# Role of E-Procurement Strategy in Enhancing Procurement Performance in State Corporations in Kenya

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Abstract: In a competitive and globalized business environment, corporate sectors and business houses need to be at breast with new technological developments as well as manage reduction of operational costs while meeting the organizational goals and objectives. Since the internet arrived on the scene as a supply management tool in the mid-1990s enterprises have tried to gain the benefit e-procurement can deliver: cost reduction, process streamlining, improved contract compliance, increased spend under management, and more. However many challenges stood in the way and only in the recent years have leading enterprises taken full advantage of the value of e-procurement systems. As a higher percentage of enterprise spend and more spend categories flow through e-procurement systems, greater cost savings and other benefits are realized. E-procurement technology and other advanced technologies essentially are freeing procurement professionals to become true supply managers at these enterprises, and the role of procurement is shifting from reducing costs to creating supply value for the company. A descriptive research design will be used in this study. A questionnaire was used for collecting date .Quantitative data was analyzed by employing descriptive statistics and inferential analysis using statistical package for social science (SPSS). This technique gives simple summaries about the sample data and present quantitative descriptions in a manageable form.

Keywords: competitive, globalized business environment, e-procurement, operational costs.

#### 1. Introduction

In a competitive and globalized business environment, corporate sectors and business houses need to be at breast with new technological developments as well as manage reduction of operational costs while meeting the organizational goals and objectives. The advent of technological invasion into the market place, have created emarkets in every business sector. This paved way for a faster connectivity between B2B and B2C exchanges. The benefits of online purchasing not only show cases the costs of savings but also improve the way companies operate. It helps them to deal with a chosen few suppliers with better buying strategic as well as slash down the administration costs. Today's technological business world has turned to an electronic procurement system (Kalakota and Robinson, 2009). E-procurement has brought to prominence in recent years by the popularization and commercialization of internet. In addition to the customer oriented procurement of the internet, e-procurement is practiced through electronic markets and electronic data interchange (EDI). This creates the need for an efficient electronically enabled supply chain and value chain management (whitely, 2009).

The electronic procurement system or e-procurement as it is called involves purchase and sale of products, supplies and services through the various networking systems such as electronic data interchange and internet. E-procurement does not mean just online purchasing decisions. It involves connecting the suppliers and employees of the organizations into the purchasing network companies that embark on eprocurement buying programmes will be able to aggregate purchasing across multiple departments or divisions without removing individual control, reduce rogue buying, can get the best price and quality products from a wide range of suppliers. For the suppliers, E-procurement is a boom because they can be very proactive in their business proceedings.

Although, e-procurement is still in its infancy, some companies have made impressive savings through radical streamlining of their buying activities. E-procurement actually automates the purchasing and procurement process of a company and integrates the buyers and suppliers through relevant IT systems, which together forms a value network for the company. The automation of the end to end procurement work flow has taken over the traditional purchase order software. It helps to improve the organizational efficiency and control over the procurement activities and the need. The advent of cloud computing concepts and using the cloud process for e-procurement has procurement process automated the further. The management of agreements and contracts, price list verification product, comparisons, article selection has not only become simplified but also speedy (Chin Nam, 2007).

The impact of web based technology has added value / speed to all the activities and avenues of business in today dynamic global competition. The ability to provide customers with cost effective total solution and life cycle costs for sustainable value become vital, Business organizations are now under tremendous pressure to improve their responsiveness and efficiency in terms of product development, operations and resource utilization with transparency. With the emerging application of internet and

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information technology (ICT) the companies are forced to shift their operations from traditional way to a virtual eprocurement and supply chain philosophy to transport the company's activity to automated one (Carabello, 2007).

Electronic procurement is an ever-growing means of conducting business in many industries, around the world and is projected to reach \$3 trillion in transaction this year, up from \$75 billion in 202 (Verespej, 2002). In their discussion of competitive purchasing strategies required for the twenty first century. Monczka and Morgan (2000) stated that firms must maximize the use internet based technologies (including e-procurement) in every aspect of the business, linking across all members of the supply chain, increasing the speed of information transfer and reducing non-value adding tasks. Clearly, the use of electronic procurement is a relatively recent phenomenon; therefore a sound for electronic procurement strategy does not exist. The construct, "electronic procurement strategy" examined in this research represents a theoretical fusion of organizational moves and management approaches used to achieve organizational objectives and to pursue the organizational objectives and to pursue the organization's mission.

The procurement process has traditionally involved slow manual procedures and even slower systematic processes for handling procurement transactions (Hawking et al., 2004). E-procurement has had an increasingly important role in business to business (B2B) procurement. Web- enabled B2B e-procurement enhances inter organizational coordination resulting in transactions cost saving and competitive sourcing opportunities for the buyer organization (Subramanian and Shaw, 2002).

In recent years organizations are becoming more discerning about e-procurement decisions that need to be made and how they respond to the multitude of pressures and influences. The procurement process has traditionally involved slow manual procedures and even slower systematic processes for handling procurement transactions (Hawking et al., 2004). E-procurement has had an increasingly important role in business to business B2B) eprocurement enhances inter organizational coordination resulting in transaction cost savings and competitive sourcing opportunities for the buyer organization (Subramaniam and Shaw, 2002).

In recent years organizations are becoming more discerning about e-procurement decisions that need to be made and how they respond to the multitude of pressures and influences. A number of public sector agencies worldwide have identified electronic procurement (e-procurement) as a priority e-government agenda and have implemented or are in the process of implementing buyside e-procurement systems. What is e-procurement? Confusion exists in defining the term e-procurement (Vaidya, Yu, Soar & Turner, 2003). While the terms 'e-procurement' and 'epurchasing' have been used synonymously in many jurisdictions in an attempt to prove their involvement in the e-procurement revolution (m), the term 'purchasing' has a narrower scope. E-procurement refers to the use of internetbased (integrated acmanus, 2002) information and communication technologies (ICTs) to carry out individual or all stages of the procurement process including sourcing, negotiation, ordering, receipt, and post purchase review (Croom& Brandon-Jones, 2004). While there are various forms of e-procurement that concentrate on one or many stages of the procurement process such as e-tendering, e-market place, e-auction/reverse and e-catalogue/purchasing, e-procurement can be viewed more broadly as an end to end solution that integrates and streamlines many procurement processes throughout the organization. Although the term 'end to end e-procurement' is popular, industry and academic analysts indicate that this ideal model is rarely achieved (DOIR, 2001) and e-procurement implementations generally involve a mixture of different models (S & A., 2003). As one of the core enablers of an e-business supply chain, e-procurement is conceptualized as a subset of e-procurement.

## 2. Statement of the Problem

State corporations play a major role in the development of the country through provision of public services and have become a strong entity in Kenya and very useful engines to promoting development. On the international scenes the global economy recorded a growth of 5.1% in 2006 compared to 4.5% (IMF 2005). In Kenva state corporations accounted for 20% of the country's Gross Domestic Product (GDP), provided employment opportunities to about 300,000 people in the formal sector and 3.7 million persons in the informal sectors of the economy (GoK 2004). The government through sessional paper no. 10 of 1965 established state corporation by an act of parliament to meet both commercial and social goals, that was to correct market failure, to exploit social and political objectives, provide education, health and redistribute income or develop marginal areas. One aim of making Kenya a newly industrialized, middle income country by providing quality life for all its citizens is by the Kenyan Vision 2030 (KNBS, 2008).

However, in addition, State Corporations in Kenya has been experiencing a myriad of problems including corruption, nepotism and mismanagement (Daily nation March 12, 2003, Petiffor free directory.com 2004). For example a world bank report (2004) stated that a key area for corruption busting reform is the parastatal sector which when compared to similar economies are a drain on public resources and are locus of corruption that thrives in public monopolies especially when coupled with lax oversight, mismanagement and fiduciary control procedures. An area of State Corporations dominance that cries out for reforms is the financial sector and other support and service provision sectors. In fact the public investment committee reports of out of 130 reports examined by the Auditor General, only 23 Corporations managed a clean bill of health (GoK, 2002). The general story is one of loss, fraud, theft and gross mismanagement which are hampering improved and sustained performance and service delivery. In view of the myriad challenges of budgetary allocations, staffing, and deterioration and near collapse of infrastructure, negative travel advisories issued by the governments in the main international source markets, coupled with actual and perceived concerns regarding safety and security results in negative publicity affecting marketing efforts (Economic Survey 2009). Private and public sector organizations have been experiencing challenges on their procurement

performance but organizations which have enhanced their performance through embracing e-procurement strategy have been able to supersede others in terms of accountability and transparency (Subramaniam & Shaw, 2002)

Productivity of state corporations was quite low while at the same time they continued to absorb excessive portion of the budget, becoming a principal cause of long term procurement problems (Hawamdeh 2005). State Corporations' operations had become inefficient and nonprofitable, partly due to multiplicity of objectives, stifled private sector initiatives and failing of joint ventures requiring the government to shoulder major procurement burdens (Naliaka, 2005). 31% of state corporations rely on old records in selecting their suppliers, while 69% search through internet catalogue in selecting suppliers Comick (2006).

A study by Chan and Lee (2002) found that organizations which adopted e-procurement strategies have reduced costs through transactional and process efficiencies and thereby promoting their procurement performance. However, in Singapore, previous research by Lim et al (2004) on the survey of the role of e-procurement adoption strategy shows that global state corporation use of the internet is high, while in Kenya, previous research by Kinyanjui and Omolo (2006) on usage, obstacles and policies on e-procurement show that only 33% of state corporations have implemented eprocurement as a strategy to improving services. The million dollar question will be the use of e-procurement as a strategy to enhance or deteriorate the performance of the procurement function, but none of the existing research explores further how e-procurement strategy affects the procurement performance. This study therefore explains the role of e-procurement strategy in enhancing procurement performance in State Corporations in Kenya.

## 3. Literature Review

For decades procurement performance has been attracting great attention from practitioners due to poor performance resulting from non-adherence to power processes and procedures. The procurement function has not been given the recognition it deserves in developing countries, in most public entities, regardless of the effort by the partners like the World Bank, the international. Trade organization, the united Nations conference on trade and development on trade and development, they and others. This could be deliberate or sheer ignorance on the value the procurement function could contribute to any organization (Telgen, Zomer, Boer, 1997). While functions like Human Resource (HR) and Finance can have their performance measured, this is not the case with the procurement function. The failure to establish performance of the procurement function has led to irregular and biased decisions that have costly consequences to every entity.

Knvdsen, (2009) suggested that procurement performance starts from purchasing effectiveness in the procurement function in order to change from being reactive to being proactive to attain set performance levels in an entity. According to Van Weele (2006) purchasing performance is considered to be the result of two elements; purchasing effectiveness and purchasing efficiency. For an organization to change its focus and become more competitive Amaratunga & Baldry (2002) suggest that performance is a key driver to improving quality services while its absence or use of in appropriate means can acts as a barrier to change and may lead to deterioration of the purchasing function.

Organization which does not have performance means in their processes, procedures, and plans experience lower performance and higher customer dissatisfaction and employee turnover (Artley & Stroh, 2001, Arnaratunga & Baldry, 2002 and CIPs Australia, 2005). Measuring the performance of the purchasing function yields benefits to organizations such as cost reduction, enhanced profitability, assumed supplies, quality improvements and competitive advantage as noted by Batenburg & Versendaal (2006).

Although the need for performance in procurement has long been recognized, for a variety of reasons, many organizations fail to measure it adequately (Cammish and Keough, 1991; Brun et al., 2004). Easton et al. (2002) review the history of PP in the literature through the 1980s and early 1990s and conclude that a general weakness of "traditional" measures is that they recognize and reward mainly short-term gains, rather than long-term ones. Laudon and Laudon (2010) argued that measuring long-term impact is notoriously difficult. The literature on e-PP is divided in terms of its impact at the operational or strategic level of the organization. At the operational level, there have been several studies investigating the impact of EPTs on PPR and PP including Mishra et al. (2007), Vaidyanathan and Devarai (2008) and Teo et al. (2009). It is argued that by utilizing new procurement technologies, firms can increase the efficiency of their entire procurement process and, thereby, can achieve higher firm performance (Lindskog and Wennberg, 2002). Research by Gebauer et al. (1998) has also described PPR and how these positively impact PP in terms of cost, time, satisfaction, quality, stock, and value.

There is general agreement that e-PPR positively impact PP in terms of cost, time, satisfaction, quality, stock, and value; however, estimates of the impact of investments vary (Ordanini and Rubera, 2008; Gunasekaran and Ngai, 2008) and empirically derived figures are difficult to unearth.

Knudsen (2003) suggests e-procurement can be condensed into the following six processes -"e-sourcing, e-tendering, einforming, e-mro (Maintenance, Repair and operating materials), ERP (Enterprise resource planning) and ecollaboration". The principle of electronic tendering is simply to provide a faultless system of transmitting input from the contractor's tender through to contract management removing the inefficiencies, delays and cost involved in manually processing tender information and re-transcribing for contract management activity. Bell (2001) suggests changes must take place if electronic solutions are to become predominant and companies are to remain competitive in the new era.

By implementing e-procurement system, several benefits could be gained. Several studies have explored the benefits of implementing e-procurement system; one of them was by Gunasekaran, McGaughey, Ngai, and Rai (2009) which focused on the status of e-procurement in Small and Medium Enterprises (SMEs) in the South Coast of

Massachusetts. This research showed that e- procurement was poorly understood by SMEs and they were not reaping the benefits of e-procurement.

Panayiotou, Gayialis, and Tatsiopoulos (2004) conducted a case study that focused on analyzing the Greek government procurement processes carried out by the General Secretariat of Procurement. This study identified tangible (quantifiable) and intangible (difficult to quantify) benefits. Tangible benefits included cost of supply reduction, tender costs reduction and lead time savings. Intangible benefits included process improvement and organizational benefits. Another study was conducted by Croomand Brandon-Jones (2009). This study exploited issues related to implementation and impact of e-procurement in nine public sectors in the United Kingdom (UK). Five impacts were identified in this study, namely: change in total cost of acquisitions, changes in organizational characteristics, changes in governance structure, management and implementation.

Yen and Ng (2003) also conducted study on the impact of eprocurement in the procurement process on the supply chain by analyzing the project of Hong Kong Textile Apparel Industry Global Applications (HKTAIGA). They used SWOT analysis to describe impacts in each stage of procurement process. Strengths and weaknesses were used as internal performance measurement in the procurement process, for example, efficiency, and effectiveness. Opportunities and threats were identified asthe electronic environments that support e-procurement.

Neilson et al. (2000) state that instead of bureaucratic, hierarchical structure, organizations should form more flexible, decentralized team and alliance based networks that allow employees to react to market shifts. This research that assumes that e-procurement involves a network of actors that operate both inter and intra-organization processes.

Firms are making significant investments in their e-business strategies and IT; yet some managers remain unclear about how to adapt their organization to new strategies and processes. Advancements in procurement technology create the opportunities for new forms of arranging work, such as collapsing boundaries between suppliers and customers make it imperative for management to identify the key attributes and processes required for competitive advantage. Hand field and Nichols (2002) assert that access to memory is vital because a chain lacks many of the formal and informal mechanisms that guide decisions in established firms, such as hierarchy (formal) and strong vales, traditions and beliefs (informal).

According to the literature in the field, security (Croom, 2000) and authentication (Varney, 2011) are two other major challenges present in e-procurement. The impacts of technological errors, system constraints and technological failures, which are seldom discussed or acknowledged, are also a major concern for e-procurement (Coulthard & Castleman, 2001; Mota & Filho, 2011; Sun et al., 2012). While tools such as e-signature, e-notice or e-bids do significantly reduce processing time – these constructs might raise security issues, cause costly errors and authenticating bidders problematic. In this sense, much of the responsibility of ethical behavior is placed on the vendors which, given

their motives, may place additional pressure on procurement to validate the integrity of the process; again driving up implementation costs. The public agency is limited in its ability to insure that the internal structures of suppliers fits within the broader context of the rigorous ethical expectations of the public sector.

Grodeland and Aseland (2011) have suggested that in postcommunist state countries there is a large use of informal practices because citizens do not trust that their problems can be solved formally. This attitude is also applicable to Albania as a post-communist country which is still under political transition. Albania is one of the most corrupted countries in Europe and transparency challenges still need to be addressed. There are direct factors and peripheral elements that can enforce and promote transparency. According to Smith (2010) lack of meritocracy in the public administration and strong political connections are sources of law evasion and consequently corruption. Abbink (2004) suggests that these issues can be solved through staff rotation in the public administration. On the other hand, this practice can have negative consequences on the civil servants image and expertise.

While Sitkin's (1992) theory of intelligent failure attempts to provide the answer, the model has recently been adapted as describing how to "learn from failure" (Scott & Vessey, 2000). Though there have been very little studies from e-Procurement perspective, some studies relating organizational learning to failures can be found in the IS literature. Scott & Vessey (2000) view organizational learning as a series of processes interspersed with "small" successes or failures. According to the authors, organizations will sometimes fail, giving them opportunity to learn from their failures.

They further reason that the experience of failure produces learning readiness and if the cause of the failure is determined, organizational learning takes place. According to Argyris (1982), organizations find it difficult to learn lessons from problems and seldom question the underlying basis of their own problems. Soete and Weehuizen (2003) further support this notion that public sector organizations often lack innovation and are resistant to change - they tend to emphasize conformity and defend status quo instead of focusing on creativity, improvement and change. This is evident when implementing innovative especially information technologies such as e-Procurement systems. As the implementation of e-Procurement initiatives in the public sector demands exchange of information within and among users (specialist-users) and suppliers (large suppliers and local/regional SMEs), the procurement organization must have capacity to exercise organizational learning and share the lessons learnt. However, despite many examples of public sector e-Procurement failures in the popular business press (Vaidya et al., 2004), organizations do not document and share the lessons learnt pertaining to the failed e-Government implementations because organizations are interested to publicize only successes (Subramanian & Sachdeva, 2003) and are apparently silent on failures, making it difficult to researchers to obtain data (Sauer, 1999).

#### 4. Research Methodology

A descriptive research design will be used in this study. The target population of this study comprises of the ICT and Procurement managers tall the 190 state corporations comprising of a total of 380 respondents. Thus E-procurement strategy and its application are relevant at this level prompting the choice of the departments. Primary data was collected using a questionnaire covering the role of E-procurement in state corporation performance. Quantitative data was analyzed by employing descriptive statistics and inferential analysis using statistical package for social science (SPSS).

# 5. Summary of Findings

The general objective of this study was to critically examine the role of e-procurement strategies on the procurement performance in state Corporations in Kenya. The specific research objectives were to establish whether customer service level on e-procurement strategy affect procurement performance in state Corporations in Kenya; to evaluate how procurement cost on e-procurement strategy affect procurement performance in state Corporations in Kenva; to identify whether inventory optimization on e-procurement strategy affect procurement performance in state Corporations in Kenya; to find out whether buyer/supplier collaboration in e-procurement strategy promotes procurement performance in state Corporations in Kenya and finally to determine if compliance and auditability of eprocurement strategy enhances the procurement performance in state Corporations in Kenya

In this respect, analysis of the aggregate data from all manufacturing sub sectors indicates that approximately 82.6717 % of variations in the procurement performance in state Corporations in Kenyaare well explained by the independent variables. T-test X1, X2, X3, X4, and X5are the most significant predictors based upon p-value, meaning that the regression equation is statistically significant.

Respondents were asked to whether each independent factor influenced procurement performance in their organizations. Interestingly, the result showed that customer service level was the most important driving force for procurement performance in state Corporations in Kenya. It is followed by auditability and compliance(X5), Vision and Plan Statement procurement cost production (X2), inventory optimization (X3), and buyer supplier collaboration (X4).

# 6. Regression Analysis

The output table 4.8 below is for Y versus X1, X2, X3, X4, and X5.

Table 4.1: Regression output				
Dependent Varia	able: Y			
Sample: 1 310				
Included observations: 310				
Variable	Coefficient	Std. Error	t-Statistic	Sig.
С	46.79671	5.196101	9.006121	0.0000
X1	6.769933	0.999345	6.774372	0.0000
X2	3.822904	0.936286	4.083050	0.0001
X3	3.199374	0.824425	3.880734	0.0002
X4	2.899480	0.764836	3.790983	0.0002
X5	4.518513	0.927896	4.869633	0.0000
R-squared	0.839845	Mean dependent variable		73.86466
Adjusted R- squared	0.826717	S.D. dependent variable		13.78283
S.E. of	5 737400 Sum squared resid		4015.980	
regression	5.757409	F-statistic		63.97615
Durbin-Watson stat	1.870660	Prob(F-statistic)		0.000000

The equation derived from regression output is as follows:

Y = 46.79671 + 6.769933 X1 + 3.822904 X2 + 3.199374 X3 + 2.899480 X4 + 4.518513 X5

# 7. Conclusions

Study findings revealed that services offered in their departments as efficient and effective; that E-procurement service level significantly reduces paper work and increased productivity of clerical staff and that customer service level in e-procurement strategy leads to change in "users" behavior; that procurement automation reduces procurement cost to a great extent; that E-procurement software system reduces time and effort required to complete purchasing transactions and hence reduced procurement cost; that the cost of laving IT infrastructure is dependent on the factors that influence procurement cost; that procurement cost reduction integrates organizations with key tools cost data to make decisions; that high levels of inventory/stock adversely affect profitability of the corporation; that inventory optimization was affected by dynamic pricing policy; that top level management contributes to policies on ordering and replenishment of inventory in their organizations; and that that real time.

# 8. Recommendations

State corporations should adopt electronic customer relationship management systems (CRM) to help them improve the relationship and contact with customers. They should also have a good e-procurement software system as it would help them greatly reduce the time and effort required to complete purchasing transactions by eliminating traditional paper chain of requisitions, approvals, receiving and payment reconciliation. Business information systems should also be well integrated to provide an organization with the key tool cost data that allows them to make considered decisions on purchases, discount requirements and supplier partnerships as real - time information in regard to inventory levels throughout the supply chain assists in lowering the costs of back orders, lost orders and obsolescence

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