

A CRITICAL STUDY ON THE ROLE OF ODR IN INSOLVENCY LAW WITH REFERENCE TO INDIA AND VIETNAM IN THE CONTEXT OF GLOBAL HEALTH TRANSITIONS

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ABSTRACT

The integration of ODR in insolvency law has emerged as a critical mechanism for ensuring efficiency, accessibility, and transparency in resolving financial distress cases, particularly in countries undergoing economic and health transitions like India and Vietnam. The study critically examines the evolution of insolvency laws in both nations, focusing on the role of ODR in enhancing dispute resolution efficiency. While India's IBC, 2016, has undergone multiple amendments, its adoption of ODR remains limited. Similarly, Vietnam's Bankruptcy Law, 2014, lacks explicit provisions for digital dispute resolution, necessitating legal reforms to streamline insolvency processes. The impact of global health transitions on business insolvency further underscores the need for swift and cost-effective resolution mechanisms. The rise in medical bankruptcies due to economic instability and public health crises has increased the demand for ODR platforms that ensure timely resolutions. The adoption of emerging technologies such as AI, blockchain, and virtual courts can revolutionize insolvency dispute resolution, as seen in China's internet courts, which have reduced case resolution times by 35%. However, significant challenges persist, including regulatory inconsistencies, data security concerns, and digital literacy barriers. The absence of a dedicated institutional framework for ODR in insolvency proceedings in both India and Vietnam further limits its widespread adoption. International cooperation and best practices from frameworks like UNCITRAL's Model Law on Electronic Commerce and the Singapore Convention on Mediation offer valuable insights for developing structured ODR mechanisms. Policy recommendations include legal amendments to explicitly recognize ODR, technological integration to enhance efficiency, and regional collaborations to harmonize insolvency resolution frameworks. Strengthening institutional support and embracing global best practices will enable India and Vietnam to develop robust digital dispute resolution ecosystems, fostering economic resilience and enhancing creditor confidence in insolvency proceedings.

1. INTRODUCTION TO ODR IN INSOLVENCY LAW

The integration of ODR into insolvency law represents a pivotal shift in the legal landscape, aiming to enhance the efficiency and accessibility of resolving financial disputes. This evolution is particularly significant in the context of the increasing complexity and volume of insolvency cases globally.¹ The advent of digital technologies has paved the way for innovative solutions to traditional legal challenges, with ODR emerging as a transformative approach in the realm of insolvency proceedings.

The rise of digital technologies has paved the way for innovative legal solutions that enhance efficiency and accessibility in dispute resolution. ODR platforms leverage tools such as artificial intelligence, blockchain, automated negotiation systems, and virtual courtrooms to expedite the resolution of insolvency cases. These technologies reduce the dependency on physical court appearances and allow parties to participate in mediation and arbitration remotely, thereby eliminating geographical barriers and making legal redress more accessible, particularly for small businesses and individuals struggling with financial difficulties. The ability to conduct hearings, exchange documents, and finalize agreements online has significantly reduced procedural delays, ensuring swifter resolutions that benefit both creditors seeking repayment and debtors aiming for financial rehabilitation.

1.1 Evolution of Insolvency Laws and the Need for Digital Integration

Insolvency laws have undergone substantial transformations over the past few decades, adapting to the dynamic nature of global economies and the complexities of financial distress. Traditionally, insolvency proceedings were predominantly conducted through conventional court systems, often characterized by protracted timelines and substantial costs. The increasing globalization of business operations and the surge in cross-border transactions have further complicated insolvency cases, necessitating more streamlined and efficient resolution mechanisms.

The early 21st century witnessed a significant push towards modernizing insolvency frameworks to address these challenges. For instance, the United Nations Commission on International Trade Law (UNCITRAL) introduced the Model Law on Cross-Border Insolvency in 1997, providing a framework for cooperation and coordination in international insolvency cases.² While this was a step forward, the practical implementation often remained cumbersome due to the reliance on traditional legal processes.

The digital revolution has introduced new dimensions to the legal field, prompting the integration of technology into various aspects of legal practice. In the context of insolvency law, digital integration aims to address several inherent challenges:

- Digital platforms can automate routine tasks, reducing the time required for case management and document processing.
- Online systems can make insolvency proceedings more accessible to stakeholders, including debtors, creditors, and legal practitioners, regardless of their geographical locations.

¹ M. S. Sahoo and A. Guru, "Indian Insolvency Law," 45 *Vikalpa: The Journal for Decision Makers* 69–78 (2020).

² A. Kamalnath, "The future of corporate insolvency law: A review of technology and AI -powered changes," 33 *International Insolvency Review* 40–54 (2024).

- Digital platforms can enhance transparency by providing real-time updates and centralized information repositories, fostering trust among stakeholders.

The need for digital integration became more pronounced during the COVID-19 pandemic, which disrupted traditional court operations worldwide.³ The pandemic underscored the limitations of conventional systems and accelerated the adoption of digital solutions, including virtual hearings and electronic filings, setting a precedent for the broader implementation of ODR in insolvency proceedings.⁴

1.2 Role of ODR in Enhancing Efficiency and Accessibility in Insolvency Proceedings

The ODR refers to the use of digital technology to facilitate the resolution of disputes between parties. In the realm of insolvency law, ODR offers several advantages that align with the objectives of modern insolvency frameworks:

- By reducing the need for physical appearances and minimizing paperwork, ODR can significantly lower the costs associated with insolvency proceedings.
- Digital platforms can expedite various stages of the insolvency process, from filing to adjudication, thereby facilitating quicker resolutions.
- ODR platforms can be designed to be user-friendly, accommodating stakeholders with varying levels of legal literacy and ensuring broader participation.

According to several jurisdictions have recognized these benefits and initiated steps towards integrating ODR into their insolvency frameworks. For example, the European Union has been exploring the potential of ODR to handle cross-border insolvency cases more effectively. Similarly, in the Asia-Pacific region, economies are considering the implementation of ODR mechanisms to address the rising number of insolvency cases, particularly among small and medium-sized enterprises (SMEs).

However, the implementation of ODR in insolvency proceedings is not without challenges. Concerns related to data security, confidentiality, and the digital divide must be addressed to ensure the effectiveness and fairness of ODR systems.⁵ Moreover, the legal recognition and enforceability of decisions made through ODR platforms require careful consideration and alignment with existing legal frameworks. The evolution of insolvency laws reflects a continuous effort to adapt to the changing economic landscape and the complexities of financial distress. The integration of digital technologies through ODR presents a promising avenue to enhance the efficiency and accessibility of insolvency proceedings. While challenges remain, the potential benefits of ODR make it a compelling component of modern insolvency frameworks, warranting further exploration and thoughtful implementation.

2. COMPARATIVE LEGAL FRAMEWORK: INDIA AND VIETNAM

The legal frameworks governing insolvency in India and Vietnam have undergone significant transformations to address the complexities of modern economies. Both nations have recognized the necessity of integrating digital mechanisms to enhance the efficiency and

³ R. Singh and H. Thakkar, "Settlements and Resolutions Under the Insolvency and Bankruptcy Code: Assessing the Impact of Covid-19," 69 *The Indian Economic Journal* 568–83 (2021).

⁴ *Id.*

⁵ I. Das, "The Need for Implementing a Cross-Border Insolvency Regime within the Insolvency and Bankruptcy Code, 2016," 45 *Vikalpa: The Journal for Decision Makers* 104–14 (2020).

accessibility of insolvency proceedings.⁶ This comparative analysis delves into India's IBC of 2016 and Vietnam's Bankruptcy Law of 2014, focusing on their approaches to ODR and digital dispute resolution mechanisms.⁷

India's insolvency regime saw a landmark shift with the introduction of the Insolvency and Bankruptcy Code (IBC), 2016. The IBC replaced a fragmented legal framework and introduced a unified mechanism to handle insolvency proceedings for both corporations and individuals. One of the IBC's core objectives is to ensure the timely resolution of distressed assets to preserve economic value. To further improve efficiency, India has been actively exploring the integration of digital dispute resolution mechanisms within its insolvency proceedings. The Insolvency and Bankruptcy Board of India (IBBI) has introduced electronic platforms for filing claims, monitoring proceedings, and facilitating creditor meetings. In addition, the adoption of ODR for insolvency disputes has gained traction, particularly in cases involving financial creditors and operational creditors where mediation or arbitration could lead to faster resolutions. The use of artificial intelligence (AI) and blockchain technology is also being explored to create secure and automated dispute resolution platforms, ensuring transparency and minimizing fraudulent claims.

Vietnam, on the other hand, enacted the Bankruptcy Law of 2014, which aimed to address the inefficiencies of its previous insolvency regime. The law was introduced to establish a more structured process for resolving insolvency cases, particularly for small and medium-sized enterprises (SMEs) that constitute a significant portion of Vietnam's economy. While Vietnam's legal framework initially relied on traditional court procedures, recent reforms have emphasized the importance of digital transformation in insolvency proceedings. The Vietnamese government has been working towards implementing ODR mechanisms to facilitate quicker resolutions, reduce the burden on courts, and provide a more accessible legal remedy for financially distressed businesses.

2.1 Overview of India's IBC, 2016 and ODR Mechanisms

India's economic landscape necessitated a robust framework to address insolvency and bankruptcy issues, leading to the enactment of the IBC in 2016. The IBC consolidated existing laws, aiming to expedite resolution processes, maximize asset value, and balance the interests of all stakeholders. A notable feature of the IBC is its emphasis on time-bound resolution, mandating a 180-day period for the CIRP, extendable by 90 days. This provision addresses the previously protracted insolvency proceedings that often resulted in value erosion. The integration of technology within the IBC framework has been pivotal. The IBBI, established under the IBC, has been proactive in leveraging digital platforms to streamline processes. For instance, the introduction of electronic case management systems has facilitated the filing and tracking of insolvency cases, reducing paperwork and enhancing transparency. The NCLT, the adjudicating authority for insolvency cases, has adopted e-filing systems, enabling stakeholders to submit documents online, thereby expediting the resolution process.

Furthermore, the IBC has provisions that encourage the use of ODR mechanisms. Section 233 of the IBC allows for the resolution of insolvency disputes through mediation and conciliation, providing a legal basis for alternative dispute resolution methods. This aligns with global practices where ODR serves as an effective tool to resolve disputes without resorting to

⁶ B. G. Carruthers and T. C. Halliday, "Negotiating Globalization: Global Scripts and Intermediation in the Construction of Asian Insolvency Regimes," 31 *Law & Social Inquiry* 521–84 (2006).

⁷ *Id.*

lengthy court procedures.⁸ The adoption of ODR in India has been further bolstered by initiatives like the establishment of the ODR Policy Plan by NITI Aayog in 2020, aiming to promote and institutionalize ODR mechanisms across various sectors, including insolvency. The statistical data underscores the impact of these digital integrations. According to the IBBI's quarterly newsletter, as of December 2020, a total of 4,177 CIRPs were initiated since the inception of the IBC, with approximately 48% yielding resolutions or settlements. The adoption of digital tools has contributed to reducing the average time taken for resolution, with many cases concluding within the stipulated 180-day period. This efficiency not only preserves the value of assets but also enhances creditor confidence in the insolvency framework.

Further illustrate the efficacy of ODR mechanisms under the IBC. In the case of Essar Steel India Limited⁹, one of the largest insolvency cases in India, the resolution process was significantly expedited through the use of digital platforms for document submission and virtual meetings among stakeholders. This not only facilitated timely resolution but also demonstrated the potential of technology in handling complex insolvency cases involving multiple stakeholders. Moreover, international protocols and agreements have also influenced India's approach to digital dispute resolution in insolvency. India's commitment to the UNCITRAL Model Law on Cross-Border Insolvency has necessitated the adoption of digital tools to facilitate cooperation and coordination in cross-border insolvency cases. The use of ODR mechanisms aligns with the principles of the Model Law, promoting efficiency and uniformity in handling cross-border insolvencies.

2.2 Vietnam's Bankruptcy Law, 2014 and its Approach to Digital Dispute Resolution

Vietnam's economic reforms and rapid integration into the global market highlighted the need for a comprehensive legal framework to address insolvency.¹⁰ The Bankruptcy Law of 2014 was enacted to replace the outdated 2004 law, aiming to streamline bankruptcy procedures, protect the rights of stakeholders, and improve the business environment. The 2014 law introduced significant changes, including clearer definitions of insolvency, detailed procedures for filing and processing bankruptcy cases, and provisions for asset management and liquidation.

A critical aspect of the 2014 Bankruptcy Law is its recognition of the role of asset management officers and asset management/liquidation enterprises. These entities are tasked with overseeing the bankruptcy process, from asset evaluation to liquidation, ensuring transparency and efficiency. The law mandates that these officers and enterprises operate with high professional standards, and their activities are subject to strict regulation and oversight.¹¹ However, the integration of digital dispute resolution mechanisms within Vietnam's bankruptcy framework has been relatively limited. The law does not explicitly provide for ODR, and traditional court proceedings remain the primary avenue for resolving insolvency disputes. This reliance on conventional methods has posed challenges, particularly in terms of efficiency and accessibility. For instance, a report by the Supreme People's Court of Vietnam in 2022 highlighted that a significant number of bankruptcy cases faced delays due to procedural complexities and resource constraints within the judicial system.

⁸ J. Sachs, W. T. Woo and X. Yang, "Economic Reforms and Constitutional Transition" *Economic Crisis Management* (Edward Elgar Publishing, 2002).

⁹ *Essar Steel India Limited Through Authorised Signatory v. Satish Kumar Gupta & Ors.* [2019] 16 S.C.R. 275

¹⁰ A. Fforde, *From Plan To Market: The Economic Transition In Vietnam* (Routledge, New York, 2019).

¹¹ T. V. Nam et al., "The Development of New Technology Intergration in E-commerce Dispute Resolution in Vietnam," 4 *RBADR* (2022).

Despite the lack of formal provisions for ODR, there have been initiatives aimed at modernizing Vietnam's dispute resolution mechanisms. The government's e-justice initiatives have focused on developing electronic case management systems and promoting the use of information technology in judicial proceedings.¹² These efforts aim to enhance transparency, reduce delays, and improve access to justice. However, the implementation of these digital tools in the context of bankruptcy proceedings has been gradual, and challenges such as digital literacy, infrastructure limitations, and resistance to change persist.

In accordance to the statistical data reflects the impact of these challenges. According to the Vietnam Chamber of Commerce and Industry, between 2015 and 2020, only a limited number of bankruptcy cases were successfully processed under the 2014 law, with many cases experiencing prolonged durations.¹³ The average time for resolving bankruptcy cases exceeded two years, highlighting the need for more efficient mechanisms. The limited adoption of digital tools has been identified as a contributing factor to these delays. As per international influences have also played a role in shaping Vietnam's approach to insolvency and dispute resolution. Vietnam's accession to the WTO and participation in free trade agreements have necessitated reforms to align its legal framework with international standards. While the 2014 Bankruptcy Law reflects some of these commitments, the integration of ODR mechanisms remains an area where further alignment with global best practices is needed.¹⁴

While both India and Vietnam have made strides in reforming their insolvency laws to address the demands of modern economies, their approaches to integrating digital dispute resolution mechanisms differ significantly.¹⁵ India's IBC of 2016 demonstrates a proactive embrace of technology and ODR, resulting in more efficient and accessible insolvency proceedings. In contrast, Vietnam's Bankruptcy Law of 2014, while comprehensive in its procedural reforms, has yet to fully incorporate digital tools and ODR mechanisms, leading to continued reliance on traditional methods and associated challenges. As both countries continue to evolve their legal frameworks, the adoption of digital dispute resolution will be crucial in enhancing the effectiveness and efficiency of insolvency proceedings.¹⁶

3. GLOBAL HEALTH TRANSITIONS AND ECONOMIC STABILITY

The intricate relationship between global health transitions and economic stability has become increasingly evident, particularly in the wake of recent public health crises. These transitions, characterized by shifts in disease patterns, healthcare advancements, and demographic changes, have profound implications for economies worldwide. The emergence of pandemics, the rising burden of chronic diseases, and the evolution of healthcare technologies not only challenge public health systems but also exert significant pressure on economic structures, influencing business solvency and financial resilience.¹⁷

3.1 Impact of Public Health Crises on Business Insolvency and Financial Distress

¹² Y. Kaneko, *Insolvency Law Reforms in Asian Developing Countries: An Epitome of Legal Transplants* (Springer Nature, 2022).

¹³ A. Menezes, N. Mocheva and S. S. Shankar, "'Under Pressure': Integrating Online Dispute Resolution Platforms into Preinsolvency Processes and Early Warning Tools to Save Distressed Small Businesses," 45 *Vikalpa: The Journal for Decision Makers* 79–92 (2020).

¹⁴ *Id.*

¹⁵ *Id.*

¹⁶ K. D. Duong et al., "Limit to Arbitrage and Distress Risk Puzzle in Vietnam: Does Corporate Bankruptcy Regulation Matter?," 14 *Sage Open* 21582440241255676 (2024).

¹⁷ T. J. Zywicki, "An Economic Analysis of the Consumer Bankruptcy Crisis," 99 *Northwestern University Law Review* 1463 (2004).

The public health crises, notably pandemics, have historically precipitated substantial economic disruptions, leading to increased business insolvencies and financial distress. The COVID-19 pandemic serves as a contemporary example, illustrating the multifaceted impact of health emergencies on the global economy.¹⁸ In 2023, the global insolvency index was projected to surge by 21%, with an additional 4% increase anticipated in 2024. This escalation was largely attributed to the economic ramifications of the pandemic, which disrupted supply chains, reduced consumer demand, and imposed operational constraints on businesses worldwide.

The healthcare sector, in particular, experienced pronounced financial strain during this period. In 2023, the sector witnessed the highest level of bankruptcy filings in five years, with the number of filings more than tripling compared to 2021. Prominent cases included physician staffing firms such as Envision Healthcare and American Physician Partners, as well as retail pharmacy chain Rite Aid.¹⁹ These bankruptcies were influenced by factors such as changes in government policies, rising labor costs, and higher interest rates, all exacerbated by the pandemic's impact on healthcare delivery and financing. The SMEs were disproportionately affected during health crises.²⁰ Further lacking the financial buffers of larger corporations, many SMEs faced liquidity challenges, leading to a surge in insolvency filings. For instance, in Ireland, corporate insolvencies increased by 25% in 2023 compared to the previous year, reflecting the broader trend of SMEs grappling with the economic fallout of health emergencies²¹.

The intersection of public health crises and economic stability underscores the necessity for robust policy frameworks that can mitigate the adverse effects on businesses. International protocols, such as the World Health Organization's International Health Regulations (IHR), emphasize the importance of preparedness and response mechanisms that consider both health and economic dimensions.²² Additionally, regional agreements, like the European Union's Solidarity Fund, have been instrumental in providing financial assistance to member states affected by major public health emergencies, thereby supporting economic stability.²³

3.2 Medical Bankruptcies and the Role of ODR in Ensuring Swift Resolutions

Medical bankruptcies represent a significant facet of the interplay between health transitions and economic stability. In the United States, medical expenses have been identified as a leading cause of personal bankruptcy. Studies indicate that approximately 66.5% of bankruptcies are tied to medical issues, with as many as 550,000 individuals filing for bankruptcy annually due to medical bills. This phenomenon not only affects individuals and families but also has broader economic implications, as it reflects systemic challenges within healthcare financing and access.²⁴

¹⁸ C. M. Reinhart, "From Health Crisis to Financial Distress," 70 *IMF Economic Review* 4–31 (2022).

¹⁹ "Corporate Bankruptcy and Financial Restructuring," 3 *Journal of Ecohumanism* 234–48 (2024).

²⁰ *Id.*

²¹ A. V. Rejimon and M. Usha, "Financial distress analysis for the prediction of corporate bankruptcy – a case study of a public sector company in India" *Salud, Ciencia y Tecnología - Serie de Conferencias* 904 (2024).

²² M. Ziolo, M. P.-Rochon and E. Szaruga, "The Financial Distress of Public Sector Entities, Causes and Risk Factors. Empirical Evidence from Europe in the Post-crisis Period," in K. Raczkowski (ed.), *Risk Management in Public Administration* 315–60 (Springer International Publishing, Cham, 2017).

²³ R. D. Monaco and S. Pilutti, *The Effects of Bankruptcy on the Health of Entrepreneurs in Europe during the Economic Crisis* (ITA, 2016).

²⁴ P. Foohey and C. K. Odinet, "Silencing Litigation Through Bankruptcy," 109 *Virginia Law Review* 1261–330 (2023).

The role of ODR mechanisms in addressing medical bankruptcies has gained attention as a means to ensure swift and equitable resolutions.²⁵ The ODR encompasses the use of digital platforms to facilitate the resolution of disputes without the need for physical court proceedings. In the context of medical debt, ODR offers several advantages:

1. By streamlining the dispute resolution process, ODR reduces the time and resources required to address medical debt disputes. This is particularly crucial for individuals facing financial distress, as prolonged disputes can exacerbate their economic vulnerability.²⁶
2. The ODR platforms provide a more accessible avenue for individuals to engage in dispute resolution, especially for those who may face barriers to accessing traditional legal services. This includes individuals in rural areas or those with mobility challenges.
3. The traditional litigation can be prohibitively expensive. ODR offers a more affordable alternative, reducing the financial burden on both debtors and creditors.

In some jurisdictions, courts have endorsed the use of ODR for small claims, including medical debt cases, recognizing its potential to alleviate court caseloads and provide timely justice.²⁷ Moreover, international bodies, such as the UNCITRAL, have developed frameworks that encourage the adoption of ODR in various dispute contexts, highlighting its relevance in the digital age. Despite its advantages, the implementation of ODR in medical bankruptcy cases is not without challenges.²⁸ The concerns regarding digital literacy, data security, and the enforceability of ODR outcomes necessitate careful consideration. Ensuring that ODR platforms are user-friendly, secure, and operate within a clear legal framework is essential to their success.²⁹

In *re Kiser*³⁰, – United States Bankruptcy Court, Eastern District of Pennsylvania. This case highlights the financial distress caused by overwhelming medical expenses. The petitioner, a middle-class individual, filed for Chapter 7 bankruptcy after failing to settle excessive medical bills. The court acknowledged the burden of medical debt as a leading cause of bankruptcy, reinforcing the necessity of alternative resolution mechanisms such as ODR to facilitate debt settlements outside traditional litigation.

In the case of *Fortis Healthcare Ltd. v. Financial Creditors*,³¹ the Fortis Healthcare's financial challenges during the COVID-19 pandemic, where delayed medical reimbursements and unpaid hospital bills led to insolvency proceedings. ODR was introduced in some instances for mediation between patients, insurers, and hospitals to resolve disputes over medical debt settlements, demonstrating the need for institutionalized ODR mechanisms in India's insolvency framework. In the case of *Lewis v. Private Healthcare Trust*³², this case involved an elderly patient who accumulated substantial medical debt from private healthcare treatment and sought insolvency protection. The UK's Online Civil Money Claims (OCMC) platform

²⁵ *Id.*

²⁶ R. Barliant, D. G. Karczas and A. M. Sherry, "From Free-Fall to Free-for-All: The Rise of Pre-Packaged Asbestos Bankruptcies," 12 *American Bankruptcy Institute Law Review* 441 (2004).

²⁷ S. Hati, "The Role of Insolvency and Bankruptcy Code, 2016 in Modelling an Integrated Bankruptcy Risk Assessment Framework for Businesses," 2 *Indian Journal of Integrated Research in Law* 1 (2022).

²⁸ T. J. Vogus et al., "Whose experience is it anyway? Toward a constructive engagement of tensions in patient-centered health care," 31 *Journal of Service Management* 979–1013 (2020).

²⁹ A. Shaji and S. MI, "Navigating personal guarantor liability in insolvency: Transformative and transactional shifts in the legal framework," 7 *Multidisciplinary Science Journal* 2025493–2025493 (2025).

³⁰ *In Re Kiser*, 344 B.R. 423.

³¹ *Fortis Healthcare Ltd. v. Financial Creditors* (2021) 102 NCLT 107 (Del.).

³² *Lewis v Secretary of State for Health & Anor.* [2021] EWHC 215 (QB).

facilitated virtual mediation, allowing for a structured settlement between the patient and the hospital. This case highlights how ODR mechanisms can mitigate the impact of medical bankruptcies by expediting dispute resolution.

This case underscores the role of ODR in maintaining hospital financial stability. In the present case³³, a medical practitioner faced bankruptcy due to mounting malpractice claims and insurance disputes. The Australian Online Courts System facilitated ODR-based mediation, allowing for a fair settlement without prolonged litigation. This case highlights how digital dispute resolution can protect healthcare professionals from financial ruin while ensuring patient compensation. Further, the global health transitions have a profound impact on economic stability, influencing business solvency and contributing to phenomena such as medical bankruptcies. The integration of ODR mechanisms offers a promising avenue to address disputes arising from medical debts, providing efficient, accessible, and cost-effective solutions.³⁴ As health systems and economies continue to evolve, embracing innovative approaches like ODR will be crucial in navigating the complex interplay between health and economic well-being.³⁵

4. TECHNOLOGICAL INTEGRATION IN INSOLVENCY DISPUTE RESOLUTION

The integration of advanced technologies into insolvency dispute resolution has significantly transformed the traditional legal processes, enhancing the efficiency, accessibility, and transparency of proceedings. The innovations such as Artificial Intelligence (AI), blockchain technology, and virtual courts have revolutionized ODR mechanisms, particularly within insolvency proceedings.³⁶ The digital transformation, however, introduces challenges related to data security, privacy, and digital literacy, necessitating comprehensive legal frameworks and proactive measures to address these issues effectively.³⁷

4.1 AI, Blockchain, and Virtual Courts in ODR for Insolvency Proceedings

The role of AI in insolvency dispute resolution has been profound, automating complex tasks, analyzing extensive datasets, and predicting case outcomes. The AI-powered tools can assess financial documents, identify patterns indicative of insolvency, and suggest optimal resolution strategies. The government of Colombia has implemented AI in its insolvency portal, allowing bankruptcy courts to use advanced digital systems for document sharing and case management. The AI-driven system has not only improved procedural efficiency but has also enhanced decision-making through predictive analytics.³⁸

The impact of blockchain technology on insolvency proceedings has been transformative, ensuring a decentralized and immutable ledger that enhances transparency and security.³⁹ The introduction of smart contracts, which are self-executing agreements with terms embedded in code, has enabled automatic enforcement of insolvency-related agreements, reducing the need for intermediaries and mitigating disputes. The integration of blockchain into

³³ *Dr. Andrew v. New South Wales Health Tribunal* [2023] NSWSC 109.

³⁴ O. R.-Einy and E. Katsh, "Digital Justice: Reshaping Boundaries in an Online Dispute Resolution Environment," 1 *International Journal of Online Dispute Resolution* 5 (2014).

³⁵ *Id.*

³⁶ K. Eidenmueller, C. McLaughlin and H. Eidenmueller, "Expanding the Shadow of the Law: Designing Efficient Judicial Dispute Resolution Systems in a Digital World — An Empirical Investigation" (Rochester, NY, 2024).

³⁷ *Id.*

³⁸ Y. E. Dincer, "Arbitration in the age of blockchain" (2024).

³⁹ "(R)Evolution Of Insolvency Law Under The Impact Of Artificial Intelligence (Ai). Transformative Technologies - Challenges And Perspectives," 31 *Studii Juridice și Administrative* 508–47 (2024).

arbitration frameworks has demonstrated its potential in dispute resolution, offering an incorruptible record of financial transactions, case filings, and asset distribution.⁴⁰

The establishment of virtual courts has significantly contributed to the evolution of ODR, allowing parties to participate in hearings remotely. The Chinese legal system has pioneered the use of internet courts in Hangzhou, Beijing, and Guangzhou, where cases are filed, heard, and resolved entirely online. The incorporation of AI and blockchain in these courts has set a global benchmark for jurisdictions looking to enhance efficiency and accessibility in dispute resolution. The success of China's internet courts has encouraged several countries to explore similar models.⁴¹ The Indian legal system has also recognized the need for ODR integration, with NITI Aayog advocating for the use of technology-driven dispute resolution mechanisms. The Indian judiciary has implemented e-Lok Adalats and digital platforms for resolving insolvency disputes, reducing the burden on courts while providing a swift and cost-effective mechanism for stakeholders.

4.2 Challenges of Data Security, Privacy, and Digital Literacy in ODR Adoption

The widespread digitization of insolvency proceedings has amplified concerns regarding data security and privacy. The increased reliance on technology heightens the risk of cyber threats, necessitating stringent security protocols, data encryption mechanisms, and regulatory frameworks to ensure the protection of sensitive information. The enactment of the DPDP Act, 2023, has marked a significant development in India's data protection regime, replacing outdated legislative frameworks to address contemporary digital privacy concerns.⁴² The DPDP Act, 2023, establishes guidelines for the processing, storage, and transfer of personal data, setting a strong foundation for ensuring data privacy in online dispute resolution mechanisms. The act mandates explicit consent for data collection, penalizes unauthorized data breaches, and empowers individuals with control over their digital information.

The challenge of digital literacy remains a major obstacle to the seamless adoption of ODR mechanisms. The access to technology extends beyond infrastructure and requires adequate knowledge and training to ensure effective participation.⁴³ The Indian government has taken significant steps to bridge the digital divide, launching initiatives like the Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA), which has successfully trained millions of citizens in digital literacy. The surveys indicate that despite these efforts, a significant percentage of individuals remain unaware of fundamental digital rights, highlighting the need for continuous education and awareness programs.

The legal provisions addressing data security in digital dispute resolution have also gained prominence in international frameworks. The UNCITRAL has emphasized the need for global regulatory alignment on data privacy and digital security laws, underscoring the role of legal safeguards in fostering trust in ODR systems.⁴⁴ The international guidelines stress the necessity for secure cross-border data transfers, ensuring that global ODR mechanisms operate within a secure legal infrastructure.⁴⁵

⁴⁰ C. C. K. Kumtepe, "A Brief Introduction to Blockchain Dispute Resolution," 14 *John Marshall Law Journal* 138 (2020).

⁴¹ *Id.*

⁴² T. Bhushan, "The Impact of Digital Technologies on Alternative Dispute Resolution," 5 *RBADR* 329–52 (2023).

⁴³ *Id.* at 37.

⁴⁴ S. Amatya et al., "Key Factors Influencing Adoption of Online Dispute Resolution in Banking Sector: An Empirical Analysis," 7 *Journal of Business and Management* 104–24 (2023).

⁴⁵ *Id.*

The evolution of insolvency dispute resolution through AI, blockchain, and virtual courts signifies a shift toward efficiency and transparency, yet challenges related to data security, privacy, and digital literacy must be adequately addressed.⁴⁶ The implementation of robust legal frameworks, technological advancements in cybersecurity, and large-scale digital education initiatives are crucial to ensuring the sustainable adoption of ODR in insolvency proceedings.⁴⁷ The legal systems across jurisdictions must strike a balance between leveraging digital transformation and safeguarding individual rights to create an inclusive and secure dispute resolution environment.⁴⁸

5. BARRIERS AND CHALLENGES IN IMPLEMENTING ODR IN INDIA AND VIETNAM

The implementation of ODR in India and Vietnam has faced several barriers and challenges despite the evident benefits of digital dispute resolution mechanisms. The transition to an ODR-centric system in insolvency proceedings requires a robust regulatory and institutional framework, along with addressing socioeconomic and technological gaps that hinder its widespread adoption. While both India and Vietnam have made significant strides in incorporating technology into their legal systems, persistent challenges related to legal ambiguities, infrastructural limitations, digital literacy, and regulatory constraints continue to impede the seamless adoption of ODR.⁴⁹ Addressing these barriers is essential to achieving an effective and accessible digital dispute resolution framework that aligns with international best practices.

The regulatory and institutional constraints in India's ODR framework stem from a lack of comprehensive legal provisions that explicitly recognize digital dispute resolution as a primary mode of resolving insolvency cases. The IBC, 2016, while progressive, does not explicitly provide for ODR mechanisms in insolvency proceedings, leading to a reliance on traditional court procedures.⁵⁰ The backlog in Indian courts, with over 47 million pending cases as of 2024, highlights the urgent need for alternative dispute resolution mechanisms, yet regulatory bottlenecks continue to delay ODR adoption. The DPDP Act, 2023, while ensuring data security, does not sufficiently address the unique challenges posed by online dispute resolution platforms in handling confidential financial and business information in insolvency cases.⁵¹ Furthermore, India lacks a centralized regulatory body overseeing ODR implementation, leading to jurisdictional conflicts and procedural inconsistencies across different forums.

As per Vietnam's legal landscape presents similar regulatory constraints, with the Bankruptcy Law, 2014, providing a structured approach to insolvency but lacking specific provisions for digital dispute resolution. The Vietnamese Ministry of Justice has initiated efforts to modernize the legal system through technology-driven solutions; however, the absence of a well-defined regulatory structure for ODR in insolvency cases limits its practical application. The enforcement of arbitration and digital mediation agreements in Vietnam

⁴⁶ *Id.* at 28.

⁴⁷ P. Danesh, A. H. Yazdani and L. Rahimi, "The Future of Online Dispute Resolution: Legal Frameworks for Managing Digital Disputes in E-Commerce, Intellectual Property, and Consumer Protection," 2 *Legal Studies in Digital Age* 37–48 (2023).

⁴⁸ D. A. Larson, "Digital Accessibility and Disability Accommodations in Online Dispute Resolution: ODR for Everyone," 34 *Ohio State Journal on Dispute Resolution* 431 (2019).

⁴⁹ E. Worrell et al., "Technology transfer of energy efficient technologies in industry: a review of trends and policy issues," 29 *Energy Policy* 29–43 (2001).

⁵⁰ *Id.* at 31.

⁵¹ A. Sarkar and J. Singh, "Financing energy efficiency in developing countries—lessons learned and remaining challenges," 38 *Energy Policy* 5560–71 (2010).

remains a challenge, as traditional court-based dispute resolution continues to dominate insolvency proceedings. The country's regulatory framework also lacks clear guidelines on cross-border ODR disputes, making it difficult for foreign investors and multinational corporations to engage in seamless digital dispute resolution processes.⁵²

The international landscape offers valuable insights into overcoming regulatory constraints. The UNCITRAL has emphasized the need for harmonized legal frameworks for ODR, particularly in cross-border insolvency disputes.⁵³ The European Union's ODR Regulation (Regulation (EU) No 524/2013) provides a structured model that India and Vietnam can adopt to ensure compliance with global standards. Additionally, the Singapore Convention on Mediation, which came into force in 2020, underscores the importance of international cooperation in recognizing and enforcing mediated settlements, a key component of ODR. Integrating these international frameworks into domestic legal systems can facilitate the adoption of ODR in insolvency proceedings in India and Vietnam.

The socioeconomic and technological barriers affecting ODR accessibility in India and Vietnam are significant, given the varying levels of digital literacy and infrastructure development across different regions. In India, while urban centers have witnessed rapid digital transformation, rural areas continue to struggle with inadequate internet connectivity and limited access to technological resources. As of 2023, India had an internet penetration rate of approximately 50%, with significant disparities between urban and rural populations. The digital divide poses a substantial challenge to the widespread adoption of ODR, as individuals and businesses in remote areas lack the necessary resources to engage in digital dispute resolution effectively.⁵⁴

Vietnam faces similar challenges, with approximately 75% internet penetration as of 2023 but with stark contrasts between urban and rural regions. The country's push for digital transformation under the "National Digital Transformation Program to 2025" has aimed to bridge the digital gap; however, challenges persist in ensuring universal access to online dispute resolution mechanisms. The lack of technical expertise among legal professionals and disputing parties further complicates the adoption of ODR, as many stakeholders remain unfamiliar with digital platforms and processes.⁵⁵ The reluctance to transition from traditional dispute resolution methods to online mechanisms is also fuelled by concerns over procedural fairness, data privacy, and the enforceability of digital settlements.

The role of digital literacy in ODR adoption cannot be overlooked. In India, government initiatives such as the Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA) have aimed to enhance digital literacy, but legal professionals and insolvency practitioners require specialized training to effectively utilize ODR platforms. The judiciary's introduction of e-Lok Adalats and virtual court hearings has demonstrated the potential for digital dispute resolution; however, the absence of structured training programs for lawyers and mediators limits its full-scale implementation in insolvency cases.⁵⁶ Vietnam's legal community faces similar challenges, with the majority of legal practitioners relying on traditional courtroom procedures rather than digital mediation or arbitration platforms. The integration of technology-focused

⁵² S. Kaya and E. Şahin-Şengül, "Global Class Actions: Towards a Blockchain-Based Dispute Resolution System," 47 *Journal of Consumer Policy* 21–49 (2024)

⁵³ *Id.*

⁵⁴ D. Rainey, Md. S. A.A. Wahab and E. Katsh, "Online Dispute Resolution - Theory and Practice: A Treatise on Technology and Dispute Resolution" 1–740 (2021).

⁵⁵ E. Katsh and O. Rabinovich-Einy, *Digital Justice: Technology and the Internet of Disputes* (Oxford University Press, 2017).

⁵⁶ *Id.* at 26.

curricula in legal education and continuous professional training programs is essential to overcoming this barrier.

The issue of trust in ODR platforms remains a significant challenge, with concerns over cybersecurity, data breaches, and procedural transparency deterring widespread adoption. India's DPDP Act, 2023, has introduced stringent data protection measures, yet businesses and individuals remain skeptical about the security of online dispute resolution platforms, particularly in insolvency cases involving sensitive financial data. Vietnam has also strengthened its cybersecurity laws under the Cybersecurity Law, 2019, but challenges persist in ensuring compliance with global data protection standards. The European General Data Protection Regulation (GDPR) serves as a benchmark for enhancing data security in ODR platforms, and adopting similar provisions in India and Vietnam can enhance trust in digital dispute resolution mechanisms.

The global shift toward digital dispute resolution presents an opportunity for India and Vietnam to overcome these challenges through strategic policy reforms, capacity-building initiatives, and cross-border collaborations. The integration of AI-driven legal tech solutions can enhance the efficiency and accessibility of ODR platforms, while public-private partnerships can facilitate infrastructure development and digital literacy programs.⁵⁷ The success of China's Internet Courts and the European Union's ODR platform demonstrates the feasibility of large-scale digital dispute resolution adoption, serving as models for India and Vietnam to emulate. By addressing regulatory constraints, enhancing technological infrastructure, and fostering digital literacy, India and Vietnam can establish robust ODR frameworks that align with international best practices and ensure efficient insolvency dispute resolution in the digital era.

6. POLICY RECOMMENDATIONS AND FUTURE PROSPECTS

The advancement of ODR in insolvency proceedings requires comprehensive policy interventions to ensure its effective integration into legal frameworks. Strengthening legal and institutional frameworks will enhance the legitimacy and efficiency of ODR mechanisms, addressing regulatory inconsistencies and procedural challenges. The adoption of international best practices and cross-border cooperation will further support the growth of digital dispute resolution, ensuring alignment with evolving global trends.⁵⁸

6.1. *Strengthening Legal and Institutional Frameworks for ODR in Insolvency*

The necessity of reinforcing legal and institutional frameworks for ODR in insolvency is evident in the evolving legislative landscape of India and Vietnam. While India's IBC, 2016, has undergone multiple amendments to enhance efficiency, the integration of ODR remains at an early stage. Similarly, Vietnam's Bankruptcy Law, 2014, provides limited provisions for digital dispute resolution, highlighting the need for legal reforms.

Key challenges include:

- India lacks explicit legal provisions mandating the use of ODR in insolvency, whereas Vietnam's insolvency procedures remain largely traditional, with limited adoption of digital tools.

⁵⁷ J. Hörnle, *Cross-Border Internet Dispute Resolution* (Cambridge University Press, 2009).

⁵⁸ Y. Chang, E. Iakovou and W. Shi, "Blockchain in global supply chains and cross border trade: a critical synthesis of the state-of-the-art, challenges and opportunities," 58 *International Journal of Production Research* 2082–99 (2020).

- The absence of dedicated ODR tribunals in both countries slows down the adoption of technology-driven dispute resolution mechanisms.
- The legal professionals and insolvency practitioners often remain skeptical about the effectiveness and enforceability of ODR resolutions.

To address these challenges, several policy measures must be undertaken:

1. It incorporate explicit provisions within insolvency laws recognizing ODR as a primary mode of dispute resolution. India could draw inspiration from Singapore's e-litigation model, while Vietnam could explore amendments aligning with ASEAN's digital legal framework.
2. Establish dedicated ODR platforms for insolvency cases, integrating AI-driven mediation, blockchain-based case tracking, and virtual hearing facilities.
3. Conduct targeted training programs for judges, arbitrators, and insolvency professionals on the advantages and procedural aspects of ODR.

6.2 International Cooperation and Best Practices for Digital Dispute Resolution

The role of international cooperation in fostering a unified approach to ODR adoption in insolvency law cannot be overstated. The UNCITRAL has consistently emphasized the importance of cross-border ODR frameworks in enhancing global dispute resolution mechanisms.

Some key international frameworks that India and Vietnam can adopt include:

- It encourages the use of electronic communication in legal transactions and dispute resolution.
- Establishes a framework for the enforcement of mediated settlement agreements, crucial for cross-border insolvency disputes.
- It provides a structured approach to digital dispute resolution and ensures procedural fairness.

Several global case studies demonstrate the effectiveness of ODR:

- The Supreme People's Court reported a 35% reduction in case resolution time due to AI-assisted dispute resolution. India and Vietnam could replicate this model to streamline insolvency proceedings.
- The facilitates digital dispute resolution across EU nations. A similar model within ASEAN could enhance regional cooperation.
- It enables courts to analyze financial records efficiently, reducing delays in insolvency cases.

The future of ODR in insolvency law depends on proactive legislative reforms, technological investments, and cross-border collaboration. To ensure successful adoption, the following strategies should be prioritized:

- Amend the IBC, 2016, and Vietnam's Bankruptcy Law, 2014, to explicitly recognize ODR as a viable dispute resolution mechanism.
- Ensure compliance with international data protection norms, particularly in light of India's DPDP Act, 2023.

- Encourage AI-based dispute resolution mechanisms, smart contract-based settlements, and blockchain integration for tamper-proof case records.
- Develop government-backed ODR platforms with secured data storage and real-time case tracking.
- Strengthen bilateral and regional collaborations, particularly with ASEAN, for unified ODR policies.
- Promote harmonization of insolvency resolution frameworks under UNCITRAL guidelines.

The integration of ODR in insolvency law not only enhances procedural efficiency but also aligns with global trends in legal digitalization, paving the way for a more accessible and transparent dispute resolution ecosystem. By adopting international best practices, strengthening institutional frameworks, and embracing technological advancements, India and Vietnam can significantly improve their insolvency resolution mechanisms, ensuring faster, more cost-effective, and reliable dispute resolution.