TRANSFORMATION TO E-PUBLIC PROCUREMENT IN THE UNITED ARAB EMIRATES IN THE LIGHT OF UNICITRAL MODEL LAW

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ABSTRACT

Purpose: This research investigates the transformation of the e-public procurement system in the United Arab Emirates in light of the UNICITRAL Law Model.

Theoretical framework: The current research consists of an introduction and the definition of public procurement and e-public procurement in addition to the e-tender system in UAE at the Federal and local levels and how it is consistent with the UNICITRAL Law Model.

Design/Methodology/Approach: It should be noted that a descriptive/analytical approach has been adopted in this study, clarifying the concept of public procurement and then addressing the mechanism of electronic systems used in the UAE.

Findings of the paper: The UAE has six electronic systems for public procurement that helped to reduce public spending, simplify the process and procedures, save time, and maximize the benefits of public expenditure.

Research, Practical & Social implications: We suggest using AI in public procurement systems to reduce the dealing with human resources to make the tender less corrupted and not to abuse the public procurement employee power.

Originality/Value: We propose to create electronic systems for public procurement in the Emirates that do not have electronic systems for public procurement, in addition to continually introducing technical support to the employees to avoid mistakes and to enhance effectiveness and efficiency.

Keywords: public procurement, digital transformation, e-public procurement, e-tender, United Arab Emirates.
TRANSFORMAÇÃO PARA A CONTRATAÇÃO PÚBLICA ELETRÔNICA NOS EMIRADOS ÁRABES UNIDOS À LUZ DA LEI MODELO DA CNUDCI

RESUMO

Objetivo: Esta pesquisa investiga a transformação do sistema de compras públicas eletrônicas nos Emirados Árabes Unidos à luz do Modelo de Direito UNICETRAL.

Quadro teórico: A pesquisa atual consiste em uma introdução e a definição de contratos públicos e públicos eletrônicos, além do sistema de e-tender nos Emirados Árabes Unidos, a nível federal e local e como é consistente com o Modelo de Direito UNICETRAL.

Design/Metodologia/Abordagem: Deve-se notar que uma abordagem descritiva/analítica foi adotada neste estudo, clarificando o conceito de contratação pública e, em seguida, abordando o mecanismo de sistemas eletrônicos utilizados nos EAU.

Conclusões do documento: Os EAU têm seis sistemas eletrônicos para a contratação pública que ajudaram a reduzir a despesa pública, simplificar o processo e os procedimentos, economizar tempo e maximizar os benefícios da despesa pública.

Investigação, implicações práticas e sociais: Sugerimos utilizar a IA nos sistemas de contratação pública para reduzir a utilização de recursos humanos para tornar o concurso menos corrompido e não abusar do poder dos funcionários públicos.

Originalidade/Valor: Propomos criar sistemas eletrônicos para a contratação pública nos Emirados que não tenham sistemas eletrônicos para a contratação pública, além de introduzir continuamente suporte técnico aos funcionários para evitar erros e aumentar a eficácia e a eficiência.


1 INTRODUCTION

Countries spend on their procurement to meet their needs for goods and services equivalent to 15% to 20% of the GDP (Thai, 2001), making them the market's largest buyers. In some countries, the public procurement of goods and services is more than 60% of public spending (Tesfahun, 2011). According to the OECD, Public procurement in the OECD countries is equivalent to $4.733 billion annually (Basil Fuleihan Financial and Economic Institute, 2015). At the same time, public procurement in Arab countries constitutes over 15% and 20% of GDP (Aboelazm, 2022a). On the other hand, public procurement is included in developing countries with almost 820 billion US dollars annually (The World Bank, 2012). Accordingly, improper public procurement practices waste public spending and national resources, negatively affecting economic growth. So, most countries, in general, and the United Arab Emirates (UAE) in particular, designed some policies to secure a electronic system for public procurement to increase
transparency, integrity, and sustainability and reduce the monopoly in public procurement.

In addition, governments try to apply electronic systems in all fields when making public policies (Aboelazm, 2021). Nowadays, most countries have found that the use of technology in several fields, such as e-justice (Aboelazm, 2022b), e-commerce, and public procurement (Carayannis, 2001), achieves many advantages through establishing an electronic tender system, which contributes significantly to reducing corruption (Vaidya, 2006) and achieving higher levels of transparency and integrity in public procurement to reduce public spending by saving time, effort, and resources spent on the paper system (Aboelazm, 2022a; Mufleh, 2020).

Through the implementation of several reforms, the United Arab Emirates recently made a significant improvement to its public procurement system. These reforms aim to increase the procurement process’s transparency, accountability, and efficiency, ensuring that taxpayer money is spent wisely. A centralized e-procurement system (Aboelazm & Afandy, 2019), a regulatory body for procurement involving small and medium enterprises in public tenders (Aboelazm, 2023a), the use of public procurement to achieve sustainability (Aboelazm, 2023b), and a code of ethics for procurement specialists are among the modifications. More private-sector investment is anticipated due to these reforms, increasing the nation's overall economic competitiveness (Cherian, Munuswamy & Jasim, 2020; Tutu, Kissi, Osei-Tutu, & Desmond, 2019).

2 METHODOLOGY

The study relied on the descriptive approach in dealing with public and electronic procurement definitions. It also used the analytical method in analyzing the articles of the UNCITRAL Model Law on Public Procurement and the Federal Procurement and Stores Regulations in the United Arab Emirates. The comparative approach was used between the electronic tender’s system in the United Arab Emirates and the UNCITRAL Model Law to identify their similarities and differences.

The study relied on several sources in articles published in international journals indexed on Scopus and Web of Science and reports issued by specialized international organizations such as the World Bank and the Organization for Economic Cooperation and Development. It also relied on various laws, such as the Public Procurement Law in the United Arab Emirates and the UNCITRAL Model Law.
2.1 DEFINITION OF PUBLIC PROCUREMENT

Procurement generally refers to finding and acquiring the necessary goods and services in both the public and private sectors for the most affordable price while maintaining acceptable quality margins (Lee, 2010). Because of this, the public, private sector, and policymakers are more interested in public procurement (Larbi, Baiden & Agyekum, 2019; Offei, Kissi, & Badu, 2016). However, there are some distinctions between public and private procurement. Public procurement, on the other hand, is concerned with providing a good or service to serve the public interest by the rules set forth by law’s orders, directives, judgments, political or administrative decisions, and considering a preconceived plan (Gordon, 1996; Bright, 1994; Panayiotou et al., 2004).

As stated by Gershon, “The act of procuring from third parties includes the acquisition of goods, services, and building projects. This process covers the entire life cycle, from the conception and identification of business requirements to the expiration of an asset’s useful life or the conclusion of a services contract” (Gershon, 1999). Therefore, public procurement aims to acquire goods and services from vendors and contractors that can do so quickly and effectively (Atiga & Azanlerigu, 2017).

On the other hand, most national laws lack a clear definition of government procurement. For instance, Egyptian law did not define public procurement (Egyptian Public Procurement Law No. 182 for 2018). However, it was described as follows in the Procurement and Warehouse Regulations in the United Arab Emirates (Cabinet Decision No. 4 of 2019) and the UNCITRAL Law (UNCITRAL Model Law on Public Procurement 2011):

UNCITRAL law defines public procurement as “means the acquisition of goods, construction, or services by a procuring entity” (Article (2) from UNCITRAL Model Law on Public Procurement 2011). On the other hand, the United Arab Emirates law defines it as “Any good, service, or business needed by the federal authorities to carry out their business” (Article (1) from Cabinet Decision No. (4) of 2019).

Accordingly, public procurement includes any of the needs of the federal government, which means the public procurement does not include any of the needs of local government; the law mentioned that the needs of the federal authorities only could be public procurement whether these needs are supplies, services, or even construction work.
2.2 DEFINITION OF E-PUBLIC PROCUREMENT

Electronic procurement systems have not yet been implemented in most developing nations, such as Egypt, despite the development of many cutting-edge systems that can be used in procurement, such as artificial intelligence and electronic systems that would develop support systems for the government (Schiele & Torn, 2020). However, it is used in some nations, such as South Korea (Kim, 2008; Lim et al., 2008; Lim & Lee, 2006; The World Bank, 2004), Italy (Giacalone et al., 2006; OECD, 2011), and the United Arab Emirates.

The definition of public procurement provided earlier suggests that "electronic public procurement" can describe the use of ICT to establish purchasing between awarding entities and suppliers (Hamad, Al-Sarraf, 2023; Asamoah & Annan, 2019; Tutu, Kissi, Osei-Tutu & Desmond, 2019).

The use of ICT by the government to manage its relationships with suppliers who submit bids for the purchase of goods and services, construction projects, and consulting services is known as "e-public procurement" (Baltharzzar, Bernard & Kofi 2019; Davlila et al., 2003). Also, it is "the application of technological tools to significant steps in the public procurement process, including contract award, selection, and communication" (Sun et al., 2012; Belisari, Appolloni & Cerruti, 2019).

The previous definitions refer to occupations or fields that have utilized technological, communicative, or electronic means; depending on the situation, they may be all purchase areas or only some without the other (Aboelazm, 2022a). However, e-public procurement goals were not given any of these definitions. Roman defines e-procurement as follows: "e-procurement can be understood as the digitalization of key purchasing processes elements, such as search, selection, communication, bidding, or contract awarding" (Roman, 2013).

To increase efficiency, quality, and transparency in public procurement, it is defined as "information systems shared between various governmental organizations and the private sector, which are carried out electronically in any part of the procurement process" (Walker & Brammer, 2012; Carayannis, & Popescu, 2005; Purwanto, Sjarief, Dawan, Kurniawan, Pertiwi, Zahra, 2023).

On the other hand, UNCITRAL law did not define electronic public procurement. Still, the United Arab Emirates law defines it as the electronic system prepared by the
Ministry and uses in the federal entity to complete all procurement-related operations (Article (1) from Cabinet Decision No. (4) of 2019).

3 E-TENDERS SYSTEM IN UNICITRAL AND UNITED ARAB EMIRATES LAWS

3.1 UNICITRAL MODEL LAW

The UNCITRAL Model Law defines electronic tenders as the method of publishing tenders by electronic means, and it stipulates that the following should be met (Article (53) from UNICITRAL Model Law on Public Procurement 2011):

“1. The procuring entity shall solicit bids by causing an invitation to the electronic reverse auction to be published in accordance with article 33 of this Law. The invitation shall include:

(a) The name and address of the procuring entity;
(b) A detailed description of the subject matter of the procurement, in conformity with article 10 of this Law, and the desired or required time and location for the provision of such subject matter;
(c) The terms and conditions of the procurement contract, to the extent they are already known to the procuring entity, and the form of the contract, if any, to be signed by the parties;
(d) A declaration pursuant to article 8 of this Law;
(e) The criteria and procedures to be used for ascertaining the qualifications of suppliers or contractors and any documentary evidence or other information that must be presented by suppliers or contractors to demonstrate their qualifications in conformity with article 9 of this Law;
(f) The criteria and procedure for examining bids against the description of the subject matter of the procurement;
(g) The criteria and procedure for evaluating bids in accordance with article 11 of this Law, including any mathematical formula that will be used in the evaluation procedure during the auction;
(h) The manner in which the bid price is to be formulated and expressed, including a statement as to whether the price is to cover elements other than the cost of the subject matter of the procurement itself, such as any applicable transportation and insurance charges, customs duties and taxes;
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(i) The currency or currencies in which the bid price is to be formulated and expressed;
(j) The minimum number of suppliers or contractors required to register for the auction in order for the auction to be held, which shall be sufficient to ensure effective competition;
(k) If any limit on the number of suppliers or contractors that can be registered for the auction is imposed in accordance with paragraph 2 of this article, the relevant maximum number and the criteria and procedure, in conformity with paragraph 2 of this article, that will be followed in selecting it;
(l) How the auction can be accessed, including appropriate information regarding connection to the auction;
(m) The deadline by which suppliers or contractors must register for the auction and the requirements for registration;
(n) The date and time of the opening of the auction and the requirements for identification of bidders at the opening of the auction;
(o) The criteria governing the closing of the auction;
(p) Other rules for the conduct of the auction, including the information that will be made available to the bidders in the course of the auction, the language in which it will be made available and the conditions under which the bidders will be able to bid;
(q) References to this Law, the procurement regulations and other laws and regulations directly pertinent to the procurement proceedings, including those applicable to procurement involving classified information, and the place where those laws and regulations may be found;
(r) The means by which suppliers or contractors may seek clarification for information relating to the procurement proceedings;
(s) The name, functional title and address of one or more officers or employees of the procuring entity who are authorized to communicate directly with and to receive communications directly from suppliers or contractors in connection with the procurement proceedings before and after the auction without the intervention of an intermediary;
(t) Notice of the right provided under article 64 of this Law to challenge or appeal decisions or actions taken by the procuring entity that are allegedly not in
compliance with the provisions of this Law, together with information about the
duration of the applicable standstill period and, if none will apply, a statement to
that effect and the reasons therefor;
(u) Any formalities that will be required after the auction for a procurement
contract to enter into force, including, where applicable, ascertainment of
qualifications or responsiveness in accordance with article 57 of this Law and the
execution of a written procurement contract pursuant to article 22 of this Law;
(v) Any other requirements established by the procuring entity in conformity with
this Law and the procurement regulations relating to the procurement proceedings.
2. The procuring entity may impose a maximum limit on the number of suppliers
or contractors that can be registered for the electronic reverse auction only to the
extent that capacity constraints in its communications system so require, and shall
select the suppliers or contractors to be so registered in a non-discriminatory
manner. The procuring entity shall include a statement of the reasons and
circumstances upon which it relied to justify the imposition of such a maximum
limit in the record required under article 25 of this Law.
3. The procuring entity may decide, in the light of the circumstances of the given
procurement, that the electronic reverse auction shall be preceded by an
examination or evaluation of initial bids. In such case, the invitation to the auction
shall, in addition to information listed in paragraph 1 of this article, include:
(a) An invitation to present initial bids, together with instructions for preparing
initial bids;
(b) The manner, place and deadline for presenting initial bids.
4. Where the electronic reverse auction has been preceded by an examination or
evaluation of initial bids, the procuring entity shall promptly after the completion
of the examination or evaluation of initial bids:
(a) Dispatch the notice of rejection and reasons for rejection to each Supplier or
contractor whose initial bid was rejected;
(b) Issue an invitation to the auction to each qualified supplier or contractor whose
initial bid is responsive, providing all information required to participate in the
auction;
(c) Where an evaluation of initial bids has taken place, each invitation to the auction shall also be accompanied by the outcome of the evaluation, as relevant to the supplier or contractor to which the invitation is addressed.”

The UNCITRAL Model Law included how to register for the electronic tender and the timing of its conduct as follow (Article (55) from UNCITRAL Model Law on Public Procurement 2011):

“1. Confirmation of registration for the electronic reverse auction shall be communicated promptly to each registered supplier or contractor.
2. If the number of suppliers or contractors registered for the electronic reverse auction is insufficient to ensure effective competition, the procuring entity may cancel the auction. The cancellation of the auction shall be communicated promptly to each registered supplier or contractor.
3. The period of time between the issuance of the invitation to the electronic reverse auction and the auction shall be sufficiently long to allow suppliers or contractors to prepare for the auction, taking into account the reasonable needs of the procuring entity”.

Additionally, the UNCITRAL Model Law also includes the requirements that must be met during the conduct of the electronic tender, as follows (Article (56) from UNCITRAL Model Law on Public Procurement 2011):

“1. The electronic reverse auction shall be based on:
   (a) Price, where the procurement contract is to be awarded to the lowest-priced bid; or
   (b) Price and other criteria specified to suppliers or contractors under articles 53 and 54 of this Law, as applicable, where the procurement contract is to be awarded to the most advantageous bid.
2. During the auction:
   (a) All bidders shall have an equal and continuous opportunity to present their bids;
   (b) There shall be automatic evaluation of all bids in accordance with the criteria, procedure and formula provided to suppliers or contractors under articles 53 and 54 of this Law, as applicable;
(c) Each bidder must receive, instantaneously and on a continuous basis during the auction, sufficient information allowing it to determine the standing of its bid vis-à-vis other bids;
(d) There shall be no communication between the procuring entity and the bidders or among the bidders, other than as provided for in subparagraphs (a) and (c) of this paragraph.

3. The procuring entity shall not disclose the identity of any bidder during the auction.
4. The auction shall be closed in accordance with the criteria specified to suppliers or contractors under articles 53 and 54 of this Law, as applicable.
5. The procuring entity shall suspend or terminate the auction in the case of failures in its communication system that put at risk the proper conduct of the auction or for other reasons stipulated in the rules for the conduct of the auction. The procuring entity shall not disclose the identity of any bidder in the case of suspension or termination of the auction.”

3.2 UNITED ARAB EMIRATES LAW

In the United Arab Emirates, there is an e-public procurement system at a central level, and decentralized e-public procurement systems, consisting of:

The central electronic procurement system, through which all tenders, practices, and competitions are announced, in addition to notifying suppliers electronically of practices related to their activities (Article (7) from Cabinet Decision No. (4) of 2019).
The federal government entities organize an electronic record for suppliers and receive (Article (8) from Cabinet Decision No. (4) of 2019) all offers and bids electronically (Article (16) from Cabinet Decision No. (4) of 2019). The supplier is notified through the electronic procurement system of the receipt of his bid (Article (28) from Cabinet Decision No. (4) of 2019).

As well as the decentralized electronic public procurement system, which consists of the following (Official platform for the United Arab Emirates Government):

- **The digital platform for Abu Dhabi government procurement (Al Maqtaa Gate)**, where local government agencies in Abu Dhabi announce purchases through digital platforms for Abu Dhabi government procurement, is designated for this purpose. The Department of Government Support in Abu
Dhabi launched this platform to enhance digital services and transparency and raise the efficiency and speed of procurement processes for the local government sector.

- **The Dubai Government E-Procurement Portal** is the official procurement portal for Dubai government tenders. It is the online destination for all suppliers working with entities in the Dubai government.

- **The central portal for e-procurement of the Government of Sharjah** provides support tools to enable procurement specialists and suppliers to carry out procurement activities. It also offers innovative, safe, and highly efficient ways of managing tenders, saving time and effort for the department and its suppliers.

- **The electronic supply system for government agencies in Ajman**, where the Department of Finance of the Government of Ajman is authorized to carry out the registration of suppliers, contractors, and consultants and to approve dealing with them in the Government of Ajman Suppliers wishing to deal with government agencies in Ajman must submit a request to the Contracts and Procurement Division.

- **The electronic supply system for government agencies in Ras Al Khaimah**, and this system is intended for contracting with government agencies in Ras Al Khaimah, and the supplier must first register in the supplier's register of the Department of Finance of the Government of Ras Al Khaimah.

### 4 CONCLUSION

This research dealt with the reform of government procurement systems by using electronic procurement systems, and this was done through three points. In the next point, the advantages of electronic procurement were explained, including how it can effectively reduce corruption in government procurement processes and the benefits that this system can achieve at all levels and for all parties to the procurement process.

The UAE's unique experience of having a central electronic platform for government procurement at the level of federal entities was also reviewed. It also has five decentralized platforms for government procurement at the local government level.

The research has shown many advantages that characterize the government procurement system in the United Arab Emirates. It combines centralized and decentralized procurement systems, which significantly contributes to achieving the
benefits of the two procurement methods and avoiding the potential adverse effects of applying one system without the other.

Several World Bank reports also supported the distinctive experiences of e-government procurement, including those of the United Arab Emirates. One of the reports mentioned the experience of the Dubai Municipality, which started in the early years of the twenty-first century after the issuance of a decree requiring all legal entities to begin utilizing e-government systems. The following are the crucial elements that I have listed below that the government has learned about as a result of fulfilling this mandate:

- Strong sponsorship on the part of the executive management.
- Efficient allocation of financial and human resources.
- Efficient marketing and a focus on customer service while providing a value proposition to all interested parties.
- Continuous management of change and involvement of the end-user or customer in development.

For this reason, Dubai uses the "Tejari" electronic procurement system, which Dubai and IBM created. It ran for ten years, from 2002 to 2012, processing contracts worth more than 12 billion AED (roughly 3.25 billion US dollars), involving more than 4,200 suppliers, and saving close to AED 7 million (approximately $1.9 million) a year in terms of time, materials, and archiving.

Therefore, it is suggested that the remaining emirates that have not yet established an electronic system adopt the federal electronic procurement system and other decentralized systems. Sharing this unique experience makes it possible to take advantage of these systems in Arab nations that have not yet incorporated technological tools into governmental procurement procedures.

Because this new technology will result in a significant breakthrough in efficiency and effectiveness in government procurement processes, the UAE can also develop an electronic procurement system using artificial intelligence techniques. Additionally, it will result in significant reductions in government spending.

LIMITATIONS

Nevertheless, the current research focuses on the case of the United Arab Emirates compared to the UNCITRAL Model Law. The scholars may present future research that
could focus on the uses of artificial intelligence in public procurement by establishing bidding systems that rely on artificial intelligence rather than humans to prevent public procurement officials from dealing with private suppliers. It is also possible to focus on other aspects, such as sustainability standards in public procurement, conflicts of interest, or integrity and transparency, which significantly affect the volume of public spending on public procurement. The author also suggests that future studies rely on case studies through questionnaire-based studies.
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