



DIGITAL JUSTICE AND THE UNCITRAL ODR FRAMEWORK: NORMATIVE FOUNDATIONS, INSTITUTIONAL LIMITS, AND FUTURE DIRECTIONS

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Abstract

Cross-border digital trades are now being conducted at unprecedented dimensions. But they are also simultaneously generating new dimensions of complex cross-border disputes. Consequently, Online Dispute Resolution (ODR), an essential component of digital justice, is being increasingly employed as a way of resolving cross-border disputes electronically. While the UNCITRAL has made significant contributions through establishing the normative foundations for e-commerce and ODR, there still exist many issues about how well suited is the governance model of UNCITRAL to deal with the increasing decentralisation of the digital economy. This paper assesses critically UNCITRAL's contribution to international ODR governance by assessing its normative foundations, institutional limitations, and potential role as a catalyst for digital justice. The study employed a qualitative doctrinal method, and a fair comparative approach, in assessing UNCITRAL's primary legal documents relating to ODR and the institutional experiences associated with the World Intellectual Property Organisation (WIPO), the EU Framework of ODR, and several private ODR service providers. Research indicated that while UNCITRAL was successful in developing internationally accepted legal principles for both e-commerce and ODR, it continues to be hampered institutionally through lack of authority over ODR institutions, reliance on voluntary compliance with soft law, and inability to address technology-related issues. Ultimately, this research found that an integrated governance model that combines UNCITRAL's normative influence with enhanced institutional coordination and cooperation among regional public authorities, alongside relevant private sector entities, provides a better mechanism for resolving cross border digital disputes.

Keywords: Online Dispute Resolution, UNCITRAL, Digital Justice, International Commercial Law, E-Commerce, International ODR Governance

1.0 INTRODUCTION



The growth of the digital economy has dramatically changed international trade and, with it, the nature of cross-border legal disputes. Digital services, e-commerce platforms, online marketplaces and electronic contracts, accounts for the surging volume of cross-border digital transactions.¹ The value of digital trade jumped from \$4.59 trillion in 2020 to \$7.23 trillion in 2024. Digital trade averaged an annual increase of 12.1% per annum, faster than overall global trade at 9.7%.² The volume and cross-border nature of these transactions is generating an unprecedented number of new socio-economic opportunities. However, these same opportunities are creating increased numbers of complex cross-border disputes. Existing institutional frameworks for resolving these disputes that are ill-equipped to resolve them.³ High litigation costs, juridical complexities, long proceedings and difficulties in enforcing decisions in courts of law, frequently make conventional judicial processes unsuitable for most cross border transactions⁴. Therefore, Online Dispute Resolution (ODR) has developed into a significant method of delivering justice within the digital economy.

Growing use of ODR represents a larger shift toward digital justice. According to Sultan et al, today, ODR goes far beyond being an instrument of private commercial innovation.⁵ It has evolved into an integral part of international dispute governance. Technology assisted dispute resolution systems are used extensively by private digital platforms such as eBay, Amazon, PayPal and Alibaba,⁶ while international and regional organizations including World

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¹ Nabila A, 'Asrar Digital Transactions: An International Legal Review of Global E-Commerce' (2025) 3(5) International Journal of Law and Policy 1

² International Trade Centre (ed), Global Digital Trade Development Report 2025 (International Trade Centre 2025)

³ Shu-min W, Li Y and Khaskheli MB, 'Innovation Helps with Sustainable Business, Law, and Digital Technologies: Economic Development and Dispute Resolution' (2024) 16(10) Sustainability 3910

⁴ Aouidef Y, Ast F and Deffains B, 'Decentralized Justice: A Comparative Analysis of Blockchain Online Dispute Resolution Projects' (2021) 4 Frontiers in Blockchain

⁵ Sultan S, Baig K and Hashmi MAI, 'ADR in International Trade Disputes: Compatibility with WTO and UNCITRAL Frameworks' (2025) 3(3) Physical Education Health and Social Sciences 480

⁶ Zhuk A, 'Applying Blockchain to the Modern Legal System: Kleros as a Decentralised Dispute Resolution System' (2023) 4(3) International Cybersecurity Law Review 351



Intellectual Property Organization (WIPO),⁷ the European Union, and the United Nations Commission on International Trade Law (UNCITRAL) have all taken action on both normative and institutional level, in response to the governance problems caused by digital commerce.⁸ This increasingly diverse set of norms creates important issues regarding the coherence, legitimacy and effectivity of international ODR governance.

Of all international organizations, UNCITRAL holds a unique position.⁹ UNCITRAL does not manage global ODR systems, nor does it directly regulate private digital platforms. Instead, it is the main international organization responsible for establishing internationally consistent legal standards for regulating international commercial transactions.¹⁰ Since the 1990s, UNCITRAL has provided most of the legal basis for ODR through documents like the Model Law on Electronic Commerce (1996), Model Law on Electronic Signature (2001), United Nations Convention on Use of Electronic Communication in International Contract (2005) and Technical Notes on Online Dispute Resolution (2016). These instruments have improved legal clarity concerning electronic communication, recognized electronic signature and offered procedural guidelines for resolving disputes using technology.¹¹ Despite this, because they represent primarily soft law¹², lack enforcement powers and require member states' consent to implement them, there continues to exist debate regarding their ability to effectively govern an increasingly complex digital dispute environment.¹³ A gap exists between UNCITRAL's authority in ODR governance and the actual achievement of those goals.

⁷ WIPO's Arbitration and Mediation Center administers domain-name disputes under the UDRP, a private but widely adopted policy allowing trademark holders to challenge domain names registered in bad faith, without going to court.

⁸ Esther V, Chittu N and Cortes P, 'ODR for E-Commerce: Legal Standards and Developments in Asia and Europe' (Figshare, April 2025)

⁹ The United Nations Commission on International Trade Law (UNCITRAL) is the UN's core legal body for international trade law, tasked with modernizing and harmonizing rules on international commerce. It produces model laws, conventions, and guidance documents that states may voluntarily adopt into domestic law.

¹⁰ Megliani MA, 'The Odious Debt Doctrine: The Equitable Rule' (2024) 25(5) German Law Journal 772

¹¹ Sidorov VN and Sidorova EV, 'The Contribution of UNCITRAL to the Regulation of Electronic Commerce' (2026) 12 Courier of Kutafin Moscow State Law University (MSAL) 174

¹² Soft law refers to instruments like guidelines, model laws, or technical notes, that influence state and institutional behaviour but are not legally binding and carry no formal enforcement mechanism, in contrast to "hard law" treaties that create binding obligations.

¹³ Sampani C, 'Online Dispute Resolution in E-Commerce: Is Consensus in Regulation UNCITRAL's Utopian Idea or a Realistic Ambition?' (2021) 30(3) Information & Communications Technology Law 235



In order to determine this gap, this paper examines UNCITRAL's framework relative to four related parameters: its normative coherence, institutional capability to act effectively, its ability to adapt to evolving technology, and its potential to coordinate an increasingly fractured global ODR system characterized by growing influence of private platforms, regional regulatory structures and developing digital technologies. When analyzed relative to these criteria, this paper suggests that although UNCITRAL was successful in establishing foundational legal principles for international digital dispute resolution, its current architecture of governance is institutionally insufficient to meet the practical requirements associated with contemporary cross-border ODR. The primary insufficiencies relate not to the substantive content of its legal instruments but rather to their unenforceable nature, incomplete implementation among members, lack of functional supervisory mechanisms and failure to respond quickly enough to changing technological environments.

This paper offers three primary contributions to ongoing scholarly discourse in law. Firstly, this paper re-conceptualizes the role of UNCITRAL as an international standard setting entity, separate from operational governance roles played by private digital platforms and regional regulatory frameworks. Secondly, this paper introduces a structured analytical framework for evaluating the institutional effectiveness of international ODR governance beyond the traditional distinction between binding and non-binding legal instruments. Finally, this paper presents a feasible conceptual design for institutional reforms combining binding minimal international standards, nationally differentiated implementation modalities, and regulated participation by private ODR operators that seeks to reconcile international legal harmonization with technological innovations and differences in national regulations.

2.0 METHODOLOGY

This study adopts a qualitative doctrinal research design, complemented by analytical and comparative approaches, to examine the role of the United Nations Commission on International Trade Law (UNCITRAL) in the governance of Online Dispute Resolution



(ODR). The doctrinal style of research is a research into doctrines¹⁴ and relies heavily on the interpretation and analysis of principles, and normative frameworks that govern cross-border electronic commerce. As opposed to measuring the quantitative performance of various ODR systems, this research analyzed the legal and institutional adequacy of currently available legal instruments to address the evolving requirements of international ODR governance. The analytic legal reasoning process went beyond mere description of what is contained in international legal instruments, to an evaluation of their institutional feasibility, practicality, and ability to effect current cross border digital disputes.

3.0 RESULTS AND DISCUSSIONS

3.1 Conceptualizing Digital Justice and Online Dispute Resolution (ODR)

Digital justice could simply be understood as the application of technological tools, digital platforms and automated systems to legal principles and practices for resolving disputes in digitally mediated spaces. It has been considered as a new dimension in the administration of justice. Mesquita argues that the “old generation” of dispute resolution mechanisms was based on centralized courts.¹⁵ While the emergence of digital justice represents a shift towards the creation of a decentralized, efficient, accessible, and flexible technology-based alternative methods of dispute resolution that offer advantages such as rapidity, low cost and simplified participation. These characteristics are especially relevant for cross border disputes in which traditional litigation may represent an excessively time-consuming and costly process.¹⁶ Beyond the mere digitization of the existing procedures for dispute resolution in the international context, digital justice means the transformation of the procedure itself through the integration of modular and technologically supported processes for negotiation, mediation,

¹⁴ Ekenisi C, Atim AG, Aidonjio PA, Uzoho K and Obieshi E, ‘Constitutional, Legal, and Procedural Perspectives on Witness Protection: A Comparative Study of Nigeria, India, and the United States’ (2026) *International Journal of Constitutional and Administrative Law* 75

¹⁵ Mesquita LV, ‘The Contract as a Tool for Conflict Management: Procedural Agreements and Digital Innovation’ (2025) 2 *European Journal of Privacy Law & Technologies*

¹⁶ Latifah E, Bajrektarevic AH and Imanullah MN, ‘The Shifting of Alternative Dispute Resolution: From Traditional Form to the Online Dispute Resolution’ (2019) 6(1) *Brawijaya Law Journal* 27



arbitration and automated decision making in online platforms.¹⁷ In addition, this development represents a part of broader evolutions of e-commerce and International ODR governance. For a better understanding of the extent to which digital justice is incorporated within the UNCITRAL's framework, it is essential to study how Online Dispute Resolution (ODR) has developed as a practical solution for the resolution of cross-border digital disputes.

Within this conceptual frame, it could be said that ODR emerges as a mechanism for realizing digital justice.¹⁸ It is a form of digital justice that pertains to utilizing Information Communication Technology (ICT) for facilitating, managing, and resolving disputes. The ODR process has completely changed the way that disputes are resolved. Authors such as Ontanu et al., explained that the integration of a digital tool like ICT, into dispute resolution processes presents an opportunity for enhanced efficiency and cost-effectiveness in the process of access to justice.¹⁹ The evolution of ODR illustrates a progression from being primarily used as a private innovation and cost-efficient option for consumer and business disputes to a widely accepted mechanism in dispute resolution institutions worldwide.²⁰ It has migrated toward public/quasi-public arenas such as courts, arbitration institutions and international frameworks. Gonzalez explained that this migration indicates a paradigm shift toward procedural and substantive advantages, flexibility, fairness and efficiency.²¹ Its architecture inherently reflects aspects of dispute system design, wherein processes are constructed so as to resolve disputes at the earliest and easiest feasible opportunity.

The conceptualization of online dispute resolution (ODR) is dependent on understanding its theoretical foundation. Frequently, ODR is seen as nothing more than an electronic means to resolve disputes. However, such an understanding overlooks the underlying change in

¹⁷ Bojin L and Doroga S, 'Digitalisation and Consumer Alternative Dispute Resolution: Despite (Apparent) Lack of Success, Are These the Seeds of a New Way of Approaching Disputes?' in *Consumer Protection and the Digital Economy* (Routledge 2026)

¹⁸ Ballesteros MCR and Ávila JLG, 'Online Dispute Resolution Platforms (ODR): A Legal and Technical Perspective' (2024) 4(1) *Law and Business* 28

¹⁹ Onțanu EA and Tjong Tjin Tai E, 'Digital Technology and Procedural Justice: Towards a Geography of Justice' (2025) 30(2) *Tilburg Law Review* 96

²⁰ Brand RA, 'UNCITRAL, Access to Justice, and the Future of Online Dispute Resolution' (2021) 8(1) *BCDR International Arbitration Review*

²¹ González WN, 'Los Mecanismos Extrajudiciales de Resolución de Conflictos en Línea: Su Problemática en el Derecho Internacional Privado' (2020) 13 *ACDI - Anuario Colombiano de Derecho Internacional*



paradigm. ODR is more than simply a procedural innovation, it embodies a broader transformation toward digital justice. This represents a rethinking of how justice is defined, delivered, and experienced through digitally mediated environments. Access to Justice Theory emphasizes that ODR has the ability to democratize how disputes are resolved through reducing the costs associated with resolving those disputes, as well as the delay in the process²². According to Brand, the term justice in this perspective, does not solely refer to the quality of the final legal decision, but also includes access to the process itself.²³ As such, for international e-commerce transactions, whether they are small in monetary value, or high in number, there should not exist a significant problem in terms of consumers realizing their rights, because the cost of pursuing a court action was higher than the amount in issue. The law and technology theory, on the otherhand underscores the interplay between legal rules or procedures and technological systems.²⁴ This illustrates that technology implements laws but also creates them. Together, these theories illustrate that ODR represents more than an innovative procedure, but rather, the culmination of multiple intellectual traditions.²⁵

These concepts carry important implications for international governance. Digitally mediated disputes are often cross national borders, involving parties, places, platforms and laws in different jurisdictions.²⁶ Domestic frameworks cannot adequately govern such cross-border interactions. Therefore, digitally mediated justice becomes an international concern requiring coordination, standards setting, and institutional engagement at global levels. But Global ODR governance takes place within an institutional ecosystem composed of numerous international institutions rather than a single cohesive regime. These institutions do not adjudicate most digital disputes directly. Rather, they define the circumstances under which such disputes are resolved by setting the norm, coordination, and diffusion of legal standards.

²² Aman S, 'Cross-Border Alternative Dispute Resolution (ADR): Opportunities and Challenges' (2025) 14(2) *Journal of Asian Development Studies* 1113; Zhang Y, 'The Future of Online Dispute Resolution and Intelligent Innovation' [2022] 929

²³ Brand (n 20)

²⁴ Creutzfeldt N, Kyprianides A, Bradford B and Jackson J, 'Part I: Situating Access to Justice' (Bristol University Press Digital 2024)

²⁵ Onțanu and Tjong Tjin Tai (n 19).

²⁶ Ekpenisi, C., Edet, J. E., Aidonojie, P. A., & Atim, A. G. Digital Trade Governance Beyond The Wto: Regulatory Fragmentation, Digital Sovereignty And The Future Of E-Commerce Law (2026) 5(1), 56–80 *International Journal of Law in Changing World*



3.2 Normative Contributions of UNCITRAL

The value of UNCITRAL's contributions toward Online Dispute Resolution (ODR) can't be measured solely by how many laws or regulations have been passed. The true measure of UNCITRAL's impact will depend on whether these laws, taken as a whole, help create a consistent, global, legal structure for the regulation of e-commerce and the handling of disputes that arise in a digital environment. Unlike organizations like the WIPO, which directly manage online dispute resolution systems, UNCITRAL works mainly as a lawmaking body.²⁷ As a result, UNCITRAL's primary role is to reduce the level of legal risk associated with international business transactions through universally recognized and applicable rules, regarding the use of electronic means in conducting commercial activity. By doing so, UNCITRAL provides legal frameworks for recognizing digital transactions and creating procedural standards for resolving disputes related to them.²⁸ When viewed collectively, the model laws developed by UNCITRAL reflect a developing trend from establishing the legal basis for using electronic means for conducting commerce, to providing the legal basis for governing disputes occurring within digital commerce environments.

UNCITRAL Model Law on Electronic Commerce (1996) was the first step in the development of normative standards by eliminating perhaps the greatest impediment to the growth of electronic commerce. This is the legal uncertainty concerning the enforceability of electronic communications.²⁹ Article 5 of the Model Law establishes a basic principle of functional equivalence, i.e., that information shall not be treated differently based on the fact that it exists

²⁷ Takashima, T, 'Developing Legal Frameworks for Dispute Resolution in the Digital Age' (2025) Transforming Arbitration: Exploring the Impact of AI, Blockchain, Metaverse and Web3 .

²⁸ Rashed MF, 'Framework of the United Nations Commission on International Trade Law: Bridging E-Commerce and Online Dispute Resolution' (2025) 3(1) Legal Research & Analysis

²⁹ Singh C, 'A "Sign" of the Times: A Brief Consideration of the Validity of E-Signatures in Agreements and Affidavits in South African Law' (2024) 45(1) Obiter



in electronic format. Furthermore, Articles 11 and 13 confirm that electronically entered into contracts are valid and clarify who bears responsibility for electronic communications.³⁰ However, the implications of the provisions contained in the Model Law extend far beyond electronically entered into contracts. They created the legal certainty necessary for ODR to exist; thus, electronic pleadings, notification, settlement agreements, and all other forms of digital communication are capable of serving the same legal purposes as written documents. Therefore, although the Model Law did much more than simply enable electronic commerce to occur, it established a legal base for the subsequent emergence of cross border ODR. Nevertheless, its contribution remained primarily transactional. It validated digital commerce but did not establish institutional mechanisms for governing disputes arising from it.

However, UNCITRAL's limitation in relation to this objective was overcome with each subsequent instrument. For example, the Model Law on Electronic Signatures (2001) increased confidence in digitally conveyed assent by creating a neutral reliance test under Article 6 to ensure that the authentication requirements would continue to advance as new technologies emerge.³¹ The United Nations Convention on the Use of Electronic Communications in International Contracts (2005) further enhanced certainty of law in cross border transactions.³² Of particular note were Articles 8, and 10, which confirmed the enforceability of electronically entered contracts, specified the legal effects of sending and receiving electronic communications, and acknowledged contracts entered into through automated message systems.³³ Such provisions are particularly important today for modern ODR given that they support electronic filing systems, automated notice procedures and increasingly digital methods of entering into commercial obligations. Together, these instruments moved UNCITRAL's norms from acknowledging electronic communications, to promoting commercially reliable digital contractual relations between jurisdictions.

³⁰ Bompreszi C, Implications of Blockchain-Based Smart Contracts on Contract Law (Nomos 2021); Krasniqi A and Kačamakovic MK, 'Challenges and Perspectives of Law and Digitalization: Case Study of Contract Law' (2023) 13(2) Journal Human Research in Rehabilitation 264

³¹ Singh (n 29).

³² Ko S-W, Kang S-Y and Oh K-Y, 'Improvements in the Practice Application of UNCUECIC' (2022) 18(2) International Academy of Global Business and Trade 33

³³ Suwadi P, Manthovani R and Assyifa AK, 'Legal Comparison of Electronic Contract in Electronic Commerce Between Indonesia and the United States Based on the United Nations Commission on International Trade Law' (2023) 11(3) Journal of Law and Sustainable Development



UNCITRAL's most obvious normative contributions were made by Technical Notes on Online Dispute Resolution (ODR) published in 2016. According to Brand, these Technical Notes moved the focus away from facilitating e-commerce electronically and towards developing minimum standards of dispute resolution for digital environments.³⁴ With respect to the previous instruments, these Technical Notes define internationally recognized procedural norms. Examples of such norms include: accessibility, transparency, independence, impartiality, effectiveness, due process, accountability, fairness. Additionally, the technical notes provide a model of three stages for resolving disputes. these stages are negotiation, facilitated settlement, and final determination.³⁵ While the Technical Notes are non-binding, they have established internationally recognized standards to evaluate whether public or private ODR systems meet basic standards of legitimacy. Therefore, they have contributed significantly to establishing universally accepted procedural legitimacy standards for Digital Justice.

Together, these instruments clearly illustrate how UNCITRAL has taken a cumulative and consistent approach to creating regulatory frameworks for the digital economy.³⁶ Instead of being separate legal documents, each instrument built on prior uncertainty by first accepting electronic communication, then validating electronic consent, followed by enabling cross-border contracting digitally³⁷ and lastly articulating minimal standards of procedure for ODR³⁸. By building on a progressive normative structure, UNCITRAL has increased legal certainty, fostered greater international cooperation and created the legal foundation for contemporary digital dispute resolution. However, these achievements also demonstrate limitations to a system whose greatest advantage is in generating norms rather than providing mechanisms for implementing those norms through institutionally governed structures. As such, the success of international ODR will depend not only on coherent legal principles but

³⁴ Brand (n 20)

³⁵ Pinet SC and others, 'Le E-Règlement Extrajudiciaire des Différends: Le Déploiement d'une Justice Alternative en Ligne' (CNRS 2022)

³⁶ Castellani L, 'UNCITRAL Texts on Electronic Commerce' in [editor and book title not stated in source] (Edward Elgar Publishing 2023) 512

³⁷ Kim H, 'Industrial Digital Transformation and A Proposal to Rebuild Digital Trade Agenda' (2024) 58 Journal of World Trade 87

³⁸ Brand (n 20)



also on institutions that can implement, supervise and adapt those principles in a rapidly fragmenting digital environment. This represents the subject matter of the next section.

3.3 Institutional Limitations of the UNCITRAL ODR Framework

Despite its significant normative achievements, UNCITRAL's ODR framework faces important institutional limitations that reduce its effectiveness in today's digital economy³⁹. These institutional limits do not stem from the weakness of the legal principles themselves. As previously demonstrated, UNCITRAL has developed internationally recognized legal rules for digital communication, digital contract formation, and procedural fairness through electronic means. The issue exists within the institution itself. The ODR framework is based on an institutional model that was created to enable the harmonization of laws among nations rather than to provide governance to the rapidly evolving and technologically driven field of ODR. Since digital commerce has continued to evolve, the gap between UNCITRAL's normative leadership and its ability to address this changing environment has grown bigger.

The first and perhaps most critical limitation is the fact that the UNCITRAL Technical Notes on Online Dispute Resolution (2016) are of soft-law nature.⁴⁰ As opposed to the New York Convention of 1958⁴¹ and the Singapore Convention on Mediation of 2019,⁴² both of which provide participating countries with legally-binding obligations, the Technical Notes were conceived merely as a guidance document.⁴³ While this method permitted countries with diverse legal systems to come to agreement, it simultaneously diminished the actual impact of the framework. Countries may implement, alter, or disregard the Technical Notes without consequences. Private companies providing ODR services are likewise unbound by them. As

³⁹ Sampani C, 'Online Dispute Resolution in E-Commerce: Is Consensus in Regulation UNCITRAL's Utopian Idea or a Realistic Ambition?' (2021) 30(3) Information & Communications Technology Law 235

⁴⁰ Sampani C, 'Online Dispute Resolution in E-Commerce: Is Consensus in Regulation UNCITRAL's Utopian Idea or a Realistic Ambition?' (2021) 30(3) Information & Communications Technology Law 235

⁴¹ Formally the Convention on the Recognition and Enforcement of Foreign Arbitral Awards, this treaty obliges signatory states to recognize and enforce arbitration awards made in other countries, making it one of the most successful instruments in international commercial law.

⁴² This treaty extends similar cross-border enforceability to settlement agreements reached through international commercial mediation, addressing a gap the New York Convention does not cover since it applies only to arbitration awards, not mediated settlements.

⁴³ Alexander NM and Chern C, 'The Singapore Convention' in [editor and book title not stated in source] (Edward Elgar Publishing 2023) 242



a result, universally accepted principles including, transparency, equity, accessibility, and responsibility are applied irregularly throughout jurisdictions.

In so doing, we observe a larger-scale institutional contradiction. The flexibility to enable UNCITRAL to obtain international consent has also constrained its regulatory capacity. By seeking consent from as many countries as possible, the Framework relinquished much of the authority required to ensure that countries apply similar implementations. Therefore, while UNCITRAL has been highly successful in developing international standards, it has similarly failed to promote the adoption of those standards within the realm of ODR practice.

Secondly, there is currently no institutional mechanism for implementation and oversight of the Framework. Brand explained that UNCITRAL sets forth legal standards, however, it neither operates nor administers ODR platforms, nor does it accredit dispute resolution service providers nor monitors compliance with its own standards.⁴⁴ Monitoring adherence to the Framework's standards falls predominantly on individual country governments, arbitration organizations, and private entities. Although the lack of a centralized entity promotes respect for State sovereignty, it also generates disparate application of international standards. Thus, some jurisdictions have incorporated elements of UNCITRAL's electronic commerce instruments into domestic legislation, while others have only partially or wholly implemented aspects thereof. The inconsistent application of international standards creates ambiguity regarding the enforceability of ODR resolutions, thus undermining one of the objectives of UNCITRAL, uniformity in international commercial law.

Finally, the Framework lacks detailed direction on how to recognize and enforce resolutions achieved through ODR. Its instruments have established the legal throughbility of electronic business transactions.⁴⁵ Thus, Articles 5 and 8 of the Model Law on Electronic Commerce (1996), and Articles 5 and 8 of the Electronic Communications Convention (2005), confirm that electronic transmissions and contracts will not be deprived of their legality solely because they exist digitally. Similarly, Article 6 of the Model Law on Electronic Signatures (2001),

⁴⁴ Brand (n 20)

⁴⁵ Singh (n 29).



reinforces confidence in electronic authenticity processes.⁴⁶ However, these provisions have facilitated electronic commerce far more than the enforcement of decisions resulting from ODR. According to Alexander & Cher, enforcement of ODR resolutions often relies on additional legal frameworks, e.g., the New York Convention regarding arbitrated awards and the Singapore Convention regarding mediated settlements.⁴⁷ A significant number of disputes settled through private ODR platforms do not qualify under either of these models, thereby generating uncertainty about the enforceability of their resolutions across jurisdictions.

In addition, UNCITRAL's framework is currently facing increasing pressures due to rapid technological advancements.⁴⁸ At the time when most of UNCITRAL's electronic commerce instruments were developed, the main challenge related to recognizing electronic communications and digital contracts.⁴⁹ Now, however, private online dispute resolution systems frequently utilize artificial intelligence, automated negotiations, algorithms-based decision-making tools, blockchain technology and digital evidence management⁵⁰. These technologies generate new legal questions relating to transparency, accountability, explainability, cybersecurity and data protection. Even though the 2021 UNCITRAL Secretariat Stocktaking of Developments in Dispute Resolution in the Digital Economy (DRDE) identifies many of these challenges and developments. Takashima assert that the current framework contains very few provisions governing how such technologies ought to be regulated. Thus far, technological innovations have proceeded at a rate that exceeds the international regulations being formulated to control and govern them.

An additional challenge relates to growing role of private digital platforms in resolving cross border disputes. Private companies such as eBay, Amazon and PayPal resolve tens of millions

⁴⁶ Singh C, 'A "Sign" of the Times: A Brief Consideration of the Validity of E-Signatures in Agreements and Affidavits in South African Law' (2024) 45(1) *Obiter*

⁴⁷ Alexander and Chern (n 43).

⁴⁸ Takashima (n 27).

⁴⁹ Singh (n 29).

⁵⁰ Alessa H, 'The Role of Artificial Intelligence in Online Dispute Resolution: A Brief and Critical Overview' (2022) 31(3) *Information & Communications Technology Law* 319; Kumtepe CCK, 'Unpacking the Technology of Trust: Establishing Trust and Fairness in Online Dispute Resolution through Blockchain and Smart Contracts' (2025) 33 *International Journal of Law and Information Technology*



of disputes annually through their own internal ODR systems.⁵¹ These platforms determine procedures for settling disputes, manage evidence submitted by disputing parties and facilitate settlement agreements. Frequently, these platforms also enforce resultant agreements through contractual mechanisms instead of through judicial process. Although this paradigm provides for increased efficiency and speed relative to traditional methods for resolving disputes, it simultaneously vests a substantial amount of discretion into private organizations. UNCITRAL's current framework recognizes the importance of procedural fairness in ODR, nevertheless, it fails to provide guidance on how privately operated systems should be monitored/supervised.

Finally, the current framework pays too little attention to reality of global digital divide. Access to ODR relies on availability of stable and reliable internet connection(s), adequate digital skills and knowledge base, appropriate technological infrastructure and institutional capacity⁵². Unfortunately, each of these factors vary widely across many developing countries. As a result, realization of promise associated with international ODR governance is not achievable equally in all jurisdictions. Enhancing access to ODR therefore requires more than establishment of effective legal frameworks, investment in digital infrastructure development, acquisition of technical capabilities and institutional development are similarly essential.

Collectively speaking these constraints reveal a similar conclusion. UNCITRAL has resolved most of the legal impediments preventing development of e-commerce⁵³. Instead, the most serious challenge now confronting UNCITRAL is institutional in nature. Progress toward future development of international ODR will depend more heavily on development of mechanisms for coordination and governance of implementation activities (e.g., accreditation of ODR service providers), supervision of technological innovation, and engagement with

⁵¹ Ermakova EP, 'Features of Online Settlement of Consumer Disputes by E-Commerce Platforms in the People's Republic of China' (2023) 1(3) *Journal of Digital Technologies and Law* 691

⁵² Mairal-Llebot M, Orús ML and Cosculluela CL, 'Challenges in Achieving Educational Inclusion and Development in the Digital Era: Analysis of Emotions, Barriers and Perceived Needs' (2023) 29(9) *Education and Information Technologies* 11421; Pal S, 'Access to Justice in the Digital Era: A Comparative Study of ODR Implementation in India vis-à-vis International Best Practices' (2025) 7(4) *International Journal For Multidisciplinary Research*

⁵³ Sidorov and Sidorova (n 11).



both public institutions and private digital platforms. A broader institutional perspective serves as foundation for comparative analysis presented in subsequent sections.

3.4 Comparative Institutional Perspectives: Lessons for UNCITRAL

The limitations of UNCITRAL's ODR framework become clearer when viewed alongside other models of dispute resolution governance. No single institution has solved every challenge associated with cross-border online disputes. However, organisations such as the World Intellectual Property Organization (WIPO), the European Union (EU), eBay, and the Internet Corporation for Assigned Names and Numbers (ICANN)⁵⁴ have adopted different institutional approaches that offer useful lessons for UNCITRAL. These examples show that effective ODR depends not only on sound legal principles but also on institutions capable of implementing, supervising, and adapting those principles in practice.

WIPO's experience is especially significant to this discussion as WIPO operates in both an administrative capacity and with respect to international norms. While UNCITRAL provides the framework for international trade law, WIPO is responsible for administering those rules on an individual basis. One example of WIPO's role is its operation of the World Intellectual Property Organization Arbitration and Mediation Center. That center is often called on to administer claims regarding the use of trademarks or other intellectual property rights that have been infringed by virtue of their being registered as domain names.⁵⁵ The WIPO arbitration and mediation process utilizes the Uniform Domain Name Dispute Resolution Policy ("the UDRP") which outlines a formalized procedure to resolve claims of infringement, when a domain name has been used by someone else. In addition to providing the structure for the arbitration process, WIPO selects impartial arbitrators to hear each case and publish decisions made in each case⁵⁶. As such, WIPO's arbitration program creates consistent

⁵⁴ The Internet Corporation for Assigned Names and Numbers (ICANN) is the nonprofit body that oversees the global domain name system; it enforces the UDRP through contracts with accredited registrars rather than through direct government regulation.

⁵⁵ Shoukat D, 'IP Dispute Resolution in the Digital Age: An Analysis of WIPO's UDRP Mechanisms and AI Integration' (2025) 3(2) Trends in Intellectual Property Research

⁵⁶ Chapuis R, 'Noms de Domaine et Modes Alternatifs de Règlement de Conflits' (Doctoral thesis, 2021); Shoukat D, 'IP Dispute Resolution in the Digital Age: An Analysis of WIPO's UDRP Mechanisms and AI Integration' (2025) 3(2) Trends in Intellectual Property Research



procedures to be followed in every case. Overall, WIPO's ability to provide a well-structured, fair, and consistent arbitration process makes it one of the most effective organizations in the world to help settle disputes.

Moreover, there exists an important institutional distinction between UNCITRAL and WIPO. UNCITRAL has successfully created international legal frameworks for resolving transnational business disputes, however, UNCITRAL is dependent on member states and non-governmental actors to implement the legal principles once they have been agreed to. By contrast, WIPO continues to oversee the implementation of those principles post-establishment. This does not imply that UNCITRAL should become a global dispute resolution forum. Rather, it indicates that international legal standards are more effective when implemented by institutions that facilitate consistency, monitor compliance, and foster best practices. Thus, WIPO provides an illustration that institutional coordination is at least as important as legal harmonization.

An additional lesson can be inferred from the European Union's Online Dispute Resolution (ODR) Portal. According to Esther et al., this portal was created as part of Regulation (EU) No. 524/2013⁵⁷ with the goal of increasing the confidence of consumers in electronic commerce conducted across borders, through a singular online interface to file consumer complaints.⁵⁸ In contrast to UNCITRAL's Technical Notes, where cooperation is optional and adherence not mandatory⁵⁹, the creation of this EU framework was supported by mandatory regulation that required each member state to create one or more national contact points and cooperate in running the platform.

Although the platform had a strong regulatory base, it did not reach the levels of effectiveness expected and ultimately ceased functioning. The low degree of awareness among users of the platform, limited numbers of traders participating in the process, and competitive existence of other private mechanisms for resolving disputes all contributed to the limited practical use of

⁵⁷ This regulation created a single online platform for EU consumers to file cross-border e-commerce complaints, requiring each member state to designate a national contact point. The Platform was discontinued after it failed to attract sufficient use, as discussed later in this section.

⁵⁸ Esther V, Chittu N and Cortes P, 'ODR for E-Commerce: Legal Standards and Developments in Asia and Europe' (Figshare, April 2025)

⁵⁹ Sampani (n 13).



the platform⁶⁰. Therefore, the European experience therefore offers an important lesson: binding legislation alone cannot guarantee effective ODR governance. Also, creating successful institutional mechanisms for international ODR governance requires a variety of factors including, but not limited to, the accessibility of such mechanisms to stakeholders, user trust and confidence, adequate administrative support for such mechanisms, and active participation from relevant stakeholders. For UNCITRAL, this suggests that strengthening legal authority without improving institutional capacity would solve only part of the problem.

Finally, private ODR platforms serve as another illustrative model of alternative forms of ODR governance. eBay's Resolution Center provides an excellent example of how dispute resolution can be embedded directly into electronic commerce. Utilizing automatic negotiation processes, online communication capabilities, and assistance from the platform in reaching a decision in many instances, eBay resolves thousands of disputes annually without involving either courts or arbitration institutions⁶¹. The reason for this high level of effectiveness lies in the fact that the dispute resolution processes are tightly coupled with the original commercial transaction being conducted on the platform. The platform can utilize tools such as payment control measures, account management techniques and reputation-based systems to enhance enforceability of decisions reached in the course of a dispute proceeding and reduce reliance on judicial enforcement.

However, eBay also illustrates some of the potential pitfalls associated with relying exclusively on private forms of dispute resolution governance. Because eBay creates its own rules for dispute resolution proceedings (i.e., who will manage evidence and make decisions), how evidence will be managed and who will supervise decision-making are all issues determined by contract relationships with users.⁶² While this form of governance can produce speedy and efficient outcomes, it also raises valid questions about transparency, accountability, fair process rights, and access to impartial review. These types of questions

⁶⁰ Fernández Rodríguez B, 'La Plataforma Europea ODR y el Reglamento (UE) 2024/3228: ¿Un Adiós Inevitable o una Muerte Anunciada?' (University of Granada 2025)

⁶¹ Bochenek AC and Elesbon SAZS, 'ODR's em Conflitos de Consumo: O Consumidor.gov.br Precisa de um Nudge?' [2023] *Revista Internacional Consinter de Direito* 447

⁶² Zhao Y and Xiao Z, 'The Regulatory Framework for Crowdsourced Online Dispute Resolution: Revisiting the Dispute Resolution Triangle' (2026) 26 *Pepperdine Digital Commons*



reinforce the continued relevance of legally recognized principles like those advocated by UNCITRAL, regardless of whether innovations in technology may allow for improved efficiencies.

Lastly, the experience of ICANN exemplifies the benefits of hybrid forms of governance. ICANN utilizes contractual obligations entered into with accredited registrar companies along with the implementation of the UDRP through third-party service providers authorized by ICANN to administer domain name disputes . This hybrid model allows responsibility for developing rules governing domain name disputes, managing those disputes themselves through third-party administrators (such as WIPO), and ensuring compliance with those rules to be shared among multiple entities rather than concentrated in a single entity. The collective nature of this collaborative approach has allowed for a somewhat stable and predictable mechanism for resolving international domain name-related disputes. Although this area of law is specialized in terms of subject matter, ICANN's model illustrates how international agreements on norms can exist side-by-side with decentralized models for implementation and oversight.

When viewed collectively, each example illustrated here reveals a similar theme: WIPO has demonstrated the need for long-term monitoring by an institution, The European Union has shown that although binding regulations may be passed into law, there must be follow-through on implementation for any regulation to have practical application, eBay has shown that technology driven dispute resolution may be fast and efficient but lack accountability, and ICANN has shown that a hybrid model combining elements of public and private institutions may contribute to a more robustly legitimate and effective model for resolving cross-border disputes.

3.5 Implications for International ODR Governance

The analysis in the preceding sections demonstrates that the challenges confronting international ODR governance extend beyond the adequacy of UNCITRAL's legal instruments to the broader international ODR governance. Although UNCITRAL has



provided a basic regulatory foundation for electronic commerce,⁶³ limitations however exist. The major challenge now is institutional, rather than purely normative. This leads to three implications regarding the new institutional structure for international ODR governance.

The first implication pertains to the increasing importance of international organizations. As international e-commerce is becoming more complex, international organizations cannot be limited to standardizing legal rules. They need to ensure institutional coordination, technological monitoring, and continued dialogue among all stakeholders participating in digital dispute resolution. Therefore, the success of UNCITRAL as an international institution will depend not only on its ability to create a new set of legal standards, but also on its capability to provide the necessary institutional backing to ensure consistent application of those legal standards in an ever-changing digital world.

The second implication concerns the increasing relation between public international law and private governance of e-platforms. It has been found that a large number of cross border digital disputes are being resolved through private e-platforms, which do not rely on traditional judicial systems.⁶⁴ Private e-platforms offer many advantages in terms of speed of settlement using technology-based dispute resolution processes but raise several questions concerning transparency, responsibility and fairness of procedure. Therefore, international ODR governance will depend increasingly on collaboration between international institutions responsible for setting norms and operators providing private dispute resolution services.

The third implication relates to technological developments. The use of artificial intelligence, automated negotiations, decisions made with algorithms and other technologies that allow for new ways of managing and resolving disputes are developing at a rapid pace, however, they have only partially been taken into account by UNCITRAL's current framework.⁶⁵ Thus, the next stage of governance will need to go beyond merely verifying electronic transactions to

⁶³ Rashed (n 28).

⁶⁴ Pálfi D, 'Internal Dispute Resolution Systems: Do High Promises Come with Higher Expectations?' (2024) 64(3) Hungarian Journal of Legal Studies 391

⁶⁵ Mitić M, 'Artificial Intelligence in UNCITRAL Model Law on Automated Contracting' [2025] 605



establish basic principles allowing for assurance that such emerging technologies will function in accordance with due process requirements, transparency, and procedural legitimacy.

In summary, the results point towards a shift from normative harmonization to institutional governance for further development of international ODR governance. UNCITRAL has effectively solved the legal issues that previously impeded international electronic commerce. However, there remains a more urgent issue, namely: how can international institutions coordinate various actors, regulate technological innovations, and ensure procedural legitimacy in an increasingly decentralized environment? In the subsequent section we build on these results to propose an integrated governance model intended to reinforce the institutional basis of international ODR governance.

3.6 Towards an Integrated Governance Model for International ODR

The preceding analysis demonstrates that strengthening international ODR governance requires institutional innovation rather than additional legal instruments. The challenge is no longer to establish the legal validity of electronic commerce, but to develop governance arrangements capable of implementing international standards, responding to technological change, and coordinating the growing range of public and private actors involved in cross-border dispute resolution. Therefore, the proposals contained below represent supplementary parts of a unified strategy of governance. Jointly, they intend to strengthen UNCITRAL's role as the world's leading organization in establishing international regulations, while increasing institutional capacity to back up an evermore decentralized and technology-based environment for ODR.

The first focus from is to move from soft law to graduated international standards. Comparative research proves that neither voluntary guidelines or binding legislation can provide sufficient foundations for international ODR governance. On the one hand, although the Technical Notes issued by UNCITRAL promoted a worldwide recognition of broad agreement regarding these Guidelines, their lack of binding force hindered a consistent realization of these Guidelines.⁶⁶ Conversely, as shown by the EU ODR Platform example,

⁶⁶ Sampani (n 13).



binding legislation does not automatically lead to good governance. The EU ODR Platform achieved poor results due to insufficient institutional commitment and low user trust in spite of being regulated through obligatory legislation⁶⁷.

In contrast to adopting immediately an international treaty based on the results of comparative research, UNCITRAL should take advantage of a progressive regulatory approach. First, UNCITRAL should issue globally recognized minimum requirements concerning procedural correctness, transparency, data protection, accountability of algorithms, and participation of users. The initial function of these minimum requirements will be as models for national regulation, thereby encouraging regulatory harmonization while offering national governments flexibility in realizing these models. Subsequently, the development of common practices at the level of states may bring about an evolution from standard models to formally binding international commitments. This kind of approach follows historically the development of international business law. Generally, practical convergences precede legislative convergences.⁶⁸

Then, there is need to provide for institutional oversight and coordination. The previous section showcased that UNCITRAL's main weakness consists not in creating legal standards but in enforcing them. Contrary to WIPO, which performs both rule creation and administration of institutions, there exists no body responsible for monitoring conformity with UNCITRAL's standards, accrediting providers of ODR services or promoting consistent application of UNCITRAL's procedural principles. This deficiency does not imply that UNCITRAL needs to perform itself as an operative body for resolving disputes. However, it can set up a coordinating structure involving states, arbitral organizations, regional entities, agencies for protecting consumers and certified private providers of ODR services. Such a coordinating entity can specify criteria for certification, prepare recommendations for best practices, follow-up technological developments and assist collaboration amongst participating actors. In addition, instead of performing the role of a regulator, it will act as a

⁶⁷ Esther V, Chittu N and Cortes P, 'ODR for E-Commerce: Legal Standards and Developments in Asia and Europe' (Figshare, April 2025)

⁶⁸ Bernal EGC, 'Harmonization of Cross-Border Contract Law: Legal Solutions in a Globalized World' (2024) 2(2) Journal of Policy and Society 2273



coordinatory entity and increase the consistency in applying standards while preserving national autonomy in regulation.

The next is technological governance. As mentioned before, technological innovation constitutes one of the most significant challenges confronting the present regime⁶⁹. Subsequent initiatives from UNCITRAL should therefore formulate technology-independent principles applicable to AI-assisted ODR. These include providing information to parties whenever automation impacts decisions taken by humans, ensuring that explanations exist for the bases used in decisions made by automated systems and maintaining availability for human review on request. By focusing on outcomes related to governance instead of specific technologies, the regime remains relevant even though technological progress occurs rapidly.

Then, public-private regulatory synergy. The comparative analysis further emphasizes that platforms are key players in international ODR.⁷⁰ If UNCTIRAL ignores these developments, then much of global ODR would fall outside the boundaries established by internationally recognized standards. Instead of regulating privately-owned platforms internationally through laws directly applicable thereto, UNCTIRAL should encourage voluntarily compliance through a universally accepted accreditation process. On agreeing to comply with minimum procedural requirements through this process, platforms would obtain acknowledged accreditation for dispute resolution mechanisms applied by them in cross border contexts. Compliance remains voluntary. Accreditation creates meaningful incentive for compliance without requiring politically complex regulatory duties.

There should also be accessible digital justice. The success of the reforms outlined above depend on whether all countries have the ability to realize them. Reliable digital infrastructure, Internet access, institutional capacity and digital literacy are required for realizing ODR. Where these prerequisites are lacking, international ODR governance runs the risk to exacerbate existing social inequalities rather than improve access to justice.⁷¹ Thus, capacity

⁶⁹ Karthikeyan C, 'AI (Artificial Intelligence) for Conflict Resolution and Negotiation' in, *Advances in Business Strategy and Competitive Advantage* (IGI Global 2024) 21

⁷⁰ Bagby JW and Packin N, 'RegTech and Predictive Lawmaking: Closing the RegLag Between Prospective Regulated Activity and Regulation' [2021] *Michigan Business & Entrepreneurial Law Review* 127

⁷¹ Harid S and Honcharenko K, 'Expanding Access to Justice through ODR, and the "Digital Divide": Is ODR the Cause of, or the Solution to the Inequality of Arms?' (2023) 10 *BCDR International Arbitration Review* 65



building must become an integral part of governance for international ODR. Future initiatives from UNCITRAL should comprise cooperation with regional organizations, promotion of technical aid for judges and practitioners alike and establishment of procedural standards enabling operationally effective in bandwidth-poor and resource-constricted settings. Designing procedures inclusively is not merely a goal of development, it is also necessary to legitimize an internationally agreed ODR framework.

An Integrated Governance Framework. The reforms suggested in this study should not be regarded as independent policy measures. They constitute an integrated governance framework whereby each element relies on other elements. Gradual standardized approaches need to be supported by institutional coordination to guarantee enforcement. Institutions must be able to adapt themselves to changing technology. Private platforms must be subject to technology governance since they account for a very high percentage of cross-border disputes resolved through mediation mechanisms. None of the proposals outlined above can attain their aims without addressing structural inequalities limiting the effectiveness of international ODR governance.

International commercial law experiences demonstrate that separated reforms rarely succeed because legal standards, institutional capacity, technological developments and participations of stakeholders occur simultaneously. Therefore effective governance for ODR necessitates simultaneous occurrence of all these factors. The proposals formulated herein address explicitly the institutional deficits evidenced throughout the preceding analyses and intend to place UNCITRAL not solely as primary producer of international legal standards but as institution which supports a coordinated and technology sensitive, technology reactive and inclusive system for international ODR governance.

4.0 CONCLUSION

This study examined whether the existing legal framework of UNCITRAL is able to govern Online Dispute Resolution (ODR), in a rapidly decentralized digital economy. The study found that although UNCITRAL has developed the normative foundations for e-commerce and cross-border ODR, by way of its Model Laws, the Electronic Communication Convention,



and its Technical Notes on ODR, these norms are insufficient to address current challenges in governance. The study demonstrated that the primary weakness of the UNCITRAL framework does not lie within the legal rules themselves, but rather in how they were designed. In particular, soft-law implementation processes, lack of oversight, fractured enforcement mechanisms, and the rapid rate at which new digital technologies emerge and evolve have all contributed to a reduced ability of the UNCITRAL framework to facilitate coordination among an increasing number of stakeholders in an increasingly complex ODR environment. A comparative analysis of WIPO, EU ODR frameworks, and private-platform based dispute resolution mechanisms also showed that effective ODR governance require both strong institutional coordination and coherent legal standards.

Therefore, this study advocates that future of international ODR governance should transition from solely creating norms toward developing a cohesive model of governance. Specifically, UNCITRAL can continue to act as the preeminent international norm-creating entity. However, it should strengthen collaboration with States, Regional Organizations, and Private Sector ODR Providers to improve implementation effectiveness, technology responsiveness, and accountability within institutions. This will help create a global ODR system that is responsive to emerging needs of the rapidly evolving digital economy, while maintaining the core principles of access, equity/fairness, and certainty associated with digital justice.