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The Legal Challenges of Determining the Applicable Law in International Electronic Contracts: A Comparative Analytical Study

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Abstract

Objectives: This research aims to analyze the legal issues related to determining the applicable law in international electronic contracts, highlighting the shortcomings of traditional conflict-of-laws rules, and proposing legislative reforms that consider the unique nature of the digital environment.

Methods: The study adopts a descriptive, analytical, and comparative approach by examining relevant international and Arab legal texts, reviewing judicial precedents and scholarly opinions, and presenting practical models from cross-border e-commerce contracts.

Results: The findings show that electronic contracts are legally valid when they meet the essential elements of consent, capacity, and legality. The "characteristic performance" criterion appears to be the most appropriate for determining the applicable law when no explicit agreement exists between the parties, provided adequate consumer protection is ensured in business-to-consumer (B2C) transactions.

Conclusion: The research addresses the challenge of identifying the governing law for international electronic contracts and proposes Arab legislative reforms characterized by technological neutrality, strengthened party autonomy, enhanced consumer protection, and harmonized legal frameworks in line with the evolving digital environment.

Keywords: Electronic contracts, conflict of laws, party autonomy, international E-Commerce, consumer protection.

النظام القانوني للعقود الالكترونية ذات الطابع الدولي: الماهية، والاختصاص القضائي، والقانون واجب التطبيق

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ملخّص

الأهداف : يهدف هذا البحث إلى تحليل الإشكاليات القانونية المتعلقة بتحديد القانون الواجب التطبيق في العقود الإلكترونية ذات الطابع الدولي، مع إبراز أوجه القصور في قواعد تنازع القوانين التقليدية، واقتراح إصلاحات تشريعية، تأخذ بعين الاعتبار الخصوصية المميزة لبيئة التعاملات الرقمية.

المنهجية : اعتمدت الدراسة منهجًا وصفيًا تحليليًا مقارنًا، من خلال فحص النصوص القانونية الدولية والعربية ذات الصلة، ودراسة السوابق القضائية، والآراء الفقهية، إلى جانب عرض نماذج تطبيقية من عقود التجارة الإلكترونية العابرة للحدود.

النتائج : أظهرت النتائج أن العقود الإلكترونية تتمتع بصحة قانونية متى استوفت عناصرها الأساسية، وهي: الرضا، والأهلية، والمشروعية. كما تبيّن أن معيار "الالتزام المميز" يُعد الأنسب لتحديد القانون الواجب التطبيق في حال عدم وجود اتفاق صريح بين الأطراف، شريطة أن يقترن ذلك بضمانات كافية لحماية المستهلك في عقود المعاملات بين التاجر والمستهلك.(B2C)

الخلاصة : يعالج البحث مسألة تحديد القانون الحاكم للعقود الإلكترونية الدولية، ويقترح إصلاحات تشريعية عربية تتسم بالحياد التكنولوجي، وتُعزز من مبدأ سلطان الإرادة، وتدعم حماية المستهلك، وتعمل على توحيد الأطر القانونية بما يتماشى مع متطلبات البيئة الرقمية المتطورة.

الكلمات الدالة: العقود الإلكترونية، تنازع القوانين، سلطان الإرادة، التجارة الإلكترونية الدولية، حماية المستهلك.

Introduction

The proliferation of electronic commerce has reshaped the landscape of contractual relations, posing significant legal questions, especially when contracts cross borders. Traditional legal frameworks, often rooted in physical presence and territorial jurisdiction, encounter challenges in addressing the complexities of electronic contracting. This paper investigates a central legal question: How should courts and legislators determine the applicable law in international electronic contracts when no explicit choice is made by the parties?

This issue is particularly pressing in B2C transactions, where imbalances in bargaining power, disparate legal protections, and differences in consumer rights amplify legal uncertainty. The digital nature of these contracts, characterized by immediacy and border lessness, necessitates a reevaluation of classical private international law doctrines.

To that end, this study adopts a descriptive, analytical, and comparative approach. It evaluates statutory instruments, case law, and academic opinions from diverse jurisdictions to assess the adequacy of existing conflict-of-law rules in the electronic age. While prior literature has discussed the general enforceability of e-contracts, this research focuses specifically on the criteria and mechanisms for determining applicable law.

By identifying legal gaps and inconsistencies, the paper aims to offer realistic and practical recommendations tailored to evolving digital environments, particularly in Arab legal systems.

1. Context and Background

The remarkable development of information and communication technologies (ICTs) has profoundly transformed the mechanisms of modern commercial interaction. In the wake of digital globalization, the internet has emerged not merely as a tool of communication, but as an essential infrastructure for the conclusion and execution of commercial transactions. Physical proximity is no longer a prerequisite for contracting; parties can now negotiate, agree, and perform obligations entirely through electronic means.

This shift has given rise to what is known as electronic commerce (e-commerce), encompassing a wide spectrum of transactions carried out remotely through digital networks. E-commerce is not only a technical innovation, but a legal phenomenon requiring urgent reevaluation of many traditional legal doctrines. It has facilitated the creation of electronic contracts, executed without face-to-face interaction and often across multiple jurisdictions, challenging the conventional paradigms of contract formation, validity, and enforcement.

As the digital marketplace continues to expand, the internet has become deeply integrated into the socio-economic and legal fabric of global trade. It enables near-instantaneous communication between businesses, governments, and consumers, transcending geographic and territorial limitations. This evolution has catalyzed a fundamental transformation in the way contracts are negotiated and fulfilled, making it imperative to reconsider how legal systems approach such agreements.

Despite the persistence of traditional commerce, e-commerce is evolving rapidly, fueled by continuous advancements in ICT. This necessitates the establishment of a robust and coherent legal framework tailored to regulate contractual relations concluded through electronic means. Such a framework must respond to questions of contract validity, the autonomy of will, jurisdiction, enforcement, and most notably, the determination of the applicable law in international e-contracts.

In the realm of digital commerce, two broad categories of contracts dominate: Business-to-Business (B2B) and Business-to-Consumer (B2C) contracts. Each category introduces distinct legal concerns, particularly regarding the allocation of rights and obligations, the formalities of consent, and the protection of weaker parties. As such, a legal distinction also emerges between the electronic merchant (cyber-commerçant) and the electronic consumer (cyber-consommateur), both of whom operate in an environment characterized by asymmetry, speed, and extraterritoriality.

This dynamic and rapidly expanding digital environment compels jurists and legislators alike to critically examine the legal nature of electronic contracts, their formation mechanisms, and their international dimensions. Central to this examination is the challenge of determining which national law or transnational rules should govern e-commerce transactions, particularly in the absence of explicit agreement between the parties.

2. Significance of the Study

This research is of critical relevance in the current legal and commercial context. Its importance is highlighted through the following considerations:

Clarifying the Legal Nature of Electronic Contracts: The research explores the core characteristics and legal underpinnings of e-contracts, shedding light on how they are formed and how they differ from traditional contracts in form and substance.

Reaffirming the Principle of Party Autonomy: Electronic contracting emphasizes the autonomy of will, as parties are often allowed to determine the substantive law applicable to their agreements. Understanding how these principal functions in the digital realm is key to enhancing legal certainty.

Addressing Inequality in B2C Contracts: Many electronic contracts, particularly those involving consumers, reveal structural imbalances between the contracting parties. Merchants, by virtue of technological and economic superiority, often impose standard terms on consumers, who may lack bargaining power. This study highlights the need to promote legal mechanisms to ensure fairness and consumer protection in digital markets.

3. Research Structure

To explore the core issues surrounding electronic contracts and their applicable law, this study proceeds through the following sections:

Chapter One: The Nature of the Electronic Contract – its conceptual foundations, distinctive characteristics, and the technological and legal methods of formation.

Chapter Two: The International Nature of Electronic Contracts – examining the criteria for classifying e-contracts as international and the implications thereof.

Chapter Three: The Law Applicable to Electronic Contracts – an in-depth analysis of party autonomy, default rules in the absence of choice, and comparative insights from national and international legal instruments.

Chapter One: The Legal Nature of the Electronic Contract

1.1 Definition and Legal Standing

An electronic contract is a legally enforceable agreement created and accepted through digital or electronic means, typically over the internet. While its mode of formation diverges from traditional contracts, its substantive legal foundations remain consistent—requiring mutual consent, legal capacity, lawful object, and consideration.

In regulatory terms, many jurisdictions explicitly recognize the validity of such contracts. For instance, Jordan's Electronic Transactions Law No. 15 of 2015, in Article 8, affirms the legal validity of electronic contracts by stipulating that a contract shall not be denied legal effect or enforceability solely because it was concluded electronically. Similarly, Oman's Law No. 69/2008, Article 12, states that offer and acceptance can be validly expressed via electronic messages and that such expression binds the parties, provided it conforms to statutory provisions.

This legislative recognition is echoed in the EU Directive 97/7/EC, which defines distance contracts as those negotiated and concluded using remote communication technologies, including digital networks, up to and including the point of contract formation.

Electronic contracts may be categorized as:

- B2B (Business-to-Business) contracts—between two commercial entities.
- B2C (Business-to-Consumer) contracts—between a business and an end-user.

Each is subject to distinct regulatory considerations but shares common procedural elements related to consent and enforceability.

1.2 Legal Character: From Doctrine to Practice

Though executed differently, the legal nature of an electronic contract is fundamentally like that of a conventional contract. It is characterized not by the mode of communication but by the intent to create legal relations and the manifestation of assent.

Electronic contracts are generally enforceable under the same doctrines that govern traditional contracts. However, they present unique evidentiary and procedural challenges, such as verifying digital signatures, confirming consent, and determining applicable

jurisdiction in cross-border transactions.

1.3 Judicial Validation

Several courts have ruled on the enforceability of electronic agreements, particularly focusing on notice, consent, and access to terms:

1. Specht v. Netscape Communications Corp., 306 F.3d 17 (2d Cir. 2002)
2. The U.S. Court of Appeals held that users were not bound by license terms that were not conspicuously presented before downloading. The court emphasized that "a reasonably prudent internet user" must be given notice of the terms and an opportunity to agree.
3. Nguyen v. Barnes & Noble Inc., 763 F.3d 1171 (9th Cir. 2014)
4. Here, the court refused to enforce terms that were merely available via hyperlink at the bottom of a website. The ruling reinforced that passive access to terms is not sufficient for enforceability unless explicit affirmative action—like clicking "I agree"—is taken.
5. Feldman v. Google Inc., 513 F. Supp. 2d 229 (E.D. Pa. 2007)
6. This case upheld the validity of "clickwrap" agreements, where the user was required to affirmatively click "I agree" to proceed. The court ruled that reasonable notice and opportunity to review terms constituted valid consent.
7. Uber Technologies Inc. Case (New York Court of Appeals, 2024)
8. New York's highest court validated Uber's clickwrap contract structure, ruling that users were sufficiently notified of terms and consented by clicking "Agree." However, the court noted that specific arbitration clauses may still be subject to further scrutiny during disputes (Reuters, 2024).

These cases demonstrate how judicial scrutiny has evolved to balance enforceability with user protection, particularly in contracts formed without face-to-face negotiation.

1.4 Broader Legal Framework

Globally, various jurisdictions have legislated in favor of recognizing electronic contracts. For example:

- The United States implements the Electronic Signatures in Global and National Commerce Act (ESIGN) and the Uniform Electronic Transactions Act (UETA) to establish the legal equivalence of electronic signatures and records.
- The United Kingdom aligns with the EU EIDAS Regulation, providing a uniform legal foundation for digital contracts and e-signatures.
- China, Japan, and Canada have adopted electronic commerce laws ensuring validity and enforceability of digital contracts in both domestic and cross-border settings (Ishchuk, 2022).

2: Concluding the Electronic Contract

2. 1. Methods of Expressing Will in Electronic Contracts

In classical contract law, the expression of will (intent) may occur through any means suitable to the parties, including written, oral, or implied communication, unless the law imposes a specific form. This principle extends into the realm of electronic contracts, which represents an adaptation of contract doctrine to a digitally mediated environment.

As noted by Vdovichenko (2024), new forms of digital interaction, including emails, online forms, and instant messaging systems, serve as valid mediums for conveying legal intent in contracts, provided they preserve the clarity, traceability, and mutual recognition of the offer and acceptance (Vdovichenko, 2024).

Key methods of electronic expression include:

- Email communications: The sender transmits an offer electronically to a known address. Once the recipient replies affirmatively, the contract is considered concluded.
- Live chat interfaces and IRC: Real-time negotiations mirror in-person conversation, with simultaneous viewing and response mechanisms, fulfilling the mutuality requirement.
- Transactional websites: Where goods/services are offered via clickable forms, and the contract is formed upon user confirmation (e.g., clickwrap agreements).

This mode of contracting is supported by judicial precedent. In *Feldman v. Google Inc.*, the U.S. District Court upheld the binding nature of online agreements where the user had to affirmatively accept the terms by clicking a button—deeming this an effective expression of assent (513 F. Supp. 2d 229, E.D. Pa. 2007).

2.2 The Integrity of Consent and Legal Capacity

The validity of any contract—electronic or otherwise—relies upon sound will and the legal capacity of the parties involved. This includes freedom from vitiating factors such as error, fraud, coercion, or misrepresentation.

While straightforward in traditional settings, digital contracts pose complexities due to anonymity, cross-border communication, and absence of physical interaction. As highlighted by Davydova (2018), determining whether a party was misled, coerced, or mentally unfit becomes more challenging when no direct meeting occurs (Davydova, 2018).

2.3 Jurisdictional Nuances in Capacity

Legal capacity is governed by the personal law (e.g., nationality law) of the individual. For example:

- France sets the age of majority at 18.
- Tunisia maintains 20 or 21 in certain legal contexts.

These are matters of public policy and cannot be waived. Hence, a contract signed by a minor in one jurisdiction may be unenforceable in another unless supported by parental or legal guardian consent.

To address such risks, scholars recommend the use of Trusted Third Parties (TTPs) and certification authorities, which help verify identity and age. For example, the Tunisian Law on Electronic Transactions (2000) requires certification service providers to meet strict authentication and data integrity standards.

Additionally, some e-commerce websites utilize digital age verification systems, such as requiring a credit card entry, as a proxy for establishing legal majority.

2.4 Offer and Acceptance Timelines in Digital Settings

Legally, an electronic offer is considered a correspondence-based offer. Its validity persists for a "reasonable period"—typically determined by:

- The type of transaction,
- The medium of communication, and
- The urgency implied by context.

Egyptian Civil Code Article 93 states that if a time limit for acceptance is stipulated, the offeror is bound until expiration. Where no time is specified, courts may infer duration based on commercial practice or the nature of goods/services offered.

Likewise, French Law No. 2004-575 (on Confidence in the Digital Economy) requires that a digital offer must remain accessible for a period reasonable enough for the recipient to accept it, or else it may be considered withdrawn by conduct.

3: Characteristics of the Electronic Contract

3.1 Contract Formation Without Physical Presence

A defining characteristic of the electronic contract is its non-reliance on physical proximity. Parties may engage, negotiate, and conclude binding agreements entirely through digital environments, a process often referred to as *remote contracting*. Unlike traditional settings where mutual presence facilitates consent, electronic contracts unfold in cyberspace—sometimes synchronously via live interfaces, or asynchronously via emails or electronic forms.

This "virtual presence" mimics physical presence through audio-visual communication tools, offering both parties a shared, though intangible, interaction space. As noted by Sasso (2016), the temporal and spatial independence of e-contracting redefines conventional legal concepts like *offer and acceptance*, especially when using automated platforms or pre-set systems for contract formation.

Furthermore, the immediacy and speed inherent to digital commerce are pivotal in international trade contexts, where efficiency and transactional velocity are business imperatives (Sasso, 2016).

3.2 Adhesion Nature of Many E-Contracts

Adhesion contracts, or *contracts of adhesion*, are standard-form agreements drafted unilaterally by one party (usually a business) and presented to the other party (often a consumer) on a *take-it-or-leave-it* basis, with no room for negotiation.

This structure is prominent in e-commerce contracts, where consumers must accept pre-set terms (e.g., "I agree" clickwrap mechanisms) to proceed with purchases. These agreements raise concerns regarding contractual balance and informed consent, especially when the drafter's dominant bargaining power imposes unalterable terms on users.

Article 100 of the Egyptian Civil Code codifies this, affirming that "acceptance in an adhesion contract is limited to adherence to standard conditions, not subject to negotiation." Similar principles are observed globally, particularly in civil law jurisdictions.

As Arellano (2004) notes, these digital adhesion contracts rely on unilateral expression of will, backed by procedural consent mechanisms such as digital signatures, but often lack substantive negotiation [(Arellano, 2004)].

Importantly, not all e-contracts qualify as adhesion contracts. In B2B (business-to-business) transactions between equally informed professionals, parties may possess relatively balanced negotiating powers, disqualifying the arrangement from being adhesive, even if terms are standard.

3.3 Execution via Electronic Media

Electronic contracts are unique in their complete dependence on electronic communication channels for offer, acceptance, and documentation. These include:

- Web-based portals
- Email exchanges
- Instant messaging systems
- Blockchain-based smart contracts

The Civil Code of Ukraine (Art. 639), for example, equates contracts formed via electronic means to those in written form, providing them with legal enforceability and evidentiary validity [(Kroitor, 2024)].

Moreover, the medium may involve wired, wireless, or satellite-based communication, covering transactions conducted through mobile apps, smart devices, or satellite-enabled systems. This diversity of digital infrastructure introduces both opportunities and vulnerabilities in terms of accessibility, privacy, and cybersecurity.

3.4 Civil vs. Commercial Nature of E-Contracts

The classification of an electronic contract as civil or commercial hinges on the status and intent of the parties involved:

- In B2B contracts, both parties are merchants or professionals, conducting business to earn profit. Here, the contract is *commercial* by nature.
- In B2C contracts, one party (the business) acts in a professional capacity, while the other (the consumer) seeks to fulfill personal or household needs. Such contracts are commercial for the seller, but civil for the buyer.

Ramírez-Hernández (2016) underscores that risk allocation, breach consequences, and enforcement procedures may vary depending on whether the contract is civil or commercial, particularly when dispute arises [(Ramírez-Hernández, 2016)].

Thus, not all e-commerce contracts are consumer contracts. Consumer protection regimes, such as the EU Consumer Rights Directive, apply only where at least one party qualifies legally as a consumer, triggering specific protections like right of withdrawal, fairness of terms, and pre-contractual information duties.

Chapter Two: Internationality of Electronic Contracts

Determining whether an electronic contract qualifies as domestic or international is pivotal for establishing applicable legal frameworks, particularly regarding conflict of laws and jurisdiction. Given the inherently transnational nature of the internet, traditional standards for international contracts require re-examination to assess their suitability for electronic transactions. This section outlines conventional criteria of internationality and evaluates their applicability in the context of digital commerce.

1. Traditional Standards of Contract Internationality

a. Economic Standard

Historically, a contract is deemed international when it entails cross-border movement of goods, services, or capital. Under this doctrine, the place of residence or nationality of parties is secondary to the transnational nature of performance or consideration. This perspective emphasizes economic effects rather than juridical connections, expanding the category of international contracts in line with global trade dynamics.

However, modern jurisprudence has shifted towards aligning this standard with the needs of international commerce, relaxing rigid thresholds to favor global business fluidity (Tang, 2009). The emphasis lies in facilitating contracts that serve transnational commercial interests, even if they don't involve physical border-crossing of goods.

b. Legal Standard

This criterion focuses on the presence of a foreign legal element in contractual relationships, such as:

- The nationality or domicile of the parties
- The place of contract formation or execution
- The governing law or jurisdiction clause

According to this view, a contract qualifies as international if it invokes more than one legal system, regardless of where goods or services are exchanged (Peña Orozco & Chamorro Buelvas, 2021). Importantly, the foreign element must be substantive and legally relevant, not incidental.

c. Mixed Standard

As a synthesis of the above, the mixed standard considers a contract international if it has both:

- An economic cross-border component
- A legal connection to multiple jurisdictions

Despite its initial appeal, this standard has diminished in utility with the rise of digital commerce, where services may be offered globally without traditional indicators of internationality. Thus, its relevance has waned in the internet age, giving way to more adaptive legal interpretations.

2. Internationality in Electronic Contracts

The classical doctrine of offer and acceptance assumes a sequential, deliberate exchange between two parties: one issues an offer, the other responds with acceptance, and legal obligations crystallize through this logical order. This sequence has long underpinned both civil and common law understandings of contractual consent. However, in the digital economy—especially in environments dominated by apps, platforms, and smart systems—this temporal clarity collapses. Increasingly, offer and acceptance occur simultaneously, or their distinction becomes functionally irrelevant. Automated purchasing systems, for instance, are programmed to execute transactions instantly upon reaching predetermined triggers, such as price thresholds or inventory levels. In such scenarios, no human is consciously involved at the moment of legal commitment, and the classical notion of a temporally distinct 'acceptance' event becomes illusory.

Courts have attempted to adapt to this shift, often reluctantly. In Register.com v. Verio, Inc. (2004), the court accepted that repeated website usage under posted terms constituted tacit acceptance, even in the absence of a single defining moment of consent. The judgment implicitly acknowledges that digital interaction often occurs without temporal clarity, yet still gives rise to legal obligations. This signals a growing judicial tolerance for behavioral assent, where actions—rather than formal declarations—serve as evidence of agreement.

From a theoretical standpoint, this transformation invites a rethinking of the doctrine of temporality in contract law. As Murray (2021) observes, the rigidity of offer-acceptance sequences may no longer serve as a reliable foundation in mass-market and algorithmic contracts. Instead, courts and scholars may increasingly turn to behavioral models of agreement—those that infer consent from patterns of interaction, repetition, and contextual consistency. This model is particularly relevant in adhesion contracts, where users routinely 'agree' to terms by simply continuing to use digital platforms, often without ever reviewing or understanding the terms presented.

Yet, adopting such behavioral models must be approached with caution. While they reflect technological and commercial realities, they also raise serious questions about the integrity of consent and legal awareness. If legal obligations are inferred from mere patterns of use, how can courts ensure that users are meaningfully consenting, rather than being passively enrolled into binding relationships? The answer, as the study suggests elsewhere, may lie in redefining legal thresholds for digital assent—ensuring visibility, transparency, and opportunity to opt out—as opposed to abandoning the sequence model altogether.

In this light, the collapse of temporal order does not mean the abandonment of doctrinal coherence. Rather, it demands a functional reinterpretation: the law must account for automated, continuous, and sometimes ambient interactions that give rise to obligations, while preserving the normative core of voluntariness and legal accountability. The challenge lies in distinguishing between meaningful digital behavior that indicates consent, and mere routine platform use that lacks intent to contract—a distinction that courts, regulators, and legal scholars must continue to refine.

The notion of internationality has traditionally served as a critical threshold for the application of private international law rules. In conventional contract law, this concept was relatively straightforward, anchored in identifiable territorial elements such as the nationalities of the parties, the place of contracting, or the locus of performance. However, the rapid evolution of electronic commerce and digital platforms has rendered these classical indicators increasingly insufficient and, at times, misleading. Unlike traditional transactions, e-commerce contracts are often concluded in virtual environments where the geographic coordinates of offer and acceptance are obscured or even irrelevant. Parties may contract via automated systems, cloud-based infrastructures, or third-party platforms without any physical interaction or awareness of jurisdictional boundaries.

As the study demonstrates, this transformation necessitates a reconceptualization of what constitutes an "international" contract. It is no longer adequate to rely solely on the physical movement of goods or the residence of contracting parties. Instead, the international character of a contract must be assessed through its legal, economic, and digital dimensions, with emphasis on cross-border legal effects, transnational performance, and the involvement of multiple legal systems, whether explicitly acknowledged or not.

Among the doctrinal approaches examined, the legal standard proves to be the most resilient and adaptable in the context of electronic contracting. This standard classifies a contract as international when it contains one or more foreign legal elements—such as the parties having different domiciles, the existence of a foreign governing law clause, or the potential invocation of foreign jurisdiction in case of dispute. This approach aligns more closely with the realities of digital contracting, where economic activities span jurisdictions even in the absence of physical delivery.

The application of this standard is supported by key instruments like the Rome I Regulation, which, although not explicitly defining internationality, implicitly assumes it when a contract engages more than one legal system (Recital 7). This flexible formulation allows courts and arbitral tribunals to examine the substantive legal characteristics of the relationship rather than adhering to outdated territorial prerequisites. As the study indicates, even when a transaction appears localized, the underlying contractual framework—such as data processing, payment systems, or consumer access—may extend to multiple jurisdictions, thus justifying an international classification under the legal standard.

The emergence of digital marketplaces and platforms has accelerated the erosion of traditional territorial indicators in contract classification. E-commerce transactions today are facilitated through decentralized networks, including cloud-based servers, payment gateways, and algorithmic decision-making tools. These technological infrastructures are often geographically dispersed, creating a scenario where the actual place of contract formation or execution becomes legally indiscernible.

For example, a consumer in Jordan may purchase a service from a company headquartered in Ireland, processed through a U.S.-based payment gateway, and delivered via a cloud platform hosted in Singapore. In such cases, reliance on territorial factors like the "place of contract performance" becomes impractical and misleading. As Koellner (2024) and Brodermann (2024) emphasize, such transactions should instead be evaluated based on their commercial substance and legal structure, focusing on the real economic and legal relationships involved rather than superficial physical coordinates. This shift in perspective is crucial for achieving legal certainty and ensuring equitable adjudication in cross-border digital disputes.

Courts have struggled to reconcile classical conceptions of internationality with the realities of digital transactions. In several cases referenced in the study, such as OLG Frankfurt (2008) and the Epic Games v. U.S. Consumers decision (2021), courts have

refused to classify digital transactions as international merely because of interface language, payment methods, or global availability. These rulings reflect a cautious judicial approach that prioritizes actual legal content and economic substance over formality.

Nonetheless, such interpretations reveal the inconsistency and ambiguity that persist in judicial reasoning. While some courts demand a concrete legal link to a foreign jurisdiction, others apply broader criteria when digital infrastructures or consumer outreach extend across borders. To address this uncertainty, scholars such as Chen (2021) advocate for a "digital internationality" model, wherein the international nature of a contract is judged by its transnational legal effects, use of global platforms, or exposure to cross-border regulations (e.g., data localization, consumer protection laws). This evolving jurisprudence highlights the need for a multi-layered and context-sensitive assessment, combining both formal and functional criteria to determine internationality.

The divergent approaches to contract internationality are further illustrated by the comparison between CISG and the UNIDROIT Principles. The CISG adopts a strict territorial interpretation, applying only when the contracting parties have places of business in different Contracting States (Art. 1(1)(a)). While effective in traditional commerce, this narrow scope limits its relevance in digital settings where business operations may be virtual, decentralized, or platform-mediated.

By contrast, the UNIDROIT Principles adopt a more pragmatic and substantive-oriented view of internationality. As outlined in the research and emphasized by Koellner (2024), the Principles apply whenever the parties' relationship demonstrates a transnational commercial character, regardless of formal domiciliary criteria. This flexibility makes the UNIDROIT Principles particularly suitable for analyzing smart contracts, blockchain-based agreements, and automated commercial interactions, where the parties' identities and locations may be algorithmically abstracted or commercially irrelevant.

In conclusion, the research calls for a redefinition of internationality that is attuned to the technological and commercial realities of modern electronic contracting. This entails abandoning rigid territorial tests in favor of technology-neutral, functionally driven criteria, such as: the legal diversity of the contracting parties; the location and control of digital infrastructures (e.g., servers, platforms); the governing law clauses or arbitration forums invoked; and the economic and regulatory impact across jurisdictions.

Such a shift would ensure that private international law remains responsive, equitable, and coherent in the digital age. By prioritizing the real structure and effects of contractual relationships over formalistic indicators, legal systems can uphold party autonomy while ensuring consumer protection, fair dispute resolution, and cross-border legal certainty. This comprehensive framework, as articulated in the study, represents a vital step toward harmonizing national and transnational legal instruments with the demands of the global digital economy.

a. Rethinking Borders in Cyberspace

Electronic commerce operates in a borderless digital environment. Transactions often occur:

- Between users in different jurisdictions
- Without physical movement of goods (e.g., digital goods/services)
- In decentralized platforms like cloud services or blockchain networks

This challenges the territorial logic of traditional international contract doctrines. The internet inherently creates a presumption of internationality, as the location of servers, users, and service providers may span multiple nations (Saleh & Al Amr, 2023).

b. The Legal Standard as a Dominant Model

Given these realities, the legal standard is most suitable for assessing internationality in electronic contracts. This is because:

- Parties are often located in different countries.
- Offers and acceptances may originate from different jurisdictions.
- The governing law and dispute resolution clauses frequently invoke foreign systems.

As Tang (2009) explains, even purely domestic e-contracts may involve foreign servers, service providers, or data processors, embedding foreign elements in the legal structure of the contract.

c. Influence of Cyberspace on Legal Classification

Electronic contracts often involve pre-contractual negotiations, authentication, and execution through cross-border digital

means. This makes it difficult to geographically localize such transactions, supporting their classification as international by nature (Srivastava, 2020).

Moreover, technologies such as smart contracts, cloud-hosted services, and automated contracting platforms further erode the relevance of location, reinforcing the reliance on legal rather than economic criteria.

The notion of "internationality" has long served as a key gateway in determining the applicable legal framework for cross-border contracts. In traditional private international law, the classification of a contract as international typically hinged upon clear and concrete territorial indicators—such as the location of the parties' places of business, the place of performance of the contract, or the forum where negotiations occurred. These indicators formed the doctrinal backbone of classical instruments like the Rome I Regulation, the CISG, and various national conflict-of-law rules. However, in the context of electronic commerce, such indicators have become increasingly inadequate, ambiguous, or inapplicable (Poncibò, 2021).

For instance, under Rome I Regulation, "internationality" is not defined per se but is implied through the existence of a conflict of laws (Recital 7). A contract may fall under the Regulation's purview when it involves elements connected to more than one legal system. This model allows flexibility for digital contracts but assumes the presence of at least one identifiable cross-border legal link. In a digital environment, however, parties may contract without being aware of each other's jurisdiction, and the algorithmic nature of contract formation may further obscure geographic or legal identifiers. This challenges the traditional prerequisites used to trigger the application of private international law.

Similarly, the CISG explicitly conditions its applicability on the parties having their places of business in different Contracting States (Art. 1(1)(a)). This territorial test is clear but narrow, and fails to accommodate situations common in e-commerce: for example, when a business is incorporated in one state, but operates digitally in several others without any localized presence. Moreover, e-commerce platforms often anonymize or aggregate transactions, further complicating the identification of the relevant jurisdictions (Brodermann, 2024). The CISG's fallback clause in Article 10 attempts to prioritize the "place of business which has the closest relationship to the contract," but this too is conceptually strained when the contract is executed, performed, and concluded in wholly virtual environments.

By contrast, the UNIDROIT Principles of International Commercial Contracts (PICC) adopt a more functional and commercial-oriented understanding of internationality. They do not rely on formalistic territorial requirements but instead apply where the parties' relationship demonstrates a transnational commercial character. According to Koellner (2024), the PICC's doctrinal structure is particularly suitable for the analysis of automated, smart, and algorithmically formed contracts, as it focuses on commercial substance over formal location. This allows for more pragmatic adjudication in arbitral or judicial settings, where rigid geographical tests may no longer serve justice in digital settings.

Beyond legal instruments, recent comparative legal scholarship has advocated for a rethinking of "internationality" through the lens of the digital economy. Chen (2021) proposes a model of "digital internationality" based on functional legal realities, such as data localization rules, cloud-based storage, use of international platforms (e.g., Amazon, Alibaba), and transnational algorithmic targeting. In this model, the key legal concern is whether a contractual transaction has substantial cross-border effects, rather than whether it satisfies classical elements such as physical negotiation or physical delivery.

Moreover, courts are also beginning to respond to this conceptual shift. For instance, in *Epic Games v. U.S. Consumers* (2021), the U.S. District Court held that global availability of a service does not inherently establish an international contract, especially when the governing law and contractual obligations are firmly rooted in one jurisdiction. Likewise, in Germany, the Frankfurt Court of Appeal (OLG Frankfurt, 2008) found that the use of English interfaces and international payment methods like PayPal were insufficient to classify a domestic transaction as international. These decisions underscore a growing judicial tendency to prioritize actual legal and economic substance over superficial cross-border features.

As electronic contracts increasingly evolve in the direction of smart contracting, blockchain enforcement, and AI-mediated consent, the markers of internationality will continue to be obscured unless a multi-factorial approach is adopted. Such an approach would incorporate a combination of:

- Party location and real connection,
- Digital infrastructure location (e.g., servers, cloud regions),

- Algorithmic targeting and data jurisdiction, and
- Transnational commercial intent,

thus capturing the legal complexity of modern digital contracting (Koellner, 2024; Brodermann, 2024).

In conclusion, relying solely on classical indicators like place of business or physical performance no longer suffices in determining the international character of electronic contracts. The future of contract classification in cross-border e-commerce must rest on a dynamic, technology-aware framework that is adaptable to the realities of the digital economy. Only then can the principles of party autonomy, legal certainty, and conflict-of-law coherence be meaningfully upheld in an age of virtual commercial interaction.

3**: The Law Applicable to E-Commerce Contracts:**

Determining the applicable law in international electronic contracts remains a complex challenge at the intersection of private international law, technological evolution, and cross-border commercial dynamics. Unlike traditional contracts, where the place of contracting and performance might be physically identifiable, electronic contracts often defy such territorial markers. Parties may be in multiple jurisdictions, platforms may be hosted elsewhere, and contractual actions may be automated or instantaneous, complicating the task of identifying the legal system governing the relationship.

1. Party Autonomy and Its Limits

The principle of **party autonomy**—whereby the parties may freely choose the applicable law—is a central tenet in modern private international law, affirmed by key instruments such as the *Rome I Regulation* (Art. 3) and the *Hague Principles on Choice of Law in International Commercial Contracts* (2015). In electronic contracting, this principle is typically exercised via embedded terms and conditions, often located through hyperlinks or pre-ticked boxes.

However, significant issues arise concerning the **effectiveness and fairness of consent**. Many users do not actually review these terms, and even when they do, the legal language may obscure the consequences of choice-of-law clauses. Furthermore, when these terms are imposed unilaterally by digital platforms, the validity of the consent to jurisdiction becomes contested. Recent jurisprudence, including *Nguyen v. Barnes & Noble Inc.* (2014), highlights that clickwrap and browsewrap agreements may not always create enforceable choice-of-law agreements unless clearly presented and affirmatively agreed upon.

2. Absence of Choice: Default Mechanisms

When no express or implied choice is made, courts and arbitral tribunals apply **objective connecting factors**. Under the Rome I Regulation (Art. 4), the applicable law shall be that of the country **most closely connected** to the contract. However, identifying this connection becomes problematic in electronic environments where:

- The offeror and offeree may be in different legal systems,
- The server infrastructure may be in a third country,
- The transaction may be mediated entirely by automated systems.

As a result, scholars and courts are increasingly advocating for **functional tests**, emphasizing the *center of gravity* of the contractual relationship (Lehmann, 2020). Factors such as habitual residence, location of business establishment, and the primary performance obligation become critical. However, electronic contracts often lack a stable geographic nexus, leading to fragmentation and legal uncertainty.

3. Challenges Posed by Platform Economies and Digital Infrastructure

In platform-mediated commerce (e.g., Amazon, Uber, Airbnb), the platform may be the formal or informal contracting party, yet it may also impose its own governing law unilaterally—usually that of its home jurisdiction (e.g., Delaware, California, Luxembourg). This presents a systemic power asymmetry, especially for SMEs and consumers. Recent scholarship criticizes the *formal neutrality* of conflict-of-law rules that ignore informational inequality and procedural unfairness (Poncibò, 2021).

Moreover, the growth of smart contracts and blockchain-based transactions adds a further layer of complexity, where code determines execution and jurisdiction may be undefined. Scholars such as Vdovichenko (2024) argue that legal systems must move beyond formal territorial rules and adopt **transnational principles** that can accommodate the borderless nature of digital commerce.

4. Emerging Harmonization Efforts and Soft Law Instruments

Global institutions have responded to this complexity with instruments that aim to harmonize applicable law rules in the digital age:

- The UN Convention on the Use of Electronic Communications in International Contracts (2005) provides guidance on functional equivalence and consent mechanisms.
- The Hague Principles recognize the validity of choice-of-law clauses even in cases where no connection exists between the chosen law and the parties, thereby expanding flexibility.
- The UNCITRAL Model Law on Electronic Commerce and the UNIDROIT Principles of International Commercial Contracts offer interpretive frameworks that help bridge gaps between national regimes.

Yet these instruments remain **non-binding** in many jurisdictions. While they foster harmonization, their lack of enforceability limits their practical impact, especially in disputes involving consumers or parties from developing legal systems.

5. Toward a Contextual and Balanced Approach

As legal systems confront the realities of electronic contracting, a more **context-**sensitive doctrine is emerging—one that balances party autonomy with safeguards against coercive standard terms, and one that integrates technical realities with legal constructs.

Courts are encouraged to:

- Scrutinize the transparency and accessibility of choice-of-law clauses,
- Give weight to reasonable expectations of the parties,
- Apply mandatory rules (e.g., consumer protection or competition law) when appropriate,
- Embrace hybrid frameworks that blend formal and functional elements of conflict-of-law doctrine.

This evolutionary path reflects the broader trend toward **"normative pluralism"** in contract law, where traditional legal principles coexist with new forms of regulation—including platform policies, transnational commercial standards, and digital governance regimes.

Chapter Three: Failure to Choose the Applicable Law and the Doctrinal and Legislative Solutions

1. Classical Foundations of Contractual Consent

At the heart of classical contract theory lies a deeply rooted belief in the mutual manifestation of will. In both civil law and common law traditions, a valid contract emerges when two or more parties reach an agreement through offer and acceptance. This premise reflects a broader philosophical commitment to autonomy, certainty, and deliberation—values shaped in pre-digital contexts where parties negotiated directly, documents were physically signed, and consent was express and traceable.

Civil law systems—like those in Germany, France, and Egypt—emphasize the *will theory* (Willenstheorie), which holds that internal intent, when sufficiently externalized through behavior or declarations, produces legal obligations. The focus here is on consensus ad idem, or a "meeting of the minds." Common law systems, particularly in England and the U.S., tend to adopt a more objective lens, relying on external behavior and the so-called reasonable person test to infer agreement (Kramer, 2022).

These traditional models presume three pillars:

- Temporal alignment: Offer and acceptance occur in a logical, linear sequence.
- Volitional clarity: Each party acts knowingly and voluntarily.
- Evidentiary transparency: Consent is documented or observable through physical means.

Yet, each of these pillars is profoundly challenged by the architecture of digital contracting.

2. Fractured Temporality and the Collapse of Sequential Logic

In electronic contracts, especially those concluded through apps, platforms, and smart systems—the classical temporal order of offer and acceptance often collapses into simultaneity or becomes functionally ambiguous. Consider automated purchasing systems where the "acceptance" is triggered not by a human but by an algorithm set to purchase once certain market thresholds are met.

In such cases, can one meaningfully distinguish between the moment of offer and the moment of acceptance? Courts have wrestled with such questions. In *Register.com v. Verio, Inc.* (2004), for example, the court held that continued use of a website under known terms constituted acceptance, even though no single "acceptance event" occurred.

Murray (2021) suggests that the doctrine of offer and acceptance in its strict form may need to be supplanted by behavioral models of agreement—ones that infer consensus from patterns, repetition, and contextual consistency, especially in contracts of adhesion or mass-market settings.

3. Algorithmic Mediation and the "Black Box" of Consent

Traditional theories presume that parties read, understand, and assent to terms voluntarily. But in the digital world, consent is often mediated—or even substituted—by code. Online interfaces are engineered to elicit acceptance with minimal resistance: "click-wrap," "browse-wrap," and "scroll-wrap" agreements all condition service access on tacit consent.

More recently, smart contracts—self-executing scripts written in code—pose even deeper theoretical problems. They do not operate on textual negotiation, but rather on predefined inputs and automated outputs. The contract's meaning is embedded in the software, not negotiated clause by clause. As Kramer (2022) observes, this results in "consent by configuration," where user intent is deduced from technical behavior, not from human understanding.

These challenges have led scholars like Lehmann (2020) to argue that consent in the digital age must be reconceptualized as a dynamic, contextual construct, one that recognizes the structural imbalances and hidden architecture of digital platforms.

4. Formalism, Fragmentation, and the Limits of Equivalence

Despite global moves toward recognizing electronic communications as legally equivalent to paper-based instruments, formalism remains a doctrinal fault line. The mere existence of digital signatures or electronic writing does not guarantee legal effectiveness—especially in international contexts where divergent formal requirements persist.

For example, while the EU's eIDAS Regulation allows electronic signatures to have the same legal value as handwritten ones, only "qualified electronic signatures" are given full evidentiary effect. In contrast, the U.S. ESIGN Act is more permissive, treating nearly any form of electronic consent as valid. The lack of harmonization generates legal uncertainty for parties engaged in cross-border electronic transactions (Fernandez, 2023).

Moreover, many legal systems still maintain mandatory formalities for specific contracts (e.g., real estate, consumer credit, or employment), which cannot be bypassed through digital equivalence. Thus, despite the promise of digital contracting, formalism continues to serve as both a gatekeeper and a barrier.

5. Autonomy Under Pressure: From Freedom to Predetermination

Perhaps the most profound disruption of classical doctrine arises in the erosion of party autonomy. While traditional theory celebrates the will of the contracting parties as sovereign, modern platforms increasingly structure contracts as take-it-or-leave-it propositions, embedded within interface designs that prioritize speed over deliberation.

Lehmann (2020) argues that the modern digital environment results in "attenuated autonomy," where consent is less an expression of freedom and more an act of necessity—especially in monopolistic or essential-service contexts (e.g., telecom, social media, e-commerce platforms). This raises important normative questions: if users must contract to access basic digital infrastructure, can their consent be truly free?

Some legal systems have responded through consumer protection doctrines, transparency requirements, and mandatory information duties. However, these reforms often lag behind the speed of technological development, leaving users exposed to terms they neither read nor understand.

6. Doctrinal Adaptations and the Road Ahead

Legal systems are gradually adapting. The UNIDROIT Principles recognize that contracts can be formed "by the conduct of the parties that is sufficient to show agreement," regardless of formalistic indicators. This broad standard allows courts and arbitrators to apply a substance-over-form test—focusing on functional equivalence rather than procedural orthodoxy.

Meanwhile, common law courts increasingly apply doctrines such as:

- Reasonable expectations (e.g., *ProCD v. Zeidenberg*, 1996),

- Unconscionability in boilerplate contracts,
- And contra proferentem to interpret ambiguous digital clauses against the drafter.

The emerging consensus is clear: while traditional contract theory remains foundational, its application must be nuanced by context, technology, and power imbalances. The future of contract formation will depend not on replacing classical doctrines, but on reinterpreting them in light of digital architecture, automated agency, and transnational complexity.

Conclusion

This research explored the legal nature and international dimensions of electronic contracts through a comparative legal lens. The study was divided into three core sections:

1. The Legal Nature of Electronic Contracts: This section examined the doctrinal and judicial foundations of electronic contracts, confirming their legal validity across multiple jurisdictions. It analyzed how offer, acceptance, and consent operate in digital settings, supported by both legislation and case law.
2. The Internationality of Electronic Contracts: Here, the discussion highlighted how the borderless nature of the internet challenges traditional conceptions of contract internationality. The legal standard—especially regarding party domicile and jurisdiction clauses—was identified as the most reliable metric in e-commerce environments.
3. Applicable Law and the Absence of Party Choice: This part reviewed the doctrinal and legislative frameworks applied when parties fail to specify a governing law. The "most characteristic obligation" theory emerged as a functional solution, though its application must be balanced with consumer protection imperatives.

Key Findings:

- Electronic contracts are fundamentally valid and enforceable, provided they meet the basic requirements of consent, capacity, and legality.
- The internationality of e-contracts should be assessed primarily through legal rather than economic criteria.
- In cases of absent or ambiguous governing law, flexible yet structured approaches—like the distinctive performance theory—offer practical clarity.

Recommendations:

- National legislation should be updated to reflect the digital realities of contract formation, including the recognition of decentralized and automated contract platforms.
- Consumer protection mechanisms should be reinforced in B2C e-contracts, especially regarding governing law and jurisdiction clauses.
- Future treaties and model laws should adopt a technology-neutral stance that aligns with current and emerging forms of digital contracting.

This research ultimately underscores the need for continued harmonization between domestic and international legal frameworks to ensure legal certainty and fairness in the global digital economy.

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