

Technology-Mediated Dispute Resolution: Challenges and Opportunities

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Introduction

The rise of information technology has transformed dispute resolution, enabling parties to resolve conflicts regardless of their geographical locations or the origin of the dispute. This innovation, referred to as "Technology-Mediated Dispute Resolution" (TMDR), leverages digital tools and web-based platforms to facilitate dispute resolution processes. TMDR primarily relies on a range of online communication tools such as emails, chat platforms, video conferencing, tele immersion, and other electronic communication devices like telephones. These methods are applied across various dispute types, including internet domain name disputes, consumer conflicts, commercial issues, family matters, peacebuilding, and justice administration.

This article provides a comprehensive overview of TMDR, discussing the mechanisms used, the advantages and challenges it presents, and the development of TMDR initiatives globally. It concludes by exploring potential challenges and suggesting measures to maximize the benefits of TMDR in dispute resolution.

TMDR Mechanisms

Online Negotiation

Negotiation is a dispute resolution method involving direct communication between parties to reach a mutually acceptable agreement without third-party intervention. In TMDR negotiation, technology facilitates communication, enabling parties to resolve disputes independently. TMDR negotiations are categorized into **automated negotiation** and **assisted negotiation**.

Automated Negotiation

Automated negotiation uses specialized software to aid parties in settling disputes. A common approach is "blind bidding," where participants agree to adhere to any settlement determined by the procedure. They propose monetary figures in secret, which a computer program compares. If the figures fall within a predefined range (e.g., 5–30%), the system calculates a settlement as the average of the proposals. If not, the process continues until a resolution is achieved or the time limit expires. This method is ideal for disputes centered on monetary settlements.

Assisted Negotiation

Assisted negotiation employs communication technologies to support direct interaction between parties without automation. Participants use tools like video conferencing, web platforms, or telephones to facilitate discussions and reach agreements.

Online Mediation

Online mediation mirrors traditional mediation but is conducted virtually. A neutral third party, without authority to impose decisions, helps disputing parties reach an amicable settlement. Communication between all parties occurs through digital

platforms, often eliminating the need for physical meetings.

Online Arbitration

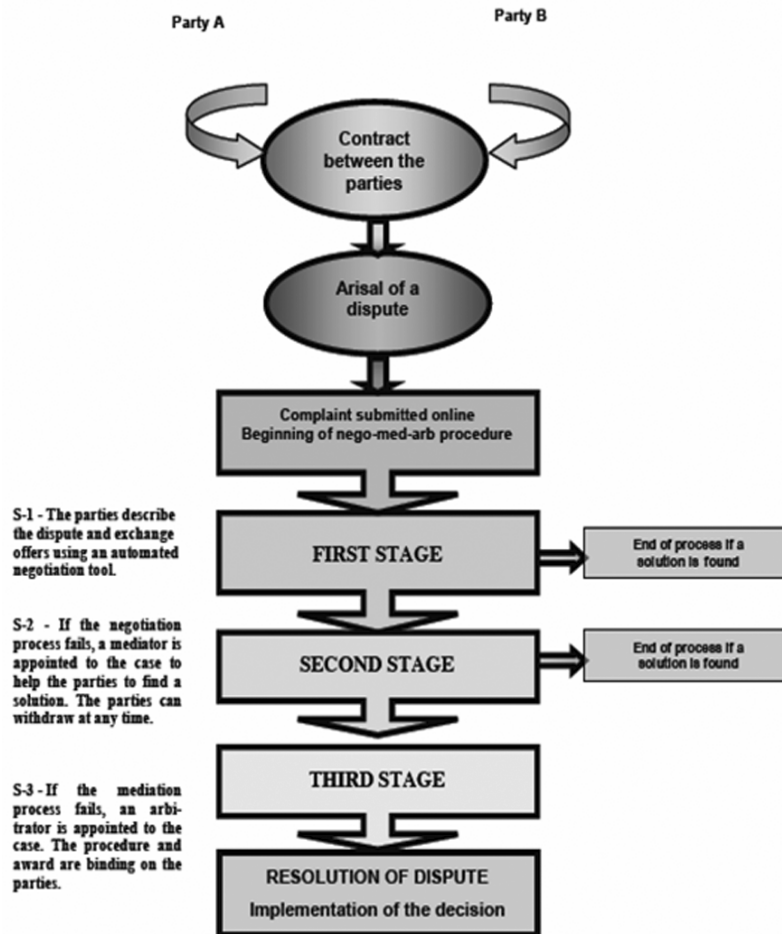
Online arbitration operates similarly to traditional arbitration but leverages digital technologies. Arbitrators are appointed electronically, and the submission of evidence, presentation of arguments, and delivery of the arbitral award are conducted online.

Hybrid Processes

In some cases, multiple dispute resolution mechanisms are combined to form a hybrid TMDR approach. For instance, parties may begin with online negotiation; if unsuccessful, they proceed to online mediation. Should mediation fail, the process escalates to online arbitration. This step-by-step approach ensures comprehensive conflict resolution. An arbitrator is appointed to resolve the dispute and any award reached through the procedure is binding on the parties (see Figure 1).

Online Case Appraisal

Illustration of an online dispute resolution process combining negotiation, mediation and arbitration



This TMDR method involves a neutral third party using a web-based platform to review a dispute and provide advice regarding the facts, applicable laws, and potential outcomes.

Online Complaint Handling

This mechanism allows a party to file a complaint with a third party, who then communicates a demand for resolution to the respondent. The complaint is typically resolved through other online dispute resolution methods, such as facilitated negotiation or online mediation. This process is commonly used for resolving online consumer disputes.

Online Mock Juries

Online mock juries involve gathering a group of potential jurors via an online platform to assess a case and deliver a non-binding decision based on the evidence and arguments presented by the parties.

Online Courts

Also referred to as "cyber courts," "electronic courts," or "virtual courts," these are traditional judicial bodies that utilize advanced communication technologies to conduct proceedings in a virtual environment. Online courts go beyond merely accepting electronic submissions of documents or evidence; they conduct the entire judicial process digitally. While many courts in developed countries now support electronic filing and evidence transmission, only those conducting proceedings entirely online are considered true online courts.

Benefits and Challenges of TMDR

Benefits

E-commerce Support

TMDR significantly contributes to the success of e-commerce by providing a framework to address disputes arising in online marketplaces. It enables efficient resolution of cross-border consumer conflicts, addressing challenges such as language and cultural differences, high costs of litigation, jurisdictional issues, and enforcement of judgments. By ensuring accessible and timely redress mechanisms, TMDR builds consumer trust, which is vital for the growth of online commerce.

Reduced Costs

TMDR minimizes traditional dispute resolution expenses, such as travel and logistical costs, as it eliminates the need for physical presence. This makes it particularly suitable for individuals unable to travel or for resolving low-value e-commerce disputes. Additionally, TMDR infrastructures are cost-effective to establish and maintain compared to creating new physical court systems.

Convenience

TMDR offers flexible communication options, allowing parties to select methods best suited to their financial resources, location, and schedules. It overcomes geographical barriers associated with traditional dispute resolution, enabling participants to resolve conflicts without leaving their locations and at a time convenient for them.

Benefits of TMDR

Access to Justice and Improved Justice Delivery

TMDR significantly enhances access to justice, especially for individuals in remote areas, those confined to prison, or those with physical disabilities. By avoiding jurisdictional and technical complexities inherent in traditional systems, TMDR promotes trans-border justice. Advanced technologies, such as web conferencing and automated transcription, improve judicial processes by streamlining evidence presentation, making it comprehensible, retrievable, and accurate. These advancements improve the overall delivery of justice.

Speed and Efficiency

TMDR's reliance on electronic communication accelerates dispute resolution by reducing delays in information exchange, enhancing time savings, and increasing procedural efficiency.

Minimal Physical Contact and Equality of Parties

By reducing physical interaction, TMDR is ideal for cases involving potential physical violence or emotional distress, such as matrimonial disputes. It eliminates scenarios where one party might intimidate or overpower another, providing a fairer platform for vulnerable individuals. Additionally, TMDR minimizes biases often observed in traditional dispute forums, such as those favoring more articulate or physically attractive individuals.

Access to Expertise

TMDR mechanisms provide global access to expert mediators and arbitrators, offering parties a wider pool of skilled professionals to choose from, thus improving satisfaction with dispute outcomes.

Challenges of TMDR

Loss of Human Contact

The absence of physical interaction in TMDR proceedings can depersonalize the dispute resolution process, reducing trust and potentially affecting outcomes. Non-verbal cues, such as body language and eye contact, are often critical in dispute resolution but are diminished in online formats. While advanced technologies, like tele immersion, aim to mitigate this, they cannot entirely replace the nuances of in-person communication.

Substitution of Human Systems

Reliance on computer technologies in dispute resolution risks dehumanizing justice. Transferring key decision-making roles to automated systems undermines the interpretative nature of law, as computer programs operate within closed systems, while legal disputes often require open-ended reasoning.

Data Protection and Confidentiality Issues

TMDR faces challenges in safeguarding sensitive information. Online platforms are vulnerable to unauthorized access, data tampering, and identity misrepresentation, which can undermine trust and the integrity of the process.

Sustainability of Virtual Agreements

Agreements reached in virtual environments may not always be practical or

sustainable in real-life scenarios. To ensure durability, it is recommended that parties temporarily leave the virtual setting to test the agreement's feasibility in real-world conditions.

Technological Inequalities

Not all parties possess equal proficiency in using digital tools or access to high-speed internet, creating an imbalance. Those with superior IT skills or equipment may dominate proceedings, disadvantaging less technologically adept participants.

Threats to Information Infrastructure

Online systems are susceptible to malicious attacks, viruses, and technical malfunctions, risking data loss or disruption. These threats necessitate robust backup systems and contingency plans to maintain continuity in dispute resolution.

Environmental Factors Affecting TMDR

Digital image and voice transmissions from casual or home environments often lack the formality of traditional judicial settings, potentially reducing participants' seriousness during online judicial proceedings. Concerns include whether oaths are properly administered and the authenticity of witness testimonies. To address this, experts suggest witnesses provide testimony from local courts, enabling proper oath administration and ensuring liability for perjury. This approach preserves the ceremonial aspect of court proceedings.

Global Applications of TMDR

United States

The U.S. Federal Rules of Civil Procedure allow video conferencing in civil trials. TMDR is also used in criminal cases. The Courtroom 21 Project exemplifies the integration of advanced technology into dispute resolution, creating one of the most technologically advanced courtrooms in the world.

United Kingdom

The UK has embraced TMDR with initiatives like the Money Claim Online Pilot Program, which enables online resolution of small claims since 2002.

Australia

Australian courts utilize video conferencing for native title hearings involving Aboriginal communities in remote areas. This reduces travel costs and speeds up dispute resolution.

Poland

Poland integrates IT solutions such as digital court reporting and speech recognition in judicial proceedings. Electronic filing of court processes is also permitted.

Brazil

The "Justiça Sobre Rodas" (Justice on Wheels) program in Santo Spirito employs mobile courts and AI to resolve accident cases at the scene, significantly reducing case resolution times.

India

India's Information Technology Act of 2000 supports TMDR. The Supreme Court has upheld the use of video conferencing for evidence collection and remote arbitration meetings, emphasizing efficiency and convenience.

Sri Lanka

TMDR has been applied in peacebuilding efforts. For example, the INFO SHARE initiative provided a secure platform for dialogue between conflicting parties during the Sri Lankan conflict.

TMDR in Pakistan: Opportunities and Challenges

TMDR (Technological and Managerial Dispute Resolution) involves leveraging technology and managerial strategies to resolve disputes effectively, often in construction, infrastructure, or other complex industries. In Pakistan, the application of TMDR can be beneficial in addressing disputes across various sectors, especially in areas where traditional legal processes are time-consuming and expensive. Here's an overview of how TMDR could be applied in Pakistan:

1. Construction and Infrastructure Sector

The construction industry in Pakistan often faces disputes related to delays, cost overruns, and contract management. TMDR tools and strategies could include:

- **Digital Contract Management Systems:** Using software like FIDIC-based contract management tools to ensure clarity in agreements and real-time monitoring.
- **Building Information Modeling (BIM):** Facilitating transparency and resolving design-related disputes early in the project lifecycle.
- **Dispute Adjudication Boards (DABs) with Online Dispute Resolution (ODR):** Enabling experts to resolve issues remotely.

2. Information Technology and E-Governance

Pakistan's burgeoning IT sector can adopt TMDR in:

- **E-Governance Platforms:** Streamlining government processes to reduce administrative disputes.
- **Online Dispute Resolution (ODR) Platforms:** Resolving conflicts in e-commerce and other digital businesses.

3. Energy and Power Projects

In large-scale energy projects (CPEC, renewable energy), disputes over performance and resource allocation are common:

- **Performance Monitoring Systems:** IoT and SCADA systems to monitor project progress and address disputes in real-time.
- **Data-Driven Decision-Making:** Using predictive analytics to preempt disputes.

4. Legal and Judicial Reforms

Pakistan's judiciary can incorporate TMDR in:

- **Case Management Software:** Reducing court backlogs by enabling better tracking and categorization of cases.
- **Mediation Platforms:** Encouraging out-of-court settlements using technology.

Challenges in Implementation

- **Awareness and Training:** Lack of awareness among stakeholders about TMDR tools.
- **Infrastructure:** Limited access to advanced technological infrastructure in remote areas.
- **Cultural Resistance:** Resistance to adopting non-traditional dispute resolution mechanisms.
- **Legal Framework:** Absence of specific regulations supporting TMDR, especially for cross-border disputes.

Policy Recommendations

- Encourage private-public partnerships to introduce TMDR platforms.
- Invest in training programs for professionals in the legal, managerial, and technical domains.
- Create a regulatory framework recognizing digital and managerial tools for dispute resolution.
- Promote success stories to build trust in TMDR solutions.

In Pakistan, TMDR can revolutionize how disputes are managed, fostering a more efficient and business-friendly environment, particularly in sectors critical to the country's economic growth.

Digital Divide

Although Pakistan boasts Asia's second largest internet and telecom subscriber base, only 28.3% of its population uses the internet. Poor broadband penetration and low IT awareness exacerbate the digital divide.

Infrastructural Challenges

Erratic power supply increases costs and limits ICT infrastructure, hindering TMDR adoption.

Resistance to Change

Many Pakistanis lack basic IT skills, and institutions continue relying on manual processes. Courts, for example, often record proceedings by hand, delaying justice delivery. Resistance stems from fears of job losses and lack of ICT integration in public services.

To address these issues, professionals and institutions must embrace ICT adoption, fostering familiarity with systems and encouraging their use in both legal and alternative dispute resolution forums.

Legal Challenges to TMDR in Pakistan

Absence of a Comprehensive Legal Framework

Pakistan lacks robust legislation to regulate the use of ICTs in commercial transactions and dispute resolution. Most existing laws predate the digital revolution and fail to address emerging challenges. **Cyber Insecurity**

Pakistan ranks high globally in cybercrime, undermining trust in online systems.

Poor cybersecurity laws and institutional capacity exacerbate the issue, discouraging the use of TMDR platforms for sensitive activities like dispute resolution.

Global distrust, amplified by Pakistan's reputation as a hub for internet fraud, has made foreign entities cautious of engaging in online transactions with Pakistani parties.

Strategies for Creating an Enabling Environment

1. Infrastructure Development

- Improve foundational systems such as power supply and affordable telecommunications networks.
- Explore mobile-based TMDR services, as mobile phones are more accessible than PCs in rural Pakistan (e.g., the Philippines' SMS-based dispute resolution).

2. Promoting Awareness and Trust

- Governments should spearhead public awareness campaigns to highlight the benefits and reliability of TMDR systems.
- Positive legislative and judicial actions, such as expanding interpretations of laws like the *Arbitration and Conciliation Act*, can bolster confidence in electronic agreements and proceedings.

3. Institutionalisation of TMDR

- Establish a central regulatory body to:
 - Set minimum standards for TMDR proceedings (e.g., impartiality and transparency).
 - Maintain a certified database of TMDR providers.
 - Monitor and penalize fraudulent platforms.
- Integrate TMDR into the *multi-door court system*, offering disputants various online and offline ADR mechanisms.

4. Regulatory Support for Consumer Protection

- Encourage TMDR-facilitated ADR services to address consumer disputes arising from e-commerce and digital transactions.
- Ensure these services are secure, efficient, and trustworthy to enhance consumer confidence.

Benefits of TMDR Development

1. Judicial Efficiency

- Reduces reliance on manual processes, such as filing and record-keeping, improving service delivery.

- Facilitates tracking and retrieval of case records, minimizing delays and corruption.

2. **ADR and Consumer Confidence**

- TMDR-enabled ADR can resolve consumer disputes efficiently, boosting trust in online banking, commerce, and payments.
- ADR service providers stand to gain increased patronage by offering secure TMDR platforms.

Concluding Remarks

Despite its challenges, TMDR remains a critical tool for modern dispute resolution globally. For Pakistan, addressing infrastructural, legislative, and cybersecurity gaps is essential to unlocking the immense potential of TMDR for judicial and ADR systems. Investments in TMDR development can significantly enhance access to justice, efficiency in the judiciary, and confidence in the country's digital economy.

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