

LEGAL OVERVIEW OF ELECTRONIC PROCUREMENT IN TANZANIA

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ABSTRACT

Electronic procurement (e-Procurement) refers as the integration of digital technologies in the replacement of paper-based procedures throughout the procurement process whereby, there is the use of information and communication technology (ICT) by the government or its agencies in every stage of the purchasing process. At present, e-Procurement has become the global adopted function performed by many nationals including Tanzania.

Electronic Procurement covers a number of elements including; the ability to download bidding documents from website; submission of bids through an electronic tender box; development of procurement management information systems (PMIS) to assist procurement reporting, oversight and monitoring as well as the publication of contract awards on the website of a procurement regulatory board. Commonly, there is the integrated database systems and wide area network communication systems in part or entire purchasing process which encompasses the initial need identification and specification by users, through the searching, sourcing, negotiation of contracts, order placement, and mechanisms that register receipt, trigger payment and support post-supply evaluation.

Developments in information and communication technology, internet and other web-based technologies in particular have led to the shift from the traditional paper-based procurement to the electronic procurement system. This shift has led to the improvement of the procurement processes in general but specifically in terms of reduction of procurement cost, minimization of delays, control of corruption and achievement of value for money.

This paper summarizes the main benefits of using e-procurement and its evident flaws in public sector in Tanzania. The author propose reform that could be undertaken to make legal aspects of e-procurement suitable in Tanzania.

Keywords: e-Procurement, Electronic Data Interchange (EDI), Web-based Enterprise Resource Planning (ERP), e-Maintenance, Repair and Overhaul (e-MRO), e-sourcing, e-tendering, e-reverse tendering, e-informing and e-contract management

INTRODUCTION

The origins of e-procurement begin in 1980s with the development of Electronic Data Interchange (EDI) which allowed customers and suppliers to send and receive orders using call-forward networks and emailⁱ. In the 1990s, technology improved and software companies began to develop online catalogues specifically for use by vendors that recognized e-procurementⁱⁱ. Around 2000s following emergency of the Ariba and Commerce One with aid of buy-side solutions, large companies started to build up their electronic-multi vendor and customer services cataloguesⁱⁱⁱ. Since then, e-procurement became a platform for sending and receiving electronic orders to which resulted into among others; enhancing the speed and certainty of doing business at a lower cost, improved workflow of procurement process and connectivity of supply chain.

In her efforts to ensure efficiency and transparency in public procurement, the government of Tanzania has devised a framework that regulates its procurement function. This mechanism is provided in the Public Procurement Act 2011^{iv} and its Regulation 2013^v. The key feature of the Act and Regulation is the provision that public procurement or disposal by tender should be done electronically. Relatively, the same mechanism can be found under the Electronic Transactions Act 2015^{vi} which provide that, all data message that are in electronic format have legal effect and therefore valid and enforceable. Additionally, the same Act gives the public institution power to deal with information, document, issue, take, or receive payment in electronic forms^{vii}.

This paper offers discussion on electronic procurement and its components including the basic concept, legal forms, factors for adopting e-procurement and conclusion.

Methodology

In doing this work, the author employed the doctrinal legal method. This is the analysis of legal prepositions and doctrines. Due to fact that, the nature of the study is to do the legal overview of electronic procurement in Tanzania that necessitated the analysis of legal documents.

Therefore, the various legal documents like books, journals, research papers such as theses and dissertations, articles from physical libraries and relevant websites and blog were analyzed.

Basic Concept of e-Procurement

E-procurement function is integrated into the purchaser to pay value chain with the trend toward computerized supply chain management that is done with software applications containing features for supplier management and auctions that make it possible to automate buying and selling. Thus, the introduction of internet based-procurement applications provoked a migration from a centrally organized procurement to an online procurement environment^{viii}. Similarly, the generation of e-procurement depends on demand or software as a service and it is the productive use of the internet to improve the effectiveness and efficiency^{ix}. Also, the legal framework guiding aspects of e-procurement provides that information shall not be denied legal effect, validity or enforceability on ground that it is in form of a data message^x.

The Legal Forms of E-Procurement

There are many forms of e-procurement. Some among many include Web-based Enterprise Resource Planning (ERP), e-Maintenance, Repair and Overhaul (e-MRO), e-sourcing, e-tendering, e-reverse tendering and e-informing as detailed below;

- **Web-based ERP**

This is one of e-procurement forms. It is process of creating and approving purchasing requisitions, placing purchase orders and receiving goods and services by using a software system based on Internet technology^{xi}. With Web-based ERP, the staff in every department may access data up to minute information and capable to generate plans on the demand and forecast, current order positions and lead times^{xii}.

- **e-Maintenance, Repair and Overhaul (e-MRO)**

This is another form of e-procurement. It is creating and approval of purchase orders, placing orders and receiving orders unrelated to the purchase services^{xiii}. In other words, e-MRO is like ERP except that in e-MRO, the goods and services ordered are non-product related MRO supplies^{xiv}.

- **e-Sourcing**

This is process of identifying new suppliers of a specific category of purchasing requirements in procurement process through use of internet technology. It is broader concept as it incorporates the key element of procurement process such as specification, e-auction, evaluation and contract^{xv}.

- **e-Tendering**

This is process of screening supplier by sending requests for information and prices to suppliers and receiving the responses of suppliers using internet technology. In other words, it is electronic publishing, communicating, accessing, receiving and submitting of all tender related information and documentation via internet^{xvi}. From each of the tendering systems reviewed a set of common features and processes can be conceptualized^{xvii}.

- **e-Reverse Auctioning**

This is process of using internet technology to buy goods and services from a number of known or unknown suppliers of low price or combination of low price and other conditions^{xviii}. According to the UNCITRAL Model Law on Public Procurement, suppliers or contractors of successively lowered bids during a scheduled period and the automatic evaluation of bids define e-reverse auction as an online real-time purchasing technique utilized by the procuring entity to select the successful submission, which involves presentation^{xix}

- **e-Informing**

This is process of gathering and distributing procurement information quality such as accuracy, timeliness, adequacy and credibility from both internal and external parties using internet technology^{xx}.

OBJECTIVES AND BENEFITS OF E-PROCUREMENT

E-procurement has many objectives. Some among many include efficiency, balanced development, economy and cross boarder commerce as hereunder discussed.

Efficiency

E-Procurement implies standardization, streamlining and integration of procurement processes, which help reduction of administrative costs and processing times. Therefore, the cost of doing businesses for both buyers and suppliers reduced and tax burden can be ease^{xxi}.

- **Economy**

E-procurement involves centralized purchasing through a unified e-government procurement system by multiple government agencies enables aggregation of demand for common spend, enabling collaborative procurement as an innovative way to consolidate purchasing power, achieve economies of scale and value for money^{xxii}.

- **Balanced Development**

An e-procurement in public allows commercial incentive that encourages productivity and competition that bring economies of scales and location through aggregation of demand. Therefore, less developed countries may move towards a successful position^{xxiii}. Furthermore, E-procurement act as catalyst for procurement reform^{xxiv}. Therefore, e-procurement improves transparency, accountability and fiduciary compliance with less opportunity for corruptive or fraudulent activities; increasing business access and competition for government expenditure; improving efficiency and reducing processing costs and facilitating access to real time for historical information for management and audit.

- **Cross-Border Commerce**

E-procurement provides for a business development tool for both governments and supplier communities through providing access to information and opportunities locally, regionally and internationally. Suppliers may have limited to participate in geographical far away tender due to lack of knowledge about procurement opportunities. However, with online publication of tenders and online bid submission, it becomes potential as it reduces distance barriers and information gaps. Eventually, it encourages participation, widening the pool of suppliers and potentially encouraging markets^{xxv}.

- **Protection of Health and Safety**

E-procurement at COVID-19 pandemic act as mitigation measure as it enables tenders to maintain physical distance practices as it compels everyone involved in tendering process to

work effectively and safely from their home or office without physical meeting. This practice commonly known as social distance help to reduce the spread of the COVID-19 Virus hence supporting the efforts to protect the health and safety of the employees and business partners while continuing to advance critical capital projects^{xxvi}.

- **Tracking of expenditure and Revenue**

The adoption of e-procurement has benefit in tracking of expenditure and revenues. For example, the government of Tanzania use on-line system to track and control all of its expenditure and revenue using Epicor software. This is a financial integrated system capable of checking both budget and funds management; checking financial transactions including receipts and payments; printing reports; and procurement processes especially preparation of procurement documents such as Local Purchaser Order and other documents which are manned by Tanzania Inter-banking Settlement System (TISS) which meant to improve efficiency in the payment^{xxvii}. However, management of software applied in e-procurement in Tanzania suffers lack of specific regulating body in case a dispute arises and non-uniformity conditions as procuring entities are many and used differently. For example, PPRA use ACCPac software, National Social Security Fund (NSSF) use ORACLE and Tanzania Ports Authority (TPA) deploys SIP software. The Tanzania Bureau of Standard which is custodian and overseer of observance of standards as provided by the Standard Act 2009^{xxviii} are for items of general nature and disregarded items that are peculiar in nature and silent to the ICT equipment and related items including software as provided;

“The function of the Bureau shall be the promotion of the standardization of specification of commodities and services, enforcing quality assurance and environmental management systems procedures, issue national standard and approve standard marks for general nature”^{xxix}.

Therefore, lack of regulatory body for software becomes as legal flaw as its absence downsides security and consequently control mechanism becomes difficult.

Another legal gap is that the information and technology specialist (IT Specialist) is not taken care in the Public Procurement Act 2011. It is common practice to use IT specialist in performance of electronic procurement functions. For example, most of preparation of procurement documents and tools including solving procuring issues on line. Even the Chief Executive Officer (CEO) of procuring entity receives procurement advises from IT specialist who is not mentioned anywhere into the law. Moreover, the procurement officer who imposed

in supervision of the value for money as per by-law may not be adequately involved unless is conversant with system and tools. Failure of recognition of IT specialist by law may affect integrity and observance of the highest standard of ethics and refrain from fraud and corruption.

- **Corruption Control**

Another benefit of e-procurement process is control of corruption. Corruption is controlled through reducing the convention mode of the interacting by face to face. In electronic procurement, all details are displayed on digital platform; where everyone is accessible and no one can volunteer to disclose deals of corruption freely on digital platform that makes the corruption being curbed^{xxx}. Neupane and his fellows^{xxxii} depict that the public or bidder can monitor and view all procurement activities through the e-procurement government web portal which helps to disclose all the procurement related information that make any officer not to easily add extra specification for their private benefit. Therefore, e-Procurement eliminates human involvement in bidding which result into reducing corruption and therefore improving the effectiveness in public sectors^{xxxii}. It should be reminded that; the public procurement devotes a large share of public funds to procure necessary goods, services and works in order to deliver public services^{xxxiii}. Corruption affects the public competence and wealth in a country to cause the increase of government operation cost, corrodes the social hierarchy and citizen's trust in government and distorts the composition of the government expenditure. Therefore, e-procurement has great impact in controlling multi-practices such as corruption due to transparency of procurement processes done on-line and a further benefit is to enhance efficiency in public institutions. Also, through applications of an e-procurement, public institutions like Tanzania Electric Supply Company (TANESCO) and National Examinations Council of Tanzania (NECTA) have increased their efficiency as they allow their customers to procure electricity credits using mobile phones; and also, the National Examinations Council of Tanzania (NECTA) deploys e-government to realize examinations results and many more others^{xxxiv}.

FACTORS INFLUENCING ADOPTION OF E-PROCUREMENT

There are main types of factors that influence the adoption of e-procurement. Harland and Walker^{xxxv} point out the factors influencing adoption of e-procurement as organizational, readiness, supply, strategic and policy factors.

In brief, organizational factors are that which influence the adoption of e-procurement like size and type of operation. E-Procurement is more evident in bigger organization unlike small one^{xxxvi}. For instance, engaging supplier in the process especially smaller companies is difficult depending on the level of instrument required and the needs of their customer base in technology and internal procedure^{xxxvii}.

On readiness factors, factors like organizational readiness and external pressure impact on e-business strategy are essential. For example, many firms experiencing a number of major problems in implementing e-business projects due to hasty decision in considering software vendor unlike if purchasing processes could have evaluated and approved before adopting e-procurement tools^{xxxviii}.

On supply factors, e-procurement will be beneficial if other supply chain factors like power, legitimacy and urgency have effect on trust in implementation of e-procurement^{xxxix}.

On strategic factor, the public sector may have set e-procurement being strategic function that line up with broader sector strategy plans. Similarly, public procurement can be used to support broader government policies through both traditional and e-procurement processes. In that regard, use electronic procurement as a policy tool to support procurement policy in term of transparency, efficiency, cost reduction and even social reforms^{xl}.

THE COMPONENT OF E-PROCUREMENT

E-procurement host multiple components and procedures. Procuring entities implement e-procurement software solutions by either as a standalone or Enterprise Resource Planning software (ERP) or electronic data interchange system to help to automate the entire manual procurement process right from requisition of goods to issue of the purchaser order^{xli}. These components decide the functioning of the procurement in an effective way. The main components of e-procurement suites may differ depending on the basis for what they offer to the user. The main components of e-procurement include indent Management, RFX creation, bid submission, bid opening and evaluation, e-auctioning, vendor selection and finalization selection, vendor and contract management detailed hereunder:

Indent Management System

This process involves demand aggregation for all frequent items procured and indent assignment by creating a requisition for procurement. It is process involved in e-tendering. It is complete solution in e-procurement process as it allows on-line ordering, tracking and management of goods, services, resources ordered and in stock or out of stock items^{xliii}.

e-Procurement Tools

E-procurement systems consists of a number of different tools which include automation of internal ordering processes, online catalogues from approved vendors and electronic request for proposal (e-RFP) process that leverages online auctions to accumulate bids on providing goods and services for a specific project^{xliiii}. Another tool is RFx. This is one of common acronyms in the strategic sourcing and procurement arena. It captures all references to requests for Information (RFI), and or Request for Quotes. The RF represents “Request For” and X stands for I, P, and or Q. The RFx process enabled by an e-RFx platform that enables and automates the RFx process with benefits of efficiency through sourcing cycle time reductions; accuracy and consistency through standardization; collaboration as well as knowledge transfer^{xliv}. Virtually, all strategic sourcing processes feature a competitive bidding step with determining factors that include; the most appropriate contract solicitation process to use; how frequently buyer a buyer bids out the spend category; determination of what to emphasize in the solicitation and level of effort necessary for solicitation and how long the process should take^{xlv}. To maximize success with e-RFx, a technology platform must have centralized data repository, templates for common bids and quotes, survey support, workflow capability, security and access, and side-by-side reporting^{xlvi}. Additionally, in an RFx process, both parties may require the non-disclosure agreement or confidentiality terms. In some cases, an electronic signature of a name and date may be acceptable. In other cases, it may be necessary to use the eTool transmittal and rely on traditional means of affixing a signature on a hard copy of the legal document to indicate acceptance^{xlvii}.

Bid submission

Bid Submission is process of inviting registered vendors to submit their quotations or participate in reverse auction. For example, the buyer setting the price, the bidder is interested to pay. This process helps to maximize the value for money by creating competition among bidders. The bidding processes includes; the list of websites; eligibility of criteria for technical

bid; technical bids enclosures and prequalification document^{xlvi}. An e-bidding system encompasses various sub-systems and interfaces with other related systems. These includes; one, e-Bidding System which provide standard bidding documents with contractual templates for different categories of procurement available to buyer and suppliers online, Two, e-Bid Lodgement System which able for security and confidential receive bid submissions electronically to manage the authentication process. In authentication, the certification process shall accept electronic signature certificates issued by certifying authorities of country bidder^{xli}. Three, electronic contract management registers; four, e-contract management system that manage numerous contract relationship such as expiry times, conditions and performance criteria and designed to strengthen transparency and efficiency; and fifth, the Government Procurement Portal that make up an e-procurement bidding service suitable for public procurement¹.

Bid opening and Evaluation

These are two processes depend each other. One is bid opening which is process of all bids received to the deadline set for bid submission be opened at the time, date and place specified in the bidding document^{li}. The other is bid evaluation that is the scrutiny of details of bids for substantial responsiveness to the provisions of the bidding document^{lii}. This process takes place after tender submission deadline is reached. The process involves the opening and examining the bids to identify the preferred supplier for the assignment and bid evaluation considers evaluation criteria or particular methodology indicated in the invitation to tender specified applied. Under adaptation of Information and technology globally, some companies have made their own electronic bid such as Source Suite in which bidding evaluation is done through electronic bid submission that allows suppliers to respond to potential business opportunities, ensures prospective bidders are registered, authenticated and given a secure access key before submitting an electronic bid. All bid responses are kept securely sealed until the close date has arrived and allows easily compare bids and save evaluation time online^{liii}.

e-Auctioning

An e-Auction is business transaction process between sellers (the auctioneers) and bidders (buyers) that take place on an electronic market. It can occur in business-to-business, business to consumer or consumer-to-consumer and allows suppliers to bid online against each other for contracts against a published specification^{liv}. Typical example in Tanzania is Tanzania

Revenue online auction for vehicles not cleared by importers. This process encourages competition as goods and services are offered at their current market value as it offers transparency and participation from wide range of prospective bidders^{lv}. An e-Auction uses web-based software to allow potential suppliers to compete online in real time and prices for goods or services provided under auction based on price alone or other criteria such as quality, delivery or services levels^{lvi}.

The most common types of e-Auctions are Reverse e-Auctions and Forward e-Auctions. In the Reverse e-Auctions, the potential suppliers compete with each other by reducing the price of the goods or services in order to win the contract while in the Forward e-Auctions potential suppliers compete with others by increasing the price for goods and services in order to win the business offered^{lvii}. E-Auction is processed in different steps as follows;

Step 1: Establishment of customer requirement Step 2: Stakeholder engagement to clarify, review and aggregate requirements and agree e - Auction Strategy

Step 3: Invitation to quote and specification is developed and agreed by stakeholders and issued to suppliers

Step 4: Suppliers submit response and opening bids Step 5: Evaluate quality aspects to responses and invite qualifying suppliers to e-Auction Step 6: The e-Auction and Step 7: Contract with winning supplier

Vendor management selection

This is process describing the activities included in researching and sourcing vendors, obtaining quotes with pricing, capabilities, quality of works, negotiating contracts and evaluating performance in order to establish service, quality, cost and satisfaction goals and choose third party supplier that help to achieve intended goals. This process is broken into establishment of goals, select the best vendors, managing suppliers and meeting the goals^{lviii}. This process is online web-based tool that act as single node to manage all vendor related activities in business in ensuring efficiency and long-term growth^{lix}. The automatic vendor evaluation has three methods that are automatic; Semi-automatic and manual benefits of using automatic vendor include accuracy, objectively standardization as it gives consistent result^{lx}.

E-Contract management

E-contract Management is the use of information technology to improve efficiency and effectiveness of contracting processes. It is process of managing contract formation, execution and analysis in order to maximize operations and financial performance of organizations with aim of reducing financial risks such as costs and facilitates an effective and automated contact management system^{lxi}. It covers the entire contract lifecycle from contract initiation and creation to negotiation of amendments, contract termination and the archiving of concluded contracts by using digital contract software to avoid creation of parallel data worlds and maintain supplier and buyer relationships on basis of a single integrated database^{lxii}. Contract management software stores key information about contracts relating to providers, leases and licensing agreement with overall purpose of streamline administrative tasks by creating a centralized and uniform record for each contract's processes^{lxiii}.

Stages of e-Contract Management

Generally, contract management involves phases. One is early stage or pre-award, the other is middle stage when the process awarded to make the agreement final and the third is the post-award stage where contract management and maintenance come in. The process includes several steps as follows:

- (i) **Preparation of contract:** This is first step in establishing contract. Parties to contract express their requests and requires asking some of questions that come into play before anything be done. For example, what are the purpose of contract, what achieved, what risks are and what are they expecting to get out of the contract^{lxiv}.
- (ii) **Authorizing contracts:** In this stage, the terms and conditions that support the parties to contract are written in term of what services offered and other terms that are agreed upon^{lxv}.
- (iii) **Negotiating the contract:** This stage, both parties negotiate the terms drafted during authorizing stage and should provide clarity on what expected from both parties and ensure no ambiguity
- (iv) **Approving the contract:** After negotiations are complete and both parties agree, next stage is approving the contract. For example, in institutions which have specific procurement policies, approving officers meet before approval for contract^{lxvi}

- (v) **Execution of the contract:** At this stage, parties to contract agree if wording is exact and contract approved followed by making it official. Now, there are factor needs to be avoided in order to make smooth flow of this stage. For example, to make physical signature or email may not be the best option for people involved are in different time zones. In lieu of that, an electronic signature is incorporated^{lxvii}
- (vi) **Revisions and Amendments:** This stage concern with parties to contract make revisions and amendments tracking in order to implement reliable process such as a contract management platform for easily records edits and add amendments
- (vii) **Renewals:** This is last stage of the contract management and can vary depending with the type of contract agreed to. This is applicable when the relationship between the parties is beneficial and the parties want to remain in contact to continue doing business

CONCLUSION

The paper has reviewed that e-tendering, e-contract, Web-based Enterprise Resource Planning (ERP), e-Maintenance, Repair and Overhaul and e-reverse tendering are the important aspect of electronic procurement functions. Again, it is observed from the paper that electronic procurement promotes governance, efficiency, and balanced-development, economy, cross boarder commerce and protection of health and safety. Also, tracking of expenditure and revenues; and corruption control. Additionally, adopting on e-procurement is influenced by different factors like organizational, readiness, supply, strategic and policy factors. Another observation is that, despite of importance of software, Tanzania has no regulatory body for software control mechanism and existing law does not recognize IT specialist. Lack of regulatory body for software downsides security and control mechanism becomes difficult. Moreover, the absence of regulatory software machinery may attract many procuring entities to buy and use any software available in the market without considering quality; security and operational costs. Extant of the software control authority shall avoid the security risk and operational costs. In addition, non-recognition of IT Specialist by law may render to distress integrity and adherence of the highest standard of ethics and refrain from fraud and corruption. Therefore, considering above highlights, it is recommended that Tanzania should make an overhaul of the current public Procurement Act 2011 and its regulation No. 446 of 2013 and

be replaced by the comprehensive electronic procurement regulation that shall incorporate all development of recent ICT and adoption of e-procurement in order to achieve effective, efficient and adequate regulatory framework of electronic procurement.

BIBLIOGRAPHY

Alor-Hernandez, G et al., *Improving E-Procurement in Supply Chain through Web Technologies: The HYDRA Approach*, Supply Chain Management New Perspective, Sanda Renko, IntechOpen, 2011 (accessed from <https://www.intechopen.com/books/supply-chain-management-nnew-perspective/improving-e-procurement-in-supply-chain--through-web-technologies-the-hydra-approach> on 14.12.2019)

Andrade, P at el., *Electronic Procurement: Dealing with Supplier Adoption*, International Conference on Enterprise Information System, CENTERIS Springer, Berlin, Heidelberg 2010 (accessed from link.springer.com on 21.12.2020)

Azmin, K..S.A and Rahman, A.A. L., *E-Procurement: A Tool to Mitigate Pubic Procurement Fraud in Malaysia*, Electronic Journal of e-Government 2015, Vol. 13 Issue 2, University of Malaysia (accessed from www.ejeg.com on 04.12,2018)

Belohlavek, J. A and Rozehnalova, N., *Legal Issues in Electronic Procurement and International Transportation*, Czech Yearbook of International Law Vol. VI, 2015 Juris Publishing, Inc. U.S.A 2015 (accessed from <https://www.ssrn.com> on 07.08.2020)

Bennett Conlin,. *What is Contract Management*, Business News Daily, 13 August, 2019 (accessed from <https://www.businessnewsdaily.com> on 29.12.2019)

Betts, M et al., *Security and Legal Issues in E-tendering*, Cooperative Research Center for Construction Innovation, Icon.Net Pty Ltd, Australia, 2004 (accessed from www.construction-innovation.info on 07.08.2020)

Chepkwony, J. K and Lagat, C., *E-Ordering and E-Informing on Supply Chain Performance in Retail Marketing Outlets in Kenya*, An International Peer-Reviewed Journal 2006, vol. 20 (accessed from <https://pdfs.semanticscholars.org> on 15.12.2019)

Doshi, V and Patowary, J ., *A Complete Guide to Vendor Management –Its Benefits, Challenges , Process & Best Practices*, ZYCUS (accessed from <https://www.zycus.com> on 03.01.2020)

E-Government Procurement Handbook, Asian Development Bank 2013

Fournier, J., What is Vendor Management, HCMWorks 2015 (accessed from <https://www.hcmworks.com> on 03.01.2020)

Gregoire, A., The Benefits of E-procurement During COVID-19, Colliers INTERNATIONAL, Canada 2020 (accessed from [colliers project leaders. com](http://colliersprojectleaders.com) on 20. 12.2020)

Gunda, E.J.P et al., *Role of E-Government in Delivery of Public Services in Tanzania Electric Supply Company in Ruvuma Region*, International Journal of Scientific and Technology Research 2015 Vol. 4 Issue 06 (accessed from www.ijstr.org on 04.02.2019)

Harland, C and Walker, H., *E-procurement in the United Nations: Influence, Issues and Impact*, International Journal of Operation & Production Management 2008, Vol .29 No. 9 (accessed from www.researchgate.net on 21.12.2020)

Imhen, P., How to optimize under Performance Appraisal with Automatic Vendor Evaluation, ZOCODE Ltd 2017 (accessed from <https://sapinsider.wispubs.com> on 03.01.2020)

Jahanshashi, H and Mohammadi, S., A Secure E-Tendering System, Conference Paper, Khaje Nasir University of Technology, Iran 2009 (accessed from <https://www.researchgate.net/publication/224570489> on 15.12. 2019)

Janani, S and Kumar, K., *A Contract Bidding Process in Construction Industry*, International Research Journal on Engineering and Technology (IRJET), 2017 Vol. 04 Issue 03 (accessed from <https://www.academia.edu> on 26.12.2019)

Kolenko, S., What is E-Procurement and Why is it Important to Your Business (accessed from Blog.procurify.com on 10.12.2019)

Lamoureux, M et al., e-RFX for Total Value Management, E-RFx &Supplier Management (accessed from www.esourcingwiki.com on 26.12.2019)

Lewis, M.D., Essentials of eSourcing: A Practical Guide for Managing the RFX Process in an “E” Environment, 89th Annual International Supply Management Conference, Procurement Sprint Corporation, Overland Park Kansas, US April, 2004 (accessed from <https://www.instituteforsupplymanagement.org> on 26.12.2019)

Malekia, D., E-procurement as Anti-corruption Tool in Public Procurement in Tanzania, A Paper presented at the 8th International Public Procurement Conference, Arusha International Conference Centre (AICC), Tanzania from 8-10th August 2018 (accessed from www.iaa.ac.tz on 04.12.2018)

Meysel, T., E-Procurement and Contract Management: The Yin and Yang of Digital Procurement, EASY SOFTWARE, May 15, 2019 (accessed from <https://easy-software.com/en/newsroom/e-procurement-and-contract-management/> on 29.12.2019)

Mohite, S. A. et al., *Web-Based Enterprise Resource Planning System: An Alternative for Small and Medium Size Business Companies*, Journal of Engineering Research and Applications ISSN: 2248-9622, Vol. 4 Issue 4 (Version3) April, 2014 pp.18-23 (accessed from <https://www.ijera.com> on 08. 12. 2019)

Najam., 7 Stages in Contract Management, Contract & Ground Logistics-Forwarding & Clearing, 2018 (accessed from <https://dotcave.com> on 29.12.2019)

Ndou, V., *E-government for Developing Countries; Opportunities and Challenges*; The Electronic Journal of Information System in Developing Countries 2004 Vol. 18 Issue1

Neupane, A et al, Role of Public E-Procurement Technology to Reduce Corruption in Government Procurement, International Public Procurement Conference held at Seattle, Washington, US from 17-19 August, 2012 (accessed from eprints.usq.edu.au on 04.12.2018)

Patel, P. H., “A Study of e-Procurement Practices in Selected Organizations in Gujarat”; A Thesis Submitted for the Award of Doctor of Philosophy in Management, Gujarat Technological University Ahmedabad, India 2017 (accessed from www.gtu.ac.in on 26.12.2019)

Reedy, J., The 8 Stages of the Contract Lifecycle, Resource for Contract Management and Procurement Professionals (accessed from <https://www.cobblestonesoftware.com> on 29.12.2019)

Satyanarayana. J., Concept of e-Procurement, Capacity Building Workshop under NEGP, National Institute for Small Government (NIGS), Great Zimbabwe University held from 4-6 May, 2017, (accessed from nimachedit.gov.in on 18.12.2019)

Vitasek, K., Reviewing RFX Bidding Methods: Which Ones are Right for You, National Contract Management Association (NCMA), Ashburn, Virginia, US (accessed from <https://www.ncmahq.org> on 26.12.2019)

Watuleke, J., *E-Procurement: Evolution and Adoption. A Review of Literature*, East African School of Higher Education Studies and Development (EASHESD), IRJDO-Journal of Education Research, 2017 Vol. 2 No.5 (accessed from <https://cees.mak.ac.ug> on 15.12.2019)

<https://demergsystems.com> on 23.12.2019)

<https://www.adb.org> on 23.11.2019

<https://www.adb.org> on 26. 12.2019)

<https://www.adb.org> on 26. 12.2019)

<https://www.bot.go.tz> on 06.12.2018)
<https://www.cips.org> on 15.12.2019)
<https://www.forceintellect.com> on 23.12.2019)
<https://www.gov.uk> on 30.12.2019)
<https://www.gov.uk> on 30.12.2019)
<https://www.thehindubusinessline.com> on 30.12.2019)
<https://www.thehindubusinessline.com> on 30.12.2019)
<https://www.waxdigital.com> 30.12.2019)
<https://www.waxdigital.com> 30.12.2019)
www.sourcesuite.com on 26.12.2019)
www.sourcesuite.com on 26.12.2019)
www.sourcinginnovation.com on 26.12.2019)
www.unictr.org assessed on 07.08.2020

ENDNOTES

ⁱ Kolenko, S., What is E-Procurement and Why is it Important to Your Business (accessed from Blog.procurify.com on 10.12.2019)

ⁱⁱ Ibid

ⁱⁱⁱ Watuleke, J., *E-Procurement: Evolution and Adoption. A Review of Literature, East African School of Higher Education Studies and Development (EASHESD)*, IRJDO-Journal of Education Research, 2017 Vol. 2 No.5 pp. 51-52 (accessed from <https://cees.mak.ac.ug> on 15.12.2019)

^{iv} S. 63 of Act (Amendment) 2016

^v S. 341 of GN. 446

^{vi} S. 4 of the Act (Act No. 13 of 2015)

^{vii} S. 13(1) and (3) of the Act, Ibid

^{viii} Watuleke, J., *E-Procurement: Evolution and Adoption. A Review of Literature, East African School of Higher Education Studies and Development (EASHESD)*, IRJDO-Journal of Education Research, 2017 Vol. 2 No.5 pp. 51-52 (accessed from <https://cees.mak.ac.ug> on 15.12.2019)

^{ix} Alor-Hernandez, G et al., Improving E-Procurement in Supply Chain through Web Technologies: The HYDRA Approach, Supply Chain Management New Perspective, Sanda Renko, IntechOpen, 2011 (accessed from <https://www.intechopen.com/books/supply-chain-management-nnew-perspective/improving-e-procurement-in-supply-chain-through-web-technologies-the-hydra-approach> on 14.12.2019)

^x Art. 5 of the UNICTRAL Model Law on Electronic Commerce 1996 with additional article 5 is as adopted in 1998

^{xi} Alor-Hernandez, G et al, Supra

^{xii} Mohite, S. A. et al., *Web-Based Enterprise Resource Planning System: An Alternative for Small and Medium Size Business Companies*, Journal of Engineering Research and Applications ISSN: 2248-9622, Vol. 4 Issue 4 (Version3) April, 2014 pp.18-23 (accessed from <https://www.ijera.com> on 08. 12. 2019)

^{xiii} Belohlavek, J. A and Rozehnalova, N., Legal Issues in Electronic Procurement and International Transportation, Czech Yearbook of International Law Vol. VI, 2015 Juris Publishing, Inc. U.S.A 2015 P.13(accessed from <https://www.ssrn.com> on 07.08.2020)

^{xiv} Alor-Hernandez, G et al, Supra

- ^{xv} eSourcing, Chartered Institute of Procurement and Supply (CIPS) (accessed from <https://www.cips.org> on 15.12.2019)
- ^{xvi} Jahanshahi, H and Mohammadi, S., A Secure E-Tendering System, Conference Paper, Khaje Nasir University of Technology, Iran 2009 (accessed from <https://www.researchgate.net/publication/224570489> on 15.12. 2019)
- ^{xvii} Betts, M et al., Security and Legal Issues in E-tendering, Cooperative Research Center for Construction Innovation, Icon.Net Pty Ltd, Australia, 2004 P.6 (accessed from www.construction-innovation.info on 07.08.2020)
- ^{xviii} Alor-Hernandez, G et al, Supra
- ^{xix} Art. 2(d) of the UNCITRAL Model Law on Public Procurement, United Nations, New York 2014 (accessed from www.uncitral.org on 07.08.2020)
- ^{xx} Chepkwony, J. K and Lagat, C., *E-Ordering and E-Informing on Supply Chain Performance in Retail Marketing Outlets in Kenya*, An International Peer-Reviewed Journal 2016 vol. 20 P21-22 (accessed from <https://pdfs.semanticscholars.org> on 15.12.2019)
- ^{xxi} Ibid
- ^{xxii} E-Government Procurement Handbook, Asian Development Bank (ADB), 2013 P. 11 (accessed from <https://www.adb.org> on 23.11.2019)
- ^{xxiii} Ibid P.13
- ^{xxiv} Satyanarayana. J., Concept of e-Procurement, Capacity Building Workshop under NEGP, National Institute for Small Government (NIGS), Great Zimbabwe University held from 4-6 May, 2017, (accessed from nimacheldit.gov.in on 18.12.2019)
- ^{xxv} E-Government Procurement Handbook, Asian Development Bank 2013 P.15
- ^{xxvi} Gregoire, A., The Benefits of E-procurement During COVID-19, Colliers INTERNATIONAL, Canada 2020 (accessed from colliersprojectleaders.com on 20. 12.2020)
- ^{xxvii} Tanzania Inter-bank settlement System (TISS)-BOT (accessed from <https://www.bot.go.tz> on 06.12.2018)
- ^{xxviii} S. 3 (1)(2) of the Act (Act No. 2 of 2009)
- ^{xxix} S. 4(1)(a)-(s) of the Act
- ^{xxx} Malekia, D., E-procurement as Anti-corruption Tool in Public Procurement in Tanzania, A Paper presented at the 8th International Public Procurement Conference, Arusha International Conference Centre (AICC), Tanzania from 8-10th August 2018 P. 9 (accessed from www.iaa.ac.tz on 04.12.2018)
- ^{xxxi} Neupane, A et al, Role of Public E-Procurement Technology to Reduce Corruption in Government Procurement, International Public Procurement Conference held at Seattle, Washington, US from 17-19 August, 2012 (accessed from eprints.usq.edu.au on 04.12.2018)
- ^{xxxii} Ndou, V., *E-government for Developing Countries; Opportunities and Challenges*; The Electronic Journal of Information System in Developing Countries 2004 Vol. 18 Issue1
- ^{xxxiii} Azmin, K..S.A and Rahman, A.A. L., *E-Procurement: A Tool to Mitigate Pubic Procurement Fraud in Malaysia*, Electronic Journal of e-Government 2015, Vol. 13 Issue 2, University of Malaysia P.1 (accessed from www.ejeg.com on 04.12.2018)
- ^{xxxiv} Gunda, E.J.P et al., *Role of E-Government in Delivery of Public Services in Tanzania Electric Supply Company in Ruvuma Region*, International Journal of Scientific and Technology Research 2015 Vol. 4 Issue 06 (accessed from www.ijstr.org on 04.02.2019)
- ^{xxxv} Harland, C and Walker, H., *E-procurement in the United Nations: Influence, Issues and Impact*, International Journal of Operation & Production Management 2008, Vol .29 No. 9 (accessed from www.researchgate.net on 21.12.2020)
- ^{xxxvi} Ibid
- ^{xxxvii} Andrade, P at el., Electronic Procurement: Dealing with Supplier Adoption, International Conference on Enterprise Information System, CENTERIS Springer, Berlin, Heidelberg 2010 (accessed from link.springer.com on 21.12.2020)
- ^{xxxviii} Harland and Walker, Supra
- ^{xxxix} Ibid
- ^{xl} Ibid pp 836-838
- ^{xli} What is e-Procurement, Force Intellect Adding Value, Enabling Growth (accessed from <https://www.forceintellect.com> on 23.12.2019)
- ^{xlii} Indent Management System, Demerg Systems India (DSI) (accessed from <https://demergsystems.com> on 23.12.2019)

- ^{xliii} Patel, P. H., “A Study of e-Procurement Practices in Selected Organizations in Gujarat”; A Thesis Submitted for the Award of Doctor of Philosophy in Management, Gujarat Technological University Ahmedabad, India 2017 P.51 (accessed from www.gtu.ac.in on 26.12.2019)
- ^{xliiv} Lamoureux, M et al., e-RFX for Total Value Management, E-RFx &Supplier Management (accessed from www.esourcingwiki.com on 26.12.2019)
- ^{xli v} Vitasek, K., Reviewing RFX Bidding Methods: Which Ones are Right for You, National Contract Management Association (NCMA), Ashburn, Virginia, US (accessed from <https://www.ncmahq.org> on 26.12.2019)
- ^{xli vi} RFX, The Sourcing Innovation Blog (accessed from www.sourcinginnovation.com on 26.12.2019)
- ^{xli vii} Lewis, M.D., Essentials of eSourcing: A Practical Guide for Managing the RFX Process in An “E” Environment, 89th Annual International Supply Management Conference, Procurement Sprint Corporation, Overland Park Kansas, US April, 2004 (accessed from <https://www.instituteforsupplymanagement.org> on 26.12.2019)
- ^{xli viii} Janani, S and Kumar, K., *A Contract Bidding Process in Construction Industry*, International Research Journal on Engineering and Technology (IRJET), Vol. 04 Issue 03, 2017 (accessed from <https://www.academia.edu> on 26.12.2019)
- ^{xli x} Ibid
- ^l Ibid
- ^{li} Guide on Bid Evaluation, Asian Development Bank 2018 P 8 (accessed from <https://www.adb.org> on 26.12.2019)
- ^{lii} Ibid
- ^{liii} Electronic Bid Submission and Evaluation (accessed from www.sourcesuite.com on 26.12.2019)
- ^{li v} What is an e-Auction, WaxDigital Limited 2009-2019 (accessed from <https://www.waxdigital.com> 30.12.2019)
- ^{li v} All You Wanted to know about e-Auctions, The Hindu BusinessLine, November, 2014 (accessed from <https://www.thehindubusinessline.com> on 30.12.2019)
- ^{li vi} Guidance eAuctions, Crown Commercial Services, 2015 (accessed from <https://www.gov.uk> on 30.12.2019)
- ^{li vii} Ibid
- ^{li viii} Fournier, J., What is Vendor Management, HCMWorks 2015 (accessed from <https://www.hcmworks.com> on 03.01.2020)
- ^{li x} Doshi, V and Patowary, J ., A Complete Guide to Vendor Management –Its Benefits, Challenges , Process & Best Practices, ZYCUS (accessed from <https://www.zycus.com> on 03.01.2020)
- ^{li x} Imhen, P., How to optimize under Performance Appraisal with Automatic Vendor Evaluation, ZOCODE Ltd 2017 (accessed from <https://sapinsider.wispubs.com> on 03.01.2020)
- ^{li xi} Bennett Conlin., What is Contract Management, Business News Daily, 13 August, 2019 (accessed from <https://www.businessnewsdaily.com> on 29.12.2019)
- ^{li xii} Meysel, T., E-Procurement and Contract Management: The Yin and Yang of Digital Procurement, EASY SOFTWARE, May 15, 2019 (accessed from <https://easy-software.com/en/newsroom/e-procurement-and-contract-management/> on 29.12.2019)
- ^{li xiii} Powell, R, “ Rob Powell Biz Blog” in Meysel, T ., Ibid
- ^{li xiv} Reedy, J., The 8 Stages of the Contract Lifecycle, Resource for Contract Management and Procurement Professionals (accessed from <https://www.cobblestonesoftware.com> on 29.12.2019)
- ^{li x v} Ibid
- ^{li xvi} Najam., 7 Stages in Contract Management, Contract & Ground Logistics-Forwarding & Clearing, 2018 (accessed from <https://dotcave.com> on 29.12.2019)
- ^{li x vii} Ibid