurements to enable firms to be more efficient in their procurements as paper-based transactions are reduced or eliminated, facilitating for a more speedy exchange of information thus high procurement performance. E-tendering has been shown to contribute positively to supply chain performance. There is therefore need for firms to adopt the use of e-tendering so that tender documents can be posted electronically and thereby enhance reliable exchange of information. Also, there is need for e-tendering because of its convenience.

E-informing has a positive influence on procurement performance, it is imperative for firms to gather information for suppliers experiences, previous clientele as well as distributing information to the relevant suppliers. There is need to electronically consult references for product/service quality so as to improve procurement performance. The study recommend that policy makers and the government institutions should formulate measures that would foster implementation of e-procurement to improve procurement efficiencies in corporations in Kenya and reduce challenges hindering adoption of e-tendering, e-ordering and e-sourcing, e-informing to improve procurement efficiency.

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