

ROLE OF ELECTRONIC PROCUREMENT ADOPTION ON PREFERENCE REGULATIONS IN STATE CORPORATIONS: A CASE OF KeNHA

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ABSTRACT

The purpose of this study was to investigate on the role of electronic procurement adoption on preference regulations in States Corporations, having a narrow focus of KeNHA (Kenya national highway authority). The researcher intends to investigate the role of electronic procurement adoption on preference regulations in States Corporations through looking at the role of cost reduction, buyer supplier integration, electronic reverse auctioning and organizational policy on preference regulations in states corporations. The study was based on disruptive innovation theory, diffusion of innovation theory, transaction cost theory and institutional theory. Based on research methodology, the researcher used qualitative and quantitative research designs, where target population comprised of 100 selected procurement officers, firm suppliers, legal and compliance department and finance officers. Stratified random sampling technique was used to acquire the right sample of 50 individuals. Data collection was done using questionnaires, analysis of data was done using SPSS and data presentation was expected to be in terms of tables, frequency charts and also figures. Quantitative data was analysed using descriptive statistic and based on the results, respondents indicated that through electronic procurement, KeNHA has managed to cut costs such as reduced cost on operational purchasing activities, electronic contracting and disposal costs and also costs on electronic procurement activities. In the second objective of the study, it was found

out that electronic procurement has played a huge role in buyer supplier integration as electronic market place has been taking place in KeNHA and other states corporations toward enhancing preference regulations. The researcher found out that electronic procurement has contributed to electronic reverse auctioning in KeNHA and states corporations as electronic order placing, and electronic selling and purchases have been enhanced hence contributing greatly to preference regulations in states corporation. Based on the results, it was clear that organizational policy has greatly contributed to preference regulations through electronic procurement as amendments of procurement rules has to be done to accommodate electronic procurement activities. Results also found out that in inferential statistics, relationship existed between dependent and independent variable, indicating that any small change in independent variable, dependent variable will be affected by a constant value of 3.315 and the resultant independent variable. The researcher concludes that electronic procurement in Kenyan States Corporation has not fully been implemented as majority of the respondents' lacked awareness of its performance and also considering that 30% of the public procurement to disadvantaged groups has never been attained, in KeNHA and other resultant states corporation. The researcher recommended that the Government should consider establishing policies which ensure full implementation of electronic procurement in states corporations to ensure that the disadvantaged target of procurement is reached, also private and

public sectors need to learn the benefits associated with electronic procurement such as cost cutting and buyer supplier integration and reverse auction. The researcher also recommended to future researcher that different variables need to be considered and that future research location should be rural or in county government to determine how

several county corporations have appreciated applicability of electronic procurement on preference regulations.

Key Words: *Cost reduction, Buyer supplier integration, Electronic reverse auctioning, Organizational policy, Electronic Procurement Adoption, Preference Regulations*

INTRODUCTION

Croom & Brandon-Jones (2004) stated that electronic procurement involves the use of internet based tools and application to carry out procurement activities which involves order taking, record keeping, delivery of, services , sourcing, purchasing and other related activities. There are several forms of electronic procurement and they involves, enterprise resource planning (ERP), vendor management systems (VMS), electronic resource auctioning (ERA) electronic informing, electronic purchasing and electronic informing. E-purchasing involves order taking, and delivery of goods through online transactions. Braithwaite and Drahos (2002) stated that preference regulations in governments have been in existence in the ancient early Egyptian, Indian, Greek, and Roman civilizations. The governments had their own states corporations which were responsible for supplying of raw materials in construction of industries and roads which were the main activities. No any other company or individual was supposed to supply or procure goods or services from organizations which were not approved by the authority by then. This was accompanied by law and standards which were set to indicate who was supposed to supply good or service to certain areas such as to government institutions. By then preference regulations were not basically concerning with the youth, women or disabled, but it was concerned with ensuring that the government entities grow and expand to reach to the local citizen.

In the European Early Middle Ages, law and standardization declined with the Roman Empire, but regulation existed in the form of norms, customs, and privileges; this regulation was aided by the unified Christian identity and a sense of honour in regard to contracts. Bovis (2007) stated that modern preference regulations were experienced in Europe in 1962, with the European Communities (EC) Council of Ministers adopted General Programmes in 1962 that envisaged the abolition of national quotas and restrictions in public procurement. Directive 66/683 prohibited rules requiring the use of national products or prohibiting the use of foreign products in public procurement, and Directive 70/32 applied the same rule to public supply contracts. The procedures for awarding public supply contracts were co-ordinated with Directive 77/62, which introduced three fundamental principles: contracts had to be advertised community-wide, discriminatory technical specifications were prohibited and tendering and award procedures had to be based on objective criteria. However, it did not apply to public utilities, or to products

originating outside the EC until its amendment by Directive 80/767 following Community approval of the 1979 General Agreement on Tariffs and Trade (GATT) Agreement on Government Procurement (Bovis, 2007). Member nations in the European Union were later given preference to procure goods and services from countries which were member of the union at free rates. Countries which were less disadvantaged also were allowed to sell goods and services to the well of countries at free rates which had the intention of influencing economic growth of those countries.

USA in general was also among countries in which modern procurement was also experienced with preference given to the native industries and no any organization was supposed to import any good or service which native industries and organizations were able to produced. This fostered growth in the small industries which later turned to be world renowned industries (Levi-Faur, 2010). Preference regulations in Africa can be dated back in 2000 with Africa Growth and Opportunity Act (AGOA) passed as part of the Trade and Development Act of 2000, which provides beneficiary countries in Sub-Saharan Africa (SSA) with the most liberal access to the United States' (US) market available to any country or region with which the US does not have a free trade agreement. AGOA became the first preference regulation to be given to Africa in general as it was based on Generalized Systems of Preferences (GPS) which were used in the international trade regime since 1971, which is concerned with allowance of developing nations to sell their goods and services to the developed nations at duty free or low duty entry (Nyeko, 2004).

Preference regulations in Africa states were introduced in South Africa in 2000 hence became the first nation in Africa to introduce preference regulations in its constituency. Referential Procurement in South Africa is derived from the Preferential Procurement Policy Framework Act, Act 5 of 2000 and its Regulations. This Act provides for the implementation of a policy and system where bids (tenders) are not awarded on being to specification and having the lowest price but on a prescribed point system where preference is given to Historical Disadvantaged Individuals (HDI's) South African citizens. HDI referred to individuals who had no voting rights in the national elections prior to the introduction of the 1983 constituency or the 1994 in terms constituency, it also catered for a female citizen in any race and any person who is disabled, becoming the first modern preference regulation in public procurement in Africa states (Krause, Pagell & Curkovic, 2001).

Locally, Mokaya (2014) stated that since 2010, PPOA with the support of the African Development Bank had assigned M/s Capital Guardians, a consultant with the responsibility to establish the extent of participation of SMEs and other disadvantaged groups in public procurement and propose a framework for their participation. This was with respect to the bill which was passed in 2005 with an aim of integrating both the small scale businesses and disadvantaged groups in public procurement activities. Awino (2011) stated that according to PPOA, disadvantaged groups' means persons perceived to be denied, by mainstream society

access to or individuals who have been subjected to prejudice or cultural bias because of their identities as members of groups without regard to their individual qualities e.g. enterprises owned by women, the youth and persons with disabilities.

Rotich (2011) stated that according to e-government strategy paper 2008, electronic procurement in public was established in Kenya since 2007 although with slow pace of implementation due to poor and inefficient data storage and retrieval with minimal suppliers willing to adapt to the new technology. This slow applicability has given way to the young generation to have stake in public procurement through electronic procurement which since 2010 has taken high pace of acceptance and currently used by the national government as a tool to spur development for small scale businesses and disadvantaged groups through preference regulation of 30% of the government procurement funds. A lot of development in preference regulations has taken place, with the current amendment regulations of 2012 laying down specified guidelines on how preference regulations will be implemented hence enhancing growth in procurement activities in Kenya state corporations and private sectors in general. Kenya National Highways Authority (KeNHA) is a corporate body which was established under Kenya Roads Act, 2007.

STATEMENT OF THE PROBLEM

Leenders and Fearon (2009) stated that electronic procurement is one of the current trends which national governments in developed nations have adopted to empower the youth and women, through allocation of supply tenders by the government and private organizations through strict regulations. This has been the most effective form of procurement in the current century due to its cost effectiveness and efficiency as the disabled and other disadvantaged groups can provide services at any point in time. Akinyi (2010) stated that Section 39 of the PPDA confers upon the Minister of Finance the capacity to prescribe preferences or reservations, after taking into consideration economic and social development factors. Specifically, the Act makes provision for preferences and reservations targeting disadvantaged groups and micro, small and medium enterprises. Regional factors may also be taken into account where the funding is 100% Kenyan and the procurement falls below the prescribed thresholds, exclusive preference is given to citizens of Kenya. With the prescribed regulations and a lot of writing of the acts which includes preference of 30% of the public procurement funds to the disadvantaged groups, their ability to deliver and procure services has not grown to the expectations, where based on report by PPOA 2014, 89.2% were quotations where preference regulations had only 18% of quotation, 1.3% were open tenders, 3.3% were direct tenders, 3.9% were cash purchases and 2.2% were restricted tenders. This has shifted attention to private sectors where procurement tenders have been allocated to most preferred organizations with enough resources which can be used for receivership if they fail to deliver, hence neglecting small enterprises and disadvantaged groups due to the problem of lack of experience, inability and insufficient qualifications (Kariuki, 2009). This research intended to solve this problem through investigating on the effects of electronic procurement adoption on preference regulations in state corporations.

OBJECTIVES OF STUDY

The main objective of the study was to investigate on the role of electronic procurement adoption on preference regulations in state corporations, through a narrow focus of KeNHA (Kenya National Highway Authority)

SPECIFIC OBJECTIVES

1. To determine the role of cost reduction on preference regulations in states corporations.
2. To assess the role of buyer supplier integration on preference regulations in states corporations.
3. To determine the role of electronic reverse auctioning on preference regulations in states corporations.
4. To examine the role of organizational policy on preference regulations in states corporations.

THEORETICAL REVIEW

The study was guided by Disruptive Innovation Theory, Diffusion of Innovation Theory, Transactional Cost Theory and Institutional Theory.

Disruptive Innovation Theory

Danneels (2004) stated that disruptive technology, which is a term retrieved from descriptive innovation theory was coined by Clayton M. Christensen with his co-writer Joseph Bower in 1995. This article was written with an aim of educating managers and other parties who are interested in purchase and supplies based the current trends and technologies which create new demand and balance performance based on the new and old systems of procurement and supplies. Anthony, Scott; etal (2008) stated that disruptive innovation is an innovation that helps create a new market and value network, eventually disrupts an existing market and value network (over a few years or decades), displacing an earlier technology. The term is used in business and technology literature to describe innovations that improve a product or service in ways that the market does not expect, typically first by designing for a different set of consumers in a new market and later by lowering prices in the existing market.

Disruptive theory based on Clayton idea of disruptive innovation, purchasing is enhanced through the new technology. Electronic auctioning and electronic order taking are some of the trends enhanced in this theory which Christensen believed that adoption of new technology in procurement helps in cost cutting and also attracting new customers with respect to preference regulations, this will enhance procurement ability for the youth and disadvantaged groups due to their conversant with technology (Johnson, Mark, Christensen, Clayton, et al., 2008). Christensen distinguishes between "low-end disruption", which targets supplier and customers who do not need full performance based on the ways of procurement operations at high end of

the market, and "new-market disruption", which targets the undetected market (disadvantaged groups and the youth whose needs are so high and they were not previously fulfilled by the existing incumbents) (Oliver, 2006).

The theory also doesn't consider performance of segment based on their technology in purchasing and supplies but also targets the demand of the products and services provided. "Low-end disruption" occurs when the rate at which services improve exceeds the rate at which customers can adopt the new performance, therefore creating high performance which is higher than the expectations of companies which have not adopted the new system. At this point disruptive innovation enters to create a balance through consideration of both segments hence influencing supplies and purchases for both low end and new market disruption (Mountain & Darryl, 2006).

Diffusion of Innovation Theory

In 1962, Everett Rogers wrote down the theory of diffusion of innovation which explained why, how and at what rate ideas and innovation spread out to cultures and how this influences business performance. Rogers argues that diffusion is the process by which an innovation is communicated through certain channels over time among the participants in a social system, (Diane, 2004). The origins of the diffusion of innovations theory are varied and span multiple disciplines. Rogers proposes that four main elements influence the spread of a new idea: the innovation itself, communication channels, time, and a social system. Rogers stated that for the process to be effective, human capital must be available, and the innovation must be widely adopted to be effective. However, Rogers stated that adoption of new technology in procurement for our case is not a one go process, since it involves different categories of adopter which include (Diane, 2000).

The innovators- These are the minorities in the technology adoption process and they are composed of 2.5% out of the whole adoption process. They are composed of individuals with the idea on how the new technology/ innovation can be utilized, implemented and also how the technology can enhance efficiency delivery for an organization (Wejnert, 2002). The second mass is composed of the early adopters and they are composed of 13.5% of the whole adoption process. These are the first individuals, public organizations or private suppliers who are willing and understand the new technology. In case study which was conducted by Choi, Kim and Lee (2010) based on electronic procurement, they indicated that with the current trend of communication as one of the element of diffusion of innovation, the youth and the disabled are mostly the early adopters in the current system of electronic procurement, with the advantage of preference regulations in China and ASIA at large.

The third lot is composed of early majority and these are the majority number with 34% of the total population, and they are composed of individuals or organizations that are willing to adopt

to the new technology in our case electronic procurement after authenticating that the new system of procurement works because they are risk averse (Wejnert, 2002). The forth bunch of adopters is composed of 34% of the whole population and they are the late majority. They adopt an innovation after the average participant. These individuals approach an innovation with a high degree of scepticism and after the majority of society has adopted the innovation. Late Majority are typically sceptical about an innovation, have below average social status, little financial liquidity, in contact with others in late majority and early majority and little opinion leadership (Rogers, 2003). The final lot cannot be defined under adoption, since they totally resist changing with the new system of technology. This group is referred to as laggards and they consist of 16% of the total adoption.

Transactional Cost Theory

The term "transaction cost" is frequently thought to have been coined by Ronald Coase in 1970s, who used it to develop a theoretical framework for predicting when certain economic tasks such as purchasing and supplies and tenders should be performed on the market considering all the external and internal costs of transaction. Based on his work on transactional cost, Ronald stated that cost can be divided into three categories (Douma & Schreuder, 2012) which are: - Information cost- Ronald stated that an organization should use the lowest cost as possible while determining what needs to be purchased, when and how. Based on his research, using the most reliable source of purchasing, which is electronic purchasing can be the most efficient too in determining cost of goods and services from external sources (Niehans, 2007).

Bargaining costs are the costs required to come to an acceptable agreement with the other party to the transaction, drawing up an appropriate contract and so on. Based on Ronald suggestion, an organization should have bargaining power before accepting and issuing of tenders and supplies. (Kariuki,2009) on his argument based on bargaining costs stated that through effective prices set by PPOA, the cost of bargaining can be minimal on public procurement hence saving time and resources. The third category of cost is policing and enforcement costs. Policing and enforcement costs are the costs of making sure the other party sticks to the terms of the contract, and taking appropriate action (often through the legal system) if this turns out not to be the case. This probably applies to the public procurement where preference preservation rules based on PPDA, 30% of the Kenya government procurement funds should be distributed to the disadvantaged groups (youth, women, small business enterprises, disabled and local contractors) (Awino, 2011).

Institutional Theory

According to Kraft's Public Policy (2007) Institutional Theory is "Policy-making that emphasizes the formal and legal aspects of government structures. Scott (2004) stated that institutional theory considers how processes by which structures, including schemes, rules, norms, and routines, become established as authoritative guidelines for social behaviour in public

procurement. DiMaggio, Paul, Powell & Walter (1991) stated that there are two dominant trends in institutional theory, which involves the old institutionalism and the new institutionalism, where the old institutionalism focuses on the old system of regulations while the new institutionalism focuses on the new trends of purchasing and procurement which involves preference regulations, electronic procurement on public sectors etc. Based on Scott argument, smooth operation of purchase and procurement should be enhanced and performed based on PPDA of 2006, gives preference regulations to the disadvantaged groups with the aim of supping economic growth.

CONCEPTUAL FRAMEWORK

Independent Variables

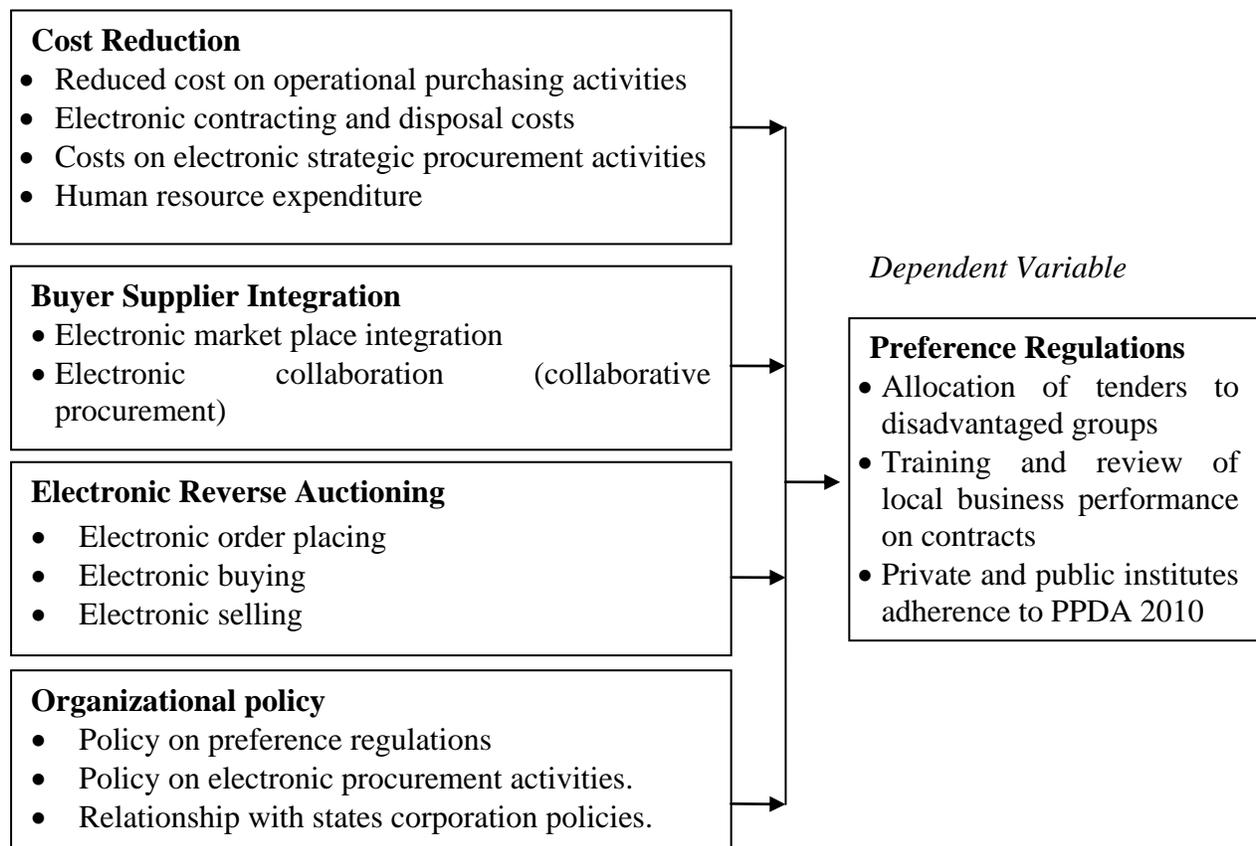


Figure 1: Conceptual Framework

EMPIRICAL REVIEW

A new study, "E-Procurement: Trials and Triumphs," released by Aberdeen, reports that E-procurement has improved cost savings and can streamlining internal processes while enhancing supplier relationships. The study found that enterprises displayed a 35% improvement in spend

under management; with a 41% reduction in maverick spend. Enterprises also reduced their requisition-to-order cost by 48%, and cut transaction cycle time in half. However, the research indicated that significant e-procurement challenges remain in areas of supplier enablement, catalog management and end-user adoption (Selko, 2007). Noor, Wario and Iravo (2013) stated 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 laying 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 state corporation.

According to Weele Van (2010) Supplier relationship management is a broadly recognized, widely-implemented strategy for managing and nurturing a company’s interactions with suppliers and vendor prospects. It involves using technology to organize, automate, and synchronize business processes principally buying activities, but also those for marketing, customer service, and technical support. Collaborative procurement is one of the roles which electronic procurement has played in preference regulations and it involves achievement of mutual benefits which is achieved when two or more individuals/ organizations work together. Efficiency in procurement is enhanced when the buying company/ organization has a positive relationship with the suppliers (supplier relationship management) which enhances efficiency in delivery (just in time delivery) (Vaughan, 2009). Through reverse auction, small business and disadvantaged groups are able to maximize their sales and profits through having another chance to resell the inventory in the market in consideration if discount. This is more applicable in the most developed countries and third world countries which are concerned with the welfare of small scale suppliers and disadvantaged groups through strict preference regulation by the authorities (Kovacs & Paganelli, 2003).

Hines, (2004) stated that most of the state corporations and even private sectors increasingly find that they must rely on effective supply chains, or networks, to compete in the global market and networked economy. In Peter Drucker's (1998) new management paradigms, this concept of business relationships extends beyond traditional enterprise boundaries and seeks to organize entire business processes throughout a value chain of multiple companies which have been able to electronically supply their services through electronic means hence enabling the less disadvantaged groups have plenty of access of services which help them to develop economic wise. Electronic evaluation of suppliers is also another service which has been of positive effect on preference regulations. This involves the process of categorizing supplier in terms of location, cost associated will service or goods to be supplied, the duration which is involved in supply of

goods or services, legal compliance and also other charges involves in movement and storage of goods or services.

According to Dooley, (2006) little or no research has been conducted to assess the impact of e-tendering on marginalised groups empowerment, Researchers have made no contribution in linking e-tendering to marginalised groups empowerment. Research conducted by (Akinyi, 2010; Croom & Brandon-Jones, 2004; white &Helen, 2000) has not fully integrated electronic procurement and its role on preference regulations, since their research was basically concerned with introduction of electronic procurement in public sector with where (Akinyi, 2010) only focused on role of electronic procurement on cost reduction and buyer supplier integration. This research deeply focused on role of electronic procurement with deep investigation on cost reduction, buyer supplier integration, electronic reverse auction and organizational policy and the role on preference regulations in state corporations.

Preference regulations specifically targeting the youth, women and disables is a concept which is new to the world and Africa in general. Government has been able to enhance its service delivery to the citizens across nations through the use of electronic procurement. Preference regulation also is a concept which has been adopted by several governments with an aim of enhancing economic development. Though creation of AGBO (Access to Government Services) Kenya youth, women and disabled have been also able to access government funds either through creation of women/youth groups hence starting up an enterprise. Electronic procurement is a service which has been created with the aim of minimizing constrains of paper work associated with electronic procurement as 20th century methods of electronic procurement have been sophisticated and tedious for less learned, the women and disabled to access. The service delivery strategy also has been able to cut costs associated by administration and paperwork which has been able to enable the targeted group save huge amount of money and time. Buyer and supplier integration also has been one of the roles of electronic procurement as suppliers from international producers can be able to interact straight with buyers from local industries in less developed nations hence enabling them access goods and services which are not produced by the native country.

RESEARCH METHODOLOGY

Research Design

This study adopted a qualitative and quantitative research designs. Qualitative Research is primarily exploratory research. It is used to gain an understanding of underlying reasons, opinions, and motivations. It provides insights into the problem or helps to develop ideas or quantitative research while Quantitative Research is used to quantify the problem by way of generating numerical data or data that can be transformed into useable statistics. The reason for the researcher to use both qualitative and quantitative research design was because in data collection, figures were involved which were accompanied by explanations to qualify the data.

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This research design provides facts and suggestions on major connections between the variables. The primary purpose of this study was to role of electronic procurement adoption on preference regulations in state corporations: A case of KeNHA.

Population of the Study

The target population of this study comprised of 100 individuals, of whom 30 were procurement officers at KeNHA, 30 firm suppliers recognized by KeNHA, 20 legal and compliance department team and 20 finance officers. The study used stratified and simple random sampling design, where in stratified, the target population was divide into different strata's/ small groups i.e. $S_1+S_2 = N$ (different strata's i.e. procurement officers, firm suppliers, legal and compliance department and finance officers). The population contained a multiple frequency of 50% of the total population that is having equal chances of selection.

Data Collection

Data collection was done using primary sources of data that is, self-administered questionnaires were used to collect data in which respondents were required to answer based on their own understanding. Drop and pick method was applied of which the questionnaires were available for the respondent to fill in a period of one week. The reasons why the researcher adopted questionnaire is because questionnaire is relatively cheap compared to any other method of data collection and that validity of information was required.

Data Analysis

Information collected from the field was classified into nominal ordinal and scale to form common data. The instrument was then scrutinized to determine the extent to which they were filled up and whether they have errors, inadequate responses or irrelevancies. Errors found were recorded on a piece of paper to ensure that this does not compromise data analysis at all. Data coding was done whereby categories of responses were identified, classified and then recorded on a prepared sheet as per research questions or objectives of study. Then, descriptive and inferential statistics was done using the Statistical Package for Social Sciences (SPSS) where confidence level of 95% was required, and a p-value of $0 \leq p \leq 0.05$ was required to show evidence of accepting the proposed research questions where Pearson correlation and multiple regression were met to ascertain the relationship between the independent and the dependent variables where:

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Such that Y =Preference regulations, a =Constant coefficient, β = Beta of respective variables, X_1 =Cost reduction, X_2 = Buyer Supplier Integration, X_3 = Electronic reverse auctioning, X_4 = Organizational policy and ϵ =Error term.

Presentation of data was done using appreciation of table and figures with respective description of figures based on the information collected from the field. Inferential statistics was also analysed, where reliability, correlation and linear regression equation were solved.

FINDINGS AND DISCUSSIONS

Table 1: Reliability analysis

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.759	.771	5

With a reliability of 0.7-0.99 the instruments are believed to be reliable and the higher the figure, the stronger the reliability index. Based on results in table 4.1 it is clear that after the research instrument were reliable with reliability coefficient of 0.771. Nunnally (1978) stated that an alpha of .0.7 is standard alpha which indicates that the research instrument is reliable. The subsequent findings and discussions are based on 45 responses out of the 50 sampled respondents which translated to 90% of the total response.

Cost Reduction

It was clear that 40% of the respondents indicated that at moderate extent, 15.5% of the respondents indicated that at very low extent, electronic procurement has contributed to cost reduction, 11.1% of the respondents respectively indicated that at low extent and very great extent, electronic procurement has contributed to cost reduction while 22.2% of the respondents indicated that at great extent, electronic procurement has contributed to cost reduction.

It was clear that 15 and 10 respondents agreed and strongly agreed respectively that through cost reduction, the youth and the disabled have been able to procure and supply goods to states corporations while 5 and 7 respondents disagreed with the statement. Based on the results, 8 respondents were neutral with the data having mean and standard deviation of 3.4762 and 1.0432 respectively where deviation between mean and standard deviation might have existed due to fatigue of the respondents and other social factors such as biasness. Electronic procurement has contributed to high operational and purchasing costs as 7 and 12 respondents agreed with the statement while 9 respondents disagreed with the statement. Based on the results, as significant numbers of 17 respondents were neutral based on the statement.

The data had mean and standard deviation of 3.4762 and 1.0349 respectively where deviation exists due to respondents' ability to give what favours them most. Based on results in the third statement of study, it is clear that electronic procurement has contributed to low contracting and disposal costs in KeNHA as 24 respondents in total agreed with the statement while 9 respondents in total disagreed with the statement. Twelve respondents were undecided, with the

data having mean and standard deviation of 3.2891 and 1.0533 respectively. Results in the fourth statement of table 4.7 indicates that 19 and 5 respondents agreed and strongly agreed respectively that electronic procurement has contributed to low costs on strategic procurement activities while 2 and 8 respondents disagreed with the statement respectively.

Based on the data, 11 respondents were neutral with the data having mean and standard deviation of 3.1171 and 1.1543 respectively. It is clear that 21 respondents were undecided whether electronic procurement has contributed to less human resource expenditure in KeNHA while a total of 11 and 13 respondents agreed and disagreed with the statement respectively. The data had mean and standard deviation of 3.1034 and 1.1785 respectively, where deviation may have existed due to respondents' fatigue.

Buyer Supplier Integration

The study established that 17 respondents indicated that at great extent, electronic procurement has played an important role in buyer supplier integration, where 5 respondents indicated that at very great extent, electronic procurement has played an important role in buyer supplier integration. Based on the results, 11 respondents indicated that at moderate extent, electronic procurement has played an important role in buyer supplier integration. 9 and 3 respondents respectively indicated that at low extent and very low extent, electronic procurement has played an important role in buyer supplier integration.

It was clear that 23 and 8 respondents agreed and strongly agreed respectively that through electronic procurement, buyer supplier integration has enhanced electronic market place for the less disadvantaged groups to have easy access while 5 and 3 respondents disagreed and strongly disagreed respectively. 6 respondents were neutral with the data having mean and standard deviation of 3.8712 and 0.9853 respectively. Further, 19 and 5 respondents respectively indicated that there is high collaborative procurement in KeNHA as a result of electronic procurement while 8 respondents in total disagreed. Based on the results 13 respondents were undecided with the data having mean and standard deviation of 3.6894 and 1.0001 respectively.

Electronic procurement is widely practised in KeNHA which encourages disadvantaged groups to integrate with buyer online as 14 and 6 respondents agreed and strongly agreed with the statement respectively while 8 and 6 respondents disagreed and strongly disagreed respectively. Based on the results, only 11 respondents were undecided with the data having mean and standard deviation of 3.4673 and 1.2312 respectively. Kenyan states corporations widely encourage buyer supplier integration to boost disadvantaged groups' access to government resources as 12 and 13 respondents agreed and strongly agreed with the statement respectively while 5 and 7 respondents disagreed and strongly disagreed respectively with 8 respondents remaining undecided/ neutral. The data had mean and standard deviation of 3.7109 and 0.9928 having low deviation from the mean.

Electronic Reverse Auctioning

On the level of agreement with how electronic procurement has contributed to electronic reverse auctioning, 22 and 10 respondents indicated that at very great extent and great extent respectively, electronic procurement has contributed to electronic reverse auctioning while 5 and 1 respondents indicated that at low extent and very low extent respectively, electronic procurement has contributed to electronic reverse auctioning with 7 respondents indicating moderate extent that electronic procurement has contributed to electronic reverse auctioning. On the role of electronic reverse auction on preference regulations, 27 and 10 respondents clearly indicated that through electronic reverse auction, buying of supplies has been efficient at KeNHA, while 1 and 4 respondents strongly disagreed and disagreed respectively. Based on the results, only 3 respondents were undecided with the data having mean and standard deviation of 4.0114 and 0.7921 respectively.

Further, 21 respondents were neutral on whether electronic reverse has contributed to loose of finance and other resources through suppliers who don't meet deadlines, where 11 and 7 respondents agreed and strongly agreed with the statement respectively. Only 4 and 2 respondents disagreed and strongly disagreed respectively. 18 respondents were undecided that suppliers are given another chance to resell their goods by KeNHA once the initial procurement tender is awarded to someone else while 9 and 5 respondents agreed and strongly agreed respectively. 10 and 3 respondents disagreed and strongly disagreed respectively with the statement. The data had mean and standard deviation of 3.3215 and 1.3213 respectively where deviation might have existed due to response rate and fatigue of respondents.

Organizational Policy

From the study, 16 and 12 respondents indicated that to a very great extent and great extent respectively, electronic procurement has played a significant role in organizational policy toward enhancement of preference regulations in states corporations while 3 and 5 respondents indicated low extent and very low extent based on the statement. 9 respondents indicated moderate extent of agreement.

On role of organizational policy on preference regulations, 15 and 16 respondents agreed and strongly agreed that KeNHA has policies which encourage the disadvantaged groups to have stake in procurement activities while 2 and 3 respondents disagreed and strongly disagreed respectively, with 9 respondents remaining neutral. The data had mean and standard deviation of 3.5672 and 1.1092 respectively. It was clear that KeNHA has no policies which discriminates the disabled on supply of services as 15 and 10 respondents disagreed on the affirmative statement. The data had mean and standard deviation of 3.293 and 1.4672 respectively where deviation from the mean exists due to fatigue of the respondents.

Further, 11 and 7 respondents disagreed with the statement which indicated that organizational policies have no influence on preference regulations in states corporations while 14 respondents agreed with 13 respondents remaining undecided. The data had mean and standard deviation of 3.3137 and 1.4002 respectively. Through organizational policy electronic procurement has been enhanced hence influencing preference regulations as 12 and 19 respondents agreed and strongly agreed with the statement while 5 and 4 respondents disagreed and strongly disagreed respectively. Five respondents were undecided with the data having mean and standard deviation of 3.8452 and 0.9713 respectively with little deviation from the mean.

Correlation Analysis

At confidence level of 95%, the researcher found out that there was relationship between independent variables and dependent variable as cost reduction had correlation of sig P. <0.05, buyer supplier integration had correlation of sig P. <0.05, electronic reverse auctioning had correlation of sig P. <0.05, and finally organizational policy had correlation of sig P. <0.05 indicating that relationship between independent variables and preference regulations in state corporations exists.

Table 2: Correlation Analysis

Correlations		Preference regulations	Cost reduction	Buyer supplier integration	Electronic reverse auctioning	Organizational policy
Preference regulations	Pearson Correlation Sig. (2-tailed)	1				
Cost reduction	Pearson Correlation Sig. (2-tailed)	.505**	1			
Buyer supplier integration	Pearson Correlation Sig. (2-tailed)	.541**	.334**	1		
Electronic reverse auctioning	Pearson Correlation Sig. (2-tailed)	.499*	.319**	.678**	1	
Organizational policy	Pearson Correlation Sig. (2-tailed)	.422*	.286*	.665**	.614**	1
		.032	.011	.005	.009	

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

MULTIPLE REGRESSION ANALYSIS

Table 3: Model Summary

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.714 ^a	.677	.647	.99696

Adjusted R square which was used to measure deviation between variables indicated that there was deviation of 64.7% of variables, that is, if the independent variables are altered at a small margin, the dependent variable will be changed by 64.7%. Based on these results the researcher concluded that relationship existed between preference regulations and cost reduction, buyer supplier integration, electronic reverse auctioning and organizational policy.

Table 4: ANOVA Results

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.053	3	3.351	7.810	.003 ^b
	Residual	17.592	41	.429		
	Total	27.644	44			

a. Dependent Variable: preference regulations

b. Predictors: (Constant), Cost reduction, buyer supplier integration, electronic reverse auctioning, organizational policy

ANOVAs analysis looks at the significant (sig) of the items to indicate relationship between variables as in table 4.16. Based on the results in table 4.16, the researcher found out that the items had sig P. < 0.003 which indicated that relationship existed between preference regulations and cost reduction, buyer supplier integration, electronic reverse auctioning and organizational policy.

Table 5: Regression Coefficients

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
		B	Std. Error			
1	(Constant)	3.315	.328		10.095	.027
	Cost reduction	.469	.205	.409	2.288	.003
	Buyer supplier integration	.281	.209	.245	1.342	.009
	Electronic reverse auctioning	.019	.136	.118	.143	.003
	Organizational policy	.188	.085	.270	2.195	.031

a. Dependent Variable: preference regulations

The linear equation was deduced as: $Y = 3.315 + 0.409X_1 + 0.245X_2 + 0.118X_3 + 0.270X_4$

When other factors remaining constant, preference regulations will be affected by 3.315 as a constant figure and 0.409 of cost reduction as the first independent variable. Based on the results, it is clear that relationship between preference regulation and cost reduction exists. Results indicates that buyer supplier integration has a positive impact on preference regulations, as when other factors remain constant, preference regulations will be affected by a constant beta of 3.315 and 0.245 of buyer supplier integration. The researcher found that electronic reverse auction has an effect of 0.118 of relationship with preference regulations when other factors are not changed, while organizational policy has a relationship of 0.270 to preference regulations when other factors remain constant, hence giving valid information that all the independent variable have a relationship with dependent variable (preference regulation).

CONCLUSIONS

The study concludes that electronic procurement in State corporation adoption has not greatly been appreciated, with few respondents lacking the awareness and the roles of electronic procurement. The disadvantaged groups have not taken full consideration on taking advantage of electronic procurement as less they only access up to twenty percent of the government procurement tenders. The study also concludes that introduction of electronic procurement has greatly contributed to cost cutting in KeNHA and stated corporations, where cost related to administration, contracting and also disposal have been minimised hence encouraging saving in States Corporations.

The study concludes that buyer supplier integration has been the main aim for introduction of electronic procurement sector in public sector, where collaboration between suppliers and buyers has been enhanced hence creating a reliable room for procurement activities. KeNHA has greatly encouraged buyer supplier integration as tenders can be applied online hence enhancing delivery and also help in time management. It is quite clear that states corporations are working towards implementation and adoption of electronic procurement as based on some respondents, electronic procurement is quite new with little knowledge on its operation and application.

The study further concludes that electronic reverse auction has played a huge role in states corporation as supplier are able to bid and have their goods supplied any time as the bids have been accepted hence playing a huge role in KeNHA as good and services are delivered and acquired in time from one specific supplier to another with reversed role. Therefore it is quite clear that electronic reverse auctioning has contributed greatly to preference regulations in states corporations.

The study finally concludes that organizational policy is a great determinant of the level at which electronic procurement will be adopted. If organizational policy bars acceptance of electronic

procurement, then the youth and the disabled will have few chances to participate in government tenders. Based on the results, KeNHA and other states corporations in Kenya have policies which encourage implementation of electronic procurement hence enhancing preference regulations in public sector. This indicates that the government does not have any restrictions on who should supply goods and services based on their jurisdictions.

RECOMMENDATIONS

The study recommends that KeNHA, other states corporations and the private sectors need to learn the advantages associated with electronic procurement such as cutting of unnecessary costs associated with ordinary procurement. This can greatly contribute to state corporation savings hence enhancing the ability to award more tenders in future.

The study also recommends that buyers' supplier relationship should be enhanced at all levels in States Corporation. What's required to sustain a mutually beneficial relationship is an understanding of each other's business needs. That doesn't mean driving for the lowest possible price with no regard for the true expense incurred, but rather recognizing that the success of one partner helps the success of the other. To develop and subsequently maintain a positive supplier-buyer relationship, each party should be able and willing to address compliance with respect to agreed norms, that is, the government should respect and make sure that implementation of thirty percent of the procurement to the youth if effectively done.

The study recommends that electronic reverse auctioning should be practised widely in public sectors to make sure that at the end of the procurement activities, every party ends up winning with minimal losses. This contributes to building up of buyer supplier integration in return and also customer client loyalty and this is what is required in business. The study recommends that all state corporations and private organizations should align their policies with government objectives as this will enhance the disadvantaged groups' ability to acquire more contacts hence contributing to creation of opportunities and maximization of youth procurement budget.

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