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The formalism gap in electronic contracts under algerian law: a comparative analysis

ABSTRACT

Objective: To analyze the scope of the principle of functional equivalence in Algerian law regarding electronic contracts, based on Law No. 15-04 of 2015 and Law No. 18-05 of 2018, in order to determine the areas in which legal equivalence is complete and those in which it remains limited by formal requirements. Methodology: A qualitative legal research study was conducted, based on dogmatic-legal, analytical-comparative, and hermeneutic methods. Algerian legislation on electronic contracting was examined, and a comparative doctrinal audit was conducted with the legislation of Tunisia, Egypt, Jordan, and Saudi Arabia, as well as with the UNCITRAL Model Law on Electronic Commerce (1996), the United Nations Convention on Electronic Communications in International Contracts (2005), the eIDAS Regulation, and the U.S. UETA/E-SIGN regime. Results: The analysis showed that Algerian law recognizes the functional equivalence of electronic documents and signatures in ordinary commercial transactions; however, it maintains restrictions regarding acts subject to notarial public instruments and those whose written form is a requirement for validity, particularly in real estate matters and other formal transactions. Conclusions: Algerian law incorporates the principle of functional equivalence effectively, albeit partially, demonstrating that the current limitations respond primarily to the preservation of substantive functions of legal formality and not to restrictions inherent in the technology.

Keywords: Algerian law; electronic contracts; formalism; functional equivalence; authentic act; comparative Arabic law.

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La brecha del formalismo en los contratos electrónicos del derecho argelino: análisis comparado

RESUMEN

Objetivo: analizar el alcance del principio de equivalencia funcional en el derecho argelino de los contratos electrónicos, a partir de la Ley n.º 15-04 de 2015 y la Ley n.º 18-05 de 2018, para determinar los ámbitos en los que la equivalencia jurídica es plena y aquellos en los que permanece limitada por exigencias formales. Metodología: se desarrolló una investigación jurídica de enfoque cualitativo, sustentada en los métodos dogmático-jurídico, analítico-comparado y hermenéutico. Se examinó la legislación argelina sobre contratación electrónica y se realizó una auditoría doctrinal comparativa con las legislaciones de Túnez, Egipto, Jordania y Arabia Saudita, así como con la Ley Modelo de la CNUDMI sobre Comercio Electrónico (1996), la Convención de las Naciones Unidas sobre las Comunicaciones Electrónicas en los Contratos Internacionales (2005), el Reglamento eIDAS y el régimen estadounidense UETA/E-SIGN. Resultados: el análisis evidenció que el ordenamiento jurídico argelino reconoció la equivalencia funcional para los documentos y las firmas electrónicas en las transacciones comerciales ordinarias; sin embargo, mantuvo restricciones respecto de los actos sujetos a instrumento público notarial y de aquellos cuya forma escrita constituye un requisito ad validitatem, particularmente en materia inmobiliaria y otros negocios solemnes. Conclusiones: el derecho argelino incorpora el principio de equivalencia funcional de manera efectiva, aunque parcial, evidenciando que los límites actuales responden principalmente a la preservación de funciones sustantivas de la formalidad jurídica y no a restricciones inherentes a la tecnología.

Palabras clave: derecho argelino; contratos electrónicos; formalismo; equivalencia funcional; acte authentique; derecho árabe comparado.

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A lacuna de formalismo nos contratos eletrónicos no âmbito da legislação argelina: uma análise comparativa

RESUMO

Objectivo: Analisar o alcance do princípio da equivalência funcional no direito dos contratos electrónicos na Argélia, com base na Lei n.º 15-04 de 2015 e na Lei n.º 18-05 de 2018, a fim de determinar as áreas em que a equivalência jurídica é plena e aquelas em que se mantém limitada por exigências formais. Metodologia: Foi realizado um estudo de investigação jurídica qualitativa, baseado nos métodos dogmático-jurídico, analítico-comparativo e hermenêutico. Foi examinada a legislação argelina sobre contratos eletrónicos, tendo sido realizada uma auditoria doutrinal comparativa com as legislações da Tunísia, Egito, Jordânia e Arábia Saudita, bem como com a Lei Modelo da UNCITRAL sobre Comércio Eletrónico (1996), a Convenção das Nações Unidas sobre Comunicações Eletrónicas em Contratos Internacionais (2005), o Regulamento eIDAS e o regime UETA/E-SIGN dos EUA. Resultados: A análise demonstrou que a lei argelina reconhece a equivalência funcional de documentos e assinaturas eletrónicas em transações comerciais comuns; no entanto, mantém restrições relativas aos atos sujeitos a instrumentos notariais públicos e àqueles cuja forma escrita é um requisito de validade, particularmente em questões imobiliárias e outras transações formais. Conclusões: A lei argelina incorpora o princípio da equivalência funcional de forma efetiva, ainda que parcial, demonstrando que as limitações atuais respondem principalmente à preservação das funções substantivas da formalidade jurídica e não a restrições inerentes à tecnologia.

Palavras-chave: Direito argelino; contratos eletrónicos; formalismo; equivalência funcional; ato autêntico; direito árabe comparado.

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INTRODUCTION

The rapid expansion of electronic commerce has fundamentally transformed the manner in which contractual relationships are created, negotiated, and performed across both domestic and international markets. Digital communication technologies have progressively displaced traditional paper-based transactions, allowing contractual obligations to arise through electronic platforms, automated systems, and remote exchanges conducted without the physical presence of the contracting parties. This transformation has required legal systems to reconsider many of the formal requirements historically associated with contract formation, particularly those concerning writing, signatures, authentication, evidentiary reliability, and the preservation of legally binding records. Consequently, one of the principal challenges confronting contemporary private law has been determining the extent to which electronic communications can perform the legal functions traditionally fulfilled by paper documents.

In response to these developments, numerous jurisdictions have enacted legislation intended to establish the legal validity of electronic transactions while preserving the certainty and security required for commercial relations. International instruments, including the UNCITRAL Model Law on Electronic Commerce and subsequent legislative initiatives concerning electronic signatures and electronic transferable records, have encouraged states to adopt the principle of functional equivalence. Rather than requiring identical technological substitutes for traditional documentary formalities, the functional equivalence approach evaluates whether electronic mechanisms are capable of performing the same legal functions previously achieved through written documents, handwritten signatures, and physical records. This principle has become one of the defining foundations of modern electronic commerce legislation and has significantly influenced legislative reforms throughout civil law and common law jurisdictions alike.

Within the Arab legal tradition, however, legislative development has followed diverse trajectories shaped by different legal cultures, institutional structures, and historical traditions. While several jurisdictions have enacted comprehensive electronic transactions legislation, important differences remain concerning the recognition of electronic signatures, evidentiary standards, authentication mechanisms, and contractual formalities. These variations demonstrate that legislative modernization does not necessarily produce identical legal consequences, even among countries sharing comparable legal traditions or regional economic objectives. Comparative legal analysis therefore provides an essential methodological tool for identifying not only similarities among legislative models but also the different solutions adopted to reconcile technological innovation with legal certainty.

Algeria has actively participated in this legislative transformation through the adoption of Law No. 18-05 concerning electronic commerce and Law No. 15-04 regulating electronic signatures and certification services. Together, these statutes represent the principal legislative framework governing electronic contracting within the Algerian legal system. They seek to facilitate digital commercial activity while maintaining the legal safeguards traditionally associated with contractual formalities. Nevertheless, despite their practical importance, academic discussion has tended to focus primarily on describing the substantive provisions contained within each statute rather than examining how effectively those provisions perform the legal functions historically fulfilled by traditional documentary requirements. This distinction between legislative description and functional legal analysis constitutes an important point of departure for the present research.

Against this broader legal background, the present study identifies a methodological limitation within the existing Algerian literature. Research examining Law No. 18-05 and Law No. 15-04 has generally concentrated on describing the legal provisions governing electronic commerce, electronic signatures, and certification services. While these descriptive analyses have clarified the content and scope of the applicable legislation, they have devoted comparatively less attention to evaluating whether the legal framework actually achieves functional equivalence between electronic and paper-based contracting. Consequently, much of the existing scholarship explains what the legislation regulates without systematically examining the legal functions that electronic mechanisms successfully replace and those that continue to depend upon traditional documentary formalities.

This article therefore approaches the subject from a different analytical perspective. Rather than evaluating Algerian legislation exclusively through doctrinal interpretation, it examines the legal system according to the functional objectives that documentary formalities have historically fulfilled within contract law. These functions include the authentication of parties, the expression of contractual intent, evidentiary reliability, legal certainty, and the long-term preservation of legally enforceable agreements. Assessing electronic contracting through these functions allows a more precise evaluation of legislative effectiveness than a purely descriptive examination of statutory provisions.

The comparative dimension of the research has likewise been deliberately defined. Instead of attempting an extensive survey of electronic commerce legislation across numerous jurisdictions, the study adopts a focused comparative design involving legal systems selected because they illuminate different legislative traditions within the Arab world. Tunisia constitutes the principal Maghrebi comparator as the first Arab jurisdiction to enact comprehensive legislation governing electronic transactions through Law No. 2000-83. Egypt and Jordan represent two Mashriq jurisdictions frequently examined in comparative legal scholarship concerning electronic contracting and digital signatures. Saudi Arabia provides a contrasting legislative model in which electronic transactions operate within a legal environment strongly influenced by Shari'a principles rather than exclusively by the French-inspired civil law tradition that has historically shaped Algerian private law. Together, these jurisdictions provide an analytically coherent comparative framework for evaluating the strengths and limitations of the Algerian regulatory model.

The purpose of this article is therefore not to determine whether Algerian legislation recognizes electronic contracts in a general sense, since this question has largely been resolved through existing statutory reforms. Instead, the study asks a more specific and function-oriented question: for which legal functions does Algerian law achieve genuine functional equivalence between electronic and traditional contracting, and for which functions does important regulatory or doctrinal uncertainty remain? By addressing this question, the article shifts the analytical focus from legislative description toward legal performance, thereby contributing a more nuanced understanding of how electronic contracting operates within the broader framework of contemporary private law.

The originality of the research lies in combining functional legal analysis with comparative doctrinal examination. Rather than treating electronic contracting legislation as a collection of isolated statutory provisions, the study evaluates the practical coherence of the Algerian legal framework against selected Arab jurisdictions that reflect different legislative histories and institutional traditions. This comparative perspective makes it possible to distinguish between regulatory solutions that successfully reconcile technological innovation with legal certainty and those that continue to generate ambiguity concerning contractual formalities, evidentiary requirements, or legal enforceability.

Methodologically, the article adopts a qualitative documentary approach based on comparative legal analysis and doctrinal interpretation. Primary legislation, comparative statutory materials, judicial principles where applicable, and specialized academic literature constitute the principal sources supporting the analysis. The methodological procedures governing corpus selection, comparative criteria, and analytical stages are presented in detail in the following section. The remainder of the article first examines the theoretical foundations of functional equivalence in electronic contracting, subsequently analyzes the Algerian legislative framework in comparative perspective, and finally identifies the principal areas in which the existing legal regime either achieves or fails to achieve effective functional equivalence between electronic and traditional contractual formalities.

Methodology

This study adopted a qualitative research approach because its primary objective was to interpret legal norms, doctrinal positions, and comparative legislative frameworks rather than to quantify legal phenomena or establish statistical relationships. Qualitative inquiry provides an appropriate methodological foundation for examining complex legal phenomena through the systematic interpretation of normative texts, conceptual categories, and scholarly discourse. As Espinoza-Freire (2025a) explains, qualitative research seeks to understand phenomena within their legal and social contexts by emphasizing analytical interpretation, making it particularly suitable for comparative legal studies concerned with legislative development and regulatory effectiveness.

The research employed a documentary and comparative legal design. Documentary analysis constituted the principal methodological strategy because the study was based on the systematic examination of legislation, international legal instruments, and specialized academic literature concerning electronic contracting and the principle of functional equivalence. According to Espinoza-Freire (2025b), scientific research requires the rigorous identification, selection, critical evaluation, and integration of reliable information obtained from recognized scientific databases and authoritative legal sources. Consequently, the documentary corpus comprised Algerian legislation governing electronic commerce and electronic signatures, comparative statutory frameworks from selected Arab jurisdictions, international legal instruments, and peer-reviewed doctrinal studies relevant to electronic transactions.

The comparative dimension of the research focused on Algeria, Tunisia, Egypt, Jordan, and Saudi Arabia. These jurisdictions were intentionally selected because they represent different legislative approaches to electronic contracting within the Arab legal tradition while allowing meaningful comparison based on shared regional and legal characteristics. The analysis also considered internationally recognized normative instruments that have significantly influenced the development of electronic transactions legislation, thereby providing a broader comparative framework for evaluating the extent to which Algerian law achieves functional equivalence between electronic and traditional contractual formalities.

Methodological rigor was ensured through the systematic integration of legislative evidence, comparative legal reasoning, and specialized doctrinal interpretation. As Espinoza-Freire (2021) argues, scientific argumentation requires logical coherence between the evidence examined, the analytical reasoning employed, and the conclusions derived from the research process. Likewise, Espinoza-Freire (2024) emphasizes that qualitative research demands methodological transparency, analytical consistency, and explicit recognition of the theoretical assumptions guiding interpretation. In accordance with these principles, the methodological approach adopted in this study was operationalized through a comparative doctrinal audit structured around the four-function framework proposed by Althabhawi et al. (2026). This framework provides the analytical categories used to evaluate the degree to which Algerian legislation and the selected comparative jurisdictions achieve functional equivalence in electronic contracting. The theoretical foundations and operational application of this analytical framework are presented in the following section.

Theoretical Framework: Four Functions of Formality

Since the 1996 UNCITRAL Model Law on Electronic Commerce, the dominant doctrinal response to formalism in electronic contracting has been functional equivalence: rather than regulating electronic communications as a separate category, the law asks what function a paper-based requirement performs and whether an electronic alternative performs the same function. Althabhawi et al. (2026) refine this into four distinct functions: an evidentiary function (a durable, reviewable record of consent), an attributional function (identifying the author of a communication and verifying its integrity), a cautionary or protective function (encouraging deliberation and shielding weaker parties from hasty commitment), and a constitutive or public-order function (rendering an act effective, often against third parties, through state-backed registration or notarization).

This distinction predicts, rather than merely describes, where equivalence should be easiest and hardest to achieve. The evidentiary and attributional functions are technology-substitutable: a certified electronic signature can, in principle, do the identifying and recording work that ink and paper did. The cautionary function, and especially the constitutive function, are not substitutable in the same way, because they depend on the involvement of a state-recognized institution — in the Algerian and broader Maghrebi context, the notary (le notaire) who executes an acte authentique — whose institutional authority a data message cannot replicate simply by being cryptographically robust. Sections 4 and 5 test this prediction against Algerian law specifically and then against the four comparator jurisdictions.

A Comparative Doctrinal Audit Centered on Algeria

This is a comparative doctrinal audit, not an empirical or interview-based study. It applies Althabhawi et al. (2026) four-function framework, originally developed through primary statutory analysis and practitioner interviews in Jordan, to a focused reading of Algerian law, read against four comparator jurisdictions selected for variation in sub-region and legal tradition rather than for breadth: Tunisia (Maghreb, the earliest Arab e-commerce statute), Egypt and Jordan (Mashriq, most discussed in prior literature), and Saudi Arabia (Gulf, Shari'a-governed contract law). Four international or regional instruments — the UNCITRAL Model Law (1996), the UN Convention on Electronic Communications (2005), the EU eIDAS Regulation (2014), and the US UETA/E-SIGN regime (1999–2000) — are included in the qualitative audit (Table 1) as benchmarks against which the Arab statutes can be read, since all of the Arab statutes examined were drafted with explicit reference to the UNCITRAL text.

Each framework was scored, independently for each of the four functions, using a four-point scale rather than the three-point scale used in an earlier version of this analysis, precisely to correct a coding ambiguity in that earlier version: full functional equivalence recognized without transaction-specific carve-out (●); partial equivalence, recognized in principle but subject to an explicit statutory or judicially recognized exception (◐); equivalence not recognized, meaning the paper-based formality remains a condition of validity or third-party effect (○); and a fourth, distinct category — indeterminate, meaning the instrument itself does not resolve the question and delegates it to the enacting or contracting state (◇). This fourth category exists specifically because the UNCITRAL Model Law and the 2005 UN Convention are not self-executing instruments; scoring their unresolved scope questions the same way as a national statute's explicit exclusion would overstate what these two instruments actually decide.

A second methodological rule, made explicit here rather than left implicit, governs what counts as an "exclusion" at all: a transaction category is coded as excluded (○) only where a statute's own scope provision would otherwise have covered it and affirmatively carves it out. Personal-status matters — marriage, divorce, inheritance — are not coded as exclusions anywhere in Table 1, because none of the commercial e-transactions statutes examined here ever purported to govern personal-status contracting in the first place; treating an area a commercial statute never addressed as something it "excludes" would conflate absence of jurisdiction with a deliberate carve-out, overstating the count of genuine exceptions. This rule is applied uniformly across every row in Table 1, including Algeria's.

The Algerian statutory basis was read directly from the primary text of Law 18-05 and Law 15-04. The Tunisian, Egyptian, Jordanian, and Saudi rows draw on primary statutory text where available and, for the constitutive-function score in Egypt and Saudi Arabia specifically, on secondary legal-practice literature rather than an exhaustive primary-text search — a limitation stated plainly in Section 8 rather than implied away by the term "audit." No inter-rater reliability check was performed; this is a single-coder doctrinal exercise. Figure 1, for the same reason the padded exclusion-count chart used in an earlier version of this analysis was abandoned, reports only the one fact that can be verified directly and without interpretive counting for every jurisdiction examined: the year each instrument was enacted relative to the UNCITRAL Model Law. This is a factual timeline, not a scored index, and is offered as evidence for the drafting-style argument developed in Section 5, not as a measure of the substantive size of each jurisdiction's formalism gap.

Findings I: Algeria's Own Formalism Gap

Algerian law shows the same internal split the theoretical framework predicts. Law 18-05 recognizes the electronic document and electronic signature as valid means of concluding and proving commercial contracts, and defines the electronic contract directly for the first time in Algerian legislative history. But Article 4 of the same law removes an entire category of transaction from this regime through a single general clause rather than an itemized list: any good or service whose contract is required to be drawn up as an acte authentique — a notarized instrument — falls outside the electronic-commerce framework altogether, regardless of how the parties would otherwise prefer to contract. Real property transactions are the paradigm case captured by this clause in Algerian civil-law practice, but the clause's own wording is not limited to real property by name; it reaches any transaction for which the general civil law separately requires notarized form, whatever that transaction happens to be. This is not a minor technical carve-out: the constitutive function of formality is excluded from electronic equivalence at the level of the statute's own scope provision, not merely through a narrow judicial exception, even though — because the exclusion is drafted as one general clause rather than a named list — it is not possible to state precisely how many distinct transaction categories it reaches without a separate study of which Algerian civil-law instruments require an acte authentique in the first place. That separate question is outside the scope of the present audit and is proposed as a direction for further research in Section 8.

Law 15-04 adds a second, more granular distinction that the comparator jurisdictions largely leave implicit: its Articles 6 and 8 separate cases where a writing requirement conditions the formation of the contract itself (a rule of validity, ad validitatem) from cases where a writing requirement exists only to prove a contract that is otherwise validly formed (a rule of evidence, ad probationem). Algerian legal commentary reads this distinction as meaning that, for the narrow category of contracts where writing is required ad validitatem, the electronic document must satisfy a stricter standard than for contracts where writing is merely evidentiary — a nuance the blunter binary framing ("formalism gap present or absent") used elsewhere in the comparative literature does not capture, and one this article treats as an Algeria-specific refinement of the general four-function model rather than a deviation from it.

Findings II: Algeria Against Four Arab Comparators

Table 1.

Functional equivalence audit: Algeria, four Arab comparators, and four international/regional benchmarks, scored against Althabhawi et al. (2026) four-function typology. ● Full · ◐ Partial · ○ Not recognized · ◇ Indeterminate (delegated to enacting state).

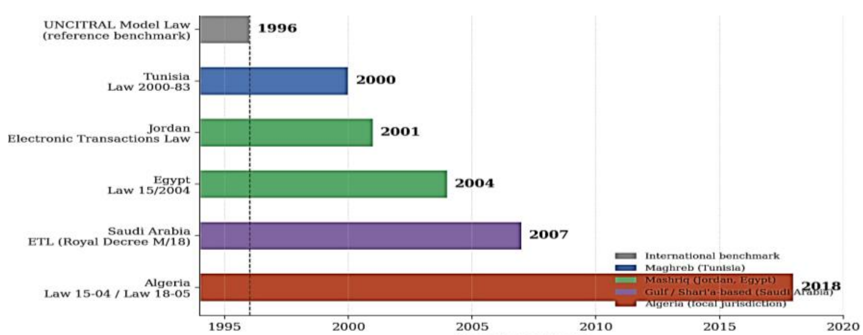
Legal Framework	Evidentiary Function	Attribution / Signature	Cautionary / Protective	Constitutive / Public-Order (Registration)	Statutory Basis (Illustrative)
UNCITRAL Model Law on Electronic Commerce (1996)	● Full	● Full	◇ Delegated to enacting state	◇ Delegated to enacting state	Arts. 6–8; Art. 1 scope proviso
UN Convention on Electronic Communications (2005)	● Full	● Full	◐ Partial (B2C often excluded)	◇ Delegated to contracting state	Art. 9; Art. 2 scope exclusions
EU eIDAS Regulation 910/2014	● Full	● Full (qualified e-signature presumption)	◐ Partial (member-state carve-outs)	◐ Partial (notarial acts reserved to national law)	Art. 25; Art. 2(3); Recital 21

US UETA (1999) / E-SIGN Act (2000)	● Full	● Full (technology-neutral signature standard)	◐ Partial (itemized statutory exclusion list)	○ Excluded (wills, family-law orders, UCC Art. 3/8/9)	UETA §3(b); 15 U.S.C. §7003
Algeria — Law No. 18-05 (2018) & Law No. 15-04 (2015)	● Full	◐ Partial (certified e-signature required for full evidentiary weight, Law 15-04 Art. 8)	◐ Partial (general clause, Art. 4, Law 18-05)	○ Excluded (any contract requiring an acte authentique)	Law 18-05, Art. 4; Law 15-04, Arts. 6, 8
Tunisia — Law No. 2000-83	● Full	◐ Partial (certification agency-issued certificate required for full effect)	◐ Partial (general reference clause, Art. 1)	○ Excluded (adoul-executed and notarial acts)	Law 2000-83, Art. 1
Egypt — Law No. 15/2004	● Full	◐ Partial (qualified certificate required for full evidentiary weight)	◐ Partial	○ Excluded (instruments requiring registration under Law 114/1946)	Law 15/2004; Real Estate Registration Law No. 114/1946
Jordan — Electronic Transactions Law	● Full	◐ Partial (accredited certification service provider required)	◐ Partial	○ Excluded (Land and Survey Dept. registration)	ETL Art. 11; Althabhawi et al. (2026)
Saudi Arabia — Electronic Transactions Law (2007)	● Full	◐ Partial (licensed certification-authority signature required)	◐ Partial (Shari'a-governed contract rules)	○ Excluded (real-estate instruments requiring kitābat al-ʿadl authentication)	Royal Decree M/18; notarial authentication offices (kitābat al-ʿadl)

Reading down the table, the pattern already visible within Algerian law in Section 4 repeats across every comparator: full or near-full equivalence for the evidentiary function, a qualified but generally recognized equivalence for attribution (each jurisdiction requires a certified, accredited, or licensed electronic signature for full legal weight, rather than accepting any electronic mark at face value), and a consistent gap at the constitutive function specifically. Tunisia's Law 2000-83 states directly, in its first article, that electronic contracts follow the same regime as written contracts with respect to the expression of will, legal effect, validity, and enforceability — language strikingly close to Algeria's approach, and drafted, like Algeria's Article 4, as a single general reference clause rather than an itemized list. Egypt and Jordan document the same exclusion through a more specific route: a named separate registration statute (Egypt's Law 114/1946) or a named government department (Jordan's Land and Survey Department) rather than a single general clause. Saudi Arabia attaches the exclusion to the kitābat al-ʿadl offices that authenticate real-property instruments under Saudi practice.

Figure 1

Timeline of enactment: Arab Electronic-transactions legislation relative to the UNCITRAL odel Law (1996).



Note. Compiled by the author from primary enactment dates. UNCITRAL (1996) shown as the reference benchmark; the four Arab comparators and Algeria are ordered by enactment year rather than by a scored index.

Figure 1 makes a narrower and more defensible point than a scored exclusion count would: Algeria was the last of the five jurisdictions examined to enact its e-transactions framework, eleven years after Saudi Arabia and eighteen after Tunisia. This timing is relevant to the drafting-style observation above. Tunisia and Algeria, the two jurisdictions that drafted their notarial-act exclusion as a single general clause rather than a named list, are also the two jurisdictions whose statutes could draw on nearly two decades of accumulated regional legislative and judicial practice interpreting what "formal contract" or "acte authentique" already means in the surrounding civil code — reducing the drafting need to spell out named categories the way an earlier, first-mover statute might have had to. This is offered as a plausible reading of the timeline, not as a tested causal claim; establishing it properly would require the primary-text study of pre-existing Algerian and Tunisian civil-code notarization requirements proposed in Section 8, not a count of words in Article 4 itself.

DISCUSSION

What the Acte Authentique Requirement Reveals

The Algerian legislature's choice to exclude acte authentique transactions from Law 18-05's scope through a single general clause, rather than attempting to define an electronic equivalent for notarization or naming each affected transaction type individually, is worth reading as a considered position rather than an oversight. The constitutive function of the notarial act in Algerian civil law does not rest on the reliability of the record the notary produces — an electronically signed and cryptographically verified document could in principle be just as reliable — but on the notary's institutional role as a state-delegated officer whose personal verification of the parties' identity, capacity, and free consent is what gives the instrument effect against third parties, whatever the specific transaction happens to be. An electronic signature attached to a data message cannot perform that institutional role merely by being technically sound, which is precisely the distinction Althabhawi et al. (2026) draw from their Jordanian interview data regarding land-registry formality. The comparative evidence in Table 1 suggests this is not a peculiarity of Jordanian or Algerian practice but a structural feature of the constitutive function itself, recurring across a Maghrebi civil-law statute, two Mashriq civil-law statutes, and a Shari'a-governed Gulf statute alike — real property is the paradigm case in every jurisdiction examined, but the underlying legal mechanism in Algeria's Article 4 is broader than real property by name.

Limitations

This audit is a single-coder doctrinal exercise without independent verification, and its scores should be read as a transparent starting point for further comparative work rather than a settled classification. The Egypt and Saudi Arabia rows rely more heavily on secondary legal-practice sources than on an exhaustive primary-statutory search for the constitutive-function score specifically, a weaker evidentiary basis than the Algeria and Tunisia rows, which draw on primary statutory text read directly by the author. Figure 1 reports enactment dates rather than a scored index precisely to avoid the false precision an earlier version of this analysis produced by counting exclusion categories from statutes that state their carve-out as a single general clause; the drafting-style argument built on that timeline in Section 5 is offered as a plausible reading, not a demonstrated causal finding. Finally, this audit covers Algeria and four comparators selected for sub-regional variation, not a complete or random sample of Arab jurisdictions with UNCITRAL-derived electronic transactions legislation; Morocco and Libya in particular are absent, and the direction proposed in Section 8 is designed specifically to address this scope limitation.

CONCLUSION

Algerian law, read through Althabhawi et al. (2026) four-function framework, achieves genuine functional equivalence for the evidentiary and attributional functions of formality, and

— through Article 4 of Law 18-05 and Articles 6 and 8 of Law 15-04 — explicitly withholds that equivalence from transactions requiring an acte authentique, placing the constitutive function of formality outside the electronic-commerce regime by the legislature's own deliberate choice rather than by oversight. The four-jurisdiction comparison shows this is not an Algerian peculiarity: Tunisia, Egypt, Jordan, and Saudi Arabia each preserve the same constitutive-function gap through their own domestic mechanisms — notarial and adoul acts, real-estate registries, and kitābat al-ʿadl offices respectively — despite differences in legal tradition that might have predicted more divergence than the evidence shows.

The concrete, falsifiable direction this suggests is a full primary-text audit extending this same four-function matrix to Morocco and Libya specifically, the two Maghrebi jurisdictions absent from the present comparison, to establish whether the pattern found here across Algeria, Tunisia, Egypt, Jordan, and Saudi Arabia holds as a general feature of Arab electronic-transactions legislation or whether the Maghreb and Mashriq sub-regions diverge once the full set of jurisdictions is examined.

Conflict of Interest

The author declares that there are no conflicts of interest regarding the publication of this manuscript.

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