


The Impact of Artificial Intelligence Technologies on the Conclusion of Public Procurement Contracts in Algeria

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Abstract:

In line with the requirements of the contemporary era and the sensitivity of the public procurement sector, the Algerian legislature enacted Law No. 23–12, which establishes the general rules governing public procurement. Within this legal framework, the legislature emphasised the necessity of adopting artificial intelligence tools in the context of public procurement contracts. In particular, the law stressed the importance of establishing and activating the electronic public procurement portal, thereby ensuring that public procurement procedures are conducted in accordance with the requirements of electronic digitisation and artificial intelligence technologies. The principal objective of this measure is to entrench the principles of transparency, integrity, and fair competition in public procurement. This orientation is not entirely novel, as the legislature had previously addressed similar considerations in earlier decrees regulating public procurement. Nevertheless, the effective implementation of these mechanisms remains an open issue for extensive legal and practical debate.

Keywords: Artificial Intelligence; digitisation of public procurement; electronic advertising; electronic public procurement portal; electronic data.

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1. INTRODUCTION

The expansion of intelligent information systems has had a profound impact on various aspects of life and across all institutions, leading to the emergence of new technologies associated with artificial intelligence, aimed at reformulating institutional strategies in line with rapid technological developments. These developments have been highlighted by artificial intelligence applications, which represent a new field in the world of computing, utilising powerful computers to accomplish the greatest possible volume of tasks that require high levels of intelligence and exceptional speed. Although artificial intelligence applications are significant across diverse fields, they have become critical in public administration, posing a new challenge for the legal sciences regarding the extent to which they can be implemented in practice.¹

From this perspective, the importance of the present study becomes evident. Under Algerian law, it is apparent that Presidential Decree No. 10–236 was the first to mention certain technologies related to artificial intelligence in the conclusion of public procurement contracts.² These technologies were further reinforced by the issuance of Presidential Decree No. 15–247,³ in which the Algerian legislature devoted Chapter Six to electronic communication and exchange. This clearly indicates the firm orientation of the Algerian legislature towards the use of artificial intelligence technologies at the conclusion of public procurement contracts. This important approach was subsequently reaffirmed through Laws No. 23–12, which define the general rules governing public procurement,⁴ particularly in Chapter Six, and more specifically in its second section entitled “Digitisation in the Field of Public Procurement.”

Therefore, the research problem of this study is as follows: What are the effects of artificial intelligence technologies and tools on the conclusions of public procurement contracts? To address this issue, a set of established scientific research methodologies has been adopted, foremost descriptive, analytical, and historical approaches. Accordingly, this study is divided into four sections, which address, in particular, the following:

First: The Theoretical Grounding of the Subject Matter of the Study

Second: The Electronic Public Procurement Portal in Algeria as a Means of Embodying the Content of Artificial Intelligence

Third, the Exchange of Electronic Transactions through the Public Procurement Portal during the Stage of Concluding the Public Procurement Contract

Fourth, the method of registration on the electronic public procurement portal is as follows:

First: On the Theoretical Grounding of Electronic Transactions in Public Procurement

The study of digitisation in public procurement, in light of Law No. 23–12, which defines the general rules governing public procurement, necessarily requires addressing the set of concepts relevant to this study, particularly those related to the electronic dimension. This is in addition to the need to clarify the role of these transactions and their importance for public procurement, as well as the extent of their contribution to establishing transparency and integrity.

2. The Theoretical Grounding of the Subject Matter of the Study

The term "theoretical grounding" (*Theoretical grounding*) generally refers to the construction and establishment of an idea, concept, or phenomenon on solid scientific and logical foundations through the examination of origins, principles, and previous theories; the accumulation of evidence; and the development of a conceptual framework that explains the phenomenon and situates it within a cognitive context. It is essential for deepening understanding and for providing systematic solutions or interpretations, particularly in scientific research and academic, legal, and jurisprudential studies.

On this basis, we aim to address the theoretical grounding of artificial intelligence in general by examining its conceptual elements, thereby enabling the reader to subsequently infer its effects on the conclusion of public procurement contracts.

2.1. Concept of artificial intelligence

As researchers specialising in legal sciences, addressing the concept of artificial intelligence necessarily requires us first to examine its legal definition, followed by determining its doctrinal definition.

A. Legal Concept of Artificial Intelligence

Through an examination of various Algerian legal texts, we have concluded that the legislature has not provided a specific definition of artificial intelligence, including in the most recent public procurement law. This has prompted us to consult legal texts from certain other states. For example, the American legislature defined it in the Future of Artificial Intelligence Act of 2017 as "that artificial system developed in the form of software or physical devices that perform various tasks under unforeseen circumstances without significant human intervention." The European Parliament, in turn, defined it as "the tool used by electronic machines to reproduce behaviours associated with humans, such as thinking, planning, and creativity." The European Union defined it as "the process related to generating outputs that may concern predictions, content, recommendations, or decisions, which may affect the physical or virtual environment alike." Turning to the most significant Arab legal texts, the Jordanian legislature defined it in the Electronic Transactions Law of 2015 as "the electronic program used to execute a procedure or respond to a procedure automatically, whether by creating, sending, or delivering a message or information." This is almost the exact definition provided by the Iraqi legislature in Electronic Signature and Electronic Transactions Law No. 78 of 2012, which defined artificial intelligence as "a computer program or any electronic means for executing a procedure or responding to a procedure for the purpose of creating, sending, or receiving information."⁵

From the foregoing legal definitions, it may be observed that they do not differ among themselves in defining artificial intelligence, insofar as they determine its legal nature as encompassing all devices, programs, or electronic computers that assist in transmitting information digitally or electronically, away from traditional and routine procedures that previously relied essentially on human intervention.

B. The Doctrinal Concept of Artificial Intelligence

Artificial intelligence is a term applied to machines and computer software designed to simulate human intelligence, performing tasks that require natural intelligence, despite fundamentally lacking it. Notably, the term is a compound of two words: the first, "intelligence," denotes understanding,

thinking, analysis, responsiveness to requirements, and the making of appropriate decisions; the second, "artificial," denotes what is nonnatural. This is achieved through the design of programs and tools capable of simulating humans and performing tasks that require intelligence. This has reached the point of designing advanced systems and software, such as expert systems, which perform the tasks of specialists in specific fields. The applications of artificial intelligence are not confined to education and scientific research but have extended to all areas of public administration activity, for example, as they constitute the art of manufacturing machines and designing computer programs capable of performing operations that simulate human behaviour across various fields and that require intelligence and human training to be carried out. This, in turn, necessitates the development of computer systems that are capable of processing information, making appropriate decisions, and simulating human thinking and behaviour in all of these respects.

Artificial intelligence is also regarded as a branch of computer science concerned with the design of systems that perform tasks requiring intelligence and that are capable of making decisions and solving problems independently.⁶ It aims to combine the immense computational power of a computer with human cognitive and communicative abilities. It relies on the power of natural language processing to understand and analyse texts in the way that human beings do. Intelligent systems can employ these techniques to understand user instructions, interact with users naturally, perform machine translation, and perform other related functions.

The *Contemporary Arabic Language Dictionary* defines it as the ability of a machine or device to perform certain activities that require intelligence, such as practical reasoning and self-correction, or as the design of computer programs that simulate the style of human intelligence in terms of understanding, thinking, and decision-making, thereby enabling the computer to perform specific tasks in place of human beings.

Artificial intelligence is also defined as intelligent programs that resemble human expertise and behaviour in receiving inquiries and requests and responding to them. It has been so named because it imitates experts in cognitive processes for solving problems and answering questions after

analysing them. Expert programs are intelligent applications that act as experts. An expert system is an intelligent program that employs rules derived from human expertise, in the form of conditions and outcomes within a specific field, and uses derivation and inference methods to extract results arising from the correspondence of these conditions or outcomes with a particular condition or outcome related to a given problem for which a solution is sought. An expert system is thus a program designed to perform the work of experts in a specific field, such as legal opinion-giving. It may be consulted to obtain legal opinions.⁷

2.2. Stages in the development of artificial intelligence

At this point in the study, three principal stages may be distinguished.

The First Stage:

The first stage of artificial intelligence began in 1950 at the hands of the scientist Shannon, who conducted research addressing the game of chess. At that time, this stage was considered highly remarkable and intellectually striking, as it focused on solving numerous puzzles in games. Moreover, it was distinguished by its active role in creating games rather than merely solving puzzles. The fundamental tool at this stage was the computer, through which new computational models were developed on the basis of three factors:

- The representation of the initial state of the problem (for example, the chessboard at the start of the game);
- The selection of perceptual conditions for reaching the final state (defeating the opponent);
- The rules governing the movement of a piece on the chessboard.

The second stage:

After the conclusion of the first stage in 1963 under the leadership of the scientist Feldman, the second stage commenced and continued until the 1970s. During this stage, the scientist Minsky developed frames to represent the data. In addition, the scientist Winograd developed an innovative system to assist in understanding English in conversations, short stories, and novels.⁸

The Third Stage:

In the mid-1970s, the third stage began, representing a modern phase in which numerous technical achievements emerged in both design and function. These developments enabled the development of many auxiliary programs that

facilitate the transfer of a portion of human intelligence to computers or intelligent machines. This stage is regarded as the golden era, during which discoveries were made that had not previously been achieved in the field of artificial intelligence.

2.3. Principles of artificial intelligence

Artificial intelligence is generally based on two fundamental principles:

- **First principle: Data representation.** This concerns the manner in which data and problems are represented in the computer so that it can process them and produce appropriate outputs.⁹ If this principle is applied to the present study, it naturally relates to the data contained in the electronic public procurement portal.

- **The second principle: search.** This may be regarded as thinking itself, in which the computer searches among the options available to it, evaluates them in accordance with predefined criteria or criteria it has inferred, and then determines the most appropriate solution.¹⁰ This principle has been referred to in relation to the electronic public procurement portal, although it has not yet been implemented in practice.

3. The Electronic Public Procurement Portal in Algeria as a Means of Embodying the Content of Artificial Intelligence

The electronic portal for concluding public procurement contracts aims to simplify administrative procedures and prevent arbitrariness by facilitating and accelerating decision-making. This, in turn, enables public administration to plan efficiently and effectively, leveraging prevailing circumstances to deliver high-quality electronic services in line with advanced technical standards.¹¹ that are consistent with the requirements of artificial intelligence in the present era. As previously indicated, these transactions in Algeria are conducted through an electronic portal specifically designated for this purpose.¹²

3.1. Definition of the Electronic Public Procurement Portal¹³

The electronic public procurement portal is a database that facilitates access to information in a smooth, straightforward manner. It includes information relating to the contracting authority and economic operators, as well as their administrative files, in addition to announcements of public

procurement contracts, their deadlines, and a range of other data related to public procurement, such as economic statistical forms of the public applicant and the exchange of documents and information between contracting authorities and economic operators.¹⁴ Notably, the concept of an electronic portal, which is distinct from ordinary websites, refers to a specialised platform dedicated to public procurement that brings together contracting authorities and economic operators within a unified electronic space.¹⁵

3.2. Characteristics of the electronic public procurement portal

From the foregoing definition, it becomes evident that the electronic portal offers significant advantages in enhancing the credibility of public procurement contracts, particularly as it relies on high-quality technological tools. The most important advantages of these methods can be summarised as follows:

- enhancing transparency and avoiding corrupt practices that prevailed during the traditional stages of concluding public procurement contracts, especially in light of the growing phenomenon of falsifying required documents;
- combating bribery, favouritism, and nepotism that may arise at the stage of announcing the public procurement contract, thereby ensuring that the contract is concluded with the most deserving economic operator, as oversight over the contracting authority is strengthened at this highly significant stage of the public procurement process;
- accelerate procedural timelines and ensure greater scrutiny throughout the process of concluding the contract up to the commencement of its execution, thus saving time, effort, and financial resources and bringing public administration closer to the citizen, namely, the economic operator;
- protecting public funds, given that public procurement constitutes the largest sector of public expenditure, for which Article 105 of the aforementioned Law No. 23–12 has placed the electronic public procurement portal under the supervision of specialised services of the Ministry of Finance;
- promoting national and local development by obtaining numerous and diverse bids within a short timeframe from economic operators across the entire national territory, establishing the principles of lawful competition

among them, and ensuring the timely settlement of financial dues owed to contractors without delay;

-ensuring rapid access to information for economic operators through electronic advertising,¹⁶ thereby overcoming traditional newspaper announcements that prevent many operators from submitting bids due to the absence of information within the prescribed deadlines;

- strengthening oversight mechanisms to combat and prevent all forms of corruption in this sensitive sector.¹⁷

3.3. Functions of the electronic public procurement portal

As previously indicated, the electronic portal has a significant positive effect on the conclusion of public procurement contracts through its advantages and characteristics. This impact is realised through a set of functions, which may be summarised as follows:

A. Publication of Information and Documents via Modern Technical Methods

The electronic public procurement portal ensures the publication of the following information and documents:

- legislative and regulatory texts related to public procurement;
- Legal consultations related to public procurement;
- the list of economic operators prohibited from participating in public procurement contracts;
- the list of economic operators excluded from participation in public procurement contracts;
- indicative programmes of projects of the contracting authorities and lists of contracts concluded during the previous financial year, as well as the names of the institutions or consortia of institutions benefiting therefrom;
- reports of contracting authorities relating to the execution of public procurement contracts;
- the list of institutions whose classification and qualification certificates have been withdrawn;
- reference price indices;
- any document or information related to the subject matter of the portal.¹⁸

B. Other functions of the electronic portal

Article 4 of the decision dated 17 November 2013, which determines the content of the electronic public procurement portal, the methods of its management, and the modalities of electronic information exchange, refers to a range of functions ensured by the electronic public procurement portal, namely:

- registration of contracting authorities through the portal;
- Registration of economic operators through the portal;
- multicriteria search;
- notification of updates;
- downloading of documents;
- the submission of tenders through the portal;
- Management of information exchange between contracting authorities and economic operators;
- coding of documents;
- Dating and time-stamping of documents;
- training in electronic submission;
- electronic signature of documents;
- event log;
- interactive guides for portal users;
- any other function necessary for the proper functioning of the portal.¹⁹

4. The Exchange of Electronic Transactions through the Public Procurement Portal at the Stage Concluding the Public Procurement Contract

The precision and sensitivity of digital dealings in the context of concluding public procurement contracts through the electronic portal mean that it contains important documents. Accordingly, the Algerian legislature has regulated this mechanism through a set of guarantees and principles aimed at ensuring procedural transparency on the one hand, safeguarding the confidentiality of submitted information on the other hand, and securing digital documents within their designated archives.²⁰

4.1. Guarantees of the Integrity of Documents Exchanged on the Digital Public Procurement Portal

The aforementioned Law No. 23–12 stipulates that the information and documents transmitted through the electronic public procurement portal are used to establish a database in accordance with the applicable legislative and regulatory provisions. In this capacity, the files of bidders' applications are preserved for use in subsequent procedures.²¹

A review of the Decision dated November 17, 2013, which determines the content of the electronic public procurement portal, the methods of its management, and the modalities of electronic information exchange, reveals that it sets out several legal controls aimed at preserving the integrity of documents exchanged electronically. This is achieved by obliging the design of the public procurement information system to ensure the formats and forms of digitising written documents without compromising their integrity, in addition to the requirement that documents be signed via secure electronic methods, with due observance of the applicable legislative and regulatory provisions, as well as the necessity of verifying the identity of economic operators.²²

4.2. Guaranteeing the Confidentiality of Information between the Economic Operator and the Contracting Authority

This is expressly provided in Article 7 of the decision dated 17 November 2013, which determines the content of the electronic public procurement portal, the methods of its management, and the modalities of electronic information exchange, specifically in its second paragraph. This stipulates that, among the principles to be respected in the design of the information system, the confidentiality of documents exchanged electronically, which are protected by encryption in compliance with the applicable legislative and regulatory provisions, is guaranteed.²³

4.3. Event Tracking

Article 7 of the Decision dated 17 November 2013 determines the content of the electronic public procurement portal. The methods of its management and the modalities of electronic information exchange, specifically in its third paragraph, indicate that one of the principles to be

observed in the design of the information system is the establishment of an event log that enables the tracking of information exchange by electronic means. This is in addition to the requirement to track the date and time of documents exchanged electronically. In this context, a receipt is issued indicating the date and time of receipt of bids, and this applies to each bid submitted electronically or on an electronic physical medium.²⁴

4.4. Interoperability of Information Systems within Artificial Intelligence Systems

This is set out in Article 7 of the Decision dated 17 November 2013, which determines the content of the electronic public procurement portal, the methods of its management, and the modalities of electronic information exchange, specifically in its fourth paragraph, which provides that, among the principles to be respected in the design of the information system, the requirement to rely on standards and specifications that enable different information systems to communicate for the purpose of exchanging data.²⁵

4.5. Securing the Electronic Archiving of Digital Documents

Pursuant to Article 7 of the decision dated November 17, 2013, determining the content of the electronic public procurement portal, the methods of its management, and the modalities of electronic information exchange, specifically in its fifth paragraph, ensures the secure electronic archiving of digital documents. This is achieved through the use of storage features, digital memory capacity, and advances in software for the preservation and retrieval of information and documents. The responsibility for securing these documents, including the electronic archive, rests with the contracting authority, which must protect them against all electronic risks.²⁶

5. Modalities for the Electronic Exchange of Information between the Contracting Authority and Economic Operators

The exchange of information by electronic means is carried out through the portal in compliance with the provisions of Law No. 23–12, which define the general rules governing public procurement. Accordingly, the contracting authority is required to make the documents related to the invitation to competition available to bidders or candidates for the contract by electronic means, in accordance with a timetable determined by the minister responsible for financing. Similarly, candidates or bidders for public procurement contracts

are required to respond electronically to the invitation to competition in accordance with the aforementioned timetable. Furthermore, any procedure conducted on a paper medium may be adapted to electronic procedures.²⁷

Documents exchanged by electronic means may be classified into two categories: first, documents relating to the contracting authority; second, documents relating to economic operators.

5.1. Documents Relating to Contracting Authorities: These include the following:

- specifications documents;²⁸
- templates of declarations of subscriptions, letters of undertakings, declarations of integrity, and undertakings to invest, where applicable;
- additional documents and information, where applicable;
- Tender announcements, invitations to preselection, and consultation letters;
- return of bids, where applicable;
- provisional award of public procurement contracts;
- declarations of the ineffectiveness of procedures;
- cancellation of procedures or cancellation of provisional awards of public procurement contracts;
- responses to requests for clarification regarding the provisions of the specifications documents;
- responses to requests for the results of bid evaluations and to appeals.

5.2. Documents Relating to Economic Operators: These include the following:

- declarations of subscription;
- letters of undertaking;
- declarations of integrity;
- undertakings to invest, where applicable;
- requests additional information and clarification of the provisions of the specifications documents, where applicable;
- withdrawal of specifications documents and additional documents, where applicable;
- applications submitted within procedures that include a preselection stage;
- technical and financial bids;

- amended bids, where applicable;
- requests the results of bid evaluations.²⁹

6. The method of registration on the electronic public procurement portal is as follows:

Neither contracting authorities nor economic operators may access the functions allocated to them unless they register on the aforementioned electronic portal. This registration is completed by filling out, signing, and submitting the electronic form designated for this purpose, which is then sent to the portal administrator via email. These forms may also be submitted directly to the portal administrator. The contracting authority or economic operators must designate a natural person authorised to access the functions available through the electronic public procurement portal, provided that such a person has an electronic address.³⁰ When the parties to the contract wish to upload their data onto the portal, they are required to observe the following:

6.1. About the contracting authority:

When the contracting authority makes the documents related to the invitation to competition available to bidders or candidates for public procurement contracts by electronic means, it must specify the document download address in the press announcement previously referred to in this study. The announcement is published on the portal simultaneously with its publication in newspapers and in the Official Bulletin of Public Contracts of the Public Operator or with the sending of consultation letters to the relevant economic operators. To calculate the bid preparation period, the date specified in the procedures for the paper-based medium is used.³¹

In the case of grouped requests, the documents related to the invitation to competition are published in the name of the group by the coordinating contracting authority.³²

6.2. About Bidders or Candidates for Public Procurement Contracts by Electronic Means:

When bidders or candidates respond to invitations to competition by electronic means, they may additionally submit a copy of the bid on a paper-based or electronic physical medium, provided that this is done within the statutory deadlines. Such a copy must be placed in a sealed envelope bearing the phrase "alternative copy" and may only be opened if the electronically

submitted bid contains a virus.³³ has not been submitted within the statutory deadlines or cannot be opened by the contracting authority. Any alternative copy that is not opened shall be destroyed.³⁴

In justified cases, such as when the documents are large or confidential, the contracting authority may notify economic operators via a paper-based or electronic medium, provided that the contract announcement includes the address for obtaining these documents.³⁵

7.CONCLUSION

Upon completion of this study, it became apparent that the Algerian legislature took a significant step by activating the electronic public procurement portal, which had already been established by Presidential Decree No. 10–236. This clearly demonstrates the legislator's endeavour to establish the principles of transparency and integrity within this sensitive sector, particularly in light of the corruption that Algeria has previously experienced, notably embezzlement of public funds, bribery, favouritism, and nepotism in public procurement. Reliance on artificial intelligence tools and the digital environment in public procurement will enable the awarding of contracts to the most deserving economic operators, yielding substantial benefits in development, investment, and other sensitive fields that advance our nation.

However, despite the numerous positive aspects outlined above, there is no dispute that the legislature was significantly delayed in activating the electronic public procurement portal, leading us to conclude that we are still only at the beginning of this process. It is therefore imperative for the legislature to accelerate the issuance of subsequent laws and decisions complementing Law No. 23–12, which defines the general rules governing public procurement, to ensure consistency with existing legal texts and to enrich them in a manner consistent with the modern digital era characterised by the significant development of artificial intelligence tools.

Accordingly, there is a need to rely on professional information technology specialists and to organise periodic training programmes for them, given the high level of sensitivity associated with bidders' files, the necessity of protecting personal data, and the need to prevent any technical malfunction that could result in the exclusion of an economic operator from competing for

a public procurement contract. Attention must also be given to the necessity of extending oversight over various administrative bodies and obliging them to publish electronic announcements for all public procurement contracts, as well as, where appropriate, organising training courses and seminars within these administrations to familiarise them with the electronic public procurement portal and its benefits. This would help eliminate traditional methods that previously encouraged corruption.

Consequently, the impact of artificial intelligence tools on the conclusion of public procurement contracts remains limited to the stage of electronic advertising or the withdrawal of specifications documents. It has not yet been extended to the sensitive stages of file examination and similar procedures. From this standpoint, we call for activating these mechanisms, given the numerous positive effects that would result from such a measure.

8. Endnotes

¹ Azad Sadiq Muhammad al-Dazīrī, “Artificial Intelligence and Legal Contracts,” *Basra Studies Journal*, no. 56 (2024): 3.

² Presidential Decree No. 10–236 of 7 October 2010, containing the regulation of public procurement, *Official Gazette of the People’s Democratic Republic of Algeria*, no. 58, issued on 7 October 2010.

³ Presidential Decree No. 15–247 of 16 September 2015, containing the regulation of public procurement and public service delegations, *Official Gazette of the People’s Democratic Republic of Algeria*, no. 50, issued on 20 September 2015.

⁴ Law No. 23–12 of 5 August 2023, defining the general rules governing public procurement, *Official Gazette of the People’s Democratic Republic of Algeria*, no. 51, issued on 6 August 2023.

⁵ Rasha Muhammad Šā’im Aḥmad, “The Application of Artificial Intelligence by Public Administration in Administrative Decision-Making,” Master’s thesis in Public Law, Middle East University, Jordan, 2022, 241.

⁶ From this perspective, this mechanism is among the most prominent for establishing the principles of transparency and integrity, particularly in the conclusion of public procurement contracts.

⁷ Nasser al-Din Muhammad al-Shā’ir and ‘Imrān ‘Izzat Bakhīt, “Applications of Artificial Intelligence and Their Role in the Development of Sharia Sciences and Research: An Analytical Reading of Trends in Recent Related Studies,” *Journal of the Faculty of Sharia, An-Najah National University*, Palestine, 2024, 8–9.

⁸ Jihād Aḥmad ‘ Afīfī, *Artificial Intelligence and Expert Systems*, 1st ed. (Amman: Dar Amjad for Publishing and Distribution, 2014), 31; see also Ḥamza Ayyūb Yūsuf, “Transformation in the Field of Artificial Intelligence from the Past to the Future,” *Comprehensive Multidisciplinary Electronic Journal*, no. 38 (2021): 7.

⁹ Ḥamza Ayyūb Yūsuf, “Transformation in the Field of Artificial Intelligence from the Past to the Future,” 7.

¹⁰ *Ibid.*, 7.

¹¹ Ben al-Akhdar Muḥammad and Ḥarwāsh Lamīn, “Public Procurement and Electronic Transactions in Algerian Legislation,” *Journal of Human Sciences* 20, no. 2 (2020): 62.

¹² This is provided for in Article 105 of Law No. 23–12, defining the general rules governing public procurement, as well as in the Decision dated 13 November 2013, determining the content of the electronic public procurement portal, the methods of its management, and the modalities of electronic information exchange, previously cited. Which states: “An electronic public procurement portal shall be established and managed by the competent services of the ministry responsible for finance ...”.

¹³ The electronic portal is generally defined as a unified entry point for multiple electronic applications or services sharing a specific sectoral scope, aimed at assisting citizens in accessing all information related to a given sector; see in this regard: Klāsh Kholoud and Boukmāsh Muḥammad, “The Electronic Public Procurement Portal within Legal Texts,” *Journal of Law and Political Sciences* 6, no. 12: 13.

¹⁴ For further information, consult the official website of the electronic public procurement portal at: <https://marches-publics.gov.dz/>.

¹⁵ Klāsh Kholoud and Boukmāsh Muḥammad, “The Electronic Public Procurement Portal within Legal Texts,” 14.

¹⁶ This is stipulated in Article 46 of Law No. 23–12, which affirms the obligation to publish notices through the electronic public procurement portal in accordance with conditions determined by a decision of the Minister of Finance.

¹⁷ Waddān Bou ‘ Abdallāh and Markān Muḥammad al-Bashīr, “The Electronic Public Procurement Portal towards Improving Public Service within the Framework of Electronic Administration,” *Journal of Finance and Markets* 2, no. 2 (2015): 112.

¹⁸ See Article 3 of the Decision dated 13 November 2013 determining the content of the electronic public procurement portal, the methods of its management, and the modalities of electronic information exchange, previously cited.

¹⁹ Decision dated 13 November 2013 determining the content of the electronic public procurement portal, the methods of its management, and the modalities of electronic information exchange, previously cited.

²⁰ Nātsh Khalīfa and Āyt ‘Abd al-Mālik Nādiya, “Enhancing Procedural Transparency through the Activation of the Electronic Public Procurement Portal: Reality and Prospects,” *Sawt al-Qanun Journal* 9, no. 2 (2023): 123.

²¹ Article 106 of Law No. 23–12, defining the general rules governing public procurement, previously cited.

²² See Article 7(1) of the Decision dated 13 November 2013 determining the content of the electronic public procurement portal, the methods of its management, and the modalities of electronic information exchange, previously cited.

²³ Decision dated 13 November 2013 determining the content of the electronic public procurement portal, the methods of its management, and the modalities of electronic information exchange, previously cited.

²⁴ Decision dated 13 November 2013 determining the content of the electronic public procurement portal, the methods of its management, and the modalities of electronic information exchange, previously cited.

²⁵ Decision dated 13 November 2013 determining the content of the electronic public procurement portal, the methods of its management, and the modalities of electronic information exchange, previously cited.

²⁶ Nātsh Khalīfa and Āyt ‘Abd al-Mālik Nādiya, “Enhancing Procedural Transparency through the Activation of the Electronic Public Procurement Portal,” 125.

²⁷ Article 106 of Law No. 23–12, defining the general rules governing public procurement, previously cited.

²⁸ In the case of a consortium of undertakings, the specifications document and the electronic undertaking are uploaded in the name of the consortium by its head; see Article 17(2) of the Decision dated 13 November 2013 determining the content of the electronic public procurement portal, the methods of its management, and the modalities of electronic information exchange, previously cited.

²⁹ Article 9 of the Decision dated 13 November 2013, determining the content of the electronic public procurement portal, the methods of its management, and the modalities of electronic information exchange, previously cited.

³⁰ Article 10 of the Decision dated 13 November 2013, determining the content of the electronic public procurement portal, the methods of its management, and the modalities of electronic information exchange, previously cited.

³¹ Article 16 of the Decision dated 13 November 2013, determining the content of the electronic public procurement portal, the methods of its management, and the modalities of electronic information exchange, previously cited.

³² Article 17(1) of the Decision dated 13 November 2013, determining the content of the electronic public procurement portal, the methods of its management, and the modalities of electronic information exchange, previously cited.

³³ Where the contracting authority detects a virus in documents relating to the administrative file, it requests the bidder or candidate to submit another copy in compliance with the applicable legal provisions. If the alternative copy is not submitted, or is submitted and contains a virus, the contracting authority will attempt to repair the bid or the alternative copy. It continues the bid evaluation if the repair is successful. Files containing a virus that are subject to an unsuccessful repair attempt are deemed cancelled or incomplete, the trace of the virus is retained, and the concerned economic operator is informed thereof; see Article 14 in conjunction with Article 9 of the Decision dated 13 November 2013 determining the content of the electronic public procurement portal, the methods of its management, and the modalities of electronic information exchange, previously cited.

³⁴ Article 12 of the Decision dated 13 November 2013, determining the content of the electronic public procurement portal, the methods of its management, and the modalities of electronic information exchange, previously cited.

³⁵ Article 13 of the Decision dated 13 November 2013, determining the content of the electronic public procurement portal, the methods of its management, and the modalities of electronic information exchange, previously cited.