

# **EFFECTS OF E-PROCUREMENT IMPLEMENTATION PRACTICES ON PROCUREMENT OF GOODS, WORKS AND SERVICES IN THE NATIONAL YOUTH SERVICE, NAIROBI CITY COUNTY**

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## **ABSTRACT**

The purpose of this study is to establish the effect of e-procurement implementation practices on procurement of goods, works and service in National Youth Service, Nairobi City County. The study sought to find out the effect of e-sourcing and e-tendering on the procurement of goods works and services in the National Youth Service, Nairobi City County as the main objectives. Numerous studies have been done on e-procurement and its contribution on procurement performance. This study sought to determine the knowledge gaps in e-procurement implementation practices by reducing cost, streamlining service leading to short lead time, customer satisfaction and timely payment of goods, work and services delivered without delay. A pilot test was carried out at Utalii Collage to ascertain the reliability of the research instrument and was confirmed by the supervisors and other experts that the instrument was reliable. The study was carried out in the National Youth Service Headquarters Ruaraka, Nairobi City County after numerous allegations of misappropriation of funds from the branch due to centralization of most of procurements functions as per the media reports and other investigative agencies. The study was guided by two main theories including, Network Perspective Theory, and Resource-Based View theory. The target population for the study was 500 staff working in various departments at the

National Youth Service, Nairobi City County. A representative stratified sample of 30% was considered representative and in this case, a sample of 150 respondents was considered for the study. The study adopted a descriptive research design. The researcher confirmed both construct and content validity by consulting supervisor and other experts. Cronbach alpha of 0.7 or above was considered to check for reliability of instruments. The quantitative data collected was sorted and entered into the current statistical package SPSS version 25 for analysis. Frequencies mean and standard deviation was used for descriptive and inferential analysis. The result was presented inform of tables and bar graphs for easy interpretation. In order to establish the effect of e-Procurement implementation practice on procurement of goods, works and services, regression analysis was employed to establish the relationship among the study variables. E-tendering was associated with reduced time for tender invitation exercise as well as led to increased transparency in tendering process. Based on the findings, the study recommended for full adoption of e-procurement implementation practices to enhance procurement of goods, works and services in National Youth Service, Nairobi City County.

**Key Words:** *e-procurement, implementation practices, procurement of goods, works and services, national youth service, Nairobi City County*

## **INTRODUCTION**

Electronic procurement prominence has grown immensely in many industries across the globe. According to Lucking-Reiley & Spulber (2001), the usage of e-procurement to conduct business supply chain transactions is projected to rise from \$75 billion in 2000 up to

\$3 trillion in the year 2002. Morgan and Jeong (2008) on their discussion paper on competitive purchasing strategies for the 21st century (Shale 2014), opined that organizations have to maximize the use of internet-based technologies e-procurement inclusive in every facet of business to link suppliers, increase the speed of information transfer and reduce non-value adding tasks. It is evident that the use of e-Procurement is a new concept and this calls for sound electronic procurement strategy studies to enlighten the organizations and other interested parties on the importance of e-procurement.

E-procurement has seen tremendous growth in business to business (B2B) and business to government (B2G) (Zhiyuan, 2012; Mambo, Ombui & Kagiri, 2015). Inter-organizational coordination has been enhanced by web-enabled B2B e-procurement hence a reduction in saving transaction costs and economical sourcing avenues for the buyer organization (Ross, 2016). Traditionally, procurement transactions were manually done leading to low transaction procedures and even slower systematic processes for handling entire procurement transactions. In the modern world, organizations are becoming discerned on how they respond to multiple pressures and influences in the procurement departments.

In the United States of America, electronic procurement earned fame as earlier as the year 2000 before the great economic recession witnessed in the country (Bovaird & Löffler, 2015). Most of the state functions in the USA started doing their procurement transactions online through the company portal with several partaking online bidding by the end of 2000 (Ingmar, 2017). Likewise, in Malaysia, the government gave notice calling for all suppliers tendering to the government to use the e-procurement system (Kaliannan, Awang & Raman, 2007). The heads of public procurement and respective directors greatly influence supplier evaluations and the drafting of specifications to ensure that public institutions get the best value for their money in delivering services for their citizens. Malaysian public sector is undergoing significant reforms and witnessing a sporadic change, especially in the adoption of integrated new technologies (Jomo, 2016) to ease and amend loopholes in public procurement procedures. E-procurement and e-government adoption in Malaysia is inevitable as the government is keen to secure the public resources from being looted by government officials in collaboration with ill-minded suppliers.

In Africa, the need to eradicate corruption, openness and accountability in public procurement activity leads to the adoption of e-procurement practices. Most of the African countries have resorted in legal reforms to streamline the public procurement and adoption of procurement frameworks. In Tanzania for instance, the government enforced e-Procurement systems to allow openness in the allotment, Advertisement, Contracting, Submission, Communication, Checking, Invoicing, Valuation, and Monitoring to make sure all public procurement transactions are well integrated and conducted online (Mwangi et al., 2018). A study by Bosco Harelimana (2018) in Rwanda found out that e-procurement has dramatically improved the public performance of the Ministry of Economics and Finance as it reduced its total cost expenses to 18.6 Million in 2016 down from 24.4 Million in the year 2015.

Kenya has been marred with allegation of fraudulent and corruption scandals that are draining the public resources. This is contrary to the executive order no 2 of 2018 which directed that all public entities shall fully adopt the use of IFMIS in all procurement of goods,

works and services latest by January 2019 to enhance accountability, prudence, transparency and efficiency in the procuring process. Upon implementation of procurement accountability tools like IFMIS by public entities, numbers of cases have been brought before the courts of law as a result of various applications of IFMIS since it makes audit trail very easy during e-procurement process. Cases such as, KPLC, KEBS, NYS and the latest concluded case of Kenya Cereals and Produce Board (KCPB), where some of the accused persons were found guilty and sentenced to jail, were traced back through IFMIS system.

Implementation of e-Procurement can potentially influence organizations buying behavior. E-Procurement will change procurement processes leading to procurement efficiency in an organization. Kingori (2013) did a study on the influence of e-Procurement at Teachers Service Commission of Kenya. The study findings revealed a significant positive correlation between e-Procurement, the levels of ICT capability and the e-Procurement application levels. The findings show that procurement efficiency highly correlated with e-Procurement applications. The current study investigates the contribution of e-Procurement implementation practice on procurement of goods, works and services at the National Youth Service (NYS), Nairobi City County.

The Kenya national youth service was founded in the year 1964 through an act of Parliament (Ayaga, 2015) to act as paramilitary service which provides an organized and disciplined pool of skilled human labor where the youths can actively engage in nation building activities. Until earlier 1980s over 20 years down the line, it was mandatory to all pre-university students to join the NYS and undergo thorough training programs inclusive paramilitary training. The idea behind the training was to expose the young adults in the wake of national building and immediate challenges. Over the years, the glory of the NYS has considerably faded due to inadequate resources allocation and misappropriations from the officers in charge.

The National youth service personnel in the recent past have been deployed to maintain peace and order in situations where the national police servicemen have been overstretched or the rapid response in case of emergencies. This has seen the importance of NYS which has led to its new reforms in 2014 by President Uhuru Kenyatta promising to revamp the institution to return its long-lost glory in public eyes. The ministry was then put under the umbrella of Devolution Ministry.

The Institution, however, has been marred with many corruption allegations and government bureaucrats. It was seen as an avenue of siphoning public money leading to many questions as for the integrity of the institution. With current trends in the NYS institution, the new shape promise by the government remains a factual dream. The service's core value of integrity, discipline, and Patriotism is now a far-fetched truth to millions of Kenyans.

The Auditor general through the use of IFMIS, has recently disclosed many alleged corruption scandals in the NYS. In the year 2018, the country was alleged to have lost over KShs.13 billion (Obura, 2018) to corruption cases in NYS, Kenya Pipeline Company (KPC) National Cereals Board (NCB), NHIF and in the Ministry of Lands. The amount alleged to have been lost in the NYS case was quoted at Kshs10.5 billion involving a number of officers

ranging from junior to senior government officials at NYS and National Treasury and supplies as reported by the media and other investigating agencies. All this was possible due to the IFMIS and e-procurement implementation practices that captured all the transactions leading to the disclosure of the exact amount alleged to have been lost in the NYS, unlike the past where nothing could be revealed to the public.

## **STATEMENT OF THE PROBLEM**

In National Youth Service, Nairobi City County, procurement of goods and services is uneven and slow, characterized by an increased lack of transparency and enhanced control (Auditor General, 2017). According to the report, the existing systems are coupled with insecurity, lack of confidentiality and accessibility. Individual factors that have engulfed the complete implementation of electronic procurement practices include inadequate skills and resistance to new technology. This is amid lots of resources being channeled to the institution for the last seven years despite low efficiency and effectiveness. Implementation of e-procurement has been a challenge in National Youth Service, Nairobi City County due to interest by various players in the procurement department leading to biasness in awarding of tenders and payment of the delivered goods. Majority of the suppliers are still following their payment for the goods delivered dated back in 2009 due to discrimination during payment of goods, works and services rendered to the organization. There is also constant transfers to the procurement staff, accounts, audit and finance which makes tracking of payment a difficult tusk since the incoming staff prefer processing payment of goods they received not pending bills incurred by their predecessors. The National Youth Service, Nairobi City County like other government institutions suffers from unjustifiable tender dispensation delays, substantial manual paperwork, constant threat to bidders, discrimination, lack of transparency in entire tender process, and corruption (Hasan, 2016). Further Addison, (2017) cited Bokpe (2013), who highlighted that setting up e-procurement systems ,helps to mitigate most of the shortcomings that the bidders faces when they are seeking contracts. E-procurement is modified to settle mismanagements and any other misappropriation of funds from procurements due to human interaction. The current study sort to determine the effect of e-Procurement implementation practices on procurement of goods, works and services in National Youth Service, Nairobi City County. In all of the above e-procurement studies in Kenya, none has exposed the real effect of e-procurement implementation practices on procurement of goods, works and services in National Youth Service, Nairobi City County, which forms the basis of this study.

## **OBJECTIVE OF THE STUDY**

The objective of the study is to determine the effect of e-Procurement implementation practices on procurement of goods, works and services in National Youth Service (NYS), Nairobi City County.

## **THEORETICAL REVIEW**

### **Network Perspective Theory**

The theory emerged in the 1970s and the 1980s. Its main focus is on the different relationships that take place between business entities, or their alliances, in a supply chain. According to Harland (1996), a network is defined as a particular kind of relation that exists among a set of things, events, or persons. Chang, Chiang and Pai (2012) see the supply chain network which has a specific context dependent on the kind of interactions among its various members resulting to a complicated network model. In this way, networks are viewed as beneficial for those companies that are embedded in it as a result of investments and activities of other counterparts involved (Håkansson and Ford, 2002). The NT is mainly about looking at how organizations become effective and the processes they need, something that had been recognized as the exchanges and interactions with other parties in the supply chain in the past decades (Håkansson and Snehota, 1989).

Performance success of a firm is dependent on effective cooperation with both partners it is dealing with and includes cooperation of the same partners with business partners they interact with. Network theory (NT) provides a base for a conceptual understanding of reciprocity as it happens in cooperative associations (Oliver, 1990). According to Haakansson and Ford, (2002), new resources are accrued from a continuous interactive relationship of different players who they come into contact with. By getting into associations the two organizations are able to achieve more together than when they are doing it individually. This kind of a relationship has been termed by Haakansson and Snehota, (1995) as a quasi-organization. A resource has more value when it is combines with other resources, the reason to which inter-organizational relationships are more important together as opposed to their possession of own resources per se. Therefore, the way a resource is assembled will determine the operations of the supply chain and as a result by the motivating force for its performance.

The network theory (NT) is useful in this study as it enables the understanding of the dynamics of inter-organizational relations by focusing on personal relationships between parties as well as the mutual creation of trust through cooperative relations and exchange processes. This is by looking at the two types of interactions, the exchange processes which are social, business and informational and the other which is adaption processes in products, production and routines. This help to establish the stable links within a network of firms. By communicating directly, the uniqueness of the relationship is conveyed which result to customers having supply chains customize their requirements. Through the social exchange processes mutual trust is gradually built among the different parties (Johanson and Mattsson, 1987). The Network Theory is important for this study as it connects all the variables of the study as it is the anchoring theory.

## **Resource-based Theory**

This Theory (RBT) was discovered by Birge Wenefeldt, 1984. This Theory is used to analyze and identify the assets, their capabilities, skills which are both tangible and intangible that makes a firm to have strategic advantages over others. The unique sets of resources which are tangible and intangible assets and capabilities is what differentiates fundamentally firms when they use them. When each firm is able to develop the competencies from the resources, they have enables them to become the firm's competitive advantage (Pearce and Robinson, 2007). According to Barney (1991) firms that succeed to develop resources that unique have them as sources of competitive advantage. These includes human resource, physical resources, financial resources, as well as organizational resources confer competitive advantage due to their value, or their rareness, uniqueness and the extend they have been embedded in the organizational fabric. The capability of an organization is in the demonstration and accomplishment of its goals against any opposition and or competition (Learned et al., 1969). It is important to determine the actual and potential limitations and strengths that help in differentiating one firm from the other. Therefore, the growth of any firm purely dependent on resources it masters but not just the opportunity it gets. Learned et al. (1969) is of the view that the ability by a firm create or find a truly distinctive competence defines its success or survival in business. Accordingly, these capabilities can only be built because they cannot be bought as they are both the internal capabilities and external partnerships.

In e-Procurement, there is involvement of different stakeholders and business to business approaches involvement. E-Procurement is dependent on technological advancement which relies on the integration of the relevant skills of innovativeness set out to attain expected gains in the department of procurement. It therefore requires an innovative mind to adapt to any business changes. The advent of new technologies like the information communication technology has been of help to public organizations and institutions in engaging with various suppliers both within the country as well as internationally. This creates competition which results into price reduction as suppliers give fair prices to tenders given. The relevancy of this theory in the study is on the interrelationships of the study.

Electronic procurement in this research is seen as a process that maximizes the use of available resources leading to effectiveness and efficiency in procurement resulting into delivery of competitive advantage. The competitive advantage, in this case, manifests in terms of improved lead times, cost efficiency, and customer satisfaction. E-Procurement leads to better coordination and use of procurement resources towards seamless procurement operations that enhance Organizational procurement and overall performance (Monczka et al., 2015).

To enhance e-procurement implementation successfully, a company must involve many resources. The resources stem from technological advancements sprouting to human resources, finances, ICT expatriates many more. The theory is relevant to the study because it advocates for the proper use of limited resources in making sure that e-procurement is well integrated with the procurement department to ensure its success. Essential resources needed

in driving the e-procurement success within the NYS should be identified and prioritized by the management.

## **EMPIRICAL LITERATURE REVIEW**

### **E-Sourcing on Procurement of Goods, Works and Services**

E-Sourcing involves identifying a variety of bids from suppliers on a specific category of purchasing requisition by the use of an online portal. According to Mongina (2015), e-sourcing has made it possible for companies to reach more suppliers at no extra cost since they do not need a physical meeting, or the company does not depend only on those suppliers they can visit.

The informed benefits of e-Sourcing include streamlined supplier sourcing process, relative prices as supplier competition are high, and also a repository online sourcing information is created (Masheti, 2016). Unlike the past, where geographical limitations were a barrier in getting suppliers, e-Sourcing is faster as e-mailing plays an intermediary role in tracing suppliers and also getting other worldwide information via the web rendering the exercise efficient.

E-sourcing has made it possible for companies to reach more suppliers at no extra cost since they do not need physical meeting or the company does not depend only those suppliers they can visit. The internet has made it possible to do online sourcing and get full required information only by pressing the button of their computers while seated at the comfort of their offices. Organizations, mostly nowadays, interact with potential suppliers via the internet and can acquire whatever necessary inputs they need enhancing their operations (Laudon & Laudon, 2016). Computers can effectively be used to track any supplier information details on the purchasing process, and this reduces unnecessary costs by just investing in computers and internet technology subscriptions at minimal costs (Davenport & Harris, 2017).

In a study survey in the United States of America (USA) by (Hannon, 2004) the finding revealed that 27% of buyers surveyed embraced e-auction a rise of 15% from those who used e-auction in 2003. However, he noted that 85% of the businesses worldwide have had business disruptive incidences and procurement dreary performance resulting from inefficient sourcing policies. Hanna was in the view that if organizations properly utilize e-Sourcing, the system reduces inefficiency in utilization of funds, lower lead times, increase accountability and ensure improved delivery in the public procurement services.

Canan et al. (2015) did a study investigating the effect of strategic e-procurement performance and sourcing using a case study research design. The findings revealed that e-Sourcing and e-Procurement had a strong significance relationship on procurement performance. Canan et al., also opined that e-Sourcing in purchasing minimizes transactions costs and enhances performance. However, Mugume and Ntayi (2014) lamented that despite intensive research on e-procurement, there is a gap that causes animosity on conceptualization of e-Sourcing.

Muraya, (2016) did a study investigating how e-Procurement is enhancing sustainability of both private and public State Corporations in Kenya guided by graphic research design. The study incorporated 262 state Corporations in Kenya. This study findings shows that e-Sourcing significantly contributed to a decline in cost and led to improved efficiency in the procurement function of the state Corporations of Kenya. She further noted that active e-Procurement practices in State Corporations had immensely improved the quality of service delivery in the procurement department of Kenyan State Corporations.

Rotich & Okello (2015) carried out a study in Kericho County to assess the effect of e-Procurement on procurement Performance of County Government structure in Kenya. The study utilised a correlational research design methodology with the help of a stratified random sampling procedure in obtaining a sample size. The study findings show that e-Sourcing and procurement function in Kericho County Government had a statistical positive significance relationship. E-Procurement implementation can considerably cost save on sourcing of suppliers and also cut on the time spent in search of suppliers manually through postal offices like it was done traditionally. The same sentiments were echoed by Mose, Njihia & Magutu (2013), who found out that e-Procurement if well implemented can significantly improve the procurement performance. They pegged improved performance in procurement performance on electronic documentation in the bidding process, which enhances accountability and transparency. Against that backdrop the current study intend to determine the effect on e-procurement implecation practices on procurement of goods, works and seVICES in the National Youth Service ,Nairobi City County.

### **E-Tendering on Procurement of Goods, Works and Service**

E-tendering is a constituent of E-procurement. E-tendering is the process of sending requests for information and prices to suppliers and receiving the response through internet-based technology (Ibem & Laryea, 2017). E-tendering, according to Ribarsky (2016), refers to the electronic integration and management of all supply chain activities inclusive of the purchase requests, authorization, ordering delivery, and payment between a supplier and the buyer.

Barngetuny & Kimutai (2015) did a study investigating the effect of e-procurement on supply chain management performance in Elgeyo-Marakwet County. The study adopted a descriptive survey research design with a stratified random sampling in obtaining the sample size. This study findings indicates that a well-orchestrated e-Procurement with the help of the e-Tendering procedure leads to a significant reduction in the transaction costs as opposed to paper word tendering exercise. The study findings also revealed a strong positive correlation between e-Tendering and supply chain performance management in Elgeyo-Marakwet County.

Ngeno & Kinoti (2017) carried a study investigating the effect of e-procurement on an effective supply chain management process in the Energy Sector in Kenya. The study adopted a descriptive research design with the use of a stratified random sampling technique in attaining sample size. The study findings revealed that e-Tendering led to a reduction in operational costs thus allowing for a more extensive choice of products and reduction of

paperwork order processing and administration costs. The study revealed a positivestatistically significant relationship between e-Tendering and supply chain performance in the energy sector of Kenya.

Wamboi (2015) carried a study to investigate the process of tendering effectiveness on public institutions in Kenya a case of Nakuru County Government. The study utilised a case study reseach design. The turget population was 43 who ware procurement department officers from Nakuru County headquarters. One of her objectives was to analyze how e-Tendering is influencing performance at the procurement department of Nakuru County. The analysed inferential statistics revealed the existence of a strong positive correlation between e-Tendering and procurement performance in the County. Wangari noted that transparency had been enhanced in the County government especially in tendering exercise hence improved performance at the procurement department and reduced cases of corruption.

Kisurkat (2017) did a study in Kajiado County investigating the impact of tendering on public institutions in Kenya. The study employed a descriptive research design. A random sampling technique was employed in order to get a sample size of the study. questionnaires were disbursed to the procurement officers in Kajiado County. The study found out that the County government has embraced tendering procedures advocated by the government to improve transparency and hence procurement performance.

Waka (2016) studied the e-Tendering adoption and procurement performance of the Kenyan oil marketing firms. The study was exploratory in nature. The study population comprised of 20 leading oil marketers in Kenya. The inferential statistics with the help of linear multivariate regression analysis were used to examine the strength of the relationship between e-tendering adoption and procurement performance. The study findings established that most of the Kenyan oil firms still use the ancient tendering system to a greater extent despite the evolution and advancement in technologies. Hence the current study realigns itself into investigating the new e-tendering effect on e-procurement implecation practices on procurement of goods.works and sevices in the National Youth Service, Nairobi City County.

### **Enterprise Resource Planning**

Enterprise Resource Planning according to Al Mahrami & Hakro (2018), refers to an organisational integrated information system geared to organisational efficiency by providing real-time data. The need for open and efficient timely flow of information between the organisation, its suppliers, distributors, and consumers motivated the implementation of ERP systems in modern organisations. ERP improves business processes, which resultsinthe increased competitive advantage of the firm. Back in the traditional ways, there was supply delays fuelled by production challenges, which led to the loss of substantial financial losses (Seethamraju, 2015).

Urgur and Ernan (2013) did a study to establish the effects of business process re-engineering and enterprise resource planning on supply chain performance in the Uganda manufacturing sector. Their study findings revealed that integrating ERP system strategies positively influences the supply chain management overall performance. In their findings also, they

noted that places, where ERP has been put in use in purchasing orders significantly, reduces transactional costs and lead time hence improved performance in the procurement section.

## **RESEARCH METHODOLOGY**

Descriptive research design was chosen, because it enables the researcher to get a holistic approach to the study (Bell et al., 2018). A descriptive research design allows the researcher to study the elements in their natural form without making any alterations to them. Civil servants permanently employed at the National Youth Service formed the target population of 500 respondents across the various departments under study. Stratified sampling was adopted to classify different officers in the different departments select as respondents. This was by picking the 2nd name in the respective list. Through this way we were able to get 150 respondents. The study used structured questionnaire in collecting field data. Likert's five-point ranking scale was used to guide responses on questionnaires.

## **RESULTS AND DISCUSSIONS**

### **Effect of E-Sourcing on Procurement of Goods, Works and Services**

The respondents were asked to establish how various aspects of e-sourcing procurement practice influenced implementation practices on procurement of goods, works and services of NYS in Nairobi County, Kenya. The responses were rated on a Likert scale and the results. From the results on the question on whether the e-sourcing has led to a reduction in costs as a result of improved process efficiency, approximately 60% of the respondent agreed with this statement whereas 9% disagreed with that statement. The mean of 4.01 which was more than the composite mean of 3.49 implied that the statement supported or positively influence implementation practices on procurement of goods, works and services in the NYS.

Also, the study required respondents to give their view on whether e-Sourcing has led low transactions cost in procurement process. It was revealed that about 58% agreed with this statement leading to a mean of 3.52 which was more than the overall composite mean of 3.49. This implied that statement supported or positively influenced e-sourcing implementation practices on procurement of goods, works and services in the NYS.

It was also revealed that approximately half or 50% of the respondents agreed with the statement that e- Sourcing has led to reduced time delivery of goods and services in the user departments whereas about 24% disagreed, leading to a mean of 3.40 which was less than the overall composite mean of 3.49. This implied that statement negatively influenced e-sourcing implementation practices on procurement of goods, works and services in the NYS.

Additionally, approximately 48%, supported the statement that the e-Sourcing facilitates tracking of procurement functions and ensures quality in supplies while 31% were neutral regarding the statement and this led to a mean of 3.39 and a standard deviation of 1.07. The mean was less than the overall composite mean of 3.49 implying that this statement negatively influenced e-sourcing implementation practices on procurement of goods, works and services in the NYS.

Similarly, about 47%, supported the fact that e-sourcing improves communication between the new suppliers and the procurement department. However, about 23% of the respondents disagreed with the statement. The mean and the standard deviation for this statement were 3.34 and 1.09 respectively. The mean was less than the overall composite mean of 3.49 implying that this statement negatively e-sourcing implementation practices on procurement of goods, works and services in the NYS.

Lastly, the study established that about 47% of the respondents concurred with the statement that e-sourcing through innovation has led to value creation of the organization. Those who disagreed were 29%. Their mean was also 3.25 while the standard deviation was 1.25 indicating variation in responses. Since the mean was less than the overall composite mean of 3.49, the study concluded that this statement negatively influenced e-sourcing implementation practices on procurement of goods, works and services in the NYS.

### **Effect of E- Tendering on Procurement of Goods, Works and Services**

The study sought to establish how the E- Tendering influences procurement of goods, works and services of NYS in Nairobi County. The responses were rated on a Likert scale and the results. From the findings, the response with the highest mean was the question on whether e-tendering resulted into reduced time for tender invitation exercise. Approximately 60% of the respondents supported this statement whereas 14% disagreed on the same. This item has a mean of 4.24 and a standard deviation of 1.08 which is higher than the overall mean (Composite) of 3.46 implying that the statement positively influences e-tendering implementation practices on procurement of goods, works and services of NYS in Nairobi City County.

On whether the e-tendering has led to increased transparency in tendering process, the findings indicated that 59% of the respondents concurred with this statement whereas about 21% disagreed with that statement. This item had a mean of 4.13 with a standard deviation of 1.12 which is higher than the overall mean (Composite) of 3.46 implying that the statement positively influence e-tendering implementation practices on procurement of goods, works and services of NYS in Nairobi City County.

The study also explored if e-tendering has greatly reduced the transactions cost involved in tendering process; the findings indicated that 48% of the respondents agreed with this statement whereas about 22% disagreed with that statement. This item had a mean of 3.37 with a standard deviation of 1.1 which is lower than the overall mean (Composite) of 3.46 implying that the statement negatively influences e-tendering implementation practices on procurement of goods, works and services of NYS in Nairobi City County.

The study revealed that 47% of the respondents agreed with the statement that e-Tendering has made it possible for public to timely submit their tenders, whereas about 24% disagreed with that statement. This item had a mean of 3.33 with a standard deviation of 0.89 which is lower than the overall mean (Composite) of 3.46 implying that the statement negatively influences e-tendering implementation practices on procurement of goods, works and services of NYS in Nairobi City County.

The study also indicated that about 46% of the respondents agreed with the statement that e-tendering has reduced the tender cycle period, whereas about 26% disagreed with that statement. This item had a mean of 3.29 with a standard deviation of 1.09 which is lower than the overall mean (Composite) of 3.46 implying that the statement negatively influence e-tendering implementation practices on procurement of goods, works and services of NYS in Nairobi City County.

The study revealed that 38% of the respondents agreed with the statement that e-Tendering has increased the accuracy and effectiveness in tendering process, whereas about 24% disagreed with that statement. This item had a mean of 3.02 with a standard deviation of 0.93 which is lower than the overall composite mean of 3.46 implying that the statement negatively influence e-tendering implementation practices on procurement of goods, works and services of NYS in Nairobi City County.

The study explored whether e-Tendering has reduced paperwork hence faster retrieval of tender offers, the findings indicated that 26% of the respondents agreed with this statement whereas majority that is about 48% disagreed with that statement. This item had a mean of 2.87 with a standard deviation of 1.01 which is lower than the overall composite mean of 3.46 implying that the statement negatively influence e-tendering implementation practices on procurement of goods, works and services of NYS in Nairobi City County.

### **Moderating effect of Enterprise Resource Planning on the relationship between e-implementation practices and Performance of goods, works and services**

The study sought to establish how the Enterprise Resource Planning influences the relationship between e-procurement implementation practices and procurement of goods, works and services in the NYS in Nairobi City County. The responses were rated on a Likert scale. The study results showed that the response with the highest mean was on the statement seeking to establish whether e-procurement and ERP have enhanced transparency hence a reduction in corruption related costs. About 74% of the respondents supported this statement whereas 13% disagreed with the same. This item had a mean of 4.73 which is more than the overall composite mean of 3.73 implying that the statement positively influence the relationship between enterprise resource planning, e-procurement implementation practices and procurement of goods, works and services, in the NYS, Nairobi City County.

On whether the level of ERP responsiveness in procurement has been enhanced with regard to customers' orders and enquiries, the findings indicated that approximately 71% of the respondents concurred with this statement whereas about 9% disagreed with that statement. This item had a mean of 4.24 with a standard deviation of 1.3 which is higher than the overall mean (Composite) of 3.73 implying that the statement positively influence the relationship between enterprise resource planning, e-procurement implementation practices and procurement of goods, works and services, in the NYS, Nairobi City County.

The study also examined whether e-procurement has led to a lean procurement unit given less employees are required, the findings indicated that 68% of the respondents agreed on this statement whereas about 9% disagreed with that statement. This item had a mean of 4.12 with

a standard deviation of 1.21 which is lower than the overall composite mean of 3.73 implying that the statements positively influence the relationship between enterprise resource planning, e-procurement implementation practices and procurement of goods, works and services, in the NYS, Nairobi City County.

The study indicated that 64% of the respondents agreed on the statement that ERP in e-procurement has reduced transport and postage costs, whereas about 12% disagreed with that statement. This item had a mean of 4.06 which is lower than the overall mean (Composite) of 3.73 implying that the statement positively influence the relationship between enterprise resource planning, e-procurement implementation practices and procurement of goods, works and services, in the NYS, Nairobi City County.

The study also established that about 48% of the respondents agreed with the statement that the cost of procurement and material handling has greatly been reduced and thus higher profits, whereas about 25% disagreed with that statement. This item had a mean of 3.35 which is lower than the overall mean (Composite) of 3.73 implying that the statement negatively the relationship between enterprise resource planning, e-procurement implementation practices and procurement of goods, works and services, in the NYS, Nairobi City County.

The study revealed that about 44% of the respondents agreed with the statement that there, are fewer damages (expiries) recorded in the warehouse, whereas about 25% disagreed with that statement. This item had a mean of 3.31 which is lower than the overall mean (Composite) of 3.73 implying that the statement negatively influence the relationship between enterprise resource planning, e-procurement implementation practices and procurement of goods, works and services, in the NYS, Nairobi City County.

The study further indicated that approximately 37% of the respondents agreed on the statement that ERP in e-procurement has reduced transport and postage costs, whereas about 18% disagreed with that statement. This item had a mean of 3.01 which is lower than the overall mean (Composite) of 3.73 implying that the statement negatively influence the relationship between enterprise resource planning, e-procurement implementation practices and procurement of goods, works and services, in the NYS, Nairobi City County.

Lastly, the study revealed that about 36% of the respondents agreed with the statement that the staff is more competent in customer service operations, whereas about 41% who forms majority disagreed with that statement. This item had a mean of 2.98 which is lower than the overall composite mean of 3.73 implying that the statement negatively influence the relationship between enterprise resource planning, e-procurement implementation practices and procurement of goods, works and services, in the NYS, Nairobi City County.

**Influence of Determinants of e-Procurement implementation Practices on Procurement of Goods, Works and Services in the NYS, Nairobi County**

The study ascertained the influence of e-sourcing, E-tendering procurement of goods, works and services in the National Youth Service, Nairobi City County. Table 1 presents the results in relation to this.

**Table 1: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.669 <sup>a</sup>	.489	.399	.30884

a. Predictors: (Constant), e-sourcing, e-tendering,

As illustrated in Table 2, the relationship between independent variables and dependent variables was established to be positive and moderately strong. The R-Squared is the variation of the dependent variable in respect to the changes in the independent variables. The R-squared in this study was 0.489, which shows that the four independent variables (e-sourcing and e-tendering) can explain 48.9% of the dependent variable.

**Table 2: ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.646	4	.897	9.631	.000 <sup>b</sup>
	Residual	4.486	116	.095		
	Total	7.954	150			

b. Predictors: (Constant), e-sourcing, and e-tendering

An analysis of variance (ANOVA) was carried out to determine how the data fit the model. From the analysis, given that p-value was 0.000 a value less than 0.05 shows that the model is good fit and can predict correctly how the four independent variables (e-sourcing, and e-tendering) influence enhanced procurement of goods, works and services in the National Youth Service, Nairobi City County. In addition, the F-calculated was (9.295) and shows that the model can be used to predicting the influence of e-sourcing and e-tendering enhanced procurement of goods, works and services.

**Table 3: Regression Coefficients**

Model		Unstandardized		Standardized t	Sig.
		Coefficients			
		Beta	Std. Error	Beta	
1	(Constant)	3.026	.420	4.824	.000
	e-sourcing	.254	.147	.421	.008
	e-tendering	.294	.144	.286	.036
	e-ordering	.373	.117	.317	.045
	e-payment	.298	.194	.297	.003

a. Dependent Variable: Enhanced Procurement of goods, works and services

From the above analysis, it shows that there is a positive significant relationship exists between e-sourcing and procurement of goods, works and services as indicated by a regression coefficient value of 0.254. Given that the test was carried out at a significant level of 0.05, the p-value 0.008 was less the expected level (0.05). Against these results, the hypothesis that: There is no significant statistical relationship between e-sourcing and procurement of goods, works and services at the NYS,Nairobi City County was rejected. This therefore implies that e-sourcing has a significant influence on procurement of goods, works and services in the National Youth Service, Nairobi City County.

The results also indicate that there is a positive significant relationship between e-tendering and procurement of goods, works and services in the National Youth Service, Nairobi City County as shown by a regression coefficient of 0.294. The p-value (0.036) was less than the significance level (0.05). According to the results, the hypothesis that: e-tendering has no significant statistical influence on procurement of goods, works and services in the National Youth Service, Nairobi City County was rejected

**Moderation Effect of ERP on Procurement of Goods and Services**

**Table 4: Parameter Estimates for Model with Interaction Term**

Estimate		Std. Error	Wald	Df	Sig.	
Threshold	Procurement of goods, works and services=1	.391	.091	.475	1	.047
	Procurement of goods, works and services =2	.612	1.004	.448	1	.012
	Procurement of goods, works and services =3	.710	.098	.275	1	.024
	Procurement of goods, works and services =4	.854	.118	.157	1	.017
	Procurement of goods, works and services =5	1.314	.231	.038	1	.009
Location	E-sourcing (X <sub>1</sub> )	.329	.032	1.242	1	.000
	E-tendering (X <sub>2</sub> )	.701	.075	.179	1	.000
	E-ordering (X <sub>3</sub> )	.350	.079	.190	1	.002
	E-payments (X <sub>4</sub> )	.421	.081	.618	1	.000
	ERP (S)	3.158	2.849	.710	1	.015
	X <sub>1</sub> *S	-2.946	3.145	.641	1	.311
	X <sub>2</sub> *S	-4.384	5.482	.128	1	.393
	X <sub>3</sub> *S	2.968	3.843	.147	1	.415
	X <sub>4</sub> *S	2.192	5.744	.419	1	.422

To test for the moderation effect of Enterprise Resource Planning on the relationship between e-procurement implementation practices and procurement of goods and services in the National Youth Service, Nairobi City County, the study fitted the following model and the regression results were as shown in Table 4.

$$Y = \beta_0 + \beta_1 X_1 * M + \beta_2 X_2 * M + \beta_3 X_3 * M + \beta_4 X_4 * M$$

The results in Table 4 show that ERP is significant when combined with procurement of goods, works and services as a predictor variable (p-value=.015<.05). However, with the introduction of the interaction term (X\*S) the model becomes insignificant. When ERP (moderator) was regressed with e-sourcing, e-tendering, e-ordering and e-payment, it was established that its moderating effect was insignificant with p-values>.05 (X<sub>1</sub>\*S p-value=.422; X<sub>2</sub>\*S p-value=.415; X<sub>3</sub>\*S p-value=.393; X<sub>4</sub>\*S=.311). This therefore implied that ERP has predictive value on procurement of goods, works and services but it has no significant moderating effect on the relationship between e-procurement implementation practices and procurement of goods, works and services.

## **CONCLUSION**

1. That e-sourcing was linked to a reduction in costs as a result of improved process, efficiency as well as associated with low transactions cost in procurement process. This in turn positively affected procurement of goods, works and services in the National Youth Service, Nairobi City County.
2. That e-tendering has resulted into reduced time for tender invitation exercise as well as led to increased transparency in tendering process hence positively influencing procurement of goods, works and services in the National Youth Service, Nairobi City County.
3. On the other hand, e-procurement and ERP enhances transparency hence a reduction in corruption related costs, the level of ERP responsiveness in procurement has been enhanced with regard to customers' orders and enquiries, e-procurement has led to a lean procurement unit given less employees are required, ERP in e-procurement has reduced transport and postage costs. These factors were as well associated with the contribution of enterprise resource planning in the relationship between e-procurement implementation practices and procurement of goods, works and services in the National Youth Service, Nairobi City County.

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