
SURVEILLANCE, SPEED AND SAFEGUARDS: RETHINKING JUSTICE THROUGH INTEROPERABLE SYSTEMS IN DEVELOPING JURISDICTIONS

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ABSTRACT

Under-trial detention remains critical issue in many developing nations. Interoperable Criminal Justice Systems (ICJS) is a technological solution to reduce pretrial incarceration. This paper explores the potential of Interoperable Criminal Justice Systems (ICJS) as a technological solution examining government-led pilot initiatives in India, Brazil, Zimbabwe, and Poland illustrating the benefits including the increased transparency, expedited case processing, and enhanced judicial accountability. of ICJS and analyses the challenges on the overreliance on technology as a remedy for rooted in legal, institutional, and socio-economic structures emphasizing the need for a balanced approach that combines digital innovation with legal reform, improved legal aid, judicial training, and robust safeguards to protect individual liberties. The paper concludes the observation that there must exist a comprehensive approach that recognizes the rights of the accused and is sensitive to the needs of the victims while still fostering public confidence in the justice system.

Keywords: Under-trial Detention, Interoperable Criminal Justice System (ICJS), Legal Reform, Data Privacy, Judicial Efficiency

1. Introduction: Pretrial detention has been an insurmountable barrier to justice in many criminal justice systems worldwide. The word undertrial detention is used to convey the idea of duration—a period for which the accused remains in custody while awaiting trial. The punitive effect of long incarceration before a fair and speedy trial may increase public spending, stimulate populations, and confront him with the choice of remaining imprisoned or accepting a guilty plea to a lesser charge. Lately, Governments and judicial systems are using technology and interoperable systems in an attempt to lay emphasis on speeding up procedural activities, concentrating efficiency on such processes, and ensuring the observance of rights of the accused. This chapter presents various governmental efforts and pilot projects focusing on the development and deployment of Interoperable Criminal Justice Systems (ICJS) for technologically reducing pretrial detention. The implementation of an Interoperable Criminal Justice System (ICJS) aims to streamline procedures and enhance data sharing among different legal agencies as governments venture on employing technology within the criminal justice field. Perhaps ICJS might be a great solution in real-time access to case information and court judgments which would drastically help reduce the backlog of undertrial detention that could otherwise incarcerate such people who often lose in their custody for administrative inefficiencies. Furthermore, promising results during trials and pilot projects hint at the prospect of better finesse in following court directives and fewer pretrial detentions, thereby indirectly aligning with the broader objectives of judicial reform and safeguarding human rights. The challenge lies in ensuring that such a technology does not infringe upon private rights, with international surveillance regulations thus coming under scrutiny.

Research Question:

1. Can Interoperable Criminal Justice Systems (ICJS) effectively reduce undertrial detention in developing jurisdictions by enhancing data sharing, transparency, and judicial efficiency?
2. What are the potential risks and limitations of over-reliance on technology (like ICJS) in criminal justice reform, particularly regarding data privacy, judicial discretion, and structural inequalities?

Methodology: The researcher here has taken the doctrinal and exploratory method to answer the research question. For this, the researcher has relied upon secondary sources like articles, books, case comments, legislations, rules and judicial interpretation from e-resources.

2. Understanding the problem of Under-trial detention: Many underdeveloped countries often struggle with overwhelmed and inefficient court systems; there exists an issue of pretrial

detention.¹ The disorganization among various agencies within the criminal justice system leads to delays in handling cases and prolongs the imprisonment of innocent individuals who haven't been proven guilty yet.² Addressing under trial detention requires a well-rounded approach that goes beyond just technology. It also needs changes in laws and practices to restore public trust in the justice system. The challenges of under trial imprisonment significantly impact the integrity and effectiveness of criminal justice systems. Through the use of Interoperable Criminal Justice Systems (ICJS), integrating technology provides a practical solution to address the inefficiencies that lead to prolonged detention. ICJS projects aim to make court procedures easier by enhancing data sharing and providing real-time access to important case information.³ This approach helps reduce the backlog of under trial detainees and ensures compliance with legal standards. While we pursue these technical advancements, it's crucial to find a balance between improving efficiency and safeguarding personal freedoms, particularly when it comes to privacy and surveillance.⁴ The successful rollout of pilot initiatives highlights the potential benefits of these systems, but it also underscores the importance of ongoing policy and practice changes to truly tackle the issue of under trial detention. Building trust in the justice system and protecting the basic rights of everyone within it really relies on a well-rounded strategy that blends new technology with meaningful reform.⁵

While there are government initiatives and pilot programs focused on leveraging technology to reduce under trial imprisonment, like the Interoperable Criminal Justice System (ICJS), it's crucial to thoroughly examine the significant limitations and potential adverse impacts involved. Depending on technology to make processes easier and enhance data sharing won't address the root causes of under trial detention. Implementing an ICJS might create a misleading sense of safety, as participants may believe that technology alone can resolve the deep-rooted issues within the court system.⁶ Further, assuming that the instant availability of case data will simply result in the reduction of backlogs and enhanced compliance overlooks complex human behavior and institutional resistance to change.⁷ Technical solutions might be

¹ Amnesty International, *Justice Under Trial: A Study of Pre-trial Detention in India* (Amnesty International India 2017).

² Upendra Baxi, *The Crisis of the Indian Legal System* (Vikas Publishing House 2000).

³ R Singh, 'Strengthening Justice Delivery Through Technology: Evaluating India's ICJS' (2021) 9(2) *Journal of Law and Policy Reform* 112.

⁴ Fair Trials, *Pre-trial Detention: Global Practice and Standards* (Fair Trials 2018) www.fairtrials.org.

⁵ World Bank. (2021). *Digital Transformation of the Judiciary: Lessons and Opportunities*.

⁶ Law Commission of India, Report No 268: Amendments to Criminal Procedure Code, 1973 – Provisions Relating to Bail (2017) <http://lawcommissionofindia.nic.in/reports/report268.pdf> accessed 30 May 2025.

⁷ Open Society Foundations. (2014). *Presumption of Guilt: The Global Overuse of Pretrial Detention*. <https://www.opensocietyfoundations.org/publications/presumption-guilt>

too preoccupied with speed, thus compromising an accused's right to a fair trial.⁸Placing too much emphasis on efficiency often results in rushed decisions and ignoring crucial factors in individual cases that are equally important to the court. The integration raises some very serious issues regarding data security and privacy.⁹The ICJS might very well open new avenues of oversight and regulation instead of providing a fairer system. History shows that criminal justice developments can be misused and become subject to bias. Hence trying to balance efficiency and individual rights seems a precarious task here. Whilst there are debates about the under trial detention up on human rights-theories, it should really be understood that not all persons behind bars are really innocent. The complex nature of crime, social issues, and aspects of public security must be kept in mind. Focusing solely on an accused's rights while ignoring anything that could befall the victim's side is a constant imbalance in defining justice for the latter. While these are certainly worthy causes to pursue, it would be wise to approach them cautiously when integrating this aspect within the criminal justice system. Issues with under trial detention would need a more holistic approach and not just fast technical fixes; this underlines the dire need for deep reforms in the judicial system, enhanced legal representation, and more robust safeguards for all stakeholders—victims, the accused, and society alike.

3. The Role of Technology in Addressing Under trial Detention: Technology has become an essential ally in tackling the issues surrounding under trial detention. By using digital tools, governments and legal systems can make legal processes more efficient, boost transparency, and safeguard the rights of those accused. A highly promising technological advancement is the creation of Interoperable Criminal Justice Systems (ICJS). These systems facilitate smooth communication and data sharing among various agencies involved in the criminal justice process. Although the problem of under trial detention is surely an urgent one, relying on technology and on the rollout of Interoperable Criminal Justice Systems (ICJS) might not be the definitive solution.³ Technology entering the criminal justice system is the cause for problems, like reinforcing existing inequalities and violating the rights of individuals.¹⁰This argument stresses the need for cautious integration of technology, thereby giving rise to the question of whether these efforts really resolve the root causes of under trial detention or merely

⁸ Fair Trials, Pre-trial Detention: Global Practice and Standards (2018)

⁹ Human Rights Watch, Broken System: Dysfunction, Abuse and Impunity in the Indian Criminal Justice System(2020) <https://www.hrw.org/report/2020/09/14/broken-system/dysfunction-abuse-and-impunity-indian-criminal-justice-system> accessed 30 May 2025.

¹⁰ Human Rights Watch, Broken System: Dysfunction, Abuse and Impunity in the Indian Criminal Justice System(2020)

aggrandize other deeper systemic issues.¹¹

4. The challenges in technology in tackling under-trial detention: Believing that technology alone can simplify processes and lessen under trial detention misses the intricate nature of the judicial system. Factors like corruption, lack of proper legal support, and economic inequalities contribute greatly to extended periods of detention. Just putting an ICJS in place won't necessarily fix the deeper issues at hand. Additionally, concentrating on technological solutions might shift attention and resources from essential reforms in legal aid and judicial training, which are vital for real advancements in the system.¹²

A: Privacy Challenge: The movement towards ICJS brings up important worries about privacy and surveillance. Introducing these systems might result in more surveillance of people, which could encroach on their rights. Sharing sensitive personal information across various agencies increases the chances of data breaches and misuse of that information. Some people believe that focusing too much on efficiency shouldn't undermine personal freedoms, and they stress the importance of putting safeguards in place to prevent technology from overstepping its bounds in the criminal justice system.¹³

B: Challenge of Dependence on Technology: Relying too much on technology to solve the issue of undertrial detention might lead to an illusion of safety. If judicial authorities rely too heavily on automated systems for making decisions, there's a risk of overlooking human judgment.⁷ Technological systems are not perfect; mistakes in data or biases in algorithms can lead to unjust detentions or the failure to release individuals who deserve bail.¹⁴ This emphasizes the importance of finding a middle ground that combines human judgment with the progress of technology.¹⁵ Advantages from using technology like ICJS in criminal justice can be great, but it's best to approach these advances with thoughtfulness. We should not only focus on cutting down how long people are held without trial using digital solutions; instead, we need to deal with the basic problems that make this happen. Technology should always be

¹¹ United Nations Office on Drugs and Crime (UNODC), Global Study on Legal Aid: Global Report (2016)

¹² Law Commission of India, Report No 239: Expeditious Investigation and Trial of Criminal Cases Against Influential Public Servants (2012)

¹³ Fair Trials, Automating Injustice: The Use of Artificial Intelligence & Automated Decision Making in Criminal Justice Systems (2021)

¹⁴ K Surya Prakash, 'ICJS and the Risk of Digital Miscarriage of Justice' (2022) Indian Journal of Criminology 48(1) 67.

¹⁵ V Yadav, 'Algorithmic Bias and Human Rights in Indian Criminal Justice Reform' (2023) National Law Journal 15(4) 203.

implemented with a reform plan that covers training for judges, aid for legal services, and protection for people's rights, to guarantee equal justice.

5. Important Aspects of Interoperable Criminal Justice Systems (ICJS): An Integrated Criminal Justice System (ICJS) aims to bring together all parts of the criminal justice system like law enforcement, courts, and correctional facilities into a unified and seamless operation.

A. Data Integration: The capacity to share and access information among various agencies, making sure that everyone involved has the latest data at their fingertips.

B. Streamlining Tasks: Simplifying everyday activities like case filing, scheduling, and sending notifications to minimize delays and enhance efficiency. Allowing different agencies to connect instantly helps resolve cases quickly.

C. Openness and Responsibility: Creating a system that is open and responsible, safeguarding the rights of those accused while ensuring that every action is recorded and can be reviewed.

These features enhance the efficiency of the criminal justice system and contribute to shortening the duration of under trial detention by making sure that cases are handled promptly.

6. Government Initiatives and Pilot Projects: To address the issue of under trial imprisonment, some governments have started initiatives and pilot projects aimed at the evolution and application of ICJS. These programs have shown especially strong success in countries where the criminal justice system suffers from inadequate coordination across several authorities and inefficiency.

A. India's National Judicial Data Grid (NJDG): India has advanced its criminal justice system by using technology significantly. Under trial detention has been greatly lowered due to the efforts of the National Judicial Data Grid (NJDG). Acting as a digital platform providing real-time insights into court proceedings, the NJDG details the number of outstanding cases, their length of pending status, and the count of under trial detainees. The NJDG has provided this information so that judicial officials and legislators may identify system flaws and apply remedial action to cut delays and improve efficiency.

B. Brazil's Electronic Case-Processing System: Brazil's criminal justice system's efficiency has been much improved by a computerized case processing system it instituted. The system automates scheduling, makes electronic case filing possible, and lets different agencies

communicate in real time.¹⁶ Under trial detention's length has dropped as a result; cases are handled more quickly and precisely. The system has improved openness and responsibility, therefore protecting the accused's rights during the judicial procedure.¹⁷

C. Zimbabwe's Integrated Electronic Case Management System (IECMS): Designed to improve court case management's efficiency and reduce delays, Zimbabwe has lately unveiled the Integrated Electronic Case Management System (IECMS). The IECMS automates scheduling, helps different agencies communicate in real time, and promotes electronic case submission.¹⁸ By allowing rapid case processing, the approach has shown to dramatically cut the length of under trial imprisonment. The IECMS has improved openness and responsibility, therefore protecting the accused's rights during the judicial process.¹⁹

D. Poland's Digital Criminal Justice System: Poland has developed a digital criminal justice system that greatly improves the effectiveness of its legal procedures. The technology automates scheduling, helps different agencies to communicate in real time, and simplifies electronic case submission.²⁰ The system has used video conferences for court hearings, which reduces the need for personal presence and enables faster case settlement.²¹ Underlying this is a reduction in the length of under trial detention as cases are processed more quickly and effectively.

7. Obstacles in Putting ICJS into Practice: Although ICJS has seen success in various countries; there are still challenges that must be tackled to guarantee these systems are used effectively.

A. Resistance to Change: Many individuals, especially those in the judicial and law enforcement sectors, tend to be hesitant about embracing new technologies, as they are often more comfortable with the traditional ways of managing cases.

B. Technological Infrastructure: Implementing ICJS involves a considerable investment in technology, covering hardware, software, and necessary training. In many developing nations,

¹⁶ Council of Europe, Use of Information Technology in the Brazilian Judiciary: The Justice 4.0 Programme (2021)

¹⁷ National Council of Justice (CNJ), Brazil's Electronic Judicial Process (PJe): Achievements and Future (2020)

¹⁸ AfricanLII, Zimbabwe Launches Integrated Electronic Case Management System (Judiciary of Zimbabwe, 2022)

¹⁹ Herald Zimbabwe, 'IECMS to Speed Up Court Cases, Reduce Backlogs' The Herald (Harare, 15 August 2022)

²⁰ European Commission for the Efficiency of Justice (CEPEJ), Digital Transformation of the Polish Judiciary: e-Justice Systems Overview (2021)

²¹ Organization for Economic Cooperation and Development (OECD), Access to Justice in Poland (OECD Publishing, 2021) 38–42

insufficient technological infrastructure often poses a major obstacle to the effective implementation of these systems.²²

C. Data Privacy and Security: The implementation of digital systems brings up important issues regarding the protection of personal information and overall security. One of the main challenges we face is making sure that the data in ICJS is kept safe and that the privacy of the accused is respected.²³

D. Interoperability: A major challenge is making sure that various agencies in the criminal justice system can easily communicate and share data with one another. This calls for creating consistent protocols and data formats to guarantee that different systems can work together smoothly.²⁴

8. Improving the Impact of ICJS: For ICJS to be truly effective, it's essential for governments and judicial systems to tackle the challenges that come with putting it into practice.

A. Investing in Technological Infrastructure: It's essential for governments to put resources into building the right technological infrastructure that will enable the effective implementation of ICJS. This covers providing hardware, software, and training for judges and law enforcement personnel.²⁵

B. Fostering an Innovative Mindset: Nurturing a mindset of innovation within the criminal justice system can assist in addressing the hesitance towards embracing new technologies. We can make this happen by offering training and highlighting the advantages of ICJS.²⁶

C. Protecting Data Privacy and Security: Making sure that the information held in ICJS is safe and that the privacy of the accused is safeguarded is a top priority. You can make this happen by putting strong data protection policies in place and using secure technologies like encryption.²⁷

D. Creating Consistent Protocols: To enable smooth communication and data sharing among various agencies in the criminal justice system, it's essential to establish consistent protocols

²² World Bank, Digital Transformation of Justice Systems: Challenges and Opportunities (World Bank, 2020) 10–13

²³ Council of Europe, Ethical and Legal Challenges of AI in Criminal Justice Systems (CEPEJ, 2022) 6–8

²⁴ OECD, Digital Government Index: 2020 Results (OECD Publishing, 2020) 24–27

²⁵ World Bank, Digital Transformation of Justice Systems: Challenges and Opportunities (World Bank, 2020)

²⁶ United Nations Office on Drugs and Crime (UNODC), Ensuring Access to Justice in the Era of Digital Justice (UNODC, 2021)

²⁷ Council of Europe, Ethical and Legal Challenges of AI in Criminal Justice Systems (CEPEJ, 2022)

and data formats. We can make this happen by creating national standards for sharing data and using technologies that work well together.²⁸

9. Conclusion: Delays in pretrial detention is a hindrance to justice in many countries owing to inefficient legal systems, lack of coordination among agencies, and obsolescent procedural mechanisms. Interoperable Criminal Justice System is a significant tool for such systemic deficiencies. On the other hand, the paper also rightly warns of limitations in applying ICJS. Overreliance on technology without regard to the structural and institutional flaws may lead to an illusory gain of progress. Technological systems cannot replace human judgment nor stand in place for comprehensive legal reform, judicial training, and effective legal aid mechanisms. On top of this, the digital systems also raise serious concerns about safeguarding data privacy and surveillance.

Accordingly, the success or failure of the ICJS depends on a balanced and integrated approach. Technological innovations should be complimented with meaningful judicial and legal reforms. Privacy safeguards need be ingrained into the system, so as not to infringe upon individual rights. The future of criminal justice reform depends on an appropriate balance between technology, modifications, security, and stakeholder engagement. ICJS is an essential component of making the criminal justice system more open, effective, and respectful of people's rights. The legitimacy of these reforms will depend on their capacity to deliver justice that is efficient, inclusive, and compassionate, thereby strengthening public trust in the legal system.

²⁸ OECD, Digital Government Index: 2020 Results (OECD Publishing, 2020)