

Online Dispute Resolution (ODR) in E-Commerce: Empowering Sustainability for Societal Well-Being

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Submission date: 08-Nov-2025 11:57AM (UTC+0700)

Submission ID: 2690344191

File name: IJAR-54674.pdf (427.21K)

Word count: 2477

Character count: 14778

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ABSTRACT

Online Dispute Resolution (ODR) has emerged as a crucial mechanism in e-commerce, providing efficient, cost-effective, and accessible solutions for resolving conflicts between consumers and businesses. This study conducts a systematic literature review (SLR) to examine the role of ODR in fostering sustainable economic growth and societal well-being through digital innovation. The paper explores key themes, including the effectiveness of ODR systems, consumer trust, regulatory frameworks, and the integration of artificial intelligence (AI) in dispute resolution. The findings highlight that ODR enhances consumer confidence, reduces litigation costs, and promotes economic sustainability by ensuring fair and transparent conflict resolution. Additionally, AI-driven ODR platforms improve dispute resolution efficiency by automating case assessments and facilitating negotiations. The study also discusses challenges, such as cybersecurity threats, data privacy concerns, and regulatory inconsistencies. Furthermore, ODR significantly reduces the environmental impact of dispute resolution by minimizing physical travel and paper-based documentation, which aligns with the broader sustainability goals of e-commerce. By analyzing existing literature, this research underscores the necessity for continuous advancements in ODR frameworks to support a sustainable digital economy. Future research should focus on enhancing AI capabilities, cross-border dispute resolution, and consumer protection policies. This study contributes to the discourse on digitalization's role in economic sustainability and societal well-being by advocating for an inclusive and innovative ODR ecosystem in e-commerce.

Keywords: Consumer, Digital, E-commerce, Online Dispute Resolution.

INTRODUCTION

The rapid digitalization of commerce has transformed consumer-business interactions, introducing both opportunities and challenges in dispute resolution. As e-commerce continues to grow, conflicts related to transactions, product quality, and contractual obligations have become increasingly prevalent (Li et al., 2023; Sampani, 2021). Traditional dispute resolution mechanisms, such as litigation and arbitration, are often costly, time-consuming, and inaccessible to many online consumers (Ngcobo, 2024; Van Nam et al., 2022). To address these inefficiencies, Online Dispute Resolution (ODR) has emerged as a viable alternative that leverages digital platforms, artificial intelligence (AI), and block chain technology to facilitate efficient and cost-effective resolution of e-commerce disputes (Ferreira et al., 2022; Simkova&Smutny, 2021). By integrating AI-driven automation and secure digital processes, ODR enhances fairness, accessibility, and consumer confidence in online transactions while reducing the burden on judicial systems (Arakelian et al., 2020; Gao, Y., & Liu, 2022).

Despite its benefits, the implementation of ODR faces regulatory, technological, and ethical challenges, particularly in cross-border e-commerce disputes (Chen & Wang, 2022; Riepin, 2024). While private ODR systems offer efficiency and flexibility, they often lack enforcement mechanisms, limiting their effectiveness in resolving disputes that require legal justification (Li et al., 2023). Conversely, state-run

50 ODR platforms provide greater legitimacy but struggle with jurisdictional conflicts and procedural
51 complexities (Sampani, 2021). The absence of a globally harmonized regulatory framework further
52 complicates ODR adoption, as cultural and legal pluralism hinder international consensus on dispute
53 resolution standards. Additionally, cybersecurity threats and data privacy concerns present significant
54 barriers to consumer trust, necessitating the development of robust security measures and transparent
55 governance structures to ensure the integrity of ODR platforms (Van Nam et al., 2022).

56
57 Beyond dispute resolution, ODR contributes to economic and environmental sustainability by minimizing
58 litigation costs, reducing paper-based documentation, and eliminating the need for physical travel (Gao,
59 Y., & Liu, 2022). Businesses that integrate ODR into their digital operations demonstrate a commitment
60 to ethical governance, enhancing consumer trust and brand reputation in the competitive e-commerce
61 landscape (Ferreira et al., 2022). However, to maximize its impact, ODR must evolve to address emerging
62 challenges, including AI biases, digital literacy gaps, and the scalability of dispute resolution mechanisms
63 in rapidly expanding online markets (Ngcobo, 2024; Simkova&Smutny, 2021). Future research should
64 focus on refining AI-driven decision-making, fostering cross-border regulatory collaboration, and
65 integrating ODR within broader digital governance frameworks to ensure long-term sustainability in e-
66 commerce dispute resolution (Rabinovich-Einy, 2021; Wing et al., 2021).

67 68 69 **METHODOLOGY**

70
71 This study employs a Systematic Literature Review (SLR) approach using the Preferred Reporting Items
72 for Systematic Reviews and Meta-Analyses (PRISMA) framework to ensure a rigorous and transparent
73 review process. The PRISMA model offers a unique benefit for authors in defining a straightforward
74 research question, identifying inclusion and exclusion criteria, and examining a more extensive database
75 of literature (Azril et al., 2018). There are three main steps through the systematic searching strategies:
76 identification, screening, and eligibility. The search strategy involved using the keywords "ODR" OR
77 "Online Dispute Resolution" AND "e-commerce" OR "Online business" to retrieve relevant literature
78 from two major academic databases, Scopus and Web of Science (WOS). The initial search yielded 142
79 articles published between 2020 and 2024. After applying inclusion and exclusion criteria—focusing on
80 peer-reviewed journal articles, journals, and authoritative reports discussing ODR's effectiveness,
81 technological advancements, legal frameworks, economic impact, and environmental sustainability, 17
82 articles were selected for in-depth analysis.
83

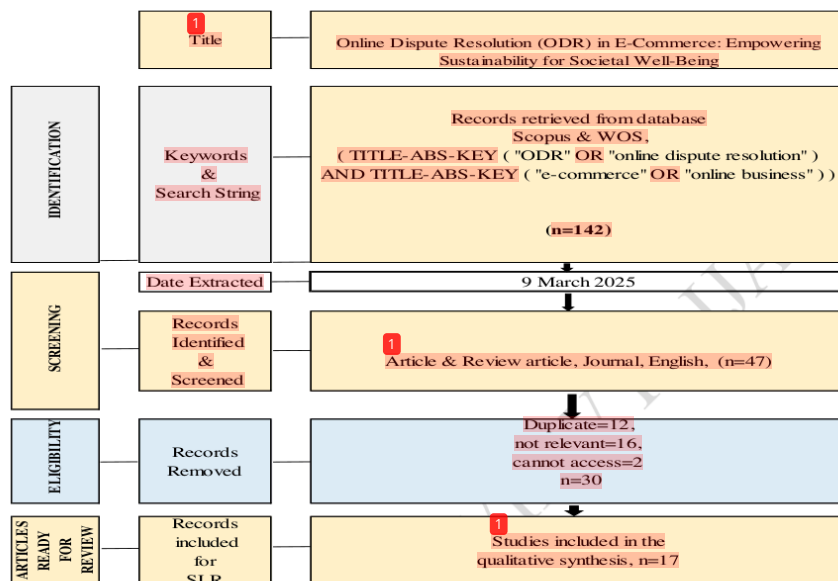


Figure 1.Flow Diagram of The Search Strategy
Source: Modified from PRISMA (Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009).

ANALYSIS & RESULTS

Figure 2 categorized the papers according to the type of research approach. In terms of research approaches, 7/17 or 41.2% use the qualitative method. At the same time, only 35.3% or 6/17 of studies adopted the mixed-method. The remaining article 23.5% or 4/17 used a quantitative method to conduct the study.

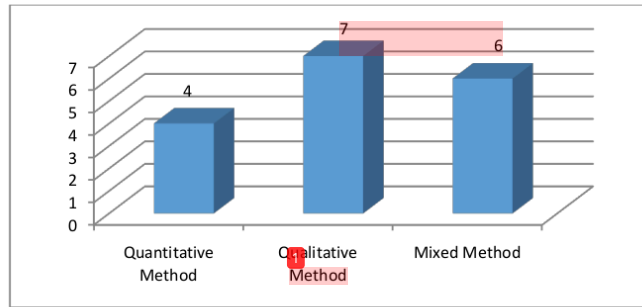


Figure 2. Papers by Type of Study

Findings indicate that ODR enhances access to justice by providing efficient and cost-effective dispute resolution, particularly in cross-border e-commerce transactions. AI-driven ODR platforms improve resolution speed by automating repetitive tasks and assisting mediators in decision-making. Additionally, block chain technology enhances transparency and security in ODR processes. Research by Li et al. (2023) highlights the differences between self-regulated and state-run ODR systems, suggesting that while private ODR is effective for routine disputes, public ODR provides better justifiability and enforcement. However, cross-border legal harmonization remains a challenge, as noted by Sampani (2021), who critiques UNCITRAL's failure to establish a universally accepted regulatory framework.

Key Themes in ODR Implementation

Technological Integration and Efficiency

One of the primary advantages of ODR is its reliance on emerging technologies such as AI, block chain, and automation to improve dispute resolution speed, transparency, and security (Ngcobo, 2024; Van Nam et al., 2022). AI-driven platforms streamline negotiations and help in the early resolution of disputes, reducing the need for human mediators (Simkova&Smutny, 2021). Block chain, on the other hand, ensures secure and tamper-proof documentation, which increases trust in the process (Ferreira et al., 2022). These technological advancements have enabled ODR to handle high volumes of disputes efficiently while minimizing errors and biases in decision-making (Arakelian et al., 2020).

Regulatory Challenges and Cross-Border Legal Harmonization

Despite its technological benefits, the implementation of ODR faces regulatory challenges, particularly in the context of cross-border e-commerce (Li et al., 2023; Sampani, 2021). While private ODR systems offer flexibility, they lack legally supported enforcement mechanisms, making them less effective in complex cases (Chen & Wang, 2022). Conversely, state-run ODR systems provide justifiability and neutrality but often struggle with jurisdictional conflicts and

enforcement across different legal frameworks (Riepin, 2024). UNCITRAL's efforts to create a global regulatory framework have faced resistance due to cultural and legal pluralism, underscoring the need for more flexible and inclusive approaches to ODR regulation (Sampani, 2021).

Sustainability and Consumer Trust

ODR also plays a critical role in sustainability by reducing carbon footprints associated with traditional dispute resolution processes (Van Nam et al., 2022; Gao, Y., & Liu, 2022). By eliminating the need for physical travel and paper-based documentation, ODR contributes to environmentally friendly e-commerce practices. Furthermore, businesses that integrate ODR demonstrate a commitment to ethical digital governance, which enhances consumer trust and brand reputation. However, trust in ODR remains a challenge in some regions due to concerns over cybersecurity, data privacy, and the legitimacy of AI-driven decisions (Ferreira et al., 2022). Ensuring transparency, user-friendly interfaces, and consumer education can significantly improve adoption and trust in ODR systems (Ngcobo, 2024).

However, while ODR presents clear environmental benefits, it is essential to consider the broader context of e-commerce sustainability. The rapid growth of online transactions has led to increased packaging waste and carbon emissions from logistics. Therefore, e-commerce platforms must balance the benefits of ODR with other sustainable practices, such as optimizing delivery routes and reducing packaging waste, to achieve a holistic reduction in environmental impact. The discussion underscores the need for global regulatory alignment, continuous innovation, and a comprehensive approach to sustainability in ODR's implementation. Future research should focus on strengthening AI capabilities, fostering international cooperation, and integrating ODR into broader digital governance frameworks for sustainable economic development.

CONCLUSION

ODR is a pivotal element in the evolving digital economy, ensuring efficient and fair conflict resolution in e-commerce while promoting sustainability. By leveraging AI, block chain, and digital platforms, ODR fosters economic sustainability while enhancing consumer protection, trust, and environmental responsibility. The reduction of carbon emissions and paper usage further positions ODR as a key contributor to green digital transformation. However, addressing regulatory and cybersecurity challenges is essential for its widespread adoption. This study underscores the necessity of integrating innovative and secure ODR solutions to promote societal well-being, economic growth, and environmental sustainability. Future research should explore adaptive AI models, international regulatory collaborations, and complementary green practices to further strengthen ODR's role in a sustainable digital economy.

Acknowledgment: The authors would like to express their appreciation for the support of the Ministry of Higher Education (MOHE) under the scheme of Fundamental Research Grant Scheme (FRGS) with Project No FRGS/1/2024/SS11/UKM/03/1.

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