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Artificial Intelligence in ODR Platforms: Ethical and Legal Concerns

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Abstract
The creation of Artificial Intelligence (AI) within Online Dispute Resolution (ODR) systems, the sphere of digital justice has changed and provided unprecedented efficiency, access and scalability to the process of dispute resolution. One of the areas of the AI dog can be used to facilitate arbitration and mediation, especially in cross-border arbitration and e-commerce arbitration, is the use of machine learning, predictive analytics and automated negotiation tools. Irrespective of these benefits, the entrustment of AI in ODR creates complicated ethical and legal issues. Algorithms bias, insufficient transparency, weakened autonomy and unnecessary responsibility issues are all examples of ethical concerns and legal concerns are the liability, enforceability of AI-produced awards, data privacy and regulatory uncertainty. The paper presents a detailed discussion of these issues that examines the effects of having AI-assisted dispute resolution when it comes to procedural fairness and human control. It also discusses new international legal frameworks such as the European Union Artificial Intelligence Act, technical notes on ODR as spread through UNCITRAL and OECD principles on AI, which are relevant in relation to AI regulation in digital justice. The research sources its conclusion and provides the recommendations to overcome ethical and legal issues to focus on human-in-the-loop models, transparency, ethical design, strong data protection, harmonized regulation and education of stakeholders. Combining these two, the AI-based ODR platforms will be able to reach the equilibrium between technological novelty and maintenance of justice system fairness, accountability and trust.

Keywords: *Artificial Intelligence, Online Dispute Resolution, Algorithms Ethics, Law, Procedural Fairness, Data Protection, Human Control*

1: Introduction

Introduction of Artificial Intelligence (AI) in Online Dispute Resolution (ODR) is a disrupted phenomenon in management of justice in the digital age. Originally envisioned as an extension of Alternative Dispute Resolution (ADR), ODR has now developed to a complex mechanism of going beyond geographical, temporal, and procedural boundaries. The introduction of AI, predictive analytics, natural language processing as well as automated negotiation and adjudication systems, have dramatically boosted the efficiency, accessibility, and scalability of the dispute resolution processes. However, the same technological development gives rise to significant ethical and legal issues, such as fairness, accountability, transparency, and due process, which threatens the conventional concept of human-focused justice and the legality of the institution.[1]

The development of AI-based ODR systems is currently taking a worldwide lead and especially in situations that have a cross-border commercial dispute component, e-commerce, and negligence. Some international organizations like the United Nations Commission on International Trade Law (UNCITRAL) have highlighted the importance of ODR as a tool of facilitating both affordable and accessible justice in digital economy.[2] Equally the European Union has been urging the respective countries to adopt the ODR frameworks as a way of simplifying the consumer dispute system and increasing consumer confidence in digital transactions.[3] Nevertheless, with the growing automation of ODR the critical ethical issues become prominent, that is, can machine-based decision-making certainly guarantee impartiality, explainability and procedural fairness? There is a danger of algorithmic bias, manipulation of data, and inexplicable reasoning models which puts the undermining of the very principles of justice in the limelight of danger, especially without sufficient human regulation.[4]

Legally, these issues are aggravated by inability to control AI through comprehensive regulatory structures on dispute resolution in AI. Though the European Union has taken a step with the proposed Artificial Intelligence Act that aims at imposing transparency and accountability requirements of high-risk AI systems, still majority of developing countries,[5] such as Pakistan, do not have legal procedures to regulate the use of AI in court or quasi-court procedures. This body of regulation creates doubt about standards of liability, data protection, and enforcement. Moreover, the ethical responsibility of the AI-based ODR platforms is also vague with the question being frequently whether it is the human arbitrator, the software developer, or the administrator of the platform that is to bear the responsibility.[6]

The critical assessment of the ethical and legal issues regarding the use of AI in ODR systems will be presented in this paper. It focuses on how algorithmic decision-making impacts procedural justice, human discretion, and data governance and compares approaches to regulation at the international level. It also discusses how a coordinated legal and ethical system can fit the technological innovation with the basic human rights especially the right to a fair trial and due process.[7] Ultimately, the paper suggests that it is necessary to implement transparency, accountability and human control both in the design and operation of AI to guarantee responsible AI regulation in ODR. This is needed to have the

[1] Editors Max Planck Yearbook of United Nations Law Online, 'Ethan Katsh and Orna Rabinovich-Einy: Digital Justice: Technology and the Internet of Disputes' 21 Max Planck Yearbook of United Nations Law Online 585.

[2] UN Law, *UNCITRAL Technical Notes Online Dispute Resolution* (Vienna:: UNCITRAL 2017).

[3] Rachele Beretta, 'Procedural Justice in Online Dispute Resolution: An Empirical Enquiry' (University of Antwerp 2024).

[4] LC Lorenz, *Book Review Algorithmic Regulation* (IOS Press 2020).

[5] Martin Ebers, 'The European Commission's Proposal for an Artificial Intelligence Act' *Research Handbook on EU Internet Law* (Edward Elgar Publishing 2023).

[6] Rachele Beretta, 'Procedural Justice in Online Dispute Resolution: An Empirical Enquiry' (University of Antwerp 2024).

[7] Anna Zoë Moritz, 'The Self in the Smart Home: An Ecological Analysis of The Digital Epoch' Erasmus Student Journal of Philosophy 25.

future of ODR that is not just representative of technological advances but also protecting the long-standing principle of fairness and justice.

2: Conceptual Framework of ODR and AI

The conceptual base of the Online Dispute Resolution (ODR) rests on the wider development of the Alternative Dispute Resolution (ADR) especially on arbitration and mediation which have long attempted to decongest the judiciary and facilitate efficiency in the resolution of disputes.[8] The digitization of ADR to ODR is a paradigm shift of human-centered to technology-driven procedures, which are intended to solve the conflicts occurring in cyberspace and open global business transactions. Fundamentally, ODR pits communication technology with algorithmic decision-making and legal reasoning into the development of platforms that can help conduct negotiation, mediate, and arbitration under the virtual setting.[9]

The adoption of Artificial Intelligence (AI) into the context of ODR is a new dawn in the field of digital justice. Some of the procedural steps can be automated with the help of AI technologies: data gathering, review of documents, predictive analytics, and even settlement proposals could be generated.[10] The existing case patterns can be analyzed based on the machine learning algorithm to predict the probable outcome, support in writing awards, and the automatic negotiation by providing a dynamic feedback system. In this regard, AI-controlled ODR systems do not only streamline the efficiency of the process, but they also suggest uniformity and economy of adjudication. But this mechanization of justice, at the same time, is something concerning in terms of the interpretive discretion that has always been the prerogative of human adjudicators.[11]

The use in ODR can be divided into three functional models: (a) decision support systems, in which AI assists human mediators/arbitrators with the creation of information-based insights; (b) semi-autonomous systems, in which AI is used to facilitate negotiation and offer settlements that are subject to human confirmation; and (c) fully autonomous systems, where algorithms make a decision without human involvement.[12] Although both the former two models can improve the ability of human decision making and maintain the oversight, the third one presents diverse concerns to the sphere of ethics and law, especially when it comes to accountability, transparency, and the right to appeal. The apparent increase in the use of non-transparent algorithms in settling disputes puts the core tenet of due process, such as the ability to be provided with a rationale and the ability to appeal procedural flaws, at risk.[13]

On a more theoretical level, the junction of AI and ODR is supported by another concept, namely, computational justice a notion that jurisprudence and the process of decision can be converted into a programmable logic that can approximate human decision-making. This idea is however controversial.[14] Legal scholars insist that justice should not be only an act of logos but an act imbedded in human values,

[8] Óscar Daniel Franco Conforti, 'Transforming Conflicts Online in Cross-Border Disputes' (2020) 13 Revista de Mediación 2340.

[9] Harold Hongju Koh, 'The" Gants Principles" for Online Dispute Resolution: Realizing the Chief Justice's Vision for Courts in the Cloud' (2021) 62 BCL Rev. 2768.

[10] Noam Ebner, 'Online Dispute Resolution (ODR) Bibliography' [2024] Available at SSRN 5021688.

[11] Daniel Rainey, Mohamed S Abdel Abdel Wahab and Ethan Katsh, 'Online Dispute Resolution-Theory and Practice: A Treatise on Technology and Dispute Resolution'.

[12] Daniel Rainey, Mohamed S Abdel Abdel Wahab and Ethan Katsh, 'Online Dispute Resolution-Theory and Practice: A Treatise on Technology and Dispute Resolution'.

[13] Anthony Amicelle, 'Big Data Surveillance across Fields: Algorithmic Governance for Policing & Regulation' (2022) 9 Big Data & Society 20539517221112431.

[14] Anna Zoë Moritz, 'The Self in the Smart Home: An Ecological Analysis of The Digital Epoch' Erasmus Student Journal of Philosophy 25.

understanding and situational logic. Riskiness of transforming justice into an outcome of algorithms is a satirizing factor that AI-based ODR systems might uphold efficiency over fairness, hence compromising on substantive justice.[15]

AI-based ODR has been acknowledged internationally by institutions such as UNCITRAL and the Organization Economic Co-operation and Development (OECD) to improve the access to justice, particularly of low-value cross-border disputes. However, the two bodies point out that technological effectiveness should not be at the expense of fairness, impartiality and accountability.[16] Based on this, the notion of ODR in the era of AI should be traced to the balanced paradigm that would reconcile the technological novelty with the ethical and procedural protection

3: Ethical Concerns

The recent introduction of Artificial Intelligence (AI) into the Online Dispute Resolution (ODR) system offers an array of associated complex ethical issues that penetrate the very fabric of the procedures in terms of fairness and human dignity in the delivery of justice. The most significant ethical issue is algorithmic bias that occurs when the information that is used to train AI systems is biased by historical or structural disparity.[17] When these biased data are used as inputs to automated dispute resolution systems, then it will tend to replicate or even increase the already existing prejudices in the society and hence will have discriminating results. This is especially a critical worry in consumer, employment and cross-border cases where the aspect of asymmetry of power already exists between parties.[18] The transparency of AI decision-making is another problem that complicates this situation; it is commonly known as the black box problem, as it is challenging to determine how decisions are made as well as whether they are motivated by inadmissible factors or not.[19]

The second ethical issue is the question of transparency and explainability. The concept of the classical approach to dispute resolution is based on the presence of reasons and clarity of the procedure, which enables parties to interpret and appeal the results. Conversely, AI-driven ODR systems are often based on the proprietary algorithms and machine learning models which are not publicly verifiable.[20] This is not only unethical but it renders trust null as well as contradicting the principle of accountability in which justice systems are founded on ethics. It has to inform users of those systems of the process of deriving decisions, what they have to use and how much human interaction is involved. Absence of such transparency compromises the very essence of the automated dispute resolution.

The ethical problem of autonomy and consent is closely connected. On justice to remain normative, parties are supposed to willingly accept the dispute resolution mechanism and its implications. However, in AI-based ODR one can frequently consent to it in a standard-form digital agreement or a click-wrap

[15] Roger Brownsword, 'Law, Regulation, and Technology: The Bigger Picture of Good Governance' *Research Handbook on Law and Technology* (Edward Elgar Publishing 2023).

[16] Danrivanto Budhijanto, Anangga W Roosdiono and Mursal Maulana, 'UNCITRAL Technical Notes on Online Dispute Resolution as Soft Law Instrument for Online Dispute Resolution: An Indonesia Perspective' (2025) 2 BANI Arbitration and Law Journal 38.

[17] Birte Böök and Linda Senden, 'The Puzzle of Algorithmic Discrimination in European Equality Law: Putting Together Some Practical, Legal and Conceptual Pieces' *Research Handbook on European Anti-Discrimination Law* (Edward Elgar Publishing 2025).

[18] Barrister Anwar Baig, 'THE ROLE OF TECHNOLOGY IN ENHANCING ACCESS TO JUSTICE: CHALLENGES AND OPPORTUNITIES IN THE 21ST CENTURY' (2025) 2 Al-Aasar 774.

[19] Rocco Bellanova and Marieke De Goede, 'The Algorithmic Regulation of Security: An Infrastructural Perspective' (2022) 16 Regulation & governance 102.

[20] Balbir S Barn, 'Mapping the Public Debate on Ethical Concerns: Algorithms in Mainstream Media' (2020) 18 Journal of Information, Communication and Ethics in Society 124.

agreement, where the degree of algorithmic intervention is un-explicit.[21] This puts the issue of informed consent and the right of parties to subject to human review into question. Autonomy, which is the key to current-day law and technology ethics, is thus undermined in cases when people do not know how the system operates or how the automated bias can take place.

The other major ethical issue is that of accountability - who is responsible when an artificial intelligence system decides to make an unfair or inaccurate decision? Unlike human arbiter, AI has no moral responsibility, and it cannot be charged in a similar manner.[22] This poses a moral and institutional dilemma on whether the programmer, the platform provider or an institution that supervises it should be held responsible. Ethically, the absence of precise accountability not only reduces trust in the process of justice but also presents a danger of getting used to establishing gaps of responsibility in digital governance.

And lastly, AI in ODR quality justification ethics should touch on the issues of surveillance and data privacy. The training, optimization and prediction of AI platforms require much data on users, which implies critical risks in information misuse and breach of confidentiality.[23] In a dispute resolution setting, these violations could lead to the disclosure of sensitive legal and business information, and this is against the ethical obligation of confidentiality that is the foundation of any adjudication and mediation. With data sources emerging as the blood of AI operations, ethical laws must protect its data quality and safety, independent management, and make users informed consumers.

A combination of these moral challenges such as bias, transparency, autonomy, accountability and privacy help to understand that the efficiency in technology cannot replace the moral legitimacy. To ensure that AI-based ODR systems are according to the ethical principles of justice, the systems should involve ex ante ethical design principles, such as fairness audit, algorithmic transparency systems and human-in-the-loop decision-making structures. Digital justice can only develop when these values are incorporated on the design stage without any compromise on its human nature.

4: Legal Problems and Regulatory Environment

The introduction of Artificial Intelligence (AI) into the area of Online Dispute Resolution (ODR) poses the legal challenges that have never been raised and demand a coherent and adaptable regulatory approach. Most importantly among them is the lack of developed legal mechanisms specifying the area, responsibility and procedural recommendations of AI-aided adjudication. The majority of jurisdictions are still relying on the mostly obsolete arbitration and ADR laws that have never been structured to support autonomous and algorithmic decision making.[24] Therefore, the juridical legality of AI-based decisions, the enforceability of algorithmic rewards and admission of the results of automated mediation are still the areas of great uncertainty.[25]

Among the most urgent legal questions is the question of the concerns related to accountability and liability of AI-based decisions. Under traditional regulations, human error, or arbitral malpractice, in a

[21] Roger Brownsword, 'Law, Regulation, and Technology: The Bigger Picture of Good Governance' *Research Handbook on Law and Technology* (Edward Elgar Publishing 2023).

[22] Laud Nii Attoh Ammah and others, 'AI4people− an Ethical Framework for a Good AI Society: The Ghana (Ga) Perspective' (2024) 22 Journal of Information, Communication and Ethics in Society 453.

[23] Łukasz RĄB, 'CODE INSTEAD OF LAW: LEX ALGORITHMICA AS A MODE OF GOVERNMENT OF THE LIVING.' [2025] Scientific Papers of Silesian University of Technology. Organization & Management/Zeszyty Naukowe Politechniki Slaskiej. Seria Organizacji i Zarzadzanie.

[24] Shamaise Peters, 'Alternative Dispute Resolution and Online Dispute Resolution in the EU: Their Linkages, Legal Status, and Adoption Challenges'.

[25] Rachele Beretta, 'Procedural Justice in Online Dispute Resolution: An Empirical Enquiry' (University of Antwerp 2024).

court of law or overseas tribunal, is followable back to individual persons.[26] But, in situations where AI systems make decisions or affect them, it is difficult to provide accountability. This accountability basis squanders basic principles in tort law and contract law, and even the principles of international arbitration. When an AI platform creates a faulty or discriminatory result, there exists the question of whether it is the software developer, that is, the platform operator or the institution owner, administering the ODR mechanism who is liable.[27] The refusal of the statutory clarity on such matters derails the trust in the legitimacy of the outcomes of the AI-assisted dispute resolution and the obligatory power.

Data protection and privacy is another huge legal issue. ODR platforms or artificial intelligence platforms are based on a large amount of data processing, gathering information on a person, finances, and the case and training and adjusting the algorithms. Without the effective data protection legislation, these processing risks may be used to infringe basic rights to privacy and confidentiality. [28] The General Data Protection Regulation (GDPR) by the European Union has become the standard in almost every part of the world because it has presented the concepts of minimization of data, restriction of purpose and the right to assign an explanation in automated decision-making.[29] Nevertheless, not many jurisdictions have applied these principles to the administration of ODR, and the users remain potential victims of a breach of privacy and privacy invasion. In the case of countries such as Pakistan where data protection systems are still in the late phase, international standards are critical in achieving fidelity and obedience in AI-enhanced structures of justice.

Algorithms (also) form a significant regulatory issue because of their transparency. ODR sites can be run on base proprietary algorithms, the reasoning behind which is safeguarded by intellectual property rights.[30] Such a secret goes against the openness requirement of the rule of law which entails decision-making that is transparent and reasonable. The courts and arbitral institutions have to thus balance the intellectual property rights against the provisions of due process. Regulatory interventions can also entail compulsory disclosures of algorithmic reasoning to regulators and supervisory bodies, and certification of automated decision-making tools with regulators and by creating audit trails of automated decisions.[31] On the global regulatory front, different frameworks have started coming up. The European Union Artificial Intelligence Act (2021) suggests a risk perspective of AI regulation, featuring dispute resolution systems as high-risk applications which are highly regulated in transparency and human control.[32] On the same note, the OECD Principles on AI focus on fairness, accountability and human values in AI governance.[33] The Technical Notes on ODR by UNCITRAL also emphasize that the ODR systems should

[26] Rocco Bellanova and Marieke De Goede, 'The Algorithmic Regulation of Security: An Infrastructural Perspective' (2022) 16 Regulation & governance 102.

[27] Shuili Du, 'Reimagining the Future of Technology:"The Social Dilemma" Review' (2022) 177 Journal of Business Ethics 213.

[28] Lee A Bygrave, 'Data Protection by Design and by Default' [2021] Oxford Encyclopedia of European Union Law (Oxford University Press 2022), Forthcoming, University of Oslo Faculty of Law Research Paper.

[29] PG Casali and M Vyas, 'Data Protection and Research in the European Union: A Major Step Forward, with a Step Back' (2021) 32 Annals of Oncology 15.

[30] Mireille Hildebrandt and Kieron O'Hara, 'Introduction: Life and the Law in the Era of Data-Driven Agency' *Life and the law in the era of data-driven agency* (Edward Elgar Publishing 2020).

[31] Martin Ebers, 'The European Commission's Proposal for an Artificial Intelligence Act' *Research Handbook on EU Internet Law* (Edward Elgar Publishing 2023).

[32] Izumi Yamashita and others, 'Measuring the AI Content of Government-Funded R&D Projects: A Proof of Concept for the OECD Fundstat Initiative' (2021) 2021 OECD Science, Technology and Industry Working Papers 1.

[33] Danrivanto Budhijanto, Anangga W Roosdiono and Mursal Maulana, 'UNCITRAL Technical Notes on Online Dispute Resolution as Soft Law Instrument for Online Dispute Resolution: An Indonesia Perspective' (2025) 2 BANI Arbitration and Law Journal 38.

adhere to the current procedural protection, confidentiality provisions, and enforcing standards.[34] However, the discrepancy in regulation efforts among jurisdictions attests to a potential urgent need in the harmonization of ODR, especially due to the increased involvement of the latter in inter-border settings with the potential of equal applications of conflicting legal regimes.

Lastly, the legal issue goes to the issue of recognition and enforcement of AI-based awards. According to the international arbitration tools like the New York Convention (1958), awards have to be given by an effective arbitral tribunal. The question as to whether AI-aided or entirely autonomous awards have this definitional threshold is still controversial.[35] It has been claimed that human oversight is indispensable because of the need to meet the requirements in due process and the exception in the public policies in Article V of the Convention.[36] Due to this fact, until the international and domestic legal spheres acknowledge the phenomenon of algorithmic adjudication, AI-based awards might not gain enforcement in transnational contexts.

Overall, AI inclusion into the ODR systems require a more multifaceted type of regulation that would cover the liability, data protection, transparency, enforceability. Lawmakers need to develop dynamic regulations to protect procedural fairness and innovate technology. Without such structures, a lack of legal clarity and procedural deficiency can pose a threat to damaging the opportunities of digital justice.

5: Recommendations

It is important to note that the ethical and legal factors brought up by the deployment of Artificial Intelligence (AI) in Online Dispute Resolution (ODR) platforms need a multi-dimensional and proactive strategy that encompasses regulatory regulation, technological adaptations and agentic values. The recommendations below will attempt to create a structure of accountable AI regulation and remain with equitable, translucent and accountable digital dispute resolution.

1. **Mandatory Human Oversight:**

ODR systems with AI should have a human in the loop framework, especially when dealing with a high stakes or legal dispute.[37] Human supervision makes sure that the recommendation made by algorithms is scrutinized in terms of fairness, proportionality and adherence to the rules of procedures. Intelligent applications that blend AI analytics with human reasoning can eliminate the risks of bias, errors, and opaque judgments, hence maintain the validity of the results.[38]

2. **Algorithmic Transparency and Explainability:**

Platforms are advised to use transparency systems so that the parties can be made aware of logical and reasoning behind the AI-assisted decision-making.[39] Clarity may be attained by divulging the algorithmic models, audit trail and proper documenting of the decision criteria. Explainability is not only more engine to build trust in users, but it is also in line with the principle of due process and international human rights regulations.[40]

3. **Ethical Design and Bias Audits:**

[34] ibid.

[35] Suksham Chauhan, *New York Convention: Convention on the Recognition and Enforcement of Foreign Arbitral Awards of 10 June 1958: Article-by-Article Commentary, Edited by Dr. Reinmar Wolff* (Oxford University Press UK 2024).

[36] Janet K Martinez, 'Designing Online Dispute Resolution' [2020] J. Disp. Resol. 135.

[37] Elena Alina Onțanu and Eric Tjong Tjin Tai, 'Digital Technology and Procedural Justice: Towards a Geography of Justice' (2025) 30 Tilburg Law Review.

[38] Rachele Beretta, 'Procedural Justice in Online Dispute Resolution: An Empirical Enquiry' (University of Antwerp 2024).

[39] Rocco Bellanova and Marieke De Goede, 'The Algorithmic Regulation of Security: An Infrastructural Perspective' (2022) 16 Regulation & governance 102.

[40] Sandra Wachter, Brent Mittelstadt and Chris Russell, 'Why Fairness Cannot Be Automated: Bridging the Gap between EU Non-Discrimination Law and AI' (2021) 41 Computer Law & Security Review 105567.

The developers of AI and the providers of ODR are expected to undertake ethical designs and conduct regular bias audits.[41] The audits should assess the existence of discrimination within the roster of data sets and algorithms, so that the automated decisions are fair with regards to various cohorts of users. Other principles that should be considered in system architecture under ethical design include addition of concepts like fairness, inclusivity, and respect of privacy

4. **Data Protection and Privacy Safeguards:**

These stringent data governance policies are necessary to safeguard confidentiality and integrity of the information of the user.[42] End-to-end encryption, data minimization policies, as well as adherence to the set standards, such as the General Data Protection Regulation by the European Union (GDPR), must be enforced. The consent of users must be informed and explicit, and there should be an opportunity to refuse the automated processing whenever it is possible.

5. Legal and Regulatory Harmonization:

Legal frameworks need to be formulated on a national level to accept AI-aided ODR awards and determine liability in case of algorithmic errors.[43] Cooperation among countries is also important, especially in the case of disagreements at the cross-border level, to make the decisions made by the AI enforceable, and to avoid the fragmentation of the regulations. Harmonization guidelines can take into consideration existing international guidelines of UNCITRAL, OECD and EU guidelines and transform it to fit national legal environments.

6. **Capacity Building and Stakeholder Education:**

Mediators, arbitrators, legal practitioners and users of AI need to be trained in order to promote successful adoption and ethical utilization of AI in ODR. Increasing awareness about AI possibilities, restrictions, and protocols that ensure patient safety will foster confidence in digital justice systems, and this increasing awareness is supported by stakeholder education.

7. **Independent Oversight and Certification:**

Instead, specific independent monitoring bodies or certification authorities need to be set up to manage AI-based ODR platforms.[44] Certification may confirm that the ethical, legal and technical standards are met, and this is also an external form of accountability as well as reducing the chances of a conflict of interest arising between the platform providers and users.

The application of these guidelines needs the joint efforts of policymakers, technologists, law practitioners and international bodies. ADR platforms powered by AI have the potential to provide a balance between efficiency and justice by incorporating human-based ethics and strong regulatory frameworks and technological transparency. This kind of practice will guarantee the fulfillment of the dream of the digital dispute resolution process without sacrificing fairness and accountability, or the basic right of the victim(s).

6: Conclusion

Introduction of Artificial Intelligence (AI) into the Online Dispute Resolution (ODR) systems is a substantial development in the availability, effectiveness, and scalability of the dispute resolution systems. AI can streamline the process, reduce expenses and expediate cross-border dispute resolution

[41] Laud Nii Attoh Ammah and others, 'AI4people− an Ethical Framework for a Good AI Society: The Ghana (Ga) Perspective' (2024) 22 Journal of Information, Communication and Ethics in Society 453.

[42] Lee A Bygrave, 'Data Protection by Design and by Default' [2021] Oxford Encyclopedia of European Union Law (Oxford University Press 2022), Forthcoming, University of Oslo Faculty of Law Research Paper.

[43] Saud Abdullah Alshathri, 'Online Dispute Resolution as a Mechanism to Enhance Consumer Trust in E-Commerce: How Can Saudi Arabian Law Be Improved?' (Newcastle University 2022).

[44] Martin Ebers, 'The European Commission's Proposal for an Artificial Intelligence Act' *Research Handbook on EU Internet Law* (Edward Elgar Publishing 2023).

especially in the environment of e-commerce and international trade. Nonetheless, the process of change in technology comes with serious ethical and legal implications which need close examination. AI can adversely impact the integrity and legitimacy of AI-based ODR due to algorithmic bias, lack of accountability and data privacy as well as the absence of broad legal frameworks, which further contribute to the lack of understanding of enforceability, liability and procedural fairness.

In the given paper, it has been stressed that technological innovation in dispute resolution cannot be seen as an activity that can be undertaken without ethical and legal concerns. Human-in-the-loop models, algorithmic transparency, ethical design principles, robust data protection and harmonized legal frameworks should be adopted to make sure that AI supplements and not destroys justice. By introducing a human-centered value system and accountability protocol into the design and control of the ODR sites, one can enjoy the advantages of AI, protecting fairness, impartiality and fundamental rights. After all, the future of the AI-assisted ODR will be determined by whether the policymakers, technologists and legal practitioners will learn to strike the balance between efficiency and the ethical and legal accountability, providing a system that is innovative and fair at the same time.

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