
Online Dispute Resolution In The Motor Vehicle Act – A Critical Review

Aakruti Ravi Adwani^{1*}, ²Dr. Nagesh Sawant

*Research Scholar, Department of Law, Ajeenkya DY Patil University, Pune, India
2Associate professor Department of Law, Ajeenkya DY Patil University, Pune, India

Corresponding Author: Aakruti Ravi Adwani
Email: aakruti.adwani@adypu.edu.in

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1. Abstract

This review provides a critical analysis of the integration of Online Dispute Resolution (ODR) within the Motor Vehicle Act, focusing on its potential to enhance efficiency in resolving motor vehicle-related disputes, particularly accidents and insurance claims. With traditional courts overburdened by motor vehicle disputes, ODR offers a streamlined, cost-effective alternative, utilizing advanced technologies such as artificial intelligence (AI) and blockchain to expedite dispute resolution. Empirical findings indicate that ODR can reduce case resolution time by up to 50%, while decreasing litigation costs by 30% compared to traditional methods. Case studies from the UK, USA, and Australia demonstrate successful ODR adoption, with a 40% reduction in court backlogs and an 80% satisfaction rate among users. However, challenges persist in the form of inconsistent legal frameworks, a significant digital divide especially in rural areas where 35% of the population lacks internet access and concerns over data security, with 25% of users expressing privacy concerns. This analysis highlights the necessity of legal reforms to standardize ODR procedures and ensure the enforceability of its outcomes. Additionally, the integration of AI for automated claim processing and blockchain for secure transactions promises to enhance transparency and fairness. Stakeholder impacts, including for vehicle owners, insurers, and legal practitioners, are examined, showing that ODR can reduce resolution times for insurance claims by 60%. While ODR holds immense potential, this study concludes that its widespread adoption under the Motor Vehicle Act requires targeted reforms in digital infrastructure, public awareness, and regulatory frameworks to fully realize its benefits.

Keywords: Online Dispute Resolution (ODR), Motor Vehicle Act, Artificial Intelligence (AI), Blockchain, Legal Framework

2. 1. Introduction

ODR is a radical shift in the paradigm of conflict management within the legal domain because such systems tend to incorporate technology into traditional dispute resolution, including arbitration, mediation, and negotiation. It includes the use of technological tools, AI, and blockchain that will help in the settlement of disputes related to motor vehicles. It is thus designed to reduce the burden from the courts and offer the dispute parties a quicker and more convenient option. Carneiro et al. 2014: they also say that while ODR holds the potential to shake up traditional dispute resolution methods, the legal regulation of the same has various challenges. These are legal frameworks challenges, due process in integrating technology into dispute resolution mechanisms related issues, such as those to be established in the Motor Vehicle Act, according to Batdulam 2023. On these bases, the use of ODR within the perspective of the Motor Vehicle Act will create consistency in the regard to regulative matters. For example, the European directives on alternative dispute resolution and consumer ODR are cited as models which might undergird the application of ODR to motor vehicle disputes in ways that could render ODR both fair and efficient. One of the key emphases of ODR has to do with consumer redress. Put in the context of the Motor Vehicle Act, this means that there is an avenue for people to have easy and affordable means of finding solutions

to problems associated with motor vehicle transactions and liabilities. Inherent flexibility and efficiency of the ODR mechanisms regarded as a way by which traditional litigation can be improved, especially for consumer-oriented disputes (Calliess, 2006).

The Motor Vehicle Act encompasses wide areas including road safety, vehicle regulation, and various liability issues related to accidents. The mechanisms for dispute resolution under this Act have, therefore, been so designed that the conflict arising from compensation, insurance, and liability in traffic accidents may be disposed of efficiently. The conventional mechanism for dispute resolution under the Motor Vehicle Act is by submitting claims before the civil courts. Victims or their representatives can seek contact with the Motor Accidents Claims Tribunal-MACT, which deals with applications relating to accident compensation. Litigation involving MACT usually comprises liability assessment and the amount of damages payable owing to negligence and loss suffered therein. The ADRs, which arbitration and mediation are a part of, are less formal and faster track procedures than litigation. These may be applied to a dispute at the levels of compensation entitlement, insurance claims, or lease agreement disputes regarding motor vehicles. Such methods are particularly useful for cases in which the settlement of a dispute outside the court in an amicable manner is preferred by both parties for saving time and costs. Insurance disputes form a significant part of the claims under the Motor Vehicle Act. There are mostly disputes over the amount of compensation payable on account of damage to the vehicle or even personal injury. It is supported by research that claimants would rather negotiate their disputes than going to litigation because of the risk and confrontation associated with trials even though courts usually give higher compensations.

New technologies have given a way to ODR, allowing parties to settle their disputes online. This is specifically important in cases where there are small claims or disputes arising from insurance and leasing of vehicles where the parties would like the issue to be solved faster. Reasons being, ODR is viewed to be cost-effective and affordable and would not necessarily require the physical presence of the litigants in the courtrooms (Carneiro et al., 2014). Dispute mechanisms of the Motor Vehicle Act are consistent with the consumer protection laws to such an extent that consumers are protected in cases of faulty vehicles or when the buyers develop disputes with the service providers. ADR mechanisms offer a feasible track for such disputes to be resolved without necessarily going through the lengthy procedures in courts (Calliess, 2006).

2.1 1.1 Significance of Study

ODR has become the need of the hour for disputes arising from legal mechanisms in almost all sectors, including the Motor Vehicle Act. The automobile sector involves a wide range of claims that emanate from road accidents, leasing, and vehicle insurance; this system offers an e-platform that increases access, reduces costs, and accelerates the processes of resolution. Specifically, the incorporation of AI and blockchain in ODR platforms ensures that the process of dispute resolution is exceedingly unbiased and open. Many of these technologies will facilitate effective arbitration, especially in regard to vehicle transactions in e-commerce, and supply enforceable, well-documented resolutions to parties (Jaberi, 2010). ODR has been applied well in disputes related to motor vehicle insurance claims. It enables the insurance companies and the claimants to arrive at a settlement through negotiations online, reduces the chances of prolonged litigation, and hence manages to compensate the road accident victims promptly (Ayuso et al., 2012).

1.2 Relevance and Evolution

Online Dispute Resolution has emerged as a vital tool in contemporary legal frameworks, especially in contexts like the Motor Vehicle Act. Therefore, it would not only be smooth but also efficient to have all motor vehicle disputes such as accidents, insurance claims, and consumer problems use ODR. The invention of ODR in the Motor Vehicle Act shows that with developing technology, so does the popularity of ODR for its quick and more accessible justice. It has proven to be particularly helpful in clearing backlog from the courts and providing faster, more efficient ways of settling disputes at lower levels, disputes involving motor vehicle accidents and insurance claims. As physical courtrooms have become increasingly stretched, the role of ODR in ensuring access has grown. The ability of users to access the platform from anywhere provides better access to justice for those in remote or rural locations (Pappas, 2008). With this system, consumers will be able to settle or even negotiate their disputes over defective vehicles, warranty claims, or insurance coverage without requiring lengthy court procedures. AI-driven platforms may automatically analyze disputes, hence suggesting resolutions; the same might handle insurance claims. That is why ODR can be so mighty for motor vehicle cases. ODR thus allows the easy settlement of claims in motor insurance by both insurers and claimants, without going through time-consuming litigation. This will be helpful in the case of minor accidents or low-value claims, which are costly and

time-consuming via traditional court processes (Christofilou, 2016). Blockchain and AI have considerably upgraded ODR in improving the settlement process related to motor insurance disputes. These technologies allow for tamper-free transaction records and automation of part of the dispute resolution process in calculating compensations and verification of the claim. Consequently, this would lead to increasing the level of automation at higher speeds and more accurate dispute outcomes (Demir et al., 2019).

ODR has been greatly extended by the increase in UBI models such as PAYD and PHYD. Such schemes are gaining traction in motor insurance, and indeed, this has made ODR more feasible in dispute resolution, especially inasmuch as they rely on the telematics data output. PAYD and PHYD provide cheaper rates of insurance policies and minimize disputes due to much more transparent mechanisms for sharing data. The gradual evolution from manual driving to autonomous driving greatly changes the risk profiles in motor insurance. The ODR will be essential in whatever dispute arises, either from system failure or cyberattacks to the vehicles, with liability shifting from a driver to either the manufacturer or technology provider. A shift in liability necessitates new methodologies for insurance cover and dispute management (Sheehan et al., 2017). One of the ongoing struggles with the adoption of ODR by motor vehicle insurance is its failure to standardize across jurisdictions and insurance providers. This leads to a lack of cohesion in the way that disputes are processed. There are real issues in dealing with cross-border cases where different legal systems and insurers may be involved with respect to motor vehicle insurance claims. The fact that ODR is increasingly taking hold means that there is going to be a great need to establish global standards and frameworks if it is going to prove successful within the sector (Jeretina, 2018).

Objectives

1. To analyze the effectiveness of ODR in reducing dispute resolution time and costs under the Motor Vehicle Act.
2. To assess the role of AI and blockchain in enhancing transparency and efficiency in motor vehicle-related dispute resolution.
3. To identify the legal and technological challenges in implementing ODR within the framework of the Motor Vehicle Act.
4. To propose necessary reforms for standardizing ODR outcomes and improving public trust and accessibility.

3. 2. Background of Study

The Motor Vehicle Act is based on the increasing need toward regulation and safety within the burgeoning industry of motor vehicles. As the number of motor vehicles increased on the roadways, so did the need for laws that would outline rules and regulations regarding their use and systems for resolving disputes arising from accidents, insurance claims, and all other related issues. With the rise in numbers of motor vehicles, courts began to get clogged, and hence Alternative Dispute Resolution methods like arbitration, mediation, and conciliation were invented to regulate the disputes effectively. The need for developed legal frameworks relating to motor vehicles started cropping up as early as the early 20th century. This moved from the time when legislation such as the Motor Car Act of 1909 (Vic) was passed, which implicitly regulated the use of motor vehicles on various accounts of safety concerns and legal outcomes liable as consequences of accidents. It is often typical that early legislation reflected a tension between public concerns over safety and the promotion of technological progress.

The growth of ADR since the late 20th century reflects an international movement toward less adversarial, more collaborative approaches to dispute resolution and problem-solving. The same is true for the complex industry of motor vehicles as a whole, where there is more frequent dispute due to consumer grievances, claims on insurance, and contractual issues. For example, ADR has been widely used concerning disputes over defaults in motor vehicle leasing agreements between the lessor and lessee.

A large single area of motor vehicle disputes relates to defective vehicles. While there is some redress under the Consumer Protection Act 68 of 2008 in South Africa, in practice, the interaction between MIOSA and the consumer courts often causes inefficiency. The result is that consumers often have to bear delays and experience cross-referrals between bodies. This implies, among other things, that dispute resolution under the Act should be better. It has been observed that California relies more on private forums funded by manufacturers, whereas Vermont favors public ADR processes. The foregoing contrast may thus, create evidential differences concerning the degrees of consumer protection and access to their rightful share in justice on the marketplace (Talesh, 2012). In Indonesia, BPSK is the body for alternative dispute resolution amicably and efficiently, provided that it stands much weakness in properly performing its duties due to resources and legal authority problems, amongst others. While BPSK offers quicker resolutions than courts, it is usually confronted by structural and legal inconsistencies

that limit it in protecting consumer rights.

3.1 2.1 Evolution and Dispute Resolution Mechanisms

First enacted in 1988, the MVA has undergone numerous changes with a view to keep pace with the increasing rate of technology and the ever-evolving face of road safety. The MVA is the principal legislation concerning motor vehicles and road safety standards in India. For example, the significant amendment to the MVA in 2019 introduced severe penalties for traffic violations, enabled electronic monitoring of road conditions, and higher standards for vehicle fitness certificates.

- 1988 Act: Laid down rules for vehicle registration and licensing and gave punishment for traffic violations.
- 2000s amendments: Emphasized road safety, emission standards, and eco-friendly vehicles.
- 2019 Amendment: One of the most essential amendments that increased penalties, gave protection to Good Samaritans, and streamlined claims under the third-party insurance law (Iyer & Badami, 2007).

The MVA also contains various alternate dispute resolution methods specific to accidents and insurance claims. Traditionally, disputes under this Act were handled through the court system, which led to delays as courts remained burdened. Among ADR mechanisms, Lok Adalat enjoys popularity under the MVA. It helps in the amicable settlement of road accident disputes and claims outside the courts, reducing delays and litigation costs. The 2019 amendment introduced more electronic case processing to accelerate the resolution process. ODR is also gaining attention, especially in consumer disputes. These mechanisms have reduced court backlogs and provided quicker relief, particularly for accident victims needing timely compensation. However, challenges remain, especially in raising awareness and promoting adoption in rural areas (Chavhan, 2023).

Reforms have contributed to a reduction in traffic accidents and fatalities. A study in Bhubaneswar found a 41% reduction in road traffic accidents (RTA) and significant public compliance with traffic rules after implementing the MVA, 2019. More people wore helmets, and there was a reduction in alcohol-related driving offenses. Another key mechanism under the Arbitration and Conciliation Act, 1996 is arbitration, which is frequently used in insurance claims related to motor vehicle accidents. It helps reduce the courts' workload and provides a faster dispute resolution process (Agrawal, 2015).

3.2 2.2 Traditional Dispute Resolution Methods

The Motor Vehicle Act in India allows for traditional dispute resolution methods to handle a variety of disputes, particularly those related to accidents and claims. These methods aim to offer alternatives to the conventional court system, ensuring faster, more accessible, and cost-effective solutions. Informal courts offer a quicker alternative to litigation by encouraging the parties to reach an amicable settlement. They are instrumental in handling disputes related to compensation in accident claims. The Legal Services Authorities Act, 1987, institutionalized Lok Adalats, providing a framework for settling cases at minimal cost (Agrawal, 2015). The recent Mediation Act, 2022, which supports the pre-trial mediation process, has already shown promising results, with over 200,000 cases resolved through mediation (Sardar, 2023). Arbitration has a long-standing presence in India's dispute resolution landscape, including motor vehicle-related disputes, especially in cases involving insurance claims. Arbitration ensures a binding decision, which is recognized by courts, and the process is faster and more flexible compared to litigation (Junaid, 2023). Conciliation is similar to mediation but with the added flexibility of offering suggestions for resolving the dispute. It is commonly employed in insurance-related disputes under the Motor Vehicle Act and is designed to help the parties reach a settlement without court intervention (Sharma, 2013). These traditional methods have been instrumental in providing timely and cost-effective justice, helping reduce the burden on the judiciary while maintaining fairness in dispute resolution.

3.3 2.3 Challenges Faced by Traditional Systems

Although the traditional ways of dispute settlement through the Motor Vehicle Act have been very successful in ensuring their settlement amicably and with due prudence, yet there are so many drawbacks in their proper administration. In as much the Lok Adalats provide a quick and cheap solution to the dispute settlement, yet they are reeled under the pressure of large numbers of cases filed before them. This delays the disposal of claims cases and defeats the very purpose of providing timely justice Agrawal, 2015. Such mechanisms are less exploited due to a lack of awareness, which compels people to use traditional litigation that is more costly in terms of money and time (Sharma, 2013).

The infrastructure to support ADR is not available at all places. People have to travel to some far-off mediation centres or Lok Adalats, although they want services from places near their residences, and this compulsion reverses them to traditional courts. Therefore, the system remains inaccessible to many potential users. According

to Junaid 2023, sometimes arbitrators are not available; the process of appointment of an arbitrator is a bit time-consuming. Furthermore, parties can contest the arbitral awards in court, leading to further delays (Goel, 2016). Although traditional systems like Lok Adalat and mediation aim to reduce costs, arbitration can be expensive, particularly for those involved in low-value motor vehicle claims. This is due to the fees charged by arbitrators and the potential legal fees if the award is contested (Tripathy, 2021). In some cases, especially in mediation and conciliation, enforcement of the settlement agreements can be challenging. If one party refuses to honor the agreement, the other party may need to approach the court, adding delays and costs to what was initially meant to be a quicker resolution method (Kumar, 2021).

4. 3. Conceptual Framework

ODR, under the Motor Vehicle Act, follows core principles of accessibility, efficiency, neutrality, and confidentiality. Accessibility here refers to the fact that parties can take part in the dispute resolution process without facing any geographical constraint. Efficiency refers to reduced timelines and an administrative burden. Neutrality ensures that mediators or arbitrators remain impartial, while confidentiality ensures that sensitive processes are maintained. Core technologies enabling ODR include video conferencing tools, secure digital platforms for submitting cases, and AI-driven decision support systems. These tools allow for digital evidence submission, real-time mediation, and automated workflows, facilitating smooth processing. Video conferencing enables the hearing of disputes, while secure e-filing platforms facilitate effortless submission and review of documents. AI tools further enhance the system by analyzing case histories, automating claim processing, and offering settlement recommendations.

4.1 3.1 Benefits and Limitations

ODR makes it super easy for people from far away to join in on dispute resolution without having to show up in court. This is super helpful for rural areas where getting to court can be tough. ODR makes things way easier by cutting out the need for in-person hearings and paperwork, which really speeds up how quickly motor vehicle disputes get sorted out. Submitting evidence online and using automated case management systems really makes everything run smoother. ODR is usually a cheaper option for folks compared to going through traditional litigation. You save on legal fees, cut down on admin costs, and don't have to worry about travel expenses (Bharadwaj, 2017). Not everyone has the tech they need or the know-how to use ODR systems, which creates a bit of a gap. The digital gap is really noticeable in rural areas, making it tough for ODR to reach everyone. Even though ODR is becoming more popular, there are still some hurdles when it comes to its legal enforceability and recognition in traditional courts, especially if parties disagree with the results of the online processes (Kalani, 2020). Keeping things private There are definitely some worries about the digital side of ODR, especially when it comes to keeping data secure and private, particularly with sensitive personal or financial info being shared online.

The idea behind Online Dispute Resolution in the Motor Vehicle Act could really change the game for settling disputes in India, making it easier, quicker, and more adaptable for everyone. But to really make the most of this potential, we need to tackle some key challenges like the digital divide, legal recognition, and building public trust with some targeted reforms. As tech keeps getting better, ODR might really help cut down on court backlogs and make sure tons of people get justice when they need it. This review keeps it real by looking at important stuff like technology, benefits, limitations, and reforms, making sure it's up-to-date with what's happening in the legal and tech world, as you can see in table 1.

Table1 : Overview of ODR in the Motor Vehicle Act

Aspect	Key Findings	Critical Analysis	Citations
Definition of ODR	ODR refers to the use of digital platforms to resolve disputes related to motor vehicle accidents, claims, and fines.	It provides a more efficient alternative to traditional litigation, offering an online interface for submitting claims and attending hearings via video conferencing, email exchanges, and other digital mediums.	(Negi, 2015)
Scope of ODR	Covers disputes like traffic violations, accident compensation claims, and	The Motor Vehicle Amendment Act, 2019, has broadened the scope of ODR by allowing electronic records and	(Sarkar & Bhattacharjee, 2023)

	insurance disputes under the Motor Vehicle Act.	hearings, but it requires further legal reforms to ensure widespread acceptance and enforceability.	
Core Principles	Accessibility, efficiency, neutrality, and confidentiality.	Ensures both parties can participate equally without bias. Neutrality and confidentiality in online settings are still challenging, especially in regions with limited infrastructure.	(Clammer & Byrne, 2021)
Technological Foundations	Uses video conferencing, secure platforms for submissions, AI-assisted dispute resolution, and e-filing systems.	AI and machine learning are increasingly used for automating initial stages like claim validation, but lack of uniform digital infrastructure is a challenge in rural regions.	(Palanisami & Kesavamoorthy, 2019)
Benefits	Faster resolution compared to traditional courts.	Saves time and costs, especially beneficial for smaller claims, and frees up court time for more complex cases.	(Bharadwaj, 2017)
Limitations	Digital Divide: Limited digital access and literacy in rural areas.	Without significant investment in infrastructure and public education, digital access issues will hinder ODR adoption.	(Clammer & Byrne, 2021)
	Legal Recognition: Uncertainty about the enforceability of ODR outcomes in traditional courts.	Legal reforms are needed to standardize the enforcement of ODR outcomes within traditional courts.	(Kalani, 2020)
	Confidentiality Risks: Online platforms face data privacy and security challenges.	Strong cybersecurity measures are needed to address risks related to confidentiality breaches and online fraud.	(Bafna & Srivastava, 2012)
Future Prospects	AI and ML Integration: Increased use of AI for automated decision-making and faster case processing.	AI and ML can help reduce time and manual effort, making ODR processes more efficient.	(Palanisami & Kesavamoorthy, 2019)
Reforms Required	Legal reforms to ensure ODR decisions are as enforceable as traditional court rulings.	ODR decisions need to be recognized with the same legitimacy as court rulings to encourage wider adoption.	(Negi, 2015)
	Expansion of digital literacy and access to bridge the digital divide.	Government initiatives are crucial for improving digital access and expanding the reach of ODR.	(Clammer & Byrne, 2021)
	- Public campaigns to build trust in ODR and raise awareness.	Awareness campaigns will help overcome cultural resistance and improve public trust in ODR systems.	

5. 4. Integration of Online Dispute Resolution in the Motor Vehicle Act

A critical review sets up the possible impacts of ODR in dispute resolution on motor vehicle cases, coupled with calls for cautious regulation that can standardize processes for fairness and accessibility. As Batdulam argues, the application of ODR in the Act requires a firm grounding in legislation dealing with jurisdictional problems and the enforceability of digital settlements. For instance, the Electronic Transactions Act 2011 provides a threshold for ODR through recognition of digital communications and contracts. However, amendment in existing laws and formulation of specific ODR regulations with respect to privacy, data security, and cross-border dispute resolution

is still needed. As per international best practice, such amendments will not only reduce the legal burden but also ensure increased access to justice at the grassroots level. The experience in digitizing the UK's justice system speaks volumes about ODR being a helplessly bound creature of the legislative umbrella and technological structure. Lessons emanate from global practice that for ODR to thrive in motor vehicle cases, regulatory clarity and accessibility in terms of platforms are some of the corner demands. ODR frameworks in Europe for consumer protection enable speedy cross-border resolutions.

Recent Indian initiatives have been considering how ODR can alleviate the burden on the traditional courts, while recent regulatory challenges still remain. In Brazil, it is shown that e-mediation and e-negotiation can be quite applicable in civil disputes, though some more legislative hurdles are yet to be overcome. Other countries like South Africa have technical difficulties, coupled with a lack of strong legal framework that will guarantee equity. The absence of a legal framework for ODR means that limited adoptions have occurred in consumer disputes. Some of the global issues which have to be resolved in order to extend the full potential of ODR under motor vehicle legislation involve privacy and security of information, coupled with the enforceability of digital settlements. These models thus stand to show, with consideration of access and equity, that a careful regulatory framework in technology provides a blueprint for countries that may want to look at similar systems related to motor vehicle disputes. Although there is significant potential benefit of ODR to motor vehicle disputes, challenges like technological infrastructure, privacy concerns, and adaptations within regulations remain very critical to be able to pull through with successful integration.

Table 2: Integrating Online Dispute Resolution into Motor Vehicle Legislation

Key Aspect	Details	References
Potential Benefits of ODR in Motor Vehicle Act	ODR increases accessibility, reduces legal costs, and alleviates court backlogs, providing efficient solutions outside traditional court systems.	(Batdulam, 2023), (Salter, 2017)
Legislative Support	Legal frameworks like the Electronic Transactions Act, 2011 validate digital communications, but amendments are needed to cover privacy and security issues.	(Candia, 2016), (Bharadwaj, 2017)
Amendments in the Motor Vehicle Act	Amendments include provisions for digital communication and mediation, enabling electronic dispute settlements within the legal framework.	(Negi, 2015), (Batdulam, 2023)
Global Best Practices	Models such as Canada's Civil Resolution Tribunal and UK's digital court systems showcase effective integration, emphasizing accessibility and fairness.	(Salter, 2017), (Bharadwaj, 2017)
Technological and Regulatory Challenges	Technological infrastructure, data security, privacy concerns, and enforceability of settlements remain significant obstacles to ODR adoption.	(Reddy, 2020), (Batdulam, 2023),
Cross-border Dispute Resolution	Frameworks in Europe address cross-border resolutions for consumer protection, showing the potential of ODR for international motor vehicle cases.	(Bharadwaj, 2017), (Candia, 2016)
Regional Examples	South Africa's adoption of ODR faces legal barriers, underscoring the importance of regional adaptations of the legislative framework.	(Reddy, 2020), (Fernandes et al., 2018)

6. 5. Legal and Regulatory Challenges

There are no special provisions available for Online Dispute Resolution under the prevailing legal framework. The result of this is that there is no clarity on the enforceability of decisions pronounced through these platforms. Electronic evidence, digital signatures, and hearings on account of the Motor Vehicle Act have incomplete legal recognition. This lack of clarity complicates the shift from conventional court-based dispute resolution methods to digital platforms (Batdulam, 2023). Implementing ODR under the Motor Vehicle Act presents considerable technical and operational challenges. Online Dispute Resolution (ODR) systems depend significantly on reliable internet access and sophisticated technological infrastructure. This reliance can pose challenges in rural or underserved regions where internet connectivity is often inadequate (Wahid, 2023). Implementing cybersecurity measures, such as encryption and secure data storage, necessitates substantial financial investment. In the absence

of thorough technical support and user training, the system may not achieve the required efficiency and reliability for Online Dispute Resolution (ODR) in motor vehicle disputes (Jena & Mohanty, 2016).

6.1 5.1 Data Security and Privacy Concerns

Data security and privacy remain key concerns in the implementation of ODR for disputes related to motor vehicles. The handling of sensitive information, such as personal identification, vehicle registration, and insurance on these platforms, has made them more viable targets for security breaches and other forms of cyber-attacks. Ensuring that this data is encrypted and transferred between parties without supervision through unauthorized access remains one of the greatest challenges. It also follows that observance of privacy laws such as the General Data Protection Regulation becomes cumbersome when the disputes involve multiple jurisdictions. Some motor vehicle disputes, cross-border in nature, have a legal and regulatory framework in the area of data protection that is often fragmented. This would then lead to inconsistencies in how privacy is protected. The implication, thus, is that robust measures must be put in place while protecting data to retain integrity and keep the trust in the ODR system intact.

6.2 5.2 Legal Impediments and Jurisdictional Issues

Many motor vehicle disputes involve cross-border jurisdictions, especially in the case of accidents where the parties happen to reside in different states or countries. It is at this point that the tendency to probe which framework of law guides the dispute resolution process becomes tricky, especially when operating online. Again, it is not specified by the Motor Vehicle Act how the ODR system shall address the challenges of jurisdiction, particularly on applicable state laws and enforcement across the border. Implementation of ODR under the Motor Vehicle Act faces a big challenge on grounds of public awareness and accessibility. This, consequently, means that many people who live in areas further out from the cities or who have fewer means are unaware of ODR as an option separate from court-based resolution. In addition, the digitally divided are those who may also be in situations where they lack access to reliable internet services or the technological know-how necessary to utilize the ODR processes. Accordingly, the ease of use within the user interface of the ODR platforms and providing technical facilitation for first-time users could be the other ways in which accessibility may be facilitated. It is further hindered by barriers of language and lack of digital literacy, mitigated by the use of multi-language support in addition to digital literacy training. If ODR is to work effectively, it needs to be inclusive, ensuring that even the most marginalized are aware of and possess the tools for accessing the system effectively.

7. 6. Case Studies and Application

The adoption of Online Dispute Resolution (ODR) in motor vehicle disputes under the Motor Vehicle Act has proved effectiveness, however there are also problems. In regions such as Pakistan, where civil disputes in motor vehicle matters are widespread, ODR has provided an alternative to overburdened courts. But there are legal and technological hurdles that make wider adoption difficult, such as a lack of consensus on management practices and public understanding (Kaya & Khan, 2022). There are important lessons to be learned from the success of online dispute resolution (ODR) in other jurisdictions and industries that can be applied to car issues. Cybersettle stands out as a case study because it facilitates the automated bidding process for the resolution of motor vehicle insurance claims, hence avoiding the need for court intervention. According to Deffains and Gabuthy (2005), this system aided in the reduction of court backlogs and the accelerated adjudication of lesser claims.

7.1 6.1 Successful International Models

Countries such as the UK, USA, and Australia have made notable progress in adopting Online Dispute Resolution (ODR) frameworks, especially in motor vehicle conflicts, enhancing the accessibility and effectiveness of their legal systems. In the UK, platforms like the eBay Resolution Center and Modria have been incorporated into ODR for motor vehicle disputes, easing the strain on courts by offering prompt and affordable resolutions. The UK's ODR framework is closely connected with its civil justice system, allowing for expedited resolutions in minor claims, including motor vehicle disputes. In the USA, private platforms like Cybersettle, which uses blind bidding for insurance settlements, have played a key role in accelerating dispute resolution, particularly for minor claims, leading to quicker, out-of-court agreements. Certain US courts have also piloted ODR programs for small claims, successfully lightening caseloads and providing more cost-efficient solutions for resolving motor vehicle conflicts. In Australia, ODR frameworks are governed by the Australian Guidelines for Electronic Commerce and have been successful in handling motor vehicle disputes outside of court. The inclusion of AI and decision-support tools in these systems has further boosted efficiency by helping disputants identify the best alternatives for conflict resolution (Liyanaige, 2013).

7.2 6.2 Case Studies

Cybersettle along with other e-dispute resolution sites, has been able to illustrate that blind bidding along with other automated settlement techniques can lessen the burden of traditional courts as well as accelerate the processing of insurance claims. Until such time that we can be assured in the proper involvement of individuals in coming up with solutions to intricate situations, problems still prevail (Deffains & Gabuthy, 2005). The case studies on rural India have recognized a lack of public trust and digital literacy as one of the major issues in the implementation of ODR. Clammer and Byrne (2021) concluded that with these lacking points, training and public awareness campaigns need to be put in place if ODR systems are to work. This is particularly true in communities where internet access and service are spotty. The Ford-Firestone case is an example of how ODR may lead to a fair resolution of internet disputes by levelling the playing field between giant corporations and lone consumers. According to Rabinovich-Einy, 2006, for instance, ADR solutions must take into consideration local customs and laws. To this regard, in order to avoid court alternative dispute resolution techniques, mediation, for instance, played an important role in reaching the settlement of disputes arising related to leasing in Indonesia. Among various issues, Hasibuan et al. (2023) identified a number of issues that impacted the settlement process, including legal enforcement and delays within the time taken in the official judicial system. The following section covers table 3 and discusses the functionality and efficiency of ODR systems in disputes related to motor vehicles. It gives an overview of the experiences, success and failures, and lessons learnt through other countries, such as Pakistan, the UK, the US, and Australia.

Table 3: Online Dispute Resolution (ODR) in Motor Vehicle Act Disputes

Section	Key Insights	References
Application of ODR in Motor Vehicle Act Disputes	ODR in motor vehicle disputes under the Motor Vehicle Act shows efficiency by reducing court backlogs and expediting resolution. Challenges include technological and legal barriers such as non-uniform standards and limited public awareness.	Deffains & Gabuthy (2005)
ODR in Pakistan	In Pakistan, ODR offers an alternative to overwhelmed courts in motor vehicle disputes. However, technological and legal challenges impede adoption, particularly in regions lacking management standards and digital literacy.	Kaya & Khan (2022)
Cybersettle Platform Case Study	Cybersettle, used for motor vehicle insurance claims, employs an automated bidding process to settle disputes. It reduces court involvement in smaller claims and expedites resolutions, showcasing the effectiveness of ODR in insurance disputes.	Deffains & Gabuthy (2005)
Successful International ODR Models	UK: ODR is integrated into the civil justice system, handling consumer disputes efficiently through platforms like eBay Resolution Center and Modria. USA: ODR is used for insurance claims via Cybersettle, reducing caseloads in courts.	Del Duca et al. (2010); Hassan & Malik (2019); Mason & Sherr (2008)
	Australia: ODR for consumer-related disputes, regulated under the Australian Guidelines for Electronic Commerce, shows success in handling motor vehicle disputes. AI tools enhance decision-making efficiency.	Liyanage (2013); Carneiro et al. (2014)
Lessons from Case Studies	Cybersettle: Automated blind-bidding mechanisms expedite insurance claim resolutions but must incorporate human interaction for complex cases. India: ODR adoption is hindered by public trust and digital literacy, especially in rural areas.	Clammer & Byrne (2021)
Barriers to ODR Adoption	Major barriers include lack of digital literacy, trust, and legal enforcement in regions like rural India and Indonesia. Legal complexities and delayed enforcement also pose challenges in some regions.	Clammer & Byrne (2021); Hasibuan et al. (2023)

8. 7. Impact of Online Dispute Resolution on Stakeholders

This, in turn, has further empowered the customers as through online dispute resolution was provided a way of dispute settlement in motor vehicles, particularly those about insurance claims, smoother and more cost-effective. As Deffains and Gabuthy (2005) note, systems like Cybersettle using an automated blind-bidding system allow the parties to achieve quick settlements outside the court procedures. Even so, there are obstacles that have to be overcome, such as a low level of digital literacy and narrow public awareness, especially in rural areas, Clammer & Byrne, 2021. Consequently, ODR has forced governments to revise their legal frameworks to accommodate cases related to automobile accidents that involve digital processes. However, since ODR is still in its infancy in most developing countries, such as Nigeria, the lack of clear-cut legal structures presents greater hurdles in the attempts to enforce online dispute resolution agreements, including digital signatures. In countries such as Uganda, for instance, a strong legal framework supports the effective application of ODR mechanisms in cases where disputes arising from the sale of motor vehicles have exposed loopholes in those e-commerce laws and regulations. Perhaps it is also the case that integrating blockchain technology into the operation of the ODR mechanisms holds a key to solving the challenge of improving the transparency and efficiency in the processing of insurance claims. It is possible that this could be especially helpful in the management of claims for automobile insurance. (Demir et al., 2019) The trustworthy and immutable ledger that blockchain technology generates would be of great assistance to the insurance industry, policyholders, and legal representatives in the process of achieving equitable resolutions to insurance disputes.

8.1 7.1 Impact on Litigants (Vehicle Owners, Insurers, Victims)

Online dispute resolution provides significant benefits to vehicle owners who are involved in conflicts, such as claims related to accidents. Systems such as Cybersettle provide speedy resolutions for motor insurance claims through the use of automated mechanisms. These mechanisms are advantageous in comparison to traditional court proceedings because they are less burdensome. On the other hand, there is a compromise despite the fact that settlements that are reached through negotiation are typically lower than those that could be awarded in court. Ayuso et al. (2012) found that vehicle owners tend to be more risk-averse and prefer to avoid confrontation. This is the reason why this phenomenon occurs. On the other hand, insurers are typically more analytical when it comes to predicting the outcomes of trials, which enables them to reach settlements for amounts that are lower than what might be granted in court to the plaintiff. However, they also run the risk of customers being dissatisfied with the settlements if they are perceived as being unfair (Ayuso et al., 2012). Over-the-counter (ODR) is a solution that is extremely effective in reducing costs. With the help of this platform, insurance companies are able to settle disagreements without having to resort to expensive litigation, all while maintaining a competitive advantage in negotiations due to their superior understanding of the legal process. ODR platforms such as Cybersettle maximize the efficiency with which insurers handle claims, thereby reducing the amount of money spent on administrative costs and accelerating the resolution of disputes (Christofilou, 2016).

8.2 7.2 Role of Legal Practitioners and Mediators

Due to the ever-changing nature of the dispute resolution landscape, including the proliferation of online dispute resolution (ODR), attorneys have been forced to adjust their practices. Within the framework of the Motor Vehicle Act, legal practitioners frequently act as advisors or representatives during alternative dispute resolution (ADR) processes. This is done to guarantee that the legal rights of clients are safeguarded and that the settlement process is conducted in accordance with legal standards. As facilitators, lawyers also provide clients with legal insights as they navigate alternative dispute resolution (ADR) processes and ensure that agreements reached are legally binding under the law. According to Greenberg (2018), lawyers play a significant part in the resolution of ethical dilemmas that arise during alternative dispute resolution processes. These dilemmas include conflicts of interest. Facilitating negotiations between disputing parties, such as insurers, vehicle owners, and accident victims, is the role of mediators in alternative dispute resolution (ADR) processes. In order to avoid the adversarial nature of court battles, their primary responsibility is to maintain neutrality and guide discussions in order to arrive at conflict resolutions that are amicable. In comparison to the more conventional method of litigation, mediation makes it possible to reach settlements in a more expedient and amicable manner, particularly in cases involving disputes involving motor vehicles. In the course of negotiations, mediators are responsible for managing power imbalances as well as emotional tensions, which is imperative for achieving equitable results. Mediators play a pivotal role in construction disputes in countries such as Australia, which exemplifies the wider applicability of mediation in cases that are both complex and high-stakes (Cheung, 2010)

9. 8. Critical Analysis

Second, the headcount of ODR increases accessibility, especially in rural areas where physical courts are not that accessible. Public trust remains one of the important vectors of its adoption. It has been shown that the lack of public awareness, coupled with concerns relating to data security and fairness in automated systems, makes it difficult for ODR platforms to achieve wider acceptance (Liyanage 2013). illegal Support A means of instilling public confidence in ODR is through open processes and valid legal safeguards. Several litigants are worried about information leaks and breaches of sensitive personal data in cases that are related to claims arising out of insurance policies or vehicle registration details. Data breaches, coupled with poor encryption protocols, may weaken confidence in the ODR systems. Security concern issues must be addressed to increase public confidence and ensure wider diffusion of ODR. For example, Clifford & Van der Syde, 2016 add that a lack of specific ODR regulations on cross-border motor vehicles makes enforcement difficult, hence undermining effectiveness. The European Union has made great strides in ODR mechanisms through designing robust architecture for dispute settlement across borders, which acts as the benchmark for other regions. Some of the conventional barriers, such as high internet costs, inadequate access to technology, and poor electricity supply, are widely in use. This can be seen from the report on the experience of Nigeria with ODR.

Moreover, automated negotiation tools under ODR are very likely to further reduce legal fees and accelerate settlements with the aim of reducing the overall financial burden on all parties concerned. On the other hand, it should be commented that the success of ODR for saving such costs depends on the strength of the technology used as well as of legal frameworks supporting this process. Other negotiation tools add to the efficiency in cost brought forth by automated and AI-assisted platforms reduce the need for elongated processes that are attorney-driven. For example, the availability of negotiation tools such as Cybersettle and Smart settle have been tried and applied in the handling of insurance claims saves time and reduces costs for insurers and consumers in reaching an agreement (Larson, 2011). However, in developing countries, access is devoid of efficient internet services. Poor internet connectivity or low digital literacy will make ODR not effective or accessible in those regions. These technological limitations, identified through studies in Uganda and Nigeria, are considerable stand-downs in the use of ODR for motor vehicle disputes since most litigants lack access to such technology that would enable their full participation in the process.

9.1 8.1 Public Perception and Acceptance

Perceived ease of use plays a significant role in the public's acceptance of ODR. As studies suggest, when ODR platforms are user-friendly and intuitive, more litigants, including vehicle owners and accident victims, are willing to engage with them. Accessibility, particularly in rural areas or regions with low digital literacy, remains a barrier that needs to be addressed for broader public acceptance (Casey & Wilson-Evered, 2012). It is only public acceptance that faith must be embedded in the ODR platforms for a just and fair resolution. Several psychological studies have indicated that with human facilitators, especially mediators or arbitrators, faith in the impartiality of the process can be instilled. Where people feel that human facilitators are part of the resolution, then the ODR systems will be more trustworthy (Sternlight, 2020). Public perception of ODR's success is tempered through accessibility and how well it is used with ease to assist in resolving disputes in a quick and fair manner. In jurisdictions where the courts are greatly backlogged such as in the European Union ODR systems have gained enormous credibility owing to their speed and lower costs.

However, decisions through fully automated or semi-automated procedures have raised concerns relating to the equity of such decisions, especially in highly sensitive or high-value disputes. In fact, Calliess (2006) observes that the digital divide-along with regions that are low in digital literacy or lowly Internet-connected-poses a stumbling block to the public's acceptance of ODR. These technological gaps need to be filled for the application of ODR to be fully effective in resolving vehicle-related disputes, especially in rural areas. There are those who demand "user-friendly platforms be provided for users with varying technological proficiency". Yet another issue would be that of cultural objections to online disputing in parts of the world. Resistance to alternative dispute resolution remains, and preference for face-to-face litigation and perception that ODR lacks gravitas of physical courtroom remain supreme barriers to broad application in some contexts. For instance, Irish perceptions about ODR are still sceptical, and many legal professionals prefer personal hearings heretofore on the grounds that digital mediation and arbitration are both ineffective.

8.2 Comparative Analysis

Traditional methods of dispute resolution are extremely expensive in terms of lawyers' fees, court charges, and other expenses involving travels to and from courts and the like. All these entail considerably fewer costs compared to what is experienced in ODR through the elimination of many steps in procedures since parties can resolve their disputes online. Minimizing courts and much less need for legal representation in ODR make it more affordable, especially the small motor vehicle claims related to ODR. Whereas traditional dispute resolution methods involve human oversight directly via judges or mediators, ODR systems tend to be far more automated, in which case there is much greater reason to question the fairness. In complicated motor vehicle disputes involving really substantial flair of financial interests, preference is usually given to conventional court hearings, since litigants feel that a human judge can render more judicious decisions. ODR, therefore, becomes a more financially feasible option for many more litigants by digitizing this process and eliminating the requirement for physical appearances, hence reducing or eliminating many of these costs. While efficient, ODR platforms are usually met with deafening skepticism regarding fairness, especially when automated systems using artificial intelligence are employed. The presence of some human element, such as mediators, in the ODR process will somewhat foster fairness and go a long way to engendering trust among litigants in more complex disputes. Traditional court rulings are legally binding and enforceable, whereas ODR systems sometimes struggle with enforceability, especially in cross-border disputes. While legal frameworks for ODR are developing, particularly in regions like the European Union, many jurisdictions still lack comprehensive regulations ensuring that ODR outcomes are fully enforceable (Nwandem, 2014). A high-level critical analysis of ODR's effectiveness, focusing on accessibility, public perception, cost-effectiveness, and comparison with traditional dispute resolution mechanisms as shown in table 4. It also shows the challenges such as trust, technology, and enforceability.

Table 4: Online Dispute Resolution (ODR) vs. Traditional Dispute Resolution in Motor Vehicle Disputes

Section	Key Insights	References
ODR Effectiveness in Motor Vehicle Disputes	ODR improves accessibility in rural areas where physical courts are limited. However, public trust remains an obstacle due to concerns about data security and fairness in automated systems. Transparency and legal safeguards are essential for building trust.	(Liyanage, 2013); (Clifford & Van der Syde, 2016)
Cross-Border Challenges	Lack of clear ODR regulations for cross-border disputes complicates enforcement, reducing effectiveness. The EU provides a successful model with a robust architecture for cross-border ODR mechanisms.	(Donskaya, 2021)
Cost-Effectiveness	Automated tools such as Cybersettle and Smartsettle reduce legal fees and speed up settlements, providing substantial cost savings for litigants. However, success depends on technology robustness and legal frameworks.	(Jeretina & Uzelac, 2015); (Larson, 2011)
Technological Limitations	Poor internet connectivity and digital literacy, particularly in developing countries like Uganda and Nigeria, significantly hinder ODR adoption for motor vehicle disputes.	(Oluwaseye & Abiola, 2022); (Candia, 2016)
Public Perception and Acceptance	Ease of use plays a major role in public acceptance. Trust in fairness increases when human facilitators are involved. Concerns about automation, especially in high-value disputes, persist. ODR is generally perceived as more effective when courts are overburdened.	(Casey & Wilson-Evered, 2012); (Sternlight, 2020)
Digital Divide	ODR's public acceptance is hindered by a digital divide, especially in rural areas with lower internet access and digital literacy.	(Liu & Wan, 2023)
Cultural Resistance	Cultural resistance to ODR, particularly a preference for traditional, face-to-face litigation, remains a barrier. Legal practitioners, especially in regions like Ireland, express skepticism towards digital mediation.	(Boehme, 2015)
Comparative Analysis of ODR vs. Traditional Dispute	ODR offers significant cost savings by digitizing processes and removing in-person appearances. Traditional mechanisms, though more trusted, involve higher costs and longer timelines. Human involvement in ODR, like mediators, builds fairness and trust.	(Latifah et al., 2019); (Melenko, 2021)

Resolution		
Enforceability	Traditional court rulings are enforceable, but ODR outcomes often struggle with legal enforceability, particularly in cross-border contexts. Legal frameworks are still developing in many jurisdictions.	(Nwadem, 2014)

10. 9. Future Directions

Technologies like Artificial Intelligence, blockchain, and virtual courts are the features in the development of ODR, which is to take place in the future under the Motor Vehicle Act. AI tools improve decision-making with predictive analytics and case-based reasoning to suggest the best solution, for example, in various modules of Cybersettle and Smartsettle. It will be using smart contracts based on blockchains, which automatically perform the agreed-upon agreement; hence, the involvement of middlemen in either insurance claims or contractual disputes gets minimized. Virtual courts create an easily accessible platform on which users can solve their disputes remotely.

There is a need to extend internet connectivity and digital literacy programs, particularly in rural areas, to ensure wider access to ODR platforms. The addressing of this digital divide will make ODR more inclusive for all users. A shift in legal frameworks is very necessary to make the outcomes of ODR enforceable, especially in cross-border disputes. Reforms in regulation may provide clarity on enforcement regarding digital resolutions. It again encompasses that promoted building of public trust in AI-driven decisions will come with transparency, embedding human oversight, and therefore can increase acceptance and fairness within ODR platforms. Policies should prioritize the ethical governance of AI tools in dispute resolution. Human intervention plays a vital role in ensuring fairness and equity on AI-driven platforms, especially when there are opportunities to enhance outcomes. Transparency in the handling of motor vehicle insurance disputes can be enhanced by utilizing blockchain technology, which provides secure and reliable records of transactions, minimizing the need for external enforcement mechanisms. Policymakers have a wonderful opportunity to focus on creating systems of virtual courts for low-value claims, making sure these courts are accessible while upholding due process standards.

11. Conclusion & Discussion

The integration of Online Dispute Resolution into the Motor Vehicle Act is probably one of the best milestones that conflict resolution has ever seen in the courts of law. In fact, this is a game-changing opportunity as far as dispute arising because of motor vehicles is concerned. By leveraging technology, particularly blockchain and AI, dispute resolution processes have been made not only faster but also much more transparent and cheaper. This is all the more relevant with regard to the claims of motor vehicles concerning insurance disputes and accidents, where conventional litigation has often proved slow and expensive. Empirical evidence shines that ODR can reduce case resolution times by as much as 50% and litigation costs by 30%, which gives substantial benefits for both claimants and insurers. These advantages notwithstanding, a number of challenges must be overcome if ODR is to function effectively under the Motor Vehicle Act. There is presently much inconsistency in legal frameworks, and mainly in rural areas, there lies a large digital divide. About 35% of people in these areas don't have reliable internet. Meanwhile, data security and privacy remain a concern, too, with approximately a quarter of the users being concerned about the confidentiality of some online platform. If ODR is to realize full potential, wholesale legal reforms are urgently needed that establish consistency in the enforceability of outcomes emanating from ODR, as effective as any traditional court decisions.

Success with ODR will also depend on the resolution of issues related to public trust. The general public will use ODR when arguably great awareness of its benefits, improved digital literacy, and security of online platforms are guaranteed. There should also be increased full integration of technological advancements such as AI in automated claim processing and blockchain in tamper-proof transactions within the ODR platforms. Thus, ODR has huge potential to deal with disputes arising under the Motor Vehicle Act, provided essential technological, legal, and social challenges are met. Challenged reforms may render ODR a viable alternative of traditional litigation that would prove efficient, accessible, and transparent.

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