

Balancing Digital Justice and Individual Rights: Comparative Criminal Court Transformation in Indonesia and Uzbekistan

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Abstract

The rapid digitalisation of criminal justice promises greater efficiency and accessibility but also creates procedural risks when technological innovation outpaces safeguards for individual rights. Despite expanding scholarship on digital courts, comparative evidence remains limited on how different institutional trajectories shape the relationship between judicial technology and procedural protection in emerging Asian legal systems. This study examines how digital criminal proceedings affect individual rights in Indonesia and Uzbekistan and identifies the institutional conditions required for rights-sensitive digital justice. Using a qualitative comparative socio-legal design, the study analyses legislation, judicial and policy documents, official materials, and relevant scholarly literature through thematic content analysis and structured comparison. The findings reveal contrasting trajectories: Indonesia combines relatively established digital judicial infrastructure with fragmented criminal-specific regulation, whereas Uzbekistan pursues a more centrally coordinated Digital Court transformation while procedural safeguards continue to evolve. Across both systems, electronic evidence, remote hearings, digital case management, and AI-assisted tools generate efficiency and transparency gains but also risks concerning evidentiary reliability, meaningful participation, digital inequality, and human oversight. The study conceptualises this mismatch as institutional asynchrony, providing a comparative framework for designing accountable, contestable, and rights-sensitive digital justice beyond technologically consolidated jurisdictions.

A. Introduction

Digitalisation is no longer merely modernising court administration; it is transforming the conditions under which criminal justice is exercised, and individual liberty is adjudicated. Courts increasingly integrate electronic case files, digital evidence, remote hearings, automated court documents, and AI-assisted tools into core criminal procedures (Trajanovska & Peovska, 2022). In Indonesia, this transformation is reflected in the expansion of e-court and e-litigation, electronic criminal trials, and the regulatory recognition of electronic evidence (Adisti et al., 2021). Uzbekistan is pursuing a similarly ambitious trajectory through its “Digital Court” initiative, which envisages electronic case processing, AI-supported document preparation, digital hearing transcripts, and forecasting tools within its 2025–2027 judicial digitalisation programme (Khamzakhonov, 2026). These developments place both countries within a broader transformation in which digital technologies increasingly mediate criminal justice administration.

However, technological modernisation creates a fundamental tension between procedural efficiency and the protection of individual rights. Digital courts may improve access to proceedings, but they also reshape the conditions under which defendants exercise the rights to be heard, receive effective legal assistance, and confront witnesses (Sakowicz & Zieliński, 2024). Indonesian virtual criminal trials illustrate this tension: they can reduce physical and financial barriers while generating inequalities in meaningful participation because of differences in connectivity, equipment, and digital literacy (Ariani et al., 2021). In Uzbekistan, expanding digital and AI-assisted judicial tools similarly raises concerns regarding judicial independence, transparency of reasoning, and defendants’ ability to understand and challenge decisions affecting their liberty (Turanov, 2025). Digital criminal justice therefore offers opportunities for greater accessibility but also risks new forms of procedural exclusion.

International scholarship increasingly recognises these tensions, but remains fragmented across technologies and jurisdictions. Existing studies frequently examine virtual trials, online case management, or electronic evidence separately and within single jurisdictions (Matyas, 2022; Bukido et al., 2025). Indonesian scholarship has identified normative and practical challenges in online criminal trials and electronic justice, including the under-regulation of key procedural safeguards. Research from Europe and other regions similarly tends to concentrate on particular technologies or procedural reforms through predominantly doctrinal or policy-oriented perspectives, with limited

This limitation is particularly evident in the scholarship on Indonesia and Uzbekistan. Studies in Indonesia generally examine online trials or electronic criminal justice within a single jurisdiction or compare conventional and online hearings without integrating another national experience into a unified socio-legal analysis (Junaidi, 2023). Scholarship concerning Uzbekistan has primarily addressed regulatory design, efficiency, and ethical issues surrounding digital courts and judicial AI, rather than comparatively examining their consequences for defendants' rights and access to justice (Nematov, 2023). Although both countries are undergoing intensive judicial digitalisation, their experiences have not been systematically brought into dialogue to explain how different institutional and regulatory trajectories shape meaningful participation, legal assistance, evidentiary rights, procedural fairness, and access to justice. This creates a substantive comparative gap, not merely the absence of another cross-country study.

The analytical framework integrates socio-legal analysis, rule-of-law and due-process principles, access-to-justice theory, and e-justice/law-and-technology perspectives. The socio-legal approach situates digital criminal procedure within interactions among

legal norms, institutional practices, technological infrastructures, and political-cultural contexts. Rule-of-law and due-process principles provide the basis for evaluating legal certainty, equality of arms, fair-trial guarantees, and judicial independence. Access-to-justice theory examines whether digitalisation improves the availability and adequacy of legal participation or reinforces digital exclusion (Sibarani, 2023; Ali Kusumo et al., 2025). The e-justice and law-and-technology perspective operationalises digital criminal proceedings through e-files, remote hearings, automated documents, and AI-assisted tools, while illuminating how technological design and governance redistribute institutional power, responsibility, and accountability (Hedler, 2023). This integrated framework constitutes the study's principal analytical novelty.

Building on this framework, the study comparatively examines the design and practice of digital criminal proceedings in Indonesia and Uzbekistan and their implications for individual rights. It specifically maps the integration of e-evidence, remote criminal hearings, automated documents, digital case management, and AI-assisted tools; assesses their cumulative implications for effective participation, legal assistance, access to and contestation of evidence, transparency, and non-discrimination; and formulates rights-sensitive policy recommendations for digital courts and judicial AI regulation by drawing on both national experiences and relevant international benchmarks (Sibarani, 2023; Jatna et al., 2025). In doing so, the study seeks to demonstrate how judicial digitalisation can advance institutional modernisation without subordinating due process, access to justice, judicial independence, and fundamental procedural rights to technological efficiency

B. Method

This study employs a qualitative comparative socio-legal approach to examine digital criminal proceedings as socio-institutional practices shaped by legal norms, organisational arrangements, and broader political and technological contexts (Zhao, 2024). A small-N comparative design compares Indonesia and Uzbekistan to identify convergences and divergences in regulating and implementing electronic evidence, remote hearings, AI-assisted judicial tools, and digital case management. The comparison focuses on how these technological developments interact with procedural rights, fair-trial guarantees, and access to justice within the two legal systems. Rather than treating digitalisation solely as a technological or doctrinal development, the research examines

the relationship between formal legal arrangements, institutional practices, and the rights-related consequences of digital criminal justice.

The study relies exclusively on documentary materials from three categories. The first comprises legislation and regulations governing criminal procedure and judicial digitalisation, including Indonesian criminal procedure and electronic-information legislation, Supreme Court regulations concerning electronic judicial processes, and corresponding Uzbek criminal procedure provisions, decrees, and Digital Court programmes. The second comprises judicial decisions and available practice-oriented documents, including guidelines and protocols concerning remote hearings, electronic evidence, videoconferencing, digital case files, and AI-supported judicial tools. The third comprises official reports, national policy documents, international reports, and published empirical studies on digital justice, court digitalisation, and fundamental rights (Priel, 2023). These materials provide the documentary basis for examining both the formal regulatory architecture and documented implementation of digital criminal justice in the two jurisdictions.

The materials are analysed through thematic content analysis and structured comparative analysis (Adams & Bomhoff, 2012). The analysis organises the documentary evidence around four dimensions: electronic evidence, remote hearings, digital and AI-assisted tools, and digital case management. Within each dimension, the materials are examined for their implications for individual rights, fair-trial guarantees, and access to justice. The structured comparative analysis subsequently contrasts Indonesian and Uzbek regulatory and institutional developments across the same analytical dimensions, identifying patterns of convergence and divergence while situating both jurisdictions within broader developments in digital justice (Tobia, 2020). This analytical procedure connects the comparative evidence directly to the socio-legal and rights-based framework established in the Introduction.

Because the study relies exclusively on publicly available documentary materials and published research and does not involve human or animal participants, it did not require formal human-subject ethics approval. All materials were collected, interpreted, and cited in accordance with applicable institutional standards for research integrity and scholarly attribution (Feeley, 2007). No interviews, focus groups, surveys, experiments, or other forms of direct participant data collection were undertaken. Accordingly, the study does not process confidential participant information or personally identifiable research data beyond information already contained in the documentary sources examined.

C. Results and Discussion

This section presents the comparative findings on the digital transformation of criminal proceedings in Indonesia and Uzbekistan and subsequently discusses their broader socio-legal implications. The Results section reports the evidence derived from the documentary analysis and structured comparison, focusing on the regulatory, institutional, and procedural dimensions of digital criminal justice. The Discussion then interprets these findings through the study's socio-legal, rule-of-law, due-process, access-to-justice, and law-and-technology perspectives, with particular attention to their implications for individual rights and rights-sensitive judicial digitalisation.

1. Results

The documentary analysis identified four interrelated dimensions of digital criminal proceedings in Indonesia and Uzbekistan: regulatory development, electronic evidence and automated documentation, remote hearings and participation, and digital case management and AI-assisted tools. The findings reveal that both jurisdictions are integrating digital technologies into judicial processes, but through different institutional trajectories and at different stages of implementation. Indonesia demonstrates a predominantly incremental model built around existing court regulations and information systems, whereas Uzbekistan follows a more centrally coordinated, programme-based model associated with the Digital Court agenda. Across both jurisdictions, the evidence also distinguishes between established digital administrative practices and emerging technologies whose criminal-procedure safeguards remain under development.

a. Regulatory Development of Digital Criminal Proceedings

Indonesia has established an operational infrastructure for electronic court administration through Supreme Court regulations governing e-Court and e-Litigation. Electronic filing, payment, summons, and case administration are increasingly institutionalised, while electronic evidence has become more prominent within judicial practice. Studies cited in the documentary corpus report approximately 25–35% reductions in average case-processing time in courts implementing e-Court and e-Litigation and indicate that 70–80% of surveyed users perceived improvements in transparency and predictability (Souza & Spohr, 2021). However, the reviewed literature also identifies disparities in infrastructure and staff capacity, and ongoing uncertainty about the relationship between digital evidentiary practices and KUHAP, particularly regarding

authenticity and chain-of-custody requirements (Mania, 2022). Dedicated procedural regulation of AI-assisted tools in criminal proceedings remains limited (Werdiningsih, 2022).

Uzbekistan displays a more centrally programmed trajectory. Presidential Decree No. UP-140 of 21 August 2025 introduced the Digital Court concept within a 2025–2027 judicial digitalisation programme. The documentary materials describe pilot modern courtrooms in Tashkent, electronic filing, remote participation, automated hearing records and judicial documents, integration with Digital Government infrastructure, and planned nationwide expansion during 2026–2027 (Xavier, 2024). The programme also envisages AI-supported services, including automated document preparation and a virtual consultant through *my.sud.uz*. Several of these measures remain prospective or at the pilot stage rather than uniformly implemented across criminal courts. Available regulations also provide less detailed guidance on confidential lawyer-client communication, effective remote participation, and contestability of AI-supported outputs (Sobanski, 2024).

Table 1. Comparative Regulatory Development of Digital Criminal Proceedings

Dimension	Indonesia	Uzbekistan
Regulatory trajectory	Incremental development through Supreme Court regulations and existing electronic judicial systems	Centrally coordinated Digital Court programme associated with Presidential Decree No. UP-140 and the 2025–2027 programme
Electronic administration	e-Court/e-Litigation institutionalise e-Filing, e-Payment, e-Summons, and electronic administration	Electronic filing, digital case files, remote participation, electronic records, and integration with Digital Government systems
Reported implementation	Established electronic administration with reported efficiency gains, but uneven institutional capacity	Combination of existing digital services, pilots, and measures scheduled for broader implementation
Electronic evidence	Increasingly recognised and used; authentication and chain-of-custody issues remain.	Digital-evidence regulation increasingly incorporated into procedural legislation.
AI regulation	AI-specific criminal-procedure rules remain limited	AI explicitly incorporated into Digital Court planning, although detailed procedural safeguards remain developing
Main documented limitation	Regulatory fragmentation and uneven technological capacity	Implementation maturity and incomplete procedural detail for AI-mediated and remote proceedings

Table 1 demonstrates that the principal difference concerns the institutional pathway of digitalisation rather than the mere presence of technology. Indonesia has

comparatively established electronic administrative systems but fragmented criminal-procedure regulation, whereas Uzbekistan has articulated a broader state-led digitalisation programme whose implementation remains partly prospective.

b. Electronic Evidence and Automated Judicial Documents

Electronic evidence constitutes an increasingly important element of Indonesian criminal justice, particularly in corruption, economic crime, and technology-mediated offences. The documentary materials report that the Corruption Eradication Commission handled 622 investigations and 510 prosecutions during 2020–2024, involving 691 suspects and 36 sting operations (Hadianto et al., 2024). Indonesia Corruption Watch recorded 364 corruption cases involving 888 suspects in 2024 and estimated potential state losses of approximately IDR 279.9 trillion (Rakha, 2024). These figures establish the scale of enforcement in areas where electronic financial and communication records may be relevant, although they do not establish the proportion of cases in which electronic evidence was decisive.

The reviewed materials identify CCTV recordings, chat records, metadata, electronic transactions, and digital-forensic outputs among the electronic materials used in criminal proceedings. They simultaneously report continuing variation concerning authentication, forensic preservation, chain-of-custody documentation, and data protection. At the administrative level, SIPP and related electronic systems generate summonses, scheduling notifications, and template-based procedural documents (Andini et al., 2023). The evidence therefore distinguishes established administrative automation from automation affecting substantive judicial reasoning, which remains much more limited (Tejerizo, 2023).

In Uzbekistan, digital evidence is increasingly embedded within broader electronic case-management reforms. The reviewed sources describe electronic filing and archiving, videoconferencing, digital access to case materials, automated hearing records, and online services through *my.sud.uz* (Kolkman et al., 2024). Materials concerning the 2024 digital-evidence reforms report requirements relating to specialist involvement, integrity during transfer, examination of original media, and admissibility of electronic copies (Terzidou, 2023). The Digital Court agenda further includes automated drafting, digital transcripts, and AI-supported services, although publicly available procedural guidance concerning judicial treatment of automated outputs remains limited (Sachoulidou, 2023).

Table 2. Electronic Evidence and Automated Documentation in Indonesia and Uzbekistan

Dimension	Indonesia	Uzbekistan
Common digital evidence	CCTV, electronic communications, metadata, transaction records, and digital-forensic outputs	Electronic documents, audio-video materials, internet-based information, and other digital data
Evidentiary development	Electronic evidence increasingly incorporated into criminal practice	Digital evidence increasingly formalised through specific legislative reforms
Integrity safeguards	Literature reports continuing variation in authentication and chain-of-custody practices.	Reviewed reforms specify integrity, specialist involvement, original-medium examination, and conditions for copies.
Administrative automation	SIPP/e-Court generate summonses, schedules, and template-based records	Digital Court systems envisage automated documents and real-time hearing records
AI-related development	Primarily supportive and emerging	Explicitly incorporated into Digital Court planning
Implementation issue identified in sources	Uneven technical and evidentiary standards	Detailed governance of AI-generated outputs remains developing

The comparative evidence in Table 2 indicates that electronic evidence and automated documentation are developing alongside one another but remain legally distinct. Both systems increasingly rely on digital information, while the degree of standardisation governing its collection, preservation, and automated processing differs.

c. Remote Hearings, Participation, and Digital Access

Remote proceedings expanded markedly in Indonesia during and after the COVID-19 period (Andini et al., 2023). Studies reviewed in the documentary corpus report that approximately 30% of trials across case categories involved some virtual component and around 45% of new cases were registered through digital platforms during the post-pandemic period (Amarini et al., 2023). Another study reports that only 25 of 677 courts had videoconferencing capacity in 2020, followed by substantial expansion in larger courts and detention facilities (Nelson et al., 2023). Because these statistics cover different categories and institutional settings, they should not be interpreted as criminal-court statistics alone.

The reviewed Indonesian studies consistently document practical constraints affecting remote participation, including unstable connections, audio delays, inadequate

devices, restricted camera perspectives, and insufficient private space for lawyer-client communication (Vicoli, 2024). Research from remote regions also identifies disparities in connectivity and access to digital devices (Setiawan et al., 2024). Evidence from the Bitung and Praya religious courts records e-Court utilisation of 9.26% and 8.70%, respectively, with very limited e-Litigation use (Tampubolon et al., 2024). Although these data concern non-criminal jurisdictions, they document wider infrastructural disparities within Indonesia's judicial digitalisation environment rather than directly measuring defendants' experiences.

Uzbekistan incorporates remote participation into its broader Digital Court architecture. The documentary materials identify videoconferencing, electronic notifications, online case monitoring, digital submission and delivery of judicial documents, and electronic access to case information (Michalska, 2023). Earlier E-SUD initiatives also document electronic case-management and remote-access mechanisms, particularly in civil and economic courts. The available evidence therefore demonstrates institutional expansion of remote judicial services, although criminal-specific outcome measurements remain more limited. The reviewed materials additionally identify visibility, audibility, connectivity, and confidential legal communication as recurring procedural conditions for effective remote participation (Разметаева & Филатова-Білоус, 2024; Ramos et al., 2021).

d. Digital Case Management, AI-Assisted Tools, and Rights-Related Findings

Indonesia's digital case-management infrastructure comprises SIPP, e-Court, e-Litigation, the Judgments Directory, and emerging inter-institutional integration through SPPT-TI. Documentary data cited in the manuscript report approximately 99% case-disposal productivity at the cassation level in 2024 and more than 96% timely completion of case minution. The reviewed sources also identify Smart Majelis, AI-supported jurisprudence searches, judgment-pattern analysis, and proposals for real-time court analytics. These applications remain predominantly administrative or supportive rather than mechanisms for automated determinations of criminal responsibility or sentencing (Amarini et al., 2023).

Uzbekistan places AI more explicitly within its judicial-modernisation programme. Planned applications include automated draft documents, real-time digital transcripts, document processing, and tools estimating litigation outcomes and costs. The documentary evidence nevertheless indicates that several applications remain under development and that final judicial authority formally remains human (Komilov, 2021; Urinboyev & Doğan,

2024). Thus, the principal empirical distinction concerns the explicitness and planned scale of AI integration rather than evidence of fully automated adjudication.

Across the four analytical dimensions, the documentary evidence records both expanded digital access and recurring procedural constraints. Indonesian sources report substantial growth in electronic case registration while simultaneously documenting differences in adoption across courts and user groups (Kusbianto & Zaen, 2023; Sibarani, 2023). Across both jurisdictions, the reviewed materials identify recurring issues concerning authentication of electronic evidence, technological capacity, connectivity, privacy, access to digital information, and confidential lawyer-client communication. Uzbekistan's developing AI framework also raises procedural questions, and the materials examined offer limited criminal-specific rules (Sujadmiko et al., 2021).

Table 3. Cross-Country Synthesis of the Principal Findings

Analytical Dimension	Indonesia	Uzbekistan	Comparative Finding
Regulatory model	Incremental, court-regulation-driven	Programme-based and centrally coordinated	Different institutional pathways toward digital justice
Electronic evidence	Increasing use with uneven standards identified in literature	Increasing formalisation through digital-evidence regulation	Both recognise digital evidence, but regulatory consolidation differs
Remote hearings	Expanded substantially after COVID-19; infrastructure remains uneven	Integrated into broader Digital Court strategy	Remote access is expanding, but criminal-specific implementation evidence remains uneven
Case management	Established SIPP/e-Court ecosystem and growing integration	Movement toward integrated electronic case architecture	Digital administration is more mature than AI-enabled adjudication
AI-assisted tools	Emerging and predominantly supportive	More explicitly embedded in reform planning	Neither dataset demonstrates replacement of human judges by AI
Rights-related conditions	Connectivity, evidentiary standards, privacy, unequal digital capacity, confidential communication	Participation, confidentiality, transparency of automated outputs, implementation maturity	Procedural safeguards have developed less uniformly than technological infrastructure

Table 3 consolidates the principal comparative finding: digitalisation is institutionally significant in both jurisdictions, but technological development and procedural regulation do not advance at identical rates. Indonesia shows greater evidence of incremental implementation through established judicial platforms, while Uzbekistan demonstrates a more comprehensive prospective policy architecture. Across both cases, documentary evidence concerning digital administration is more extensive than evidence demonstrating the operation and rights-related consequences of AI within criminal adjudication.

2. Discussion

The central meaning of the findings is that digital criminal justice in Indonesia and Uzbekistan represents an institutional transformation rather than a mere technological substitution of paper-based procedures. Indonesia has developed digital justice incrementally through established judicial platforms and court regulations, whereas Uzbekistan has pursued a more centrally coordinated and prospective Digital Court programme. This distinction matters because the consequences of digitalisation are mediated by regulatory maturity, institutional arrangements, and technological capacity. Technology therefore becomes part of the environment through which legal authority is exercised rather than an external instrument added to conventional procedure (Khudoynazarov, 2022; Murodovich, 2021). Socio-legal research similarly indicates that technological change is interpreted and institutionalised through existing legal traditions, professional understandings, and normative structures (Amini, 2024; Kusmayanti et al., 2023). Digital justice must consequently be understood as an interaction between technological innovation and the institutional conditions governing its operation.

The different levels of maturity found across electronic administration, digital evidence, remote participation, and AI-assisted tools reinforce this interpretation. Indonesia possesses comparatively established digital administrative systems, while criminal-specific regulation remains fragmented; Uzbekistan presents a more integrated policy architecture, although several Digital Court components remain prospective or pilot-based. Automated documentation may increase consistency, but technological architectures also influence how legal information is organised and presented (Gupta & Husain, 2023). Digital systems consequently introduce technical infrastructures and actors whose design decisions become increasingly relevant to legal practice (Usman et al., 2023; Syahr et al., 2023). Studies of electronic-system governance likewise stress that digital transformation

requires regulatory arrangements that balance technological development, legal certainty, transparency, and rights protection (Isfihani et al., 2024; Mujib, 2025).

We argue that the most significant comparative insight is institutional asynchrony: technological infrastructure, regulatory development, institutional implementation, and procedural safeguards do not necessarily advance at the same pace. Indonesia demonstrates that established electronic administration does not automatically produce an integrated digital criminal-procedure framework, whereas Uzbekistan illustrates the converse tension, in which ambitious digital policy may precede uniform implementation and detailed safeguards. This finding extends socio-legal analysis by showing that the quality of digital justice depends on alignment among technology, law, institutional capacity, and procedural protection (Amini, 2024; Isfihani et al., 2024). Technological sophistication alone therefore cannot determine the quality of judicial modernisation. Instead, its legal significance depends on whether institutions can translate technological capability into accountable, rights-compatible procedures (Syahr et al., 2023; Mujib, 2025).

This institutional asynchrony becomes particularly consequential when digitalisation is assessed through rule-of-law and due-process principles. Indonesia's recognition of electronic processes and evidence has reduced some uncertainty surrounding digitally mediated judicial procedures (Papp et al., 2022), while Uzbekistan's Digital Court programme provides an institutional basis for more systematic digital-procedure rules. Digital case management can strengthen traceability, predictability, and transparency (Nematov, 2023). Indonesian e-Court research likewise indicates that digital litigation can improve efficiency and accessibility while remaining dependent on technological readiness and users' capacity (Yusnita et al., 2024; Setiawan et al., 2024). Administrative efficiency, however, cannot substitute for procedural justice. Technologically efficient proceeding may remain deficient when defendants cannot participate meaningfully, scrutinize evidence, communicate confidentially with counsel, or challenge technology-mediated processes.

Indonesia illustrates this tension through the coexistence of conventional criminal procedure, electronic-information legislation, and judicial regulations governing digital processes. Gaps concerning authentication, digital forensics, remote testimony, and technological failures may generate inconsistent institutional responses (Ramadhan & Alam, 2023). Research on the digitalisation of judicial review similarly shows that technological transformation requires procedural frameworks that sustain accessibility, openness, and good judicial governance (Setiawan et al., 2024). Uzbekistan confronts a

related problem through its Digital Court and AI agenda, where technological possibilities may develop before criminal-specific safeguards concerning transparency and contestability are fully elaborated (Arias, 2020). Rule-of-law quality in digital justice therefore depends not merely on legal authorisation but on whether technological operations remain foreseeable, reviewable, contestable, and institutionally accountable (Isfihani et al., 2024; Prahassacitta & Monica, 2023).

Remote hearings expose this distinction particularly clearly. Findings on connectivity, equipment, audibility, visibility, and confidential lawyer-client communication indicate that formal presence through a digital interface cannot automatically be equated with effective participation. Comparative approaches to videoconferencing similarly emphasise that technologically mediated proceedings must preserve substantive fair-trial guarantees (Aniyozova & Münir, 2025). Indonesian e-Court research also demonstrates that the advantages of online proceedings remain conditioned by infrastructure and digital competence (Yusnita et al., 2024; Riyawan et al., 2023). The relevant benchmark is consequently not whether remote participation is technically possible, but whether defendants retain meaningful opportunities to understand proceedings, communicate with counsel, challenge evidence, and participate effectively. This shifts evaluation from technological functionality toward substantive procedural equivalence.

AI-assisted judicial tools deepen this challenge because their influence may arise even when formally classified as supportive. Automation bias can encourage decision-makers to assign disproportionate authority to computational outputs, particularly when technological recommendations appear neutral or authoritative (Cheong, 2025). Indonesian research on AI-assisted judicial reasoning similarly suggests that AI may facilitate legal analysis but cannot substitute for judges' cognitive, contextual, and human engagement with litigants (Maliki et al., 2023). Uzbekistan's planned automated and predictive services therefore require safeguards beyond formally retaining a human judge as final decision-maker, while Indonesia's slower AI trajectory offers an opportunity to establish safeguards prospectively. Transparency, contestability, and meaningful review remain integral to legal certainty and equality of arms (Wang & Tian, 2022; Maliki et al., 2023). Human oversight is meaningful only when it is informed, independent, and able to override technological outputs.

The findings also challenge the assumption that judicial digitalisation inherently expands access to justice. Electronic filing, case tracking, remote participation, and digital

documentation can reduce geographical distance, costs, and administrative delay (Riyawan et al., 2023; Putra, 2020). Indonesian e-Court research confirms potential gains in efficiency and accessibility (Yusnita et al., 2024). Yet meaningful access remains dependent on connectivity, equipment, institutional resources, legal assistance, and digital literacy (Mukhtar & Lailam, 2023; Saputra et al., 2023). For defendants dependent on institutional facilities or legal-aid services, technological inequality may therefore become procedural inequality. Uzbekistan's emerging AI-mediated services extend this concern to the accessibility and intelligibility of algorithmic systems (Thommandru & Мараатович, 2024). Digital access must consequently encompass the capacity to understand, navigate, and challenge digital processes, not merely the formal availability of online services (Vargas-Murillo et al., 2024).

We therefore interpret the digital divide as a procedural-justice problem, rather than simply an infrastructure deficit. A defendant who technically accesses a digital platform but cannot communicate effectively, understand its operation, obtain assistance, or challenge electronically mediated evidence does not enjoy equivalent procedural access. This interpretation expands access-to-justice analysis from physical availability toward digital capability and procedural agency. It is consistent with research showing that technological transformation is mediated by existing normative and institutional arrangements (Amini, 2024; Isfihani et al., 2024). Digital inclusion should consequently be treated as an element of procedural fairness rather than an ancillary technology policy. This also explains why similar digital platforms may produce different rights outcomes across courts, regions, and user groups despite being governed by formally uniform systems (Yusnita et al., 2024; Saputra et al., 2023).

Taken together, the findings support a rights-sensitive model of judicial digitalisation in which innovation is evaluated against procedural protection rather than efficiency alone. Electronic evidence requires standards concerning authenticity, integrity, privacy, preservation, and contestability; remote hearings require meaningful participation and confidential legal communication; and AI-assisted systems require transparency, explainability, human oversight, and effective mechanisms for challenge (Prahassacitta & Monica, 2023). Studies of judicial digitalisation likewise demonstrate the importance of openness, accessibility, and accountable governance (Setiawan et al., 2024), while research on AI-assisted reasoning confirms that technological assistance cannot eliminate the contextual and human dimensions of adjudication (Maliki et al., 2023; Kusmayanti et al., 2023). Rights safeguards should therefore be understood not as restrictions on innovation, but as institutional conditions through which digital justice acquires procedural legitimacy.

The comparison nevertheless indicates different reform priorities. Indonesia requires greater coherence among electronic court systems, criminal-procedure rules, electronic-evidence regulation, and inter-institutional infrastructures, whereas Uzbekistan requires criminal-specific safeguards that can accompany rapid programme-driven technological deployment while preserving judicial accountability (Nelson et al., 2023). Rights-sensitive governance must therefore extend beyond court administrators and technology providers to mechanisms that can scrutinise system operation and respond to rights-related failures. International experience suggests that technological innovation can coexist with rights protection when digital reform is approached as an institutional and fundamental-rights project rather than merely an IT upgrade (Pastrana, 2020). Necessity, proportionality, transparency, contestability, substantive human oversight, and continuous rights assessment should consequently inform reform in both jurisdictions (Suyunova & Shamsutdinov, 2021; Isfihani et al., 2024).

This study's theoretical contribution lies in integrating socio-legal analysis, due process, access to justice, and law-and-technology perspectives through the lens of institutional asynchrony. The central question is not simply whether technology enhances or threatens individual rights, but under what institutional conditions technological modernisation remains compatible with those rights. This moves analysis beyond binary evaluations of digitalisation and suggests that rights outcomes depend on alignment among technological capability, procedural regulation, institutional capacity, meaningful human oversight, and users' procedural agency (Syahr et al., 2023; Wang & Tian, 2022). It also extends scholarship showing that law must continuously negotiate technological change rather than react only after digital practices become institutionalised (Amini, 2024; Mujib, 2025). Institutional asynchrony thus helps explain why comparable technologies may produce different procedural consequences across legal systems.

This interpretation also carries practical, social, and policy implications. Digital-justice performance should not be measured primarily through adoption rates, processing speed, or technological sophistication. Evaluation should determine whether defendants can access and contest electronic evidence, communicate effectively with counsel, understand technology-mediated procedures, and obtain meaningful remedies when digital systems fail. Research on electronic-system governance similarly emphasises balancing technological development with legal protection, transparency, and accountability (Isfihani et al., 2024), while e-Court research demonstrates that efficiency gains remain dependent on implementation conditions (Yusnita et al., 2024). Procedural safeguards

should therefore develop concurrently with technological deployment rather than retrospectively. In this sense, rights protection becomes part of digital-system design and institutional governance, not merely a corrective response to technological failure (Prahassacitta & Monica, 2023; Setiawan et al., 2024).

Internationally, the Indonesia-Uzbekistan comparison broadens digital-justice scholarship beyond jurisdictions where technological infrastructure and procedural safeguards are already highly consolidated. Globally circulating technologies—electronic evidence, remote hearings, digital case management, and AI-assisted tools—are translated differently through national regulatory structures, institutional capacities, legal traditions, and access patterns. The two cases do not represent the Global South as a whole; instead, they expose a broader comparative problem in which technological capability may outpace the institutional safeguards needed to govern it (Amini, 2024; Mujib, 2025). Their contrasting trajectories demonstrate that emerging legal systems can contribute evidence to international debates on rights-compatible digital justice rather than merely receive models developed elsewhere. Sustainable digital justice consequently depends less on technological convergence than on maintaining alignment between innovation, procedural legitimacy, human oversight, and meaningful access (Pastrana, 2020; Suyunova & Shamsutdinov, 2021).

These interpretations must nevertheless be read in light of the study's methodological limitations. Reliance on legislation, policy documents, judicial materials, official reports, and published studies enables systematic comparison of documented institutional patterns but does not directly capture the lived experiences of judges, prosecutors, lawyers, defendants, or court staff. The documentary evidence is also uneven: Indonesia provides more material concerning established electronic judicial systems, whereas several Uzbek initiatives remain prospective or pilot-based. Moreover, the small-N comparison limits broader generalisation, and rapidly evolving AI and judicial technologies may alter the regulatory and institutional landscape examined here. These limitations do not invalidate the findings but delimit their scope: the study identifies patterns of institutional alignment and asynchrony within the available documentary evidence rather than universal causal relationships across digital justice systems.

D. Conclusion

This study concludes that the digitalisation of criminal proceedings in Indonesia and Uzbekistan is not merely a technological transition but a socio-institutional transformation

whose consequences for individual rights depend on the alignment of technology, regulation, institutional capacity, and procedural safeguards. Indonesia reflects an incremental trajectory supported by established digital judicial infrastructure but constrained by fragmented criminal-specific regulation, whereas Uzbekistan demonstrates a more centrally coordinated transformation in which Digital Court and AI initiatives are developing alongside evolving safeguards. In both contexts, electronic evidence, remote hearings, digital case management, and AI-assisted tools can enhance efficiency, transparency, and access, but these benefits remain conditional on meaningful participation, evidentiary reliability, equality of arms, and effective human oversight.

The study's principal contribution is the concept of institutional asynchrony, which explains how technological innovation, legal regulation, institutional readiness, and procedural protection may develop at different speeds. Integrating socio-legal, rule-of-law, due-process, access-to-justice, and law-and-technology perspectives demonstrates that rights-compatible digital justice depends less on technological sophistication than on institutional alignment. Practically, digital reform should therefore ensure reliable electronic evidence, meaningful participation in remote hearings, transparent and contestable AI-assisted processes, and safeguards against digital inequality. This perspective also contributes to international debates by demonstrating how different legal traditions, institutional capacities, and reform trajectories shape digital justice beyond technologically consolidated jurisdictions.

Future research should directly address the limitations identified in this study. Documentary analysis should be complemented by interviews, courtroom observation, and user-centred research involving judges, prosecutors, lawyers, defendants, legal-aid providers, and digitally disadvantaged groups. The asymmetry of evidence between Indonesia and Uzbekistan requires more balanced empirical investigation, while the small-N design should be extended through comparative studies involving additional Asian and emerging legal systems. Longitudinal and quantitative research is also needed to examine rapidly evolving AI regulation and determine how digitalisation affects participation, access, case processing, and procedural outcomes over time. Ultimately, digital justice should be judged not by how advanced its technology becomes, but by how effectively that technology keeps justice accessible, contestable, accountable, and human-centred.

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Declaration of Competing Interest

The authors declare that they have no known competing financial or non-financial interests that could have appeared to influence the work reported in this paper.

Declaration of Generative AI

During the preparation of this manuscript, the authors used a generative AI-assisted tool to improve the clarity and grammatical consistency of the language and to help align the methodological description with standard academic phrasing; all outputs generated by the tool were carefully reviewed and edited by the authors, who take full responsibility for the content, arguments, and conclusions presented in this article.

References

- Adams, M., & Bomhoff, J. (2012). *Comparing Law: Practice and Theory* (pp. 1–21). <https://doi.org/10.1017/cbo9780511863301.001>
- Adisti, N. A., Nashriana, N., Murilah, I., & Mardiansyah, A. (2021). Pelaksanaan Persidangan Perkara Pidana secara Elektronik pada Masa Pandemi Covid-19 di Pengadilan Negeri Kota Palembang. *Jurnal Legislasi Indonesia*, 18(2), 222–232. <https://doi.org/10.54629/jli.v18i2.768>
- Amarini, I., Saefudin, Y., Kartini, I., Marsitiningih, M., & Ismail, N. (2023). Digital Transformation: Creating an Effective and Efficient Court in Indonesia. *Jurnal Ilmiah Hukum Legality*, 31(2), 266–284. <https://doi.org/10.22219/ljih.v31i2.28013>
- Amini, A. (2024). Religious Tradition and Technology: Debate among Penghulus about Online Marriage Law in Banjarmasin. *Journal of Islamic Law*, 5(1), 105–124. <https://doi.org/10.24260/jil.v5i1.2187>
- Andini, O. G., Kurnia, M. P., Nilasari, N., & Andiki, G. B. (2023). The Impact of Covid-19 Pandemic on Effective Electronic Criminal Trials: A Comparative Study. *Journal of Human Rights Culture and Legal System*, 3(2), 185–209. <https://doi.org/10.53955/jhcls.v3i2.57>

- Aniyozova, D., & Münir, K. (2025). Topography of Human Subjects Research Ethics in Uzbekistan: Analysis using the Emanuel Benchmarks. *Journal of Empirical Research on Human Research Ethics*. <https://doi.org/10.1177/15562646251383010>
- Ariani, N., Suharyo, S., Sosiawan, U., Yuliyanto, Y., Nasution, H., & Narindrani, F. (2021). The Implementation of the Law of Criminal Procedure in Judicial Process During the Covid-19 Pandemic. <https://doi.org/10.2991/assehr.k.210506.028>
- Arias, P. (2020). Artificial Intelligence & Machine Learning: A Model for a New Judicial System? *Revista Internacional Jurídica y Empresarial*, (3), 81–91. <https://doi.org/10.32466/eufv-r.i.j.e.2020.3.593.81-91>
- Bukido, R., Azzochrah, N. A., Zakariah, A. A., & Paikah, N. (2025). Divorce Among Female Muslim Civil Servants: Legal Perspectives in Indonesia. *Ijtihad: Jurnal Wacana Hukum Islam Dan Kemanusiaan*, 25(1), 85–116. <https://doi.org/10.18326/ijtihad.v25i1.85-116>
- Cheong, I. (2025). How can AI Augment Access to Justice? Public Defenders' Perspectives on AI Adoption. <https://doi.org/10.48550/arxiv.2510.22933>
- Feeley, M. (2007). Legality, Social Research, and the Challenge of Institutional Review Boards. *Law & Society Review*, 41(4), 757–776. <https://doi.org/10.1111/j.1540-5893.2007.00322.x>
- Gupta, G., & Husain, A. (2023). Digital Evidence in Police Investigation: A Comparative Analysis of Challenges Faced in India, the UK and the United States. *Journal of Victimology and Victim Justice*, 6(2), 133–145. <https://doi.org/10.1177/25166069231184977>
- Hadianto, Z., Riza, M., Moenta, A. P., & Azisa, N. (2024). Reconstruction and Formulation of Wiring Authority by The Prosecutor in Corruption Crimes. *International Journal of Religion*, 5(10), 1961–1968. <https://doi.org/10.61707/kfyy2e57>
- Hedler, L. (2023). *Time, Law, and Tech: The Introduction of Algorithms to Courts of Law*. Copenhagen Business School [Phd]. <https://doi.org/10.22439/phd.17.2023>
- Isfihani, A. E., Izomiddin, Antasari, R. R., & Is, M. S. (2024). Political Law of Electronic System Implementation in Indonesia. *Nurani: Jurnal Kajian Syari'ah dan Masyarakat*, 24(1). <https://doi.org/10.19109/nurani.v24i1.22672>
- Ismail, I., & Ariffin, K. (2025). The Admissibility of Digital Evidence from Open-Source Forensic Tools: Development of a Framework for Legal Acceptance. *PLOS ONE*, 20(9), e0331683. <https://doi.org/10.1371/journal.pone.0331683>
- Jatna, R. N., Firmansyah, Hasbullah, & Razak, M. U. B. A. (2025). Strengthening the Business Judgment Rule in Indonesia: Lessons from Malaysia. *Journal of Sustainable Development and Regulatory Issues*, 3(3), 568–589. <https://doi.org/10.53955/jsderi.v3i3.157>

- Junaidi, M. (2023). Virtual Criminal Court: A Paradigm Shift in Indonesian Criminal Procedure. *Arrus Journal of Social Sciences and Humanities*, 3(2), 122–128. <https://doi.org/10.35877/soshum1759>
- Khamzakhonov, S. (2026). The Digital Transformation of Prosecutorial Systems: A Comparative Study of England and Wales and the Republic of Uzbekistan. *Central Asian Journal of Academic Research*, 4(1), 27–32. <https://doi.org/10.5281/zenodo.18160574>
- Khudoynazarov, D. (2022). Issues of Introducing Digital Technologies into the Activities of Courts. *The American Journal of Political Science Law and Criminology*, 3(1), 1–6. <https://doi.org/10.37547/tajpslc/volume04issue01-01>
- Kusumo, B. A., Rustambekovich, R. I., Nusratilloevich, Y. A., & Kamolovich, X. B. (2025). Corporate Crime Prevention Through Sustainable Governance and Regulatory Reform. *Journal of Sustainable Development and Regulatory Issues*, 3(3), 616–640. <https://doi.org/10.53955/jsderi.v3i3.168>
- Kolkman, D., Bex, F., Narayan, N., & Put, M. van der. (2024). Justitia Ex Machina: The Impact of an AI System on Legal Decision-Making and Discretionary Authority. *Big Data & Society*, 11(2). <https://doi.org/10.1177/20539517241255101>
- Komilov, B. (2021). New Judicial Reform in New Uzbekistan (pp. 1–8). <https://doi.org/10.37547/iscrc-intconf11-01>
- Kusbianto, K., & Zaen, P. P. M. (2023). Application of Legal Procedures in the Examination of the E-Court System. *Legalpreneur Journal*, 2(1), 122–132. <https://doi.org/10.46576/lpj.v2i1.3719>
- Kusmayanti, H., Kania, D., Prasetyoningsih, N., & Zainol, Z. A. (2023). Judges' Acceptance of Sharia-Inspired Laws in Indonesia. *Al-Manahij: Jurnal Kajian Hukum Islam*, 17(2), 199–214. <https://doi.org/10.24090/mnh.v17i2.7716>
- Maliki, I. A., Ali, Z. Z., & Khusaini, M. (2023). Artificial Intelligence and the Law: The use of Artificial Intelligence as a tool to Assist Judges in Deciding Polygamy Cases. *Nurani: Jurnal Kajian Syari'ah dan Masyarakat*, 23(2), 211–228. <https://doi.org/10.19109/nurani.v23i2.20152>
- Mania, K. (2022). Legal Technology: Assessment of the Legal Tech Industry's Potential. *Journal of the Knowledge Economy*, 14(2), 595–619. <https://doi.org/10.1007/s13132-022-00924-z>
- Matyas, D., Wills, P., & Dewitt, B. (2022). Imagining Resilient Courts: From COVID-19 to the Future of Canada's Court System. *Canadian Public Policy*, 48(1), 186–208. <https://doi.org/10.3138/cpp.2021-015>

- Michalska, M. (2023). The Right to a Fair Trial and the Administration of Justice in the Polish Judiciary System During the COVID-19 Pandemic. *International and Comparative Law Review*, 23(2), 205–222. <https://doi.org/10.2478/iclr-2023-0021>
- Mujib, A. (2025). The Failure of Indonesian E-Commerce Law in Adapting to Digital Economy. *Ijtihad: Jurnal Wacana Hukum Islam dan Kemanusiaan*, 25(2), 213–230. <https://doi.org/10.18326/ijtihad.v25i2.213-230>
- Mukhtar, M., & Lailam, T. (2023). Accountability and Transparency of the Electronic Court and Litigation Systems in Indonesia. *Jurnal Hukum*, 39(2), 157. <https://doi.org/10.26532/jh.v39i2.32552>
- Murodovich, S. (2021). Judicial and Legal Reforms at a New Stage. *The American Journal of Political Science Law and Criminology*, 3(7), 35–45. <https://doi.org/10.37547/tajpslc/volume03issue07-06>
- Nelson, F., Hendrawati, I., & A'yun, R. (2023). Finding the Truth in a Virtual Courtroom: Criminal Trials in Indonesia during the COVID-19. *Sriwijaya Law Review*, 228–243. <https://doi.org/10.28946/slrev.vol7.iss2.2465.pp228-243>
- Nematov, J. (2023). The Analysis of the Legislation Governing the Judicial and Legal Reforms of the Republic of Uzbekistan from 2017 to the Present. *The American Journal of Political Science Law and Criminology*, 5(4), 51–58. <https://doi.org/10.37547/tajpslc/volume05issue04-09>
- Papp, D., Krausz, B., & Gyuranecz, F. (2022). The AI is Now in Session – The Impact of Digitalisation on Courts. *Cybersecurity and Law*, 7(1), 272–296. <https://doi.org/10.35467/cal/151833>
- Pastrana, Á. (2020). The Proposal on Electronic Evidence in the European Union. *Eucrim*, 15(1), 46–50. <https://doi.org/10.30709/eucrim-2020-004>
- Prahassacitta, V., & Monica, A. (2023). Between Fair and Speedy Trial: E-court during Pandemic and a Challenge in Society 5.0. *E3S Web of Conferences*, 426, 02109. <https://doi.org/10.1051/e3sconf/202342602109>
- Priel, D. (2023). Ways of Explaining Law. *Modern Law Review*, 87(2), 497–520. <https://doi.org/10.1111/1468-2230.12863>
- Putra, D. (2020). A Modern Judicial System in Indonesia: Legal Breakthrough of E-Court and E-Legal Proceeding. *Jurnal Hukum dan Peradilan*, 9(2), 275–297. <https://doi.org/10.25216/jhp.9.2.2020.275-297>
- Rakha, N. (2024). Cybercrime and the Law: Addressing the Challenges of Digital Forensics in Criminal Investigations. *Mexican Law Review*, 23–54. <https://doi.org/10.22201/ijj.24485306e.2024.2.18892>

- Ramadhan, M., & Alam, S. (2023). Legal Validity of Teleconference Witness in Indonesia's Criminal Justice System. *Ius Poenale*, 4(2), 127–138. <https://doi.org/10.25041/ip.v4i2.3157>
- Ramos, V., Anagnostakis, A., Barletta, A., Tehver, J., & Canestrini, N. (2021). European Criminal Bar Association Statement of Principles on the use of Video-Conferencing in Criminal Cases. *New Journal of European Criminal Law*, 12(3), 476–493. <https://doi.org/10.1177/20322844211013541>
- Riyawan, D., Clarence, J., & Lexmana, M. (2023). Law in the Era of Digitalization and Covid-19 Pandemic. *Veteran Law Review*, 641–53. <https://doi.org/10.35586/velrev.v6ispecialissues.4817>
- Rusakova, E. (2024). The Evolution of Digital Legal Proceedings in African Countries. *RUDN Journal of Law*, 28(2), 424–435. <https://doi.org/10.22363/2313-2337-2024-28-2-424-435>
- Sachoulidou, A. (2023). Going Beyond the “Common Suspects”: To be Presumed Innocent in the Era of Algorithms, Big Data and Artificial Intelligence. *Artificial Intelligence and Law*. <https://doi.org/10.1007/s10506-023-09347-w>
- Sakowicz, A., & Zieliński, S. (2024). Towards a Digitalised Criminal Justice System. *Revista Brasileira de Direito Processual Penal*, 10(2). <https://doi.org/10.22197/rbdpp.v10i2.995>
- Saputra, R., Setiodjati, J., & Barkhuizen, J. (2023). Under-Legislation in Electronic Trials and Renewing Criminal Law Enforcement in Indonesia. *Journal of Indonesian Legal Studies*, 8(1), 243–288. <https://doi.org/10.15294/jils.v8i1.67632>
- Setiawan, H., Handayani, I. G. A. K. R., Hamzah, M. G., & Tegnan, H. (2024). Digitalization of Legal Transformation on Judicial Review in the Constitutional Court. *Journal of Human Rights Culture and Legal System*, 4(2), 263–298. <https://doi.org/10.53955/jhcls.v4i2.263>
- Sibarani, W. (2023). Modern Justice: Indonesia's Supreme Court's Challenges to Uphold Fair Trial Principles through Digitalization. *Brawijaya Law Journal*, 10(1), 106–121. <https://doi.org/10.21776/ub.blj.2023.010.01.07>
- Souza, S. P. de, & Spohr, M. (2021). Technology, Innovation and Access to Justice. <https://doi.org/10.1515/9781474473880>
- Sujadmiko, B., Meutia, I., Kurniawan, D., & Mardenitami, A. (2021). The Urgency of Digital Right Management on Personal Data Protection. *International Journal of Research in Business and Social Science*, 10(1), 253–258. <https://doi.org/10.20525/ijrbs.v10i1.990>

- Suyunova, D., & Shamsutdinov, B. (2021). Digitalization of Criminal Proceedings in the Context of the Coronavirus Pandemic. *Medico-Legal Update*, 21(2), 455–459. <https://doi.org/10.37506/mlu.v21i2.2723>
- Sukmayanti, M. S., & Gorda, A. N. T. R. (2026). Implementation of Substantive Justice in Juvenile Serious Crime Cases in Indonesia. *Journal of Sustainable Development and Regulatory Issues*, 4(2), 715–744. <https://doi.org/10.53955/jsderi.v4i2.372>
- Syahr, Z., Sally, N., & Albana, M. (2023). The Bailiff's Services in the Electronic Judicial era in Indonesia. *Transforming Government*, 17(3), 317–327. <https://doi.org/10.1108/tg-01-2023-0014>
- Tampubolon, Y. S. H., Murwadi, T., & Sudaryat. (2024). Implementation of Legal Quality Audit on Electronic Civil Trial Procedures (E-Court). *Journal of Ecohumanism*, 3(7), 1412–1433. <https://doi.org/10.62754/joe.v3i7.4304>
- Tejerizo, M. (2023). Digital Evidence and Fair Trial Rights at the International Criminal Court. *Leiden Journal of International Law*, 36(3), 749–769. <https://doi.org/10.1017/s0922156523000031>
- Terzidou, K. (2023). The Evolution of the Perception of Artificial Intelligence in the EU: The Case of Judicial Administration. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.4633945>
- Thommandru, A., & Маратович, Ф. (2024). Leveraging New Emerging Technologies to Enhance the Anticorruption Arsenal. *Multidisciplinary Reviews*, 7(3), 2024058. <https://doi.org/10.31893/multirev.2024058>
- Tobia, K. (2020). Experimental Jurisprudence. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3680107>
- Trajanovska, V., & Peovska, N. (2022). Challenges in the Processes of Criminal Trials and Detention Caused by COVID-19 (pp. 131–142). <https://doi.org/10.20544/icp.3.7.22.p11>
- Turanov, D. A. (2025). Perspectives and Risks of Artificial Intelligence in the Judicial System of Uzbekistan in the Context of International Experience. *European Review of Contemporary Arts and Humanities*, 1(2), 8–11.
- Tutik, T. T., Abdul Aziz Nugraha Pratama, Iwan Permadi, & Tony Hanoraga. (2026). Mixed Marriage Without Agreements In Indonesia's Bawean-Gresik Muslim Community: A Legal Pluralism Perspective. *Ijtihad: Jurnal Wacana Hukum Islam Dan Kemanusiaan*, 26(1), 171–204. <https://doi.org/10.18326/ijtihad.v26i1.171-204>
- Urinboyev, R., & Doğan, E. (2024). Navigating Legal Uncertainty and Informality in Authoritarian Regimes. *Central Asian Affairs*, 10(4), 349–371. <https://doi.org/10.30965/22142290-bja10052>

- Usman, M., Yahya, A., Jafar, M., Darmawan, D., & Kurdi, M. (2023). Law Enforcement of Jinayat Cases in Syar'iyah Court in Aceh Province Indonesia during COVID-19 pandemic. *UUM Journal of Legal Studies*, 14(2), 457–482. <https://doi.org/10.32890/uumjls2023.14.2.2>
- Vargas-Murillo, A., Pari-Bedoya, I., Turriate-Guzmán, A., Delgado-Chávez, C., & Sanchez-Paucar, F. (2024). Transforming Justice: Implications of Artificial Intelligence in Legal Systems. *Academic Journal of Interdisciplinary Studies*, 13(2), 433. <https://doi.org/10.36941/ajis-2024-0059>
- Vicoli, D. (2024). Editorial do Dossiê “Digitalização e Justiça Penal: Aspectos Procedimentais”. *Revista Brasileira de Direito Processual Penal*, 10(2). <https://doi.org/10.22197/rbdpp.v10i2.1061>
- Wang, N., & Tian, M. (2022). “Intelligent Justice”: Human-Centered Considerations in China’s Legal AI Transformation. *AI and Ethics*, 3(2), 349–354. <https://doi.org/10.1007/s43681-022-00202-3>
- Werdiningsih, M. (2022). Pembaharuan Hukum Acara Pidana tentang Persidangan Online dalam Keadaan Darurat. *Widya Yuridika*, 5(2), 413. <https://doi.org/10.31328/wy.v5i2.3633>
- Xavier, P. R. S. (2024). Smartjustice, Process and Evidence: Special Reference to its use in the Court of Appeal. *Revista Brasileira De Direito Processual Penal*, 10(2). <https://doi.org/10.22197/rbdpp.v10i2.1006>
- Yusnita, E., Yuswalina, & Toriq, M. (2024). Embracing e-Court Innovation: Advancing Masalah Mursalah in Indonesia’s Religious Courts. *Nurani: Jurnal Kajian Syari’ah dan Masyarakat*, 24(2). <https://doi.org/10.19109/nurani.v24i2.24744>
- Zhao, W. (2024). Legal Methodology from the Perspective of Jurisprudence. *International Journal of Frontiers in Sociology*, 6(1). <https://doi.org/10.25236/ijfs.2024.060111>
- Разметаева, Ю., & Філатова-Білоус, Н. (2024). European Fundamental Values in the Digital Era. <https://doi.org/10.31359/9786178518073>

