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BUYER/SUPPLIER RELATIONSHIP: A FACTOR INFLUENCING E-PROCUREMENT PERFORMANCE

Enock Musau Gideon

ABSTRACT: *The objective of the study was to investigate the role of buyer/supplier collaboration strategy on the performance of state Corporations in Kenya. In doing this, the study adopted the e-technology perspective theory of (*Lee, 2003*). The theory explains how the use e-collaboration allows customers and suppliers to increase coordination through the internet in terms of inventory management;* demand management and production planning.*The study used a cross-sectional survey research design. Both qualitative and quantitative research methodologies were used in the study. The study population of this study comprised of the ICT and Procurement managers at all the 190 state corporations in Kenya comprising of a total of 380 respondents. Since the population was highly heterogeneous, a cluster sampling was used to select 380 respondents from 190 state corporations. Primary data was collected using a questionnaire covering the role of E-procurement in state corporation performance. The questionnaire contained both structured and unstructured questions. Secondary data was gathered from existing credible and recognized source. Quantitative data was analyzed by employing descriptive statistics and inferential analysis using statistical package for social science (SPSS) together with simple graphics analysis, descriptive statistics form the basis of virtually every quantitative analysis to data). Correlation analysis was used to establish the relationship between the independent and dependent variables. The positive (H1) hypothesis testing was done at 5% level of significance and SPSS was used for this purpose. The data was then presented using frequency distribution tables, bar charts and pie charts for easier understanding. Procurement performance in the state corporations was regressed against the variable of the role of buyer/supplier collaboration strategy. The study established that, buyer/supplier collaboration strategy of the procurement process have positive relationship with procurement performance in State Corporation. It also revealed that, there is a significant positive relationship between the components of e-procurement strategy buyer- supplier collaboration process with the procurement performance. The study recommended that Suppliers to be so open and consider radically differing service solutions as being central to their competitive advantage and see their ability to partner and establish a relationship with the client setting them apart from their competitors.*

KEY WORDS: Buyer/supplier relationship: A factor influencing e-procurement performance

INTRODUCTION

Background Information

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

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network companies that embark on e-procurement buying programs 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 automated the procurement process further. The management of agreements and contracts, price list verification product, comparisons, article selection has not only become simplified but also speedy Chau, (2006).

Statement of the Problem: (Hsu & Chiu, 2004) propose that, the expectation of relationship is important for motivating collaboration in inter-organizational relationships noted that information sharing joint decision making and incentive alignment are factors that facilitate collaborative action through information exchange between the buyer and supplier. However, State Corporations in Kenya has been experiencing a myriad of problems including corruption, nepotism and mismanagement (R.O.K, 2009). These problems in return have worsened the relationship between the buyers and suppliers by hampering improved and sustained performance and service delivery.

Objective of the Study: To determine the role of buyer/supplier collaboration strategy on the performance of state Corporations in Kenya.

Research Hypothesis

H01: Buyer/supplier collaboration strategy has no significant influence on the performance of state corporations in Kenya.

LITERATURE REVIEW

Literature review gives an overview and synthesizes previous studies (Ngechu, 2006). A review of theoretical and analytical literature and gaps to be filled by the study is provided in this chapter.

THEORETICAL FRAMEWORK

The E -Technology Perspective Theory

E-procurement lacks an overarching definition and encompasses a wide range of business activities. For example, (Choi & Rungtusanatham, 2001),) state that e-procurement remains a

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first generation concept aimed at buyers, which should progress into e-sourcing and ultimately into e-collaboration. E-collaboration allows customers and suppliers to increase coordination through the internet in terms of inventory management, demand management and production planning (Lee, 2003). This facilitates the so-called frictionless procurement paradigm (Brousseau, 2000). This research recognizes the extensive nature of e-procurement and uses the definition provided by (Min & Galle 2002,) where e-procurement is a business-to-business (B2B) purchasing practice that utilizes electronic procurement to identify potential sources of supply, to purchase goods and service, to transfer payment, and to interact with suppliers. The authors believe that this definition provides the scope to investigate the basic level of e-procurement in the Irish ICT manufacturing sector.

The internet has been widely adopted by companies with the aim of improving performances both in internal processes and in processes going beyond their boundaries (Barratt & Rosdahl, 2002). Despite the fact that business to-business (B2B) trade has enjoyed a quieter existence online than business-to-consumer (B2C) (Barratt & Rosdahl, 2002) the benefits of e-procurement in a B2B setting are significant (Min & Galle, 2001),). Indeed it has been claimed that e-procurement has become the catalyst that allows companies to finally integrate their supply chains from end-to-end, from supplier to the end user, with shared pricing, availability and performance data that allows buyers and suppliers to work to optimum and mutually beneficial prices and schedules (Morris *et al*, 2000).

Usually companies adopt e-procurement systems to manage the purchase of low critical products and services (Min & Galle, 2002). In summation it is noted that the extent of e-procurement adoption remains in a formative stage, falling short of the type of e-sourcing and e-collaboration suggested by (Morris *et al*, 2000). Common e-procurement tools are online catalogues and direct auctions, where reverse auctions remain unpopular with sellers (Basheka & Bisangabasaija, 2010). E-procurement implementation is characterized by the direct and indirect procurement divide, where firms tend to use online systems for uncritical items (Min & Galle, 2001). The transition to modern e-procurement calls for strategic adaptation. It is one strategy, though, that requires much organizational change (Macinnis & Jaworski, 2009). The above theory instigated the third research question: How does inventory optimization affect the procurement process in state corporations' performance.

METHODOLOGY

Research Design: The research design constitutes the blue print for the collection, measurement and analysis of data, (Kothari, 2005). A cross-sectional survey research design was used in this study. Cross-sectional survey is a method that involves the analysis of data collected from a population, or a representative subset, at one specific point in time Orodho (2003). The choice of this design is appropriate for this study since it utilizes a questionnaire as a tool of data collection and helps to establish the behavior of employees towards embracing e-procurement in state corporations. This is supported by (Mugenda &Mugenda, 2003) who assert that this type of design enables one to obtain information with sufficient precision so that hypothesis can be tested properly. It is also a framework that guides the collection and analysis

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of data. (Kothari, 2005) observes that a descriptive research design is used when data is collected to describe persons, organizational settings or phenomenon.

Population

Population refers to an entire group of persons or elements that have at least one thing in common. Population also refers to the larger group from which a sample is taken (Orodho, 2003). A population can also be defined as including all people or items with the characteristic one wish to understand. The study population of this study comprised of the ICT and Procurement managers at all the 190 state corporations in Kenya comprising of a total of 380 respondents. Thus E-procurement strategy and its application is relevant at this level prompting the choice of the departments i.e. these group of respondents is directly involved in the implementation of E-procurement policy. A list that contains the number of all managers was sourced from the human resource department of each state corporation and directorate of state corporations (GOK 2011) this was used as a sampling frame to identify every single element in the target population.

Sampling Frame

A sampling frame is the source material or device from which a sample is drawn. According to orodho (2003) a sampling frame is a list of all those within population who can be sampled. The sample for this study was 190 state corporations in Kenya. (Directorate of state corporations, 2013).

Sample and Sampling Techniques

A sample is a set of observations drawn from a population by a defined procedure .The sample represents a subset of manageable size. Samples are collected and statistics are calculated from the samples so that one can make inferences or extrapolations from the sample to the population. The samples size of this study was 80 respondents. Since the population is highly heterogeneous, a cluster sampling was used to select 380 respondents from 190 state corporations. Cluster sampling is a sampling technique used when "natural" but relatively homogeneous groupings are evident in a statistical population. In this technique, the total population is divided into groups (or clusters) and a simple random sample of the groups is selected. Then the required information is collected from a simple random sample of the elements within each selected group. This may be done for every element in these groups or a subsample of elements may be selected within each of these groups. A common motivation for cluster sampling is to reduce the total number of interviews and costs given the desired accuracy. Assuming a fixed sample size, the technique gives more accurate results when most of the variation in the population is within the groups, not between them (Orodho, 2003). A simple random sampling plan where every respondent, or object or subject has chance of representation will be used in this study.

Data Collection Methods: A research permit was sought from the National Council for Science and Technology (NCST). On obtaining the research permit, the researcher sought permission from the managers to visit their corporations. Selected state corporations were thereafter visited by the researcher after an appointment had been made with the managers.

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Questionnaires and the interview schedules were administered personally by the researcher to the respondents. Adequate instruction and assurance of confidentiality was provided to all participants. Thereafter, the questionnaires were collected by the researcher after being filled.

Sample size formula

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

Where n=sample size

N= sample population

e=precision

Therefore the sample size will be 80

Table 1 Sample Frame

Population	Target population	Sample at precision 10%
ICT Mangers	190	40
Procurement	190	40
Total	**380**	**80**

Data Collection Instruments

According to (Mugenda &Mugenda, 2003) data collection is the means by which information is obtained from the selected subject of an investigation. The researcher collected both primary and secondary data during the researcher. Primary data was collected using a questionnaire covering the role of E-procurement in state corporation performance. The questionnaire contained both structured and unstructured questions. The open-ended questions were used to limit the respondents to given variables in which the researcher is interested, while unstructured questions were used in order to give the respondents room to express their views in a more pragmatic manner (Kothari, 2005). Secondary data was gathered from existing credible and recognized source. The data comprised of materials that are desirable, current, accurate,

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sufficient and relevant collected from library text books, internet and magazines and personnel file in the organization.

Pilot Study

According to Mugenda, (2003) pilot test is necessary and the validity of a study. A pilot test was conducted using questionnaires administered to ICT managers and procurement managers. This constituted 10% of the 38 state corporations firms that were registered by directorate of state corporation the for ICT managers and for procurement (10% of 38) = 3.8 = 4 were selected using simple random sampling. In each of the ICT and the procurement managers were targeted. This constituted to respondents in each state corporation and therefore the total number of the respondents for the pilot was 4 respondents.

The pilot was undertaken to pretest data collection instrument for validity and reliability. According to (Orodho, 2003) a pilot study is necessary for testing the reliability of data collection instruments. (Cooper & Schindler, 2001) explains reliability of research as determining whether the research truly measures that which it was intended to measure or how truthful the research results are. Pilot study is thus conducted to detect weakness in design and instrumentation and to provide accurate data for selection of a sample (Young, 2009). The validity of the questionnaire was determined using construct validity method. Construct validity is the degree to which a test measures an intended hypothetical construct (Mugenda, 2003). Using a panel of experts familiar with the construct is a way in which this type of validity can be assessed; the experts can examine the items and decide what that specific item is intended to measure (Kothari, 2005).

The study used different groups of experts in the field of procurement and issued them with the questionnaires. The experts were required to assess if the questionnaires helps in establishing the role of e-procurement within state parastatals in Kenya. The coefficient of data gathered from the pilot study was computed with assistance of Statistical package of social Sciences (SPSS) version 21. A coefficient of above 0.5 was obtained and this indicated that the data collection instruments were valid (Klein & Ford, 2003). The recommendations from the procurement experts and the pilot study respondents were used to improve on data collection instruments. Data validity played an important role towards generalization of the gathered data to reflect the true characteristics of the study problem.

The reliability of the questionnaires was determined using test-retest method. A reliable measurement is one that if repeated second time gives the same as it did the first time (Mugenda & Mugenda, 2003). Test-retest reliability is a measure of reliability obtained by administering the same test twice over a period of time to a group of individuals (Mandrish & Schaffer, 2005). The scores from Time 1 and time 2 can then be correlated in order to evaluate the test for stability over time (Mandrish & Schaffer, 2005). Test-re-test reliability is the degree to which scores are consistent over time; it indicates score variation that occurs from testing session as a result of errors of measurement (Shim *et al*, 2001). The preliminary or first draft of questionnaires was given to a panel of five experts in the field of procurement. These experts were asked to review the instrument and make recommendations for improving its validity.

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These recommendations were then incorporated into a second draft of the instrument which was then given to a small sample of relevant professionals. This pilot sample was asked to comment on the ease with which they understood and completed the test questions. Where relevant, these comments were incorporated into a third draft of the test instrument. This third draft was constituted to the final test instrument where the open-ended questions on the survey instrument were analyzed qualitatively; that is, they were simply reported for each of the three groups of the respondents.

Reliability

The study conducted factor analysis to select a subset of variables from a larger set based on the original variables with the highest correlations with, the principal component factors. Reliability analysis was conducted using Cronbach's alpha to determine whether the data gathered on each variable had a significant relationship with the role of e-procurement

Reliability is the extent to which results are consistent over time and an accurate representation of the total population under study is referred to as reliability and if the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable (Orodho, 2003).

(Cooper & Schindler, 2001) identify three types of reliability referred to in quantitative research, which relates to; the degree to which a measurement, given repeatedly, remains the same as the stability of a measurement over time; and the similarity of measurements within a given time period. (Mugenda, 2003) adheres to the notions that consistency with which questionnaire items are answered or individuals scores remain relatively the same can be determined through the test retest method at two different times. This attribute of the instrument is actually referred to as stability. If we are dealing with a stable measure, then the results should be similar. A high degree of stability indicates high degree of reliability, which means the results are repeatable.

(Klein & Ford, 2003) detects a problem with the test-retest method which can make the instrument, to a certain degree, unreliable. She explains that test-retest method may sensitize the respondent to the subject matter, and hence influence the response given. Similarly, (Cooper & Schindler, 2001) note that when respondents answer a set of test items, the scores obtained represent only a limited sample of behavior. As a result, the scores may change due to some characteristic of the respondent, which may lead to errors of measurement. These kinds of errors reduced the accuracy and consistency of the instrument and the test scores. Hence, it is the researchers' responsibility to assure high consistency and accuracy of the tests and scores (Kothari, 2005). To measure the reliability of the gathered data, Cronbach's alpha was applied. Cronbach's alpha is a coefficient of internal consistency. Suppose that we assume a sum of K components (K-items or test lets) X=Y1+Y2+…… Yk. Cronbach's α

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……*Equation 1*

……*Equation 2*

……*Equation 3*

Where K is as above V, the average variance of each component (item), and C he average of all covariance between the components across the current sample of persons (that is, without including the variances of each component). A commonly acceptable rule of thumb for describing internal consistency using Cronbach's α is as follows.

Table 2 Internal consistency- Cronbach's alpha

Cronbach's alpha	**Internal consistency**
α≥0.9	Excellent(high stakes testing)
0.7≤ α <0.9	Good (low stake testing)
0.6≤ α<0.7	Acceptable
0.5≤ α<0.6	Poor
α< 0.5	Unacceptable

However, greater number of items in the test can artificially inflate the value of alpha and a sample with a narrow range can deflate it, so this rule of thumb should be used with caution.

Data Analysis and Presentation

This study is expected to produce both quantitative and qualitative data to explain the role of e-procurement strategy exhaustively. Once the questionnaires were received they were coded and edited for completeness and consistency. 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, (Orodho, 2003). Together with simple graphics analysis, descriptive statistics form the basis of virtually every quantitative analysis to data, (Kothari, 2005). Correlation analysis to establish the relationship between the independent and

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dependent variables was employed. The purpose of doing correlation was to allow the study to make a prediction on how a variable deviates from the normal. The positive (H1) hypothesis testing was done at 5% level of significance and SPSS was used for this purpose. The data was then presented using frequency distribution tables, bar charts and pie charts for easier understanding.

Multiple Regression Analysis Model

Procurement performance in the state corporations was regressed against five variables of the role of e-procurement performance namely customer service level strategy, cost reduction, inventory optimization strategy, Buyer / supplier collaboration strategy and auditability of the procurement process. The equation will be expressed as follows:

Y=……

Ys = procurement performance

?= Constant (Co-efficient of intercept)

X1 = Customer service level strategy and;

X2 =Cost Reduction;

X= Inventory optimization strategy

X4= Buyer-supplier collaboration strategy

X5=Auditability and compliance strategy

έ. = Error Term

B1 …….B5= Regression co-efficient of five variables.

VI Findings and Discussions

Table 3 Factors loading for the Construct buyer-supplier collaboration strategy

α before	**Items**	**Factor loadings**
.625	Information sharing	
	Organizational development	

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	Supplier relationship competencies
	Inter organizational systems
	channel relationships

Factors loading for the Construct Buyer-supplier collaboration strategy

On buyer-supplier collaboration strategy, the reliability and factor Analysis results were as presented in table 4.10.These presents buyer-supplier collaboration strategy Cronbach's alpha values before and after removal of item with a factor loading value of less than 0.4. It shows that the Cronbach's alpha value changed from 0.722 to 0.751 after the removal of item with factor loadings of less than 0.40. All functions on buyer-supplier collaboration strategy were accepted. This was in agreement with (Mabert *et al*, 2003), that factor loading values that are greater than 0.4 should be accepted and values below 0.4 should be rejected. The new Cronbach's alpha value of 0.751 indicated that, they obtained data on all the buyer-supplier collaboration strategy items were reliable and this satisfied (Orodho, 2003) that an alpha coefficient higher than 0.60 indicates that the gathered data had relatively high -internal consistency and could be generalized to reflect opinions of all respondents in the target population on how buyer-supplier collaboration strategy determines procurement performance in state corporations in Kenya.

Descriptive Analysis

The purpose of descriptive statistics is to enable the researcher, to meaningfully describe a distribution of scores or measurements using indices or statistics. The researcher in this study used mean average and percentages of present the study findings of the role of e-procurement strategy in procurement performance in state corporations in Kenya.

Table 4 Buyer- Supplier relationship

Buyer-supplier relationships	**Not at all extent**	**small extent**	**Moderate large extent**	**Very large**	**Total**

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Information sharing	0.9	36.7	45.6	3.8	13	100
Organizational developments	3.5	12.4	76.8	2.6	4.7	100
Inter-organizational systems	0.5	6.8	76.5	6.7	9.5	100
Channel relationships	2.3	65.8	22.4	2.6	6.9	100
Supplier relationship competencies	2.7	14.8	65.7	7.2	9.6	100
Average	**1.98**	**27.3**	**57.4**	**4.58**	**8.74**	**100**

Construct Buyer-Supplier Collaboration strategy

This Buyer and supplier collaboration strategy entails the collaborative management of key supplier and buyer relationship and is an important of physical distribution and logistics management activities. Indeed, over the last decades, interest in collaborative relationship has surged. (Hart,. and Saunders, 2007), for instance, argue that closer buyer-supplier relationships have evolved over the past two decades from transaction processes based on arms length agreements to collaborative processes based trust and information sharing and that collaborative buyer – supplier relationship plays an important role in an organization's ability to respond to dynamic and unpredictable change.

Recent imperial research shows that information sharing in relationships increases financial performance (Heijden, 2003),) and that collaboration with external supply chain entities increases internal collaboration which in turn improves service performance (Johnston, 2005).

Buyer-supplier collaboration strategy is an interface of joint action between the buyer and supplier in the market place and focus on collaborative product and process development. While suppliers of commodity materials may sometimes negatively influence performance, for example, if they fail to deliver on time, the performance effects of key suppliers i.e. suppliers who supply strategic products which are high in value, scarce or contribute considerably to a buyer's performance both to the advantage or disadvantage of a buyer. To establish the

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influence of buyer supplier collaboration strategy on procurement performance in state corporations in Kenya. The study asked the respondents to indicate the extent to which buyer supplier factors affected procurement performance in state corporations in Kenya. The buyer supplier factors were dealt with and included; information sharing, organizational development, inter organizational development, inter-organizational systems, channel relationships and supplier relationship competencies.

The analyzed results are presented in table 4 and was identified that 0.9 percent of the respondents indicated that, information sharing between buyer and suppliers had no influence on procurement performance in state corporations in Kenya, 36.7% of the respondents indicated that, buyer supplier collaboration strategy had no influence on procurement performance in state corporations in Kenya to a small extent and 45.6percent of the respondents to a moderate extent, 3.8 percent of the respondents indicated that, buyer supplier collaboration strategy had influence on procurement performance in state corporation in Kenya to a very large extent on organizational development, 0.6 percent of the respondents indicated that organizational development does not have an influence on procurement performance in state corporations in Kenya, 4.2 percent of the respondents indicated that organizational development on buyer-supplier collaboration strategy influences procurement performance in state corporations in Kenya to a small extent, 13.4 percent of the respondents indicated that organizational development influences procurement performance to a moderate extent, 77.8 percent of the respondents indicated that organizational performance influence procurement performance in state corporations in Kenya and 4.6 percent of the respondents indicated that organizational performance influence procurement performance in state corporations to a very large extent.
On inter-organizational systems, 0.5 percent of the respondents indicated that inter organizational systems did not influence procurement performance in state corporations in Kenya, 6.8 percent of the respondents indicated that inter organizational systems influenced procurement performance in state corporations to a small extent, 76.5 percent of the respondents indicated that inter organizational systems influenced procurement performance in state corporations to a moderate extent, 6.7 percent of the respondents indicated that inter-organizational systems influenced procurement performance in state corporations to a large extent while 9.5 percent of the respondents indicated that inter organizational performance influenced procurement performance in state corporations to a very large extent.

Further, on channel relationship practices, 4.3 percent of the respondents indicated that channel relationships practices did not have an influence on procurement performance in state corporations in Kenya, 65.8 percent of the respondents indicated that channel relationship practices, influenced procurement performance in state corporations in Kenya to a small extent, 26.4 percent of the respondents indicated that channel relationships on procurement performance in state corporations to moderate extent while 3.5 percent of the respondents indicated that channel relationship practices on procurement performance in state corporations in Kenya influence to a very large extent.

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On supplier competencies, 2.7 percent of the respondents indicated that buyer supplier competencies on procurement performance in state corporations in Kenya, 2.3 percent of the respondents indicated that buyer supplier competencies influences procurement performance in state corporations in Kenya to a small extent, 14.8 percent of the respondents indicated that buyer-supplier competencies on procurement performance in state corporations in Kenya, to a small extent, 65.7 percent of the respondents indicated that the rate of buyer-supplier competencies on procurement performance influenced to a moderate extent in Kenya state corporations, 7.2 percent of the respondents indicated that the rate of buyer-supplier competencies influenced procurement performance to a very large extent in state corporations.

These findings concurred with Dyer et al, (2001) who indicates that a buyer supplier in a specific form of relational exchange which implies creating value together as the process of requiring a high level of purposeful co-operation and has been conceptualized as the creation of joint processes through substantial investments into co-specialized assets or simply joint action. In this study, we largely follow (Klein, 2007) and define collaboration as joint action in buyer- supplier relationships and focus on collaborative product and process development, lack of buyer supplier commitment, competencies and proper organizational systems and development affect strong and long lasting collaboration between buyer and supplier relationship and hence affecting procurement performance in state corporations in Kenya.

The study deduced that the major factors affecting procurement performance in state corporations in Kenya include; lack of collaborative buyer-supplier commitment, poor organizational development structures, inefficient organizational systems and policies, lack of information sharing and lack of integrative channel relationships.

Content analysis

Buyer Supplier Collaboration strategy

The development of customer-supplier collaboration strategy and interaction between parties in collaboration has been conceptualized by researchers working on interaction, relationships and networks in the field of industrial marketing and purchasing (Davenport, 2008). This body of research has focused on the nature of collaboration between firms and the behaviour of firms in industrial networks. To most firms in dyadic collaborations there will be conflicting pressures in creating a balance in their relationships between self-serving motives and the advantages of close interaction and collaboration. To achieve the benefits of a long-term inter-dependent relationship certain sacrifices may have to be made at different times for the relationship to grow and continue. These adaptations' mean that a particular supplier or customer is handled in unique ways to achieve cost advantages or to gain access to a firm's unique competencies or resources (Emiliani, 2000). Adaptations are likely to be viewed as necessary investments for the sake of the relationship with the other party. They may take the

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form of tailoring resources to the requirements of a certain customer or supplier through durable transaction specific investments (Freeman, 2006).

In long-term relationships continuity of the relationship relies on the perception of each party that the relationship itself constitutes an investment. Adaptations may generally be considered to have a positive impact on the long-term well-being of the relationship. The preparedness of a supplier to take part in various types of adaptations, whether they be technical, knowledge based, economic or legal (Emiliani, 2000) means that he considers it beneficial for the relationship and is committed to its future (George, 2002),). However, when adaptations are continually placed upon one party by the other, and decisions about their appropriateness and necessity are unilaterally rather than bilaterally decided, the adapting firm may lose the capability to make its own decisions about the future of the relationship. In so doing it may lose its commitment towards the other firm. Thus investment through adaptations may be felt to be for the benefit of the other firm rather than the relationship itself, and goodwill towards that firm may be lost. When the ability of the firm to contribute to decisions about the relationship, internal firm processes and innovation are sidelined over a prolonged period of time, the knowledge of how to innovate, plan for the future and contribute to the development of relationships may be lost. Thus small suppliers that often face imposed adaptations by customers may be increasingly locked
(Hines, 2004), to current relationships.

Inferential Analysis

Correlation Analysis

Correlation is a term that refers to the strength of a relationship between two variables. A strong or high correlation means that two or more variables have a strong relationship with each other while a weak or low, correlation means that the variables are hardly related. Correlation coefficient can range from -1.00 to +1.00. The value of -1.00 represents a perfect negative correlation while a value of +1.00 represents a perfect positive correlation. A value of 0.00 means that there is no relationship between variables being tested (Orodho, 2003). The most widely used types of correlation coefficient are the Pearson R which is also referred to as linear or product-moment correlation. This analysis assumes that the two variables being analyzed are measured on at least interval scales. The coefficient is calculated by taking the covariance of the two variables and dividing it by the product of their standard deviations. A value of +1.00 implies that the relationship between two variables X and Y is perfectly linear, with all data points lying on a line for which Y increases and X increases. Conversely a negative value implies that all data points lie on a line for which Y decreases as X increases (Orodho, 2003). In this study pearson correlation is carried out to determine how the research variables related to each other. Pearson's correlation reflects the degree of linear relationships between two variables. It ranges from+1 to -1. A correlation of +1 means there is a perfect positive linear relationship between variables (Young, 2009).

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Table 5 correlation analysis for construct Buyer-supplier relationship

		E-procurement performance	**Buyer-supplier Collaboration strategy**
E-procurement Performance	Pearson Correlation	1	2.899
	Sig. (2-tailed)	0.0002	63
	N	63	
Procurement cost reduction strategy	Pearson Correlation	2.899	
	Sig. (2-tailed)	0.0002	63
	N	63	
Correlation is significant at the 0.01 level (2-tailed)			

Correlation analysis for Buyer/Supplier Collaboration strategy

A correlation analysis for the construct buyer-supplier collaboration strategy was conducted to find out how buyer-supplier collaboration strategy correlated with procurement performance. Table 5 shows that the Pearson correlation coefficient was 2.899480. This is a clear in indication that buyer/supplier has a positive correlation with e-procurement performance (p-values >0.05). The significance of buyer/supplier verses e-procurement performance as indicated in the table below. These findings indicate that there is a strong linear relationship between buyer/supplier collaboration strategy and e-procurement strategy as shown in table

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2.22. By focusing on relational exchange collaboration entails the activities that are undertaken faintly rather than unilaterally (Davenport, 2008) suggested that the requirements for effective collaboration are mutual objectives, integrated policies, joint decision making, information sharing of benefits and losses.

Regression analysis

Regression analysis is a statistical tool for the investigation of relationship between variables. Usually, the investigator seeks to maintain the casual effect of on variable upon another. Regression analysis allows you to model, examine and explore spatial relationship, and can help explain the factors behind observed spatial patterns. Regression analysis is also used for prediction.

Regression analysis for construct Buyer supplier collaboration strategy

Table 6 presents the regression model the regression model of Buyer supplier collaboration strategy with a coefficient od determination of R2 = 0.272 and R= 0.522 at 0.05 significance level. The coefficient of determination indicates that 52.2 % of the variation on e-procurement performance is influenced by Buyer supplier collaboration strategy. This shows that there exists a positive relationship between Buyer supplier collaboration strategies on e-procurement performance. The test of beta coefficient shows that there is a significant relationship between Buyer supplier collaboration strategy and e-procurement performance as positive. The coefficient significance of Buyer supplier collaboration strategy effect as .191 and is significantly greater than zero since the significance of t-statistics 0.00 is less than 0.05. This demonstrates that the high level of Buyer supplier collaboration strategy as having a positive effect on e-procurement performance.

This echoed the findings by (Handfield, 2003) that effective buyer-supplier relationships promotes information sharing, joint decision making and incentive alignment are factors that facilitate collaborative action through information exchange between the buyer and supplier hence enhancing procurement performance.

Table 6 Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std Error of the Estimate
	.442	.195	.190	0.7648
Predictors : (constant)	**Buyer**	**supplier**	**collaboration**	**strategy**

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ANOVA Test

ANOVA for construct Procurement cost reduction strategy

The results of Analysis of variance (ANOVA) for regression coefficients are shown in Table 6. The analysis results revealed that the significance of F statistics is 0.00 which is less than 0.05. This implies that there is a significant relationship between procurement cost reduction strategy and e-procurement performance. E-procurement adoption is justified only when the perceived benefit is large enough to cover the cost. The high cost of initial investment associated with the required infrastructure and training of personnel, quantifying the return on investment often becomes a barrier to state corporations (Locke and Latham, 2002).

Table 7 ANOVA for construct buyer- supplier collaboration strategy

Model	**sum of squares**	**Df**	**Mean of Square**	**F**	**Sig**
Regression	73.86	1	73.860	25.314	.0002
Residual	436.814	135	3.235		
Total	510.674	136			
Predictors:	(constant)	Buyer-supplier relationship			
Dependent variable:	**E- procurement**	**performance**			

ANOVA for construct Buyer -Supplier collaboration strategy

The results of Analysis of variance (ANOVA) for regression coefficients are shown in table 4.32. The analysis results revealed that the significance of F statistics is 0.00 which is less than 0.05. This implies that there is a significant relationship between Buyer-supplier relationships and e-procurement performance. Buyer\supplier commitment is an enduring desire to maintain a valued relationship. Through commitment partners dedicate resources to sustain and further the goals of the collaboration. (Taylor & Todd, 2005) and (Shalhoub, 2006) propose that the expectation of relationship is important for motivating collaboration in inter-organizational relationships (Quach, 2005) noted that information sharing joint decision making and incentive alignment are factors that facilitate collaborative action through information exchange between the buyer and supplier.

CONCLUSIONS

The output given from the findings indicate that there is a significant positive relationship between the components of e-procurement strategy buyer- supplier collaboration process with

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the procurement performance. The findings also revealed that, buyer/supplier collaboration strategy of the procurement process have positive relationship with procurement performance in State Corporation. The finding emphasized that the advent of electronic procurement have been viewed as a key stone of supply chain collaboration. Moreover, it has been repeatedly reported that electronic procurement is an important enabler for information sharing, however, its impact on complex collaborative practices including joint decision making and incentive alignment has not been established yet.

RECOMMENDATIONS

The Researcher recommends that adversarial procurement approaches preclude the development of collaborative relationships. However, there emerged a general consensus that a more relational procurement process has a positive influence on the relationship established: this reinforces the assertion by Rogers that better business alliances are created through developing the supplier-relationship procurement model. The perceived benefits of relational approaches should include clarity of service requirements, value delivery, and cultural alignment: These supports the view presented by Lehtonen that mutual involvement in relationship development and planning is needed to convert ideas into practical operations, and to enable both parties to develop the relationship to their mutual benefit. It was also apparent that some organizations should be more evolved than others in terms of clearly defining the level of collaboration and associated business benefits they are seeking to achieve. It is recommended that Suppliers to be so open and consider radically differing service solutions as being central to their competitive advantage and see their ability to partner and establish a relationship with the client setting them apart from their competitors.

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