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# International Rule-Coordination Mechanisms for Cross-Border E-Commerce Dispute Resolution

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**Abstract:** Cross-border e-commerce connects market actors across multiple jurisdictions through end-to-end digital transaction chains. Disputes arising from such transactions typically feature high frequency and low value, diversified parties, electronic evidence, and strong requirements for procedural immediacy. Their resolution is shaped not only by public international law considerations such as duties of cooperation, treaty interpretation, and principles of jurisdiction, but also by private international law logics concerning jurisdictional connecting factors and the choice of applicable law. Adopting an international-law-oriented methodology, this study develops a framework for an international rule-linkage mechanism for cross-border e-commerce dispute resolution along four dimensions: mutual recognition of rules, procedural interfacing, institutional coordination, and enforcement safeguards. It further proposes an institutional scheme that advances soft law first and hard law progressively, incorporates platform rules into compliance review, and promotes the standardization of electronic evidence and online procedures, with the aim of enhancing predictability, accessibility, and enforceability of cross-border dispute resolution without engaging sensitive political issues.

**Keywords:** cross-border e-commerce; dispute resolution; online dispute resolution; rule linkage

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## 1. Introduction

Driven by data flows and information flows in demand matching, performance and delivery, and payment and settlement, cross-border e-commerce has blurred transaction boundaries<sup>[1-3]</sup>. This has expanded the dispute-generation mechanism from traditional contractual non-performance to a composite spectrum involving platform compliance, data use, advertising representations, intellectual property, and payment chargebacks<sup>[4-6]</sup>, while dispute handling is often compressed into a narrow time window for response and disposition<sup>[7]</sup>.

## 2. Normative Attributes of Cross-Border E-Commerce Disputes and the Theoretical Foundations of a Linkage Mechanism

Cross-border e-commerce disputes exhibit a hybrid normative character that combines private-law controversies with elements of public regulation<sup>[8-9]</sup>. On the private-law plane, they largely appear as digitalized forms of traditional issues

such as contractual performance, warranty for defects, payment and settlement, and tort liability; on the public-regulatory plane, they reflect the embedding of regulatory objectives including consumer protection, unfair-competition control, data compliance, and financial security<sup>[10,11]</sup>. Accordingly, dispute resolution in this field is not merely a matter of procedural technique within civil litigation, but rather the outcome of the joint operation of substantive norms and procedural norms. The theoretical foundations of a linkage mechanism may be summarized into three categories: first, the cooperative framework supplied by treaty obligations and general principles of international law, which provides a minimum basis for coordination of cross-border remedies through principles such as mutual recognition, good-faith performance, and proportionality; second, the system of connecting factors in private international law and the principle of party autonomy, which together establish predictable pathways for jurisdiction, the determination of the applicable law, and the recognition and enforcement of decisions; and third, a supplementary order formed by transnational commercial practices and soft-law instruments, which mitigates the high negotiation costs and slow updating pace of hard-law rules through model rules, best practices, and industry standards<sup>[12]</sup>. On this basis, rule linkage should pursue legitimacy and enforceability as dual objectives, and should develop transferable interface standards while respecting jurisdictional diversity.

### **3. The Current Landscape of the International Rule System and the Dilemmas of Linkage**

#### **3.1. Differentiation in Substantive Transaction Rules and the Insufficiency of Minimum Consensus**

The substantive rules governing cross-border e-commerce extend across multiple domains, including contract formation and performance, information disclosure, consumer withdrawal rights, product safety and conformity certification, intellectual property boundaries, digital content delivery, and after-sales protection. Different jurisdictions diverge in both the scope and the intensity of mandatory norms, with asymmetries particularly pronounced in consumer protection and the allocation of platform responsibility<sup>[13]</sup>. Because transactions are typically structured around standard terms, party autonomy is formally strengthened; yet constraints imposed by mandatory rules on the validity of such terms result in differing boundaries of autonomy across jurisdictions, thereby producing inconsistent enforceability of the same clause in different regions. Existing international norms have achieved a degree of convergence regarding the recognition of electronic contractual form, the legal effect of electronic signatures, and certain disclosure obligations. However, directly applicable minimum standards remain lacking with respect to the allocation of platform liability, cross-border after-sales duties, defect determination for digital products, and methods of damage calculation, which in turn makes it difficult to achieve rapid convergence of substantive disputes at the dispute-resolution stage through mutual recognition of rules.

#### **3.2. Multi-Track Procedural Regimes and Institutional Gaps in Online Remedies**

Procedurally, cross-border e-commerce dispute resolution has evolved into a multi-track landscape in which judicial litigation, commercial arbitration, mediation, and online dispute resolution coexist<sup>[14]</sup>. Online platforms commonly provide internal complaint handling, negotiation, and return-and-refund mechanisms, whereas external remedies depend on parties initiating proceedings before courts or arbitral tribunals. Multi-track availability should, in principle, enable flexible choice; yet substantial differences in jurisdictional connecting factors, service-of-process rules, language, and cost structures frequently confine the remedies that are practically available, given the transaction value and time constraints. Online dispute resolution can reduce costs and is well suited to electronic evidence, but in many jurisdictions its institutional basis remains largely a matter of policy advocacy rather than unified procedural legislation. In particular, stable standards are often absent regarding due process, independence, transparency, and the finality of relief, which prevents smooth recognition and conversion between online outcomes and court judgments or arbitral awards, thereby creating an institutional gap characterized by relative ease of online settlement but difficulty of cross-border enforcement.

### **3.3. Inadequate Recognition and Enforcement Mechanisms and the Weakened Realizability of Outcomes**

The endpoint of dispute resolution lies in the recognition and enforcement of outcomes. In cross-border e-commerce, remedies may take multiple forms, including court judgments, arbitral awards, mediated settlement instruments, platform determinations, or dispute-handling outcomes generated by payment institutions, each of which follows a different pathway for cross-border circulation. Recognition and enforcement of court judgments commonly depend on treaty arrangements or reciprocity, while arbitral awards generally display stronger cross-border mobility in international commercial contexts; nevertheless, concerns persist regarding the legitimacy and accessibility of arbitration for consumer disputes and small-value claims. Although cross-border enforceability of mediation outcomes shows a growing institutional trend, unified interface standards have not yet crystallized with respect to electronic signing, identity authentication, and procedural record-keeping. Platform determinations and payment dispute outcomes are closer in nature to contractual arrangements or industry rules, and their cross-jurisdictional enforceability is more readily constrained by mandatory norms and public-policy review. These deficiencies collectively weaken parties' expectations regarding the practical realizability of relief, and thereby reduce their incentives to choose formal dispute-resolution channels.

## **4. Overall Framework and Operational Logic of an International Rule-Linkage Mechanism**

### **4.1. Normative-Level Linkage: A Pathway from Soft-Law Coordination to Progressive Hard-Law Consolidation**

A feasible route for normative-level linkage is to build consensus through soft law first and then consolidate key obligations through hard law. Soft-law instruments may take the form of model clauses, procedural guidelines, recommended rules on electronic evidence, and minimum standards for online dispute resolution, which can be developed into widely adoptable texts by international organizations, industry associations, and professional bodies, and can be used to promote gradual convergence through consistency assessments and transparency-based disclosure mechanisms. The advancement of hard law should concentrate on cooperative domains with the strongest spillover effects, such as cross-border service of process and assistance in taking evidence, recognition of the formal validity of electronic documents, cross-border enforcement of mediation outcomes and decisions in small-value disputes, and minimum review standards for unfair terms. To avoid negotiation resistance triggered by one-off unification, hard-law design should preferably adopt a structure of framework obligations supplemented by optional protocols, leaving highly contested substantive rules to be iterated at the soft-law level while prioritizing the consolidation of procedural cooperation and mutual recognition of enforceable outcomes, thereby maintaining an appropriate balance between acceptability and enforceability.

### **4.2. Procedural-Level Linkage: A Multi-Tier Remedy Chain and Standardization of Interfaces**

The core task of procedural-level linkage is to construct a convertible, multi-tier remedy chain that enables seamless transitions among internal platform remedies, online mediation, arbitration, and litigation, thereby avoiding duplicative procedures and the erosion of evidentiary value. Interface standardization should cover mechanisms for signaling jurisdiction and the applicable law, requirements for the collection, preservation, and verifiability of electronic evidence, trusted standards for identity authentication and electronic signatures, traceability requirements for procedural records, and minimum safeguards for the parties' rights to be heard and to seek relief. A multi-tier chain may designate prior negotiation and online mediation as the preferred entry points, facilitating swift settlement under conditions of voluntariness and neutrality, while establishing clear escalation thresholds and time limits so that unresolved disputes can move automatically into arbitration or court proceedings. To prevent online procedures from harming weaker parties through information asymmetries, procedural design should further incorporate transparency of fees, language support, duties of notice, and guaranteed exit options, and should create external constraints through independent oversight and the publication of

dispute statistics, so that online procedures remain both efficient and procedurally legitimate.

### **4.3. Institutional-Level Linkage: Organizational Support Through Cross-Border Cooperation Networks and Compliance Governance**

Institutional-level linkage requires the establishment of a cross-border cooperation network that brings courts, arbitral institutions, mediation bodies, industry organizations, payment institutions, and platform compliance departments into a coordinated framework, enhancing overall efficiency through information exchange and procedural interfacing. Organizational support for such a network may be embodied in a unified system for dispute classification and coding, standardized case-data fields, multilingual templates for procedural documents and electronic service interfaces, and shared technical specifications for the preservation and verification of electronic evidence. Platform rules should be incorporated into a compliance governance framework, and, without altering their contractual nature, should be subject to minimum-standard review and transparency disclosure to ensure that their procedures meet requirements of procedural fairness, while enabling platform determinations, when conditions are satisfied, to be converted into enforceable settlement instruments or to serve as the basis for arbitration agreement formation. At the institutional level, capacity-building mechanisms should also be developed to enhance online mediators' and arbitrators' understanding of digital evidence and cross-border rules through training, certification, and quality assessment, thereby reducing implementation costs of rule linkage through organizational means.

## **5. Implementation Pathways and Safeguard Framework for the Linkage Mechanism**

### **5.1. Technical Support for Rule Mapping and Compatibility Assessment**

Rule mapping aims to structurally decompose the key rule elements across different jurisdictions relating to jurisdiction, the applicable law, electronic evidence, online procedures, and recognition and enforcement, so as to generate comparable element checklists and conflict-identification rules and thereby provide an operational basis for linkage design. Compatibility assessment may adopt a tiered indicator system to separately quantify differences in mandatory substantive norms, procedural safeguard standards, and enforcement conditions, while specifying minimum-consensus thresholds and alternative solutions. Technical support is not intended to replace legal judgment with algorithms; rather, it translates complex norms into verifiable compliance-check workflows through standardized data fields and rule engines, enabling platforms and institutions to identify high-risk points in real time and adjust clauses and procedures accordingly, while also providing a shared language and data interface for cross-border cooperation, reducing communication costs and improving consistency in rule application.

### **5.2. Reusable Supply of a Standard-Clause Library and a Dispute-Handling Toolkit**

A standard-clause library should produce reusable texts around core elements such as forum selection, choice of law, dispute resolution clauses, consent to electronic service, obligations to preserve evidence, and notices on data processing, and should offer modular combinations tailored to different transaction types and party structures so as to meet the practical demand for high-frequency use of standard contracts in cross-border e-commerce. A dispute-handling toolkit, in turn, should include templates for online negotiation workflows, rules for mediation procedures, formats for evidence submission, requirements for language conversion, fee and timeline schedules, and specifications for generating outcome documents, thereby ensuring a predictable process path from case initiation to closure. To prevent standardized tools from being applied rigidly, the clause library and toolkit should embed prompts regarding mandatory rules and reminders on the protection of weaker parties, and should provide exit and escalation mechanisms so that parties may opt for online resolution on a voluntary basis while retaining the right to proceed to arbitration or court proceedings, thereby maintaining a stable balance between efficiency and rights protection.

### **5.3. Mutual-Recognition Interfaces and a Trust Foundation for Electronic Evidence and the Enforcement of Outcomes**

Cross-border e-commerce disputes rely heavily on electronic evidence, including order data, communications, logistics traces, payment records, and platform operation logs, and the credibility of such evidence depends on the verifiability of its generation, preservation, and extraction stages. Mutual-recognition interfaces should specify minimum metadata requirements, timestamp and integrity-verification rules, standards for access control and audit logs, and should enhance cross-jurisdictional acceptability through third-party preservation mechanisms and verifiable digest methods. With respect to enforcement, interface design should be strengthened for the cross-border circulation of settlement instruments, confirmations of mediated agreements, and arbitral awards, with particular emphasis on harmonizing requirements for identity authentication, electronic signatures, procedural records, and proof of service, so that enforcement authorities can make recognition and enforcement determinations on the basis of clearly documented procedural safeguards. By pursuing two-way standardization of evidence and enforcement, outcomes produced through online procedures can attain higher legal realizability, which in turn enhances parties' trust in and willingness to use online dispute resolution.

### **5.4. Institutional Arrangements for Risk Governance and Continuous Evaluation Mechanisms**

During the operation of a linkage mechanism, risks may arise such as procedural abuse, harm to weaker parties caused by information asymmetries, platform rules skewed toward one side, compliance risks triggered by cross-border data flows, and biases introduced through algorithm-assisted processing. Accordingly, institutionalized arrangements for risk governance and continuous evaluation are necessary. Risk governance should take due process as the baseline, ensuring neutrality and transparency of dispute-resolution bodies and platform procedures through independence requirements, conflict-of-interest disclosures, channels for complaint review, and external supervisory assessment. Continuous evaluation should establish an indicator system to conduct periodic statistical analyses across dimensions including resolution time, cost burdens, settlement rates, reconsideration rates, enforcement success rates, and party satisfaction, and should feed evaluation results back into the clause library, procedural rules, and institutional training so as to form an iterative improvement loop. Through the institutionalization of risk governance and evaluation mechanisms, the legitimacy foundation of rule linkage can be consolidated while cross-border remedy efficiency is enhanced, thereby preventing the erosion of credibility as the mechanism expands.

## **6. Conclusion**

International rule linkage for the resolution of cross-border e-commerce disputes does not seek to replace diverse jurisdictions with a single unified rule system. Rather, it aims to achieve mutual recognition and coordinated operation across different normative layers through interface-based and modular approaches. By pursuing simultaneous alignment at the normative, procedural, and institutional levels, cross-border e-commerce dispute resolution can attain stronger predictability and enforceability while preserving jurisdictional diversity, thereby providing institutionally grounded support, with a clearer international-law orientation, for the long-term stable functioning of digital trade.

### **Disclosure statement**

The author declares no conflict of interest.

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