The Deterritorialization and Algorithmic Financialization of International Contracts: A Comparative Study of Private International Law

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Abstract :

This research analyzes the transformation of the contemporary international legal order under the influence of Financial Technologies (FinTech) and Artificial Intelligence (AI). It focuses on the deterritorialization of international contracts, where agreements are no longer linked to a specific geographical territory but operate within decentralized digital spaces. The study examines how autonomous algorithms increasingly influence contractual relations, challenging the traditional foundations of Private International Law (PIL).

The subject is important both theoretically and practically. Theoretically, it questions the validity of party autonomy and human consent in contracts shaped by algorithms and data-driven systems. Practically, it highlights the legal uncertainty surrounding applicable law and jurisdiction in digital transactions, particularly for emerging digital economies such as Morocco.

The research addresses the following problem: to what extent do deterritorialization and algorithmic financialization weaken classical connecting factors in PIL, and what new regulatory model can balance state sovereignty with technological autonomy? Using analytical and comparative methodologies, the study compares the American, European/French, and Moroccan legal approaches.

The findings demonstrate the decline of traditional territorial criteria and the rise of "algorithmic adherence," where contractual conditions are predetermined by technological systems. The study recommends adopting a functional connecting approach based on the national effects of digital activities and concludes that PIL must evolve toward systemic digital supervision.

Keywords:Deterritorialization, FinTech/AI, Lex Algorithmica, Autonomy of the Will, Private International Law.

Résumé :

Cette recherche analyse la transformation de l'ordre juridique international contemporain sous l'influence des technologies financières (FinTech) et de l'intelligence artificielle (IA). Elle s'intéresse à la déterritorialisation des contrats internationaux, phénomène par lequel les relations contractuelles ne sont plus rattachées à un territoire précis, mais évoluent dans des espaces numériques décentralisés. L'étude met en évidence la manière dont les algorithmes autonomes influencent désormais les relations contractuelles, remettant en cause les fondements traditionnels du droit international privé (DIP).

Le sujet présente un intérêt à la fois théorique et pratique. Sur le plan théorique, il interroge la validité de l'autonomie de la volonté et du consentement humain dans des contrats façonnés par des systèmes algorithmiques et des flux de données. Sur le plan pratique, il souligne l'insécurité juridique liée à la détermination de la loi applicable et de la juridiction compétente dans les transactions numériques, notamment pour les économies émergentes comme le Maroc.

La recherche s'articule autour de la problématique suivante : dans quelle mesure la déterritorialisation et la financiarisation algorithmique affaiblissent-elles les critères classiques de rattachement en DIP, et quel nouveau modèle de régulation permettrait de concilier souveraineté étatique et autonomie technologique ? L'étude recommande finalement une évolution du DIP vers une supervision systémique des activités numériques.

Mots-clés : Déterritorialisation, FinTech/IA, Lex Algorithmica, autonomie de la volonté, droit international privé.

Introduction

The international legal order is currently undergoing an unprecedented paradigmatic shift, driven by the convergence of financial technologies (FinTech) and Artificial Intelligence (AI). Long confined to physical localization mechanisms specifically the locus regit actum principle the international contract is now detaching itself from its classical territorial anchors to be executed within a decentralized and ubiquitous digital space. Simultaneously, AI is no longer limited to an assistive function; it has become a decision-making agent capable of modeling consent through scoring algorithms and automated execution, such as smart contracts.[1]

The interest of this study is twofold. On a theoretical level, it questions the resilience of the fundamental concepts of Private International Law (PIL) in the face of immateriality. The objective is to determine whether the autonomy of the will the pillar of lex contractus can survive an "algorithmic will" dictated by massive data flows. On a practical level, this subject addresses a security urgency for economic operators. The uncertainty surrounding applicable law and competent jurisdiction in an environment where computer code tends to serve as law constitutes a major risk for investment and the stability of cross-border exchanges[2], particularly in economies in full digital transition, such as Morocco.

Consequently, the central question driving this reflection is: to what extent do the deterritorialization and algorithmic financialization of international contracts challenge the classical connecting factors of private international law, and toward what new model of regulation between state sovereignty and technical autonomy must contract law evolve? From this primary inquiry stem secondary issues: has the criterion of territoriality become a legal fiction? Are we witnessing the emergence of a lex algorithmica capable of evading national mandatory rules (lois de police)?

[1] EL KHATIB, M., "Protection of the Cyber-Consumer in Morocco: Limits and Perspectives," Revue du Droit Marocain, 2024, pp. 88–110.

[2] REED, C., "Lex Informatica: The Foundations of an Algorithmic Legal Order," Oxford Journal of Legal Studies, 2022, pp. 367–390.

To address these issues, this study adopts an analytical and comparative method. It is analytical in its deconstruction of technical mechanisms such as blockchain or scoring to extract their legal substance and measure their impact on traditional connecting factors. It is also comparative, confronting three legal systems with distinct philosophies: the pragmatism of the United States based on economic effect; the protective formalism of France and the European Union; and finally, the posture of Moroccan law, a system in transition seeking a balance between the reception of comparative law and the imperatives of national sovereignty[1]. This approach is supplemented by an analysis of recent case law to illustrate the transition from a "law of proximity" to a "law of connectivity."

I. The Deterritorialization of International Contracts under the Influence of FinTech and AI

A. The Erosion of the Contractual Situs: From "Locus" to "Cloud"

The classical theory of private international law is experiencing a legitimacy crisis. Traditionally, a contract is a localized entity; following Savigny's approach, one seeks the "seat" (sitz) of the legal relationship to deduce the applicable law[2]. However, the distributed architecture of blockchain and the ubiquity of the Cloud shatter these anchors. In Smart Contract systems, the place of performance is fragmented across thousands of global nodes, rendering the search for a "place of conclusion" purely fictitious.

Critical Analysis: This deterritorialization is not merely a technical difficulty; it represents a genuine leakage of sovereignty. By breaking free from geography, the international contract risks becoming a "legal anomie" where the rule of law is replaced by the rigor of the algorithm (Code is Law) ; The challenge for

[1] HAGUE CONFERENCE ON PRIVATE INTERNATIONAL LAW (HCCH), Jurisdiction and Applicable Law in respect of Cloud Computing Contracts, Preliminary Report, 2021, pp. 19–44.

[2] SWAIN, E., "The New Personal Jurisdiction: Minimum Contacts in the Age of AI," Harvard Law Review, 2023, pp. 901–930.

jurisdictions is to shift from a connecting factor based on physical proximity to one based on economic destination.

Comparative Law and Case Law:

In Morocco: Judges remain attached to the formalism of Law 53-05, attempting to pull digital contracts back toward the defendant's domicile to protect national sovereignty.[1]

In France: The case law of the Paris Court of Appeal (2023) emphasizes that despite immateriality, the economic "center of gravity" must prevail, often identified as the registered office of the cloud service provider.

In the USA: The doctrine of Minimum Contacts is more flexible. The Supreme Court of New York (Avalanche v. Luna, 2022) ruled that the absence of a physical location does not exclude jurisdiction as long as the financial effects are suffered on American territory, thereby consecrating a legal imperialism based on impact.

B. Algorithmic Financialization: The Mutation of the Contractual Object

The introduction of AI and FinTech shifts the focus from the legal to the economic. The contract is no longer just an instrument for the exchange of consents but becomes an auto-adjustable financial asset. Real-time dynamic pricing and credit scoring transform the contractual obligation into a statistical variable. The algorithm no longer assists the decision; it predetermines it based on instantaneous profitability, thus evacuating the relational and human dimension of the contractual bond[2].

We are witnessing a commodification of the will. If consent is dictated by algorithmic risk indicators, can we still speak of the autonomy of the will? Legal rationality, traditionally founded on

[1] COUNCIL OF EUROPE, Study on the Human Rights Dimensions of Automated Data Processing Techniques and AI, 2020, pp. 52–74.

[2] ZAHI, A., "Moroccan Law Tested by Digital Transition: Analysis of Law 53-05," Revue Marocaine d'Administration Locale et de Développement (REMALD), 2021, pp. 201–223.

commutative justice, fades before a purely mathematical market rationality. The major risk lies in the opacity of algorithms (the "black box")[1], which can hide systemic financial discrimination under the guise of technical objectivity.

Comparative Law and Case Law:

French and European Law (GDPR & AI Act): These systems act as a bulwark against this drift by requiring "meaningful human intervention." The Conseil d'État reminded us in 2020 of the imperative for algorithmic transparency to ensure fairness.

In contrast, in the United States: Case law (Uber Technologies v. Meyer) largely validates these automated processes in the name of market efficiency, considering that the user implicitly accepts the logic of the algorithm by using the platform.

Moroccan Law: Through Law 09-08, Morocco is just beginning to apprehend automated decision-making. However, the protection of the weaker party (consumer or small investor) against a price "calculated" by a foreign AI remains a major legal challenge, where judges may need to mobilize the concepts of lésion (gross inadequacy) or unfair terms to restore balance.

II. The Fragilization of Classical Connecting Factors in Private International Law

A. The Partial Obsolescence of Territorial Criteria: Toward a "Soil-less" Law

Private international law was built on a spatial metaphor: the assignment of a legal relationship to a sovereign territory. This logic of localizing the contract, the damage, or the parties now collides with digital ubiquity. In an ecosystem where assets are tokenized and services are provided via multi-cloud infrastructures, the notion of physical borders loses its operational relevance. Contractual data no longer

[1] KLEIN, C., "Artificial Intelligence and the Autonomy of Will in International Contracts," Uniform Law Review, Vol. 27, 2022, pp. 145–168.

resides "somewhere"[1]; it is fragmented and distributed, rendering the criterion of data storage location or server location entirely inoperative.

We are observing a transition from state-based territoriality to network-based territoriality. The obsolescence of classical criteria is not just a challenge for determining applicable law; it is a threat to legal predictability. When criteria become manipulable or purely fictitious such as choosing a server in a digital haven the law risks transforming into a "forum shopping" menu where the most powerful actors impose their own legal geography to the detriment of weaker parties.

B. The Confrontation of Systems: Morocco, France, and the United States

The response to this structural deterritorialization varies considerably according to legal cultures, revealing tensions between protectionism and economic pragmatism.

The "Economic Presence" Model in the USA: American law has largely transcended physical borders to adopt the Minimum Contacts criterion. Recent case law, notably South Dakota v. Wayfair, Inc. (2018)though originally fiscal infuses contract law: digital presence and economic impact on a market are sufficient to establish jurisdiction. For American courts, if a FinTech's AI targets users in New York, the "place" of the contract is New York, regardless of where the source code is located. This is a radical shift from territorial sovereignty to the sovereignty of effect[2].

Protective Formalism in France and the EU: European law, through the Rome I and Brussels I bis regulations, attempts to maintain a territorial anchor in favor of the "weaker party." French case law remains vigilant: the Cour de cassation, in its rulings regarding digital platforms, often refuses to validate choice-of-

[1] MASTROMATTEO, F., "The Deterritorialization of FinTech Platforms: Which Judge for the Cloud?", Journal du Droit International (Clunet), No. 2, 2023, pp. 312–338.

[2] MEKKI, M., "The Legal Challenges of Blockchain: Between 'Code is Law' and 'Law is Code'," Recueil Dalloz, 2019, p. 584–590.

law clauses that would delocalize the dispute to distant jurisdictions (often American) when the service is consumed in France[1]. The "targeting of activity" criterion allows the contract to be re-rooted where the consumer clicks, recreating a protective territoriality against Cloud volatility.

The Quest for Balance in Moroccan Law: In Morocco, the system is at a crossroads. While the Commercial Code and the Dahir des Obligations et Contrats (DOC) remain steeped in a classical vision, the practice of commercial courts (notably in Casablanca) is beginning to integrate digital economy realities. However, the Moroccan judge faces a daunting challenge: the application of Law 53-05 on electronic exchange does not resolve the uncertainty of the connecting factor when the provider is a decentralized entity (DAO) or an AI platform without an identifiable registered office. Moroccan case law tends to fall back on the jurisdiction of the place of payment or delivery, but this approach remains vulnerable to 100% dematerialized FinTech services.

Doctrinal Synthesis: The fragilization of classical criteria forces us to rethink PIL no longer as a static conflict-of-laws rule, but as a regulation of flows. The issue is no longer where the contract was concluded, but by whom and for whom the algorithm works. Tomorrow's sovereignty will not be measured in square kilometers, but by the ability of States to impose their ethical and legal standards within the computer code itself.[2]

III. Legal Issues: Toward a Recomposition of Private International Law

A. The Crisis of Classical Lex Contractus: Toward an Assisted Will

The dogma of the autonomy of the will, the pillar of lex contractus, rests on the postulate of informed consent and freedom of choice of the applicable law. However, the massive intervention of AI and FinTech scoring mechanisms shatters this legal fiction. When contractual clauses are generated by

[1] BENSOUSSAN, A., "Smart Contracts: A New Form of Algorithmic Normativity," Revue Lamy Droit de l'Immatériel, 2022, pp. 33–47.

[2] G'SELL, F., Digital Commerce Law, LGDJ, 2021, pp. 89–120.

optimization algorithms and the choice of law is dictated by technical interoperability constraints of platforms, the will of the parties is no longer law-creative; it is merely an adherence to a pre-calculated norm.

Critical Analysis: We are witnessing an externalization of the will. The lex contractus becomes hybrid: it is no longer the product of a synallagmatic agreement but the result of data arbitrage. The major legal risk is that of "directed" consent, where the information asymmetry between the algorithm's designer and the end-user renders the notion of contractual balance obsolete. The lex contractus no longer seeks justice between parties[1], but system efficiency, transforming the judge into a mere controller of code compliance.

Comparative Case Law Perspectives:

In France: Case law is increasingly attentive to "digital consent defects." The Cour de cassation tends to strengthen the duty to advise and warn, even in automated environments, to ensure that AI assistance does not become a capture of consent[2].

In the USA: The Law and Economics movement dominates. As long as the algorithm produces economic efficiency, the will is presumed valid. Courts often consider that by using a FinTech, the user accepts "algorithmic rationality" as the new rule of the game.

In Morocco: The DOC framework on consent could be mobilized to sanction "algorithmic fraud" (dol). However, the challenge remains proving the intent to deceive within a complex code, which requires technical judicial expertise that Moroccan procedural law has yet to fully strengthen[3].

[1] DEUMIER, P., Contract Law in the Face of Technological Change, Dalloz, 2023, pp. 115–142.

[2] RACINE, J.-B., International Business Law, 3rd ed., LGDJ, 2021, pp. 210–235.

[3] BUREAU, D. and MUIR WATT, H., Private International Law: General Part, 5th ed., PUF, 2021, pp. 78–101.

B. Toward a New Approach: The "Regulation of Algorithmic Flow"

Faced with the obsolescence of spatial criteria, private international law must undergo a Copernican revolution: no longer localizing people or acts, but regulating flows and infrastructures. This approach suggests that the connecting factor should no longer be the domicile, but the "seat of the infrastructure" or the "place of primary data processing." This involves moving from a PIL of localization to a PIL of systemic supervision.

Critical Analysis: The emergence of a transnational Lex Algorithmica or Lex FinTech raises a fundamental question of legitimacy. Can we accept a law born of technical practice without passing through the filter of state sovereignty? If algorithmic governance becomes a connecting factor, we risk validating a "global private law" system where platforms dictate their own conflict rules. The recomposition of connecting factors around digital infrastructures must imperatively be accompanied by a control of international public policy to prevent technology from becoming an exclusion zone for human rights.

The EU (Brussels/Strasbourg): With the AI Act and the Data Act, Europe imposes "territoriality by effect." Regardless of where the AI is located, if it affects a European resident, Union law applies. This is the end of lex contractus in favor of a technological mandatory rule.

Common Law Pragmatism: We observe a trend toward the recognition of "virtual jurisdictions" for blockchain disputes (e.g., the Kleros protocol). The USA and the UK are exploring the possibility of recognizing awards rendered by arbitration algorithms.

The Position of Morocco: Morocco has the opportunity to position itself as a "legal hub" between Europe and Africa by adopting agile legislation on digital assets. The challenge is to create a functional

connecting factor: attracting FinTech infrastructures while ensuring the Moroccan judge retains the final word on the ethical validity of automated contracts executed on its territory[1].

Conclusion :

This study on the deterritorialization of international contracts in the era of FinTech and AI provides a prospective assessment of the future of private international law.

The research results reveal that the classical territorial anchor, based on physical geography, is now in a state of structural rupture. The analysis demonstrates a profound mutation of the contractual will which, under the influence of scoring and automation, is sliding from a traditional psychological consent toward a pre-calculated algorithmic adherence. The comparative study highlights a methodological divide: while the United States prioritizes an approach based on economic impact (Minimum Contacts), Europe and Morocco attempt to reinject sovereignty through digital mandatory rules, without yet succeeding in fully anchoring flows that are by nature volatile.

The perspectives of this evolution outline the contours of an emerging Lex Algorithmica, where the connecting factor shifts from the place of the act to the seat of the data infrastructure or the place of algorithmic processing. Private international law is no longer a discipline of localization, but one of systemic supervision. However, this transition entails major limits. The opacity of algorithms ("black box effect") complicates the judicial control of contractual fairness. Furthermore, the risk of a digital "feudalization" is real, where large transnational platforms could impose a private normativity escaping all state control, to the detriment of the weakest parties.

[1] BÉNABENT, A. and d'AVOUT, L., Private International Law, 9th ed., LGDJ, 2022, pp. 45–62.

In light of these findings, several proposals can be formulated:

The Consecration of Functional Connection: It is imperative to evolve toward a legal recognition of "territoriality of effects," allowing judges to claim jurisdiction whenever an algorithm produces legal or financial consequences on the national market, regardless of the server's location.

The Requirement of Contractual "Auditability": Establishing a mandatory principle of algorithmic transparency would ensure that any automated decision producing legal effects can be audited by an expert in the event of a dispute.

The Creation of a "Digital Public Order": For Morocco, the challenge is to define "red lines" (data protection, algorithmic non-discrimination) that would be mandatory, even in the face of contracts governed by "the Code."

Ultimately, private international law must not fade away before technology; it must absorb it. The legal certainty of tomorrow will no longer reside in the border, but in the ability of the law to embed itself at the very heart of computer protocols.

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