

	Science, Education and Innovations in the Context of Modern Problems Issue 11, Vol. 8, 2025
	Title of research article  Digital Enterprises in Algerian Legislation: Legal Framework, Evidentiary Challenges, and Prospects for Regulatory Modernization
Guezei Abdelali	Doctor University of Eloued Algeria E-mail: guezeiabdelali39@gmail.com : Orcid: 0009-0001-0871-1432
Abdallah Bouguenna	Doctor Tissemsilt University Algeria Pune, Maharashtra, India E-mail: Abdallah.bouguenna@univ-tissemsit.dz; Orcid: 0009-0001-0763-0123
Issue web link	https://imcra-az.org/archive/385-science-education-and-innovations-in-the-context-of-modern-problems-issue-11-vol-8-2025.html
Keywords	Digital enterprises; Algerian commercial law; e-commerce legislation; electronic proof; Law No. 18-05; digital transformation; legal modernization; electronic evidence; regulatory framework.
Abstract The digital transformation of commercial activity has fundamentally altered the principles of business organization and legal recognition. Digital enterprises—companies established, managed, and transacted entirely through electronic means—have become an integral component of the global commercial ecosystem. Many comparative legal systems have enacted robust legislative frameworks to ensure their regulation, transparency, and accountability. In Algeria, however, the legislative and institutional integration of digital commerce has been characterized by notable delays and partial implementation. Despite the promulgation of Law No. 18-05 of May 10, 2018, governing e-commerce, the legislation remains limited in scope, leaving significant legal ambiguities concerning the establishment, operation, and proof of digital commercial entities. This study critically examines the legal status of digital businesses under Algerian commercial law, with particular attention to evidentiary mechanisms in electronic transactions. Using a combined descriptive and analytical methodology, the paper explores the extent to which Algerian legislation accommodates electronic proof principles and whether it ensures parity between traditional and digital commercial entities. Findings reveal that Algerian law, while recognizing electronic contracts and signatures, lacks a comprehensive legal infrastructure for digital enterprises—particularly regarding registration procedures, electronic archives, and verification of digital transactions. The paper concludes with a set of recommendations aimed at harmonizing national legislation with international e-commerce standards and reinforcing the principle of 'parallelism of forms' in the recognition of digital evidence.	
Citation. Guezei A., Abdallah B. (2025). Digital Enterprises in Algerian Legislation: Legal Framework, Evidentiary Challenges, and Prospects for Regulatory Modernization. <i>Science, Education and Innovations in the Context of Modern Problems</i>, 8(11), 1129–1140. https://doi.org/10.56334/sci/8.11.93	
Licensed © 2025 The Author(s). Published by Science, Education and Innovations in the context of modern problems (SEI) by IMCRA - International Meetings and Journals Research Association (Azerbaijan). This is an open access article under the CC BY license (http://creativecommons.org/licenses/by/4.0/).	
Received: 10.04.2025	Accepted: 01.08.2025
Publishing time: 07.10.2025	

Introduction

The rapid development of modern digital media and their dominance over all aspects of contemporary life has brought about a qualitative shift in human life. The world has come to live a life brimming with rapid communications and the transfer of information across thousands of miles of distance. The transfer, storage, preservation, and retrieval of information has come to rely on electronic media, varying in form from magnetic tape and microfilm to floppy and hard disks. These media ensure the transfer of information in audio, video, or written form across the globe. What has increased the spread of these media and ensured their continued growth in use is the emergence of the concept of e-government, which relies on them to provide services to individuals. Banks and insurance companies also rely on them to perform their duties. Furthermore, modern legislation has adopted them as a means of proving all civil transactions and deals required by the concept of e-commerce, which has facilitated commercial transactions with speedy completion and cost savings. Traders, whether natural persons or companies, have become more flexible in their commercial activities. Numerous digital companies have emerged via the Internet, active in the commercial field and achieving global fame and business figures. This has prompted legislation to quickly establish legal systems to regulate commercial activity. Electronic, especially for companies that operate online, laws were issued regulating e-commerce in all its branches, and Algeria is among the countries that adopted this despite the delay in its approval, as it did not witness the issuance of regulations for e-commerce until the year 2018 with the issuance of Law No.: (18-05)(Law No. 18-05 of May 10)

However, the latter has a narrow scope, rendering many electronic legal systems incapable of encompassing its application. This necessitates recourse to the general provisions of commercial law.

Digital commercial companies established electronically lack a specific application or legal environment that enables them to properly apply its provisions. This leaves them in a vulnerable position, making it difficult to prove their existence or their legal electronic transactions. The issue of electronic evidence arises in various electronic transactions, but its importance is increasing in the field of commercial companies, where it is relied upon to ensure the stability of transactions and protect the interests of those dealing with the digital company. This can only be achieved through the existence of distinct provisions that regulate its establishment procedures and evidence mechanisms at various stages of the electronic company's life. This is what this paper will highlight; attempting to explore the existence of a legal framework for digital commercial companies that guarantees proof of their existence and activity in Algerian law. This paper poses the following question: Has the Algerian legislature been able to provide mechanisms that ensure the implementation of electronic evidence rules in the field of digital commercial companies?

Addressing this problem necessitated a combined approach, combining the appropriate descriptive approach to define the concepts involved in the study and clarify their conditions and implications, with the analytical approach to analyze the legal texts regulating commercial digital companies.

To address this problem, we divided the study into two axes. The first addresses the general framework of e-commerce companies, while the second examines the challenges of proving e-commerce companies in light of Algerian law.

As a result of studying and analyzing the aforementioned problem, the study reached several relevant results, followed by suggestions, which are included in the conclusion of this research.

First Section: The General Framework of Digital Commercial Enterprises

Before addressing the legal provisions related to the extent to which the electronic proof system is adopted in the field of digital commercial enterprises, it is necessary to shed light on the general conceptual framework of this modern type of commercial enterprise, highlight its importance, and the procedures for establishing it in accordance with the provisions of Algerian law.

First: Definition and Importance of Digital Commercial Enterprises

An enterprise is a legal system that partners agree to enter into and are bound by its provisions. Therefore, it must meet the general elements of a contract, including consent, subject matter, and cause, in addition to the

specific elements stipulated in Article 416 of the Algerian Civil Code .(Order No. (75-58) dated September 26)

These include the principle of multiple partners, the intention to participate, the principle of sharing profits and losses, and the provision of shares. In addition, the most important principle that is considered binding for its existence is writing. A company is a written contract, as confirmed by Article 324 bis 1 of the Civil Code. Accordingly, official writing is a condition for its existence, not merely for proof. The same general provisions apply to digital commercial companies, taking into account the specificity of the electronic form under which they were established. In addition to the common concept of the traditional contract, the concept of the electronic contract is stipulated in Law No. 18-05 of May 10, 2018, relating to e-commerce in Algeria, pursuant to Article 6, Paragraph 2, which states: "A contract, within the meaning of Law No. 04-02 of June 23, 2004, which sets the rules applicable to commercial practices, is concluded remotely, without the actual and simultaneous presence of its parties, by resorting exclusively to electronic communication technology".^(Rahma Tarbush)

It is clear that the traditional institution does not differ, in its content, from electronic companies except in the method of establishment and the method of practicing the purpose for which it was established. Accordingly, each of them enjoys a legal personality in all its aspects and characteristics, and the difference between them has no effect on the legal personality that each of them enjoys.(Mohamed Mounir El-Genbihi)

Second: Procedures for establishing e-commerce companies^(Samia Kaïdi, November 23, 2016, pp. 7-8)

In order to establish a commercial establishment electronically in Algerian law, it must be subject to several procedures, which we list below:

- ▯ A signed application, prepared on forms provided by the National Center for the Commercial Register.
- ▯ Proof of the existence of a premises eligible for commercial activity by submitting either: a title deed or lease; a concession for the real estate containing the commercial activity; and any contract or allocation decision issued by a public body.
- ▯ A copy (01) of the bylaws establishing the company or a copy of the company's articles of association when it concerns a public institution of an industrial and commercial nature.
- ▯ A copy of the announcement of the publication of the company's bylaws in the Official Gazette of Legal Advertisements.
- ▯ A receipt for payment of the stamp duty stipulated in the applicable tax legislation (4,000 DZD_
- ▯ A receipt for payment of registration fees in the commercial register as specified in the applicable regulations.

Domain Name

A domain name, also known as a "domain," is the equivalent of an email address on the Internet, which must be "Com.dz." A domain name is essential when creating a website for e-commerce. It is also of utmost importance in marketing and in accessing the merchant's website. Article 6 of Law No. 18-05 on e-commerce defines it as a standardized string of letters and/or numbers registered with the National Domain Name Registry, allowing identification and access to the website .(A domain name can be obtained either at the Center for Research in Scientific and Technical Information)

After obtaining a domain name, the registration procedures are completed at the local branches of the National Center for Commercial Registration, located across 48 provinces.

Domain Name Registration File

▣ A domain name registration form at the National Center for Commercial Registration, duly completed and signed by the e-resource representative according to the standard form approved by the National Center for Commercial Registration; a certified copy of the domain name registration certificate;

▣ A commitment to comply with the technical specifications specified by the National Center for Commercial Registration, duly signed by a representative of the authority;

▣ A copy of the craftsman's card (if the e-resource is a craftsman); a receipt for payment of the domain name registration fees in the National Card for e-resources.

In addition to legal publication, the legislator has obligated in Article 14 of Law No. (04-08) relating to the conditions for practicing commercial activities, to carry out legal advertising in newspapers qualified for that, regardless of the method used, ((04-08), dated August 18, 2004.) as long as it is written. Therefore, publication can be done via the Internet on the websites of daily newspapers, which may be electronic, especially since the media law has regulated the possibility of using information and communication technology by the press, which is known as electronic journalism. (Samia Kaidi, November 23, 2016, pp. 7-8.)

Extracting the Electronic Commercial Register

The National Center for Commercial Registers (since June 2014) has incorporated a secure code into the commercial register extract. This code secures the commercial register extract, proves its authenticity, and allows for online monitoring of data. The secure code is read by an electronic commercial register reader, an application installed on devices equipped with an image capture system (smartphones, tablets, etc.). This reader enables the reading and verification of commercial register information online (an internet connection is required). (For more information)

Section Two: Problems of Proving the Establishment of Electronic Companies in Algerian Law

Given the unregulated activity of digital commercial enterprises operating in the virtual market, their transactions are difficult to prove at various stages, whether in the establishment phase or the operational phase. This is what I will attempt to address in this section.

First: Problems of Proving the Electronic Establishment of a Digital Enterprise

The definition of an electronic notarized contract is no different from a paper contract; only the medium differs, with the implementation of certain specific procedures. Accordingly, an electronic notarized contract can be defined as: "A document drawn up by a notary in accordance with the conditions stipulated by law to give it an official character and to establish the legal effects thereof."

The Algerian legislator has followed the example of the French legislator, stipulating this in Article 323 bis of the Algerian Code of Civil Procedure, which states: "Electronic written proof is considered the same as paper written proof, provided that the identity of the person issuing it can be verified and that it is prepared and stored in conditions that guarantee its integrity."

It is clear from the text of this article that the Algerian legislator has recognized the legal equality between electronic writing and handwritten writing, provided that it meets the conditions represented by evidence of the writer of the writing to whom it is attributed, and the necessity of preserving it according to technical standards that would guarantee its integrity. (Zarouk)

However, by referring to Article 03 of Law No. (18-05) related to electronic commerce, we find that the legislator has authorized the dealers to conclude electronic contracts in accordance with the applicable legislation and regulations, but he has prohibited every transaction via electronic communications related to every commodity or service that requires the preparation of an official contract. (Rahma Tarbash)

It appears from reading the text of the above article that there are some commercial transactions that have not kept pace with modernization due to the legislator's requirement for their conclusion to take a certain form, such as official status for commercial establishments and commercial stores, and registration in the real estate

registry for transactions involving real estate. These transactions are considered outside the scope of modernization in Algerian commercial legislation. The reason for excluding them from the scope of electronic transactions is the absence of practical application of the provisions of what is known as the electronic notary, and by enabling the notary to draft commercial company contracts in electronic form through electronic supports that keep pace with this type of establishment, by activating the electronic signature, and embodying these mechanisms in the law regulating the notary profession to keep pace with the digital developments taking place in transactions at the present (04-08)

Contrary to what exists in comparative laws, solutions to this problem, which aroused its ire, were found through two mechanisms. The exclusion mechanism. In order for these laws to keep pace with modernization, they excluded certain actions from the scope of electronic formality, including, for example, the American, Irish, and Jordanian legislators. In addition to exclusion, what is called an electronic notary public was created. Commercial establishments cannot be established electronically, given that formality is a cornerstone; violating it results in the company's nullity. As for official writing, despite Algeria's launch of electronic certification services, it established an authority that provides electronic certification services. This authority is any person within the meaning of Law No. ((2000-03))2000/03 on Post and Telecommunications, which issues electronic certificates and other services in the field of electronic signatures. The certification it performs is official, but the legislator did not grant it the authority to conclude contracts, (Hidaya Bouazza) on the one hand, nor did it amend the notarization law, on the other hand. This is in contrast to the French legislator, which allows notaries to conclude contracts online.(Habet).

Second: Electronic Signatures and Their Evidential Validity

The national legislator's issuance of the law on electronic signatures raises questions about the meaning of this signature, given that it is a relatively new term. Accordingly, this section will address the definition of electronic signatures first, and then their evidential validity second.

A number of international organizations have attempted to provide a definition for electronic signatures, whether through laws related to electronic commerce, or through laws specific to electronic signatures. The European Union and the United Nations International Trade Organization, known as UNCITRAL, are considered the two most important organizations that have provided a definition for electronic signatures, as most of the organizations that have attempted to define it have been influenced by the UNCITRAL definition, which laid the foundations for defining electronic signatures and defined it as: "Data in electronic form included in, added to, or logically associated with a data message, and which may be used to identify the signatory in relation to the data message and to indicate the signatory's approval of the information contained in the data message."(Al-Qudah)

Thus, it appears from this definition that the United Nations International Trade Organization (UNCTAD) has not specified the method to be adopted for electronic signatures, leaving the choice of method to the individual or state, as long as that method allows for the identification of the signatory and their approval of the information contained in the message.

The European Union and other organizations have provided a definition of electronic signatures, but they have identified two types of signatures, each with a specific definition: an electronic signature, which is: "information in electronic form related to and closely linked to other electronic information and used as an authentication tool"; and an enhanced electronic signature, which is: "an electronic signature that must be:

- Uniquely associated with the signatory;
- Capable of identifying the signatory and recognizing their use;
- Created using methods that guarantee complete confidentiality;
- Linked to the information contained in the message, such that it detects any changes to the information".(Nasirat)

Despite the division adopted by European Union countries into two types of electronic signatures, these two definitions do not deviate from other definitions of electronic signatures.

In addition to these definitions provided by some international organizations, we also find some comparative international and Arab legislation providing a definition of electronic signatures in the same context, not far removed from the meaning of the definitions above.

Thus, the French legislator recognized electronic signatures by issuing Law No. 230 of 2000, dated March 13, 2000 .(Ouzian)

In which he addressed the traditional and electronic signature, focusing on the functions of the signature known in Article 1316/4 of the French Civil Code after its amendment, which states: "The signature that identifies the person to whom it is attributed and that expresses his acceptance of the content of the document to which it is linked and of the obligations contained therein." The French legislator adopted this definition to be a general definition of the signature. As for the electronic signature, the legislator defined it in the second paragraph of the amendment as "the signature that results from the use of any acceptable and reliable means to identify the signatory and ensure the signature's connection to the work or document to which it is linked".(Nasirat)

In line with French legislation, the electronic signature has received a significant share of importance in American legislation. Thus, the American law issued on June 30, 2000, defined it as: "A digital certificate issued by an independent body that identifies each user who may use it to transmit any document, commercial contract, pledge, or acknowledgment." While the electronic signature has received special attention in international legislation, it has also enjoyed this status in Arab legislation. Most Arab countries have sought to keep pace with developments in various modern means of communication, which has prompted the issuance of a new legal framework to keep pace with these developments. Thus, the Egyptian legislator issued a law specific to electronic signatures, devoting Article 1 to defining certain legal terms, including the electronic signature, which it defines as: "An electronic signature: something placed on an electronic document in the form of letters, numbers, symbols, signs, or other, and has a unique character that allows the signatory to be identified and distinguishes him from others .(Bouhamidi)

Referring to the Algerian legislature, we find that, in line with most Arab legislation, it has also attempted to keep pace with the information technology revolution currently experiencing the world. This led it to issue Law 15-08, previously stated, defining it in Article 2 as: "Data in electronic form attached to or logically linked to other electronic data used as a means of authentication".

A review of Law 15-08 on electronic signatures and certification reveals that the legislature did not define what is meant by an electronic signature, but rather indicated that when the signature is electronic, a reliable means of identification must be used to ensure its association with the associated document. It is clear from all the previous definitions given for electronic signatures that there is convergence in the definition given by each individual country, in addition to the fact that there is no comprehensive definition for electronic signatures. This is perhaps due to the rapid development of communication methods, which will consequently lead to the development of definitions.

The Validity of Electronic Signatures

In this changing environment, most countries have moved toward recognizing electronic signatures. This is due to the current reality of reliance on modern communication methods and means, which are not entirely compatible with the concept of a signature in its traditional sense. Under these circumstances, traditional signatures may find no place in the face of the proliferation of electronic information processing systems, which have begun to sweep the world and rely entirely on electronic media. Manual procedures are thus rendered ineffective .(Al-Gharib)Algeria, in turn, kept pace with these changes. The issuance of Law 15-08 on Electronic Signatures and Certification was a recognition of this signature.

Undoubtedly, with most governments shifting from a traditional system to an electronic one, which led them to grant electronic signatures a prerequisite for proof in the face of these international and Arab efforts to recognize electronic signatures, Algerian legislators found themselves faced with the need to update their laws

to keep pace with these efforts. Thus, Algeria's efforts to adapt legal rules to modern developments in the field of information technology, particularly those related to the use of mechanisms in e-commerce, culminated.

Therefore, if the general principle is the requirement of proof in writing, which is recognized by most legislation, including national legislation, since the principle in civil law is proof in writing, and in commercial law the principle is freedom of proof, while the exception is proof in writing, this contradiction between the principle and the exception in both civil and commercial law, and the question that arises is: To what extent does an electronic signature achieve proof? The answer is that an electronically drawn document is accepted as evidence, just like a paper document, provided that the person issuing it can be legally identified and that it is prepared and stored under conditions that ensure its security.

Thus, while the institution of signature was not the subject of any legal definition by the legislature, the new text gives the signature a functional definition, as stipulated in Article 2 of Law 15-08 above. The signature, necessary to complete a legal document, allows the signatory to be identified and expresses their acceptance of the obligations arising from the said document.

In addition, it indicates the necessity of trusting the means used in electronic signatures when they allow the use of a secure electronic signature until proven otherwise, in accordance with Articles 10 and 11 of the same law.

Here, as previously noted, the national legislature recognizes two types of electronic signatures: a regular electronic signature and a secure electronic signature. The latter is one whose authenticity is attested to by an accredited electronic authentication service provider. This gives a secure electronic signature legal force, making it superior to a regular electronic signature as evidence. Some transactions are excluded from the possibility of being transferred in the form of electronic documents, documents related to personal or real guarantees of a civil or commercial nature that are not subject to the provisions of this law, but rather are subject to the provisions of the Civil Code in accordance with the general rules because they are part of the public order. This is due to the fact that such guarantees often focus on complex and complicated transactions, which requires the presence of the parties in the contract council. (Al-Haija)

Problems in Proving Business Transactions During Operation

In light of the legislative recognition of the validity of written and electronic documents, including electronic notebooks, the judge's role in addressing evidence has diminished, and he no longer has discretionary power over electronic documents. The parties have a positive role in proof, and their will determines the nature of the means of proof.

It is clear from the above that the company contract can only be proven in writing for partners. Since writing is a condition for the formation of the company, it is necessarily necessary to prove it. Regarding partners against third parties, the company may only be proven in writing. In fact, third parties have the right to claim that the company is void and the contract with it is void. However, partners may not claim this voidness against third parties due to the lack of writing, and it only has effect between them from the day one of them requests the voidness in accordance with Article 418, Paragraph 2 of the Civil Code. Proof of the existence of the company may be accepted from third parties by all means, when necessary. (Nouiri)

It is clear from Law No. (04-08) on the conditions for practicing commercial activities mentioned above, which stipulates: "Legal advertisements shall also be included in the national written press or any appropriate medium, at the expense of the legal person." Thus, the company shall publish, at its own expense, what must be published and in the medium it deems appropriate. Therefore, it is necessary to find special means of publication for commercial companies, as well as to search for modern methods to ensure the dissemination of information, and to create newspapers specialized in the field of commercial advertisements instead of daily newspapers, in addition to the possibility of creating a website for commercial companies through which the words of the commercial companies are advertised. It should be noted that the Algerian legislator prohibits electronic certification service providers from collecting personal data unless they explicitly consent. The electronic certification service provider may only collect the personal data necessary to grant and maintain the electronic certification certificate, and may not use this data for other purposes.

The electronic certification service provider also has a preliminary obligation to verify the integrity of the creation data with the signature verification data before granting the electronic certification certificate. The electronic certification service provider may grant one or more certificates to each person who submits an application, after verifying their identity and, where necessary, verifying their specific characteristics. (Hidaya Bouazza)

Legal Solutions to Avoid the Problem of Proving Digital Businesses

There are several legal solutions to avoid the problems of proving digital business companies, including the following:

A- Establishing the National Authority for the Prevention and Combating of ICT-Related Crimes

The legislator has taken a number of preventive and punitive measures to combat ICT-related crimes. The legislator has established an administrative body tasked with preventing and investigating ICT-related crimes, particularly serious crimes that threaten state security in general or are described as terrorist crimes. In order to uncover the perpetrators of these crimes, the legislator has authorized this body, in cooperation with the judicial police, to establish electronic technical arrangements aimed at intercepting electronic messages or recording personal information.

(Recording personal information conflicts with the sanctity of private life and the confidentiality of private correspondence, especially since these are constitutionally guaranteed. This prompts us to ask how to reconcile the Authority's commitment to preventing crimes related to information and communication technology, particularly those that threaten state security and are described as terrorist and subversive acts, with the sanctity of private life and the confidentiality of correspondence, especially given that these are constitutionally guaranteed rights?)

The National Authority for the Prevention and Combating of Crimes Related to Information and Communication Technology was established pursuant to Law No. 09-04 (09-04). The aforementioned law includes special rules for the prevention and combating of crimes related to information and communication technology. According to Article 14, this body is responsible for the following tasks:

- Activating and coordinating operations to prevent and combat crimes related to information and communication technology.

- Assisting judicial authorities and judicial police services in their investigations into crimes related to information and communication technology, including gathering information and conducting judicial expertise.

- Exchanging information with its foreign counterparts to gather all useful data to identify perpetrators of crimes related to information and communication technology and determine their whereabouts. Referring to French law, the company's articles of association allow the Board of Directors to use information technology, through modern technologies, as if they were present, provided that the company using this technology indicates in the minutes of the Board of Directors' meeting. Several legislations were issued during the period of the spread of Covid-19, including what allows the Board of Directors of a joint-stock company to hold a meeting remotely, considering that the quorum has been achieved in the meeting by means of teleconferencing or audio-visual, while respecting the provisions of the Companies Law, and another that facilitates the Board's meeting, even if it is for a specific period. (Karim)

As for the Algerian legislator, by referring to the provisions relating to management, especially the methods of holding general assembly meetings, there was no indication of the permissibility of using modern communication technologies. Thus, the legislator is far from the provisions of companies on information technology, despite its regulation of remote meeting technology and e-mail since the end of the nineties of the last century. Despite the transformations that the national and international economic field has witnessed and the trend towards modernization and digitization, this technology has not been used in the management of companies in Algerian commercial law. (Karim)

Finally, we note that this national body used to enjoy the status of an independent administrative authority, but this was withdrawn due to political circumstances and it was made an administrative body subject to the authority of the Ministry of Defense.

Activating the Principle of Freedom of Evidence

Evidence aims to seek the truth and establish stability in dealings, as it is the surest means upon which individuals rely to protect their rights. A right is worthless if there is no means to prove it when it is disputed. In addition to the individual interest that evidence achieves, it also achieves a general social interest, as it leads to the resolution of disputes, the prevention of malicious claims, and the provision of stability in society. This is confirmed by. (Bakdar)

– It should be noted that Article 333 of the Civil Code explicitly and unambiguously establishes the principle of freedom of proof in commercial matters, stating: "In non-commercial matters, if the value of a legal transaction exceeds 100,000 Algerian dinars or is of unspecified value, evidence of its existence or termination may not be presented by witnesses unless there is a text stipulating otherwise".

– Given all the issues discussed regarding e-commerce companies and the difficulty of writing them in official electronic form, similar to traditional commercial companies, proving them electronically is based on two possibilities. The first is relying on certification certificates through which the company was registered electronically and assigned a specific domain name indicating its existence. The second hypothesis is to apply the general provisions of freedom of commercial proof by proving them by all available legal means. Conclusion:

– We can ultimately conclude that digital commercial companies are not merely a legal or economic concept, but rather a legal reality whose boundaries have been defined and defined in comparative legislation to operate within a stable framework. Consequently, the issue of proving them electronically has become easier, given the availability of all electronic data. This is in contrast to Algerian law, which continues to struggle legislatively in its attempt to embody the provisions of digital commerce in all its aspects, particularly the issue of electronic proof in the field of digital commercial companies, given the lack of electronic formality. Consequently, these companies remain established in a customary manner and their proof is subject to general rules. We can observe the following results:

– -There are no distinct provisions in the field of electronic proof for e-commerce companies in Algerian law.

– -Despite the issuance of some laws dedicated to the electronic establishment of digital commercial companies, it is concluded that commercial companies are exempt due to the lack of electronic documentation. Consequently, the problem of proof arises for digital commercial companies that operate electronically and deal with consumers electronically.

– The validity of an electronic signature in Algeria has the same legal value as a conventional signature, but its implementation in practice remains modest in the transactions of digital commercial enterprises in Algeria.

– Based on the findings presented, the following proposals can be proposed:

– The law regulating the notary profession must be amended to enable notaries to draft the electronic contracts of incorporation of digital commercial enterprises. This will ensure the legal existence of commercial enterprises operating online, facilitating the process of proving and protecting them and their clients.

– An independent body must be established under the supervision of the Ministry of Commerce and the Ministry of Post and Telecommunications to maintain the electronic files of commercial enterprises in their various legal forms. This body will grant electronic authorizations to all parties involved, allowing for confirmation. This will enable the notary drafting the contract to verify the basic data of the company and its

partners in the case of an active electronic company, and to be granted a special code in the case of incorporation.

– Since the Algerian legislator has equated the legal value of regular writing with electronic writing, as well as electronic signatures, it is necessary to amend the provisions of Article 324 bis 1, which imposes formality in some private transactions, including digital commercial companies. We propose that the term "electronic formality" be included, followed by amending the provisions of companies in the Commercial Code.

– Repeal the prohibition stipulated in Article 3 of Law No. 05-18 regulating the provisions of e-commerce, which prohibits transactions that require formal contracts, and introduce the possibility of applying the provisions of e-commerce by introducing electronic formality.

Acknowledgement

The authors extend their sincere gratitude to the Faculty of Law and Political Science at University of El Oued and Tissemsilt University for their academic support and access to legal databases during the preparation of this study. Special thanks are also due to the legal experts and practitioners who contributed valuable insights into the evolving landscape of Algerian digital commerce regulation.

Ethical Considerations

This research was conducted in accordance with established academic ethics and integrity standards. All materials used are properly cited and referenced. No part of this work involves data collection from human or animal subjects. The study adheres to the ethical publishing guidelines of COPE (Committee on Publication Ethics) and complies with principles of transparency, objectivity, and scholarly rigor.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors. The study was conducted through the authors' own academic and institutional resources.

Conflict of Interest

The authors declare that there are no conflicts of interest related to the publication of this research. All authors contributed equally to the conception, analysis, and preparation of the manuscript and approved the final version for submission.

References (APA 7th Edition)

1. Al-Gharib, F. S. (2005). Electronic signature and its evidential validity. Arab Administrative Development Organization, Research and Studies, 215.
2. Al-Hajja, M. I. (2004). E-commerce contracts (Electronic contracts – Applicable law – Contractual and non-contractual disputes). Dar Al-Thaqafa for Publishing and Distribution.
3. Al-Qudah, G. A. (2003). The authenticity of electronic signatures: A study of Jordanian legislation. Damascus University Journal of Economic and Legal Sciences, 20(1), 169.
4. Bakdar, K. (2012, June 14). Freedom of proof in commercial matters. Law Journal, 2(1), 66. University of Ghilizan.
5. Bouhamidi, N. (n.d.). The technical revolution and justifications for legal amendments: "Electronic signature as a model." Muhkamah Magazine, 4, 175.
6. Center for Research in Scientific and Technical Information (CERIST). (n.d.). Domain name registration in Algeria. Retrieved November 10, 2012, from <http://www.cerist.dz>

7. Habet, A. (2015). E-commerce in Algeria (Doctoral dissertation). Mouloud Mammeri University, Tizi Ouzou, Algeria.
8. Hidaya Bouazza. (2019). The legal system of electronic payments: A comparative study (Doctoral dissertation). Faculty of Law and Political Science, Abu Bakr Belkaid University, Tlemcen, Algeria.
9. Karim, K. (2021, January). Digitizing the preparation of corporate social responsibility filing in light of the COVID-19 crisis. *Journal of Judicial Reasoning*, 13(Special Issue), 154. Mohamed Khider University of Biskra.
10. Law No. 09-04 of August 5, 2009. Containing special rules for the prevention and combating of crimes related to information and communication technology. *Official Gazette of Algeria*, (47), August 16, 2009.
11. Law No. 18-05 of May 10, 2018. On electronic commerce and online transactions. *Official Gazette of Algeria*, (28), May 16, 2018.
12. Law No. 04-08 of August 14, 2004. Concerning the conditions for practicing commercial activities. *Official Gazette of Algeria*, (52), August 18, 2004.
13. Law No. 2000-03 of August 5, 2000. Regulating the general rules of postal and telecommunications. *Official Gazette of Algeria*, (48), August 6, 2000.
14. Mohamed Mounir El-Genbihi, M. M. (2008). *Electronic transactions and their legal framework*. Dar El-Fikr El-Gam'i.
15. Nasirat, A. M. (2005). *The authenticity of electronic signatures: A comparative study* (1st ed.). Dar Al-Thaqafa for Publishing and Distribution.
16. Nouiri, M. E. (2020, January). Special methods of commercial evidence: Between text and application in Algeria. *Journal of Political Science and Law*, 4(20), 196. Arab Democratic Center, Berlin.
17. Order No. 75-58 of September 26, 1975. Concerning the Algerian Civil and Commercial Code. *Official Gazette of Algeria*, (50), May 13, 2007.
18. Ouzian, M. (n.d.). The extent of the capability of the evidence provisions in the Dahir on obligations and contracts to include electronic signatures. *Journal of the Judiciary and Law*, 155, 20.
19. Rahma, T. (2021, January 15). *Electronic signature and Algerian legal adaptation* (Master's thesis). University of Sidi Bel Abbes, Algeria.
20. Sania, K. (2016, November 23). The role of electronic transactions in economic development. Mouloud Mammeri University, Tizi Ouzou, Algeria.
21. Zarouk, Y. (2016, June). The position of electronic writing in evidence: A comparative study. *Al-Mi'yar Magazine*, 13, 258-264. Ahmed Ben Yahya Al-Wansharisi University Center, Tissemsilt.
22. Aliyeva, S. (2023). Digital transformation and information security in public administration: Challenges and legal perspectives. *Science, Education and Innovations in the Context of Modern Problems*, 7(9), 215-229. <https://doi.org/10.56334/sci/7.9.12>
23. Bouhidel, N. (2022). The development of e-commerce legislation in Algeria: Comparative overview with EU directives. *Science, Education and Innovations in the Context of Modern Problems*, 6(7), 143-157. <https://doi.org/10.56334/sci/6.7.18>

24. Rahmani, L. (2024). The digital economy and cyber law reforms in Algeria: Towards sustainable governance. *Science, Education and Innovations in the Context of Modern Problems*, 8(11), 302-317. <https://doi.org/10.56334/sci/8.11.24>