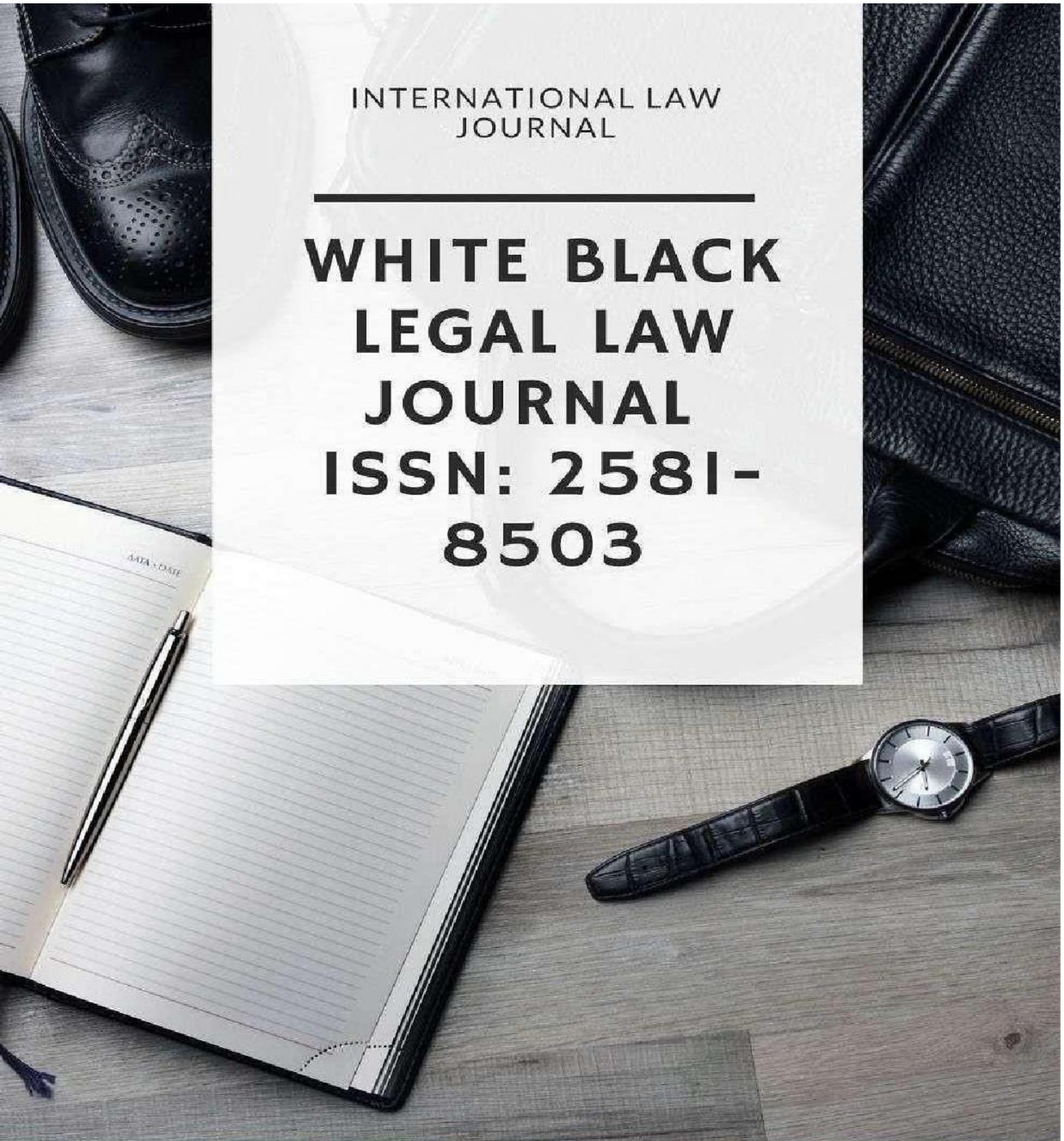




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# **REIMAGINING ACCESS TO JUSTICE THROUGH TECHNOLOGY: OPPORTUNITIES AND CHALLENGES FOR THE INDIAN JUDICIARY**

AUTHORED BY - SUMIT

Research Scholar

Department of Law, MDU Rohtak

## **Abstract**

*Access to justice remains a foundational constitutional promise under Article 39A of the Constitution of India, yet its realisation continues to be constrained by chronic case pendency, geographic and economic barriers, and procedural complexity. This paper examines how digital technology — through the e-Courts Mission Mode Project, the National Judicial Data Grid (NJDG), virtual hearings, e-filing, Artificial Intelligence-assisted legal research, and Online Dispute Resolution (ODR) — is reshaping the architecture of judicial service delivery in India. Drawing on official data from the Department of Justice, the e-Committee of the Supreme Court, and Parliamentary disclosures, the study maps the trajectory of digitisation across three completed and ongoing phases of the e-Courts Project, quantifies persistent pendency (approximately 4.76 crore cases nationwide as of 2026), and develops an opportunity–challenge framework spanning digital literacy, language accessibility, cybersecurity, infrastructure, and institutional capacity. The paper argues that technology is a necessary but insufficient condition for equitable access to justice, and that its transformative potential is contingent on complementary investments in digital literacy, multilingual interfaces, last-mile connectivity, and judicial human resources. The paper concludes with a set of policy recommendations for Phase III of the e-Courts Project and beyond.*

*Keywords: Access to Justice, e-Courts, National Judicial Data Grid, Online Dispute Resolution, Digital Divide, Judicial Reform, Rule of Law, India.*

## **1. Introduction**

The right of access to justice is widely regarded as a 'right to have rights' — a procedural guarantee without which substantive constitutional rights remain unenforceable. In India, this guarantee is anchored in Article 39A, which directs the State to ensure that the operation of the legal system promotes justice on the basis of equal opportunity, and in Article 21, as judicially expanded to include the right to a speedy and fair trial. Despite these constitutional commitments, the Indian judiciary has long grappled with a structural mismatch between judicial capacity and the volume of litigation, producing what scholars and policymakers describe as a chronic 'pendency crisis'.

Since the early 2000s, and with particular acceleration after the COVID-19 pandemic, the Indian judiciary has pursued a sustained programme of digitisation under the umbrella of the e-Courts Mission Mode Project, sanctioned by the Department of Justice, Ministry of Law and Justice, and implemented through the e-Committee of the Supreme Court of India in coordination with the National Informatics Centre (NIC). This paper undertakes a research-oriented assessment of this digitisation programme — its measurable outcomes, its unrealised potential, and the structural challenges that continue to limit its transformative reach, particularly for marginalised and rural litigants.

### **1.1 Research Objectives**

- To trace the evolution and current scale of judicial digitisation in India across e-Courts Phases I–III.
- To quantify and visualise case pendency and digital adoption using official and government-reported data.
- To develop a structured opportunity–challenge framework for technology-enabled access to justice.
- To propose evidence-based policy recommendations for equitable and inclusive judicial digitisation.

### **1.2 Significance of the Study**

The significance of this inquiry lies at the intersection of constitutional law, public administration, and technology policy. Judicial delay is not merely an administrative inefficiency; it has been shown in empirical socio-legal literature to disproportionately burden economically weaker litigants, small businesses awaiting contract enforcement, and undertrial

prisoners whose personal liberty remains contingent on the pace of adjudication. A rigorous, data-informed understanding of how digitisation interacts with these pre-existing inequities is therefore essential not only for judicial administrators and policymakers but also for legal aid organisations, civil society actors, and scholars of comparative judicial reform.

Furthermore, India's e-Courts Project is among the largest sustained public digitisation efforts of any judiciary globally in terms of case volume, court complexes covered, and multilingual population served. Its successes and shortcomings therefore carry comparative relevance for other large, federal, multilingual jurisdictions contemplating similar reforms, including several Sub-Saharan African and South-East Asian judiciaries.

### **1.3 Structure of the Paper**

Following this introduction, Section 2 develops the conceptual framework distinguishing procedural, substantive, and informational dimensions of access to justice. Section 3 traces the empirical trajectory of the e-Courts Project. Sections 4 and 5 examine, respectively, the opportunities and challenges of judicial technology adoption. Section 6 focuses specifically on the human resource and infrastructure constraints that mediate technology's impact. Section 7 situates the Indian experience within comparative international context. Section 8 presents illustrative case studies of specific technology interventions. Section 9 proposes a digital maturity framework for evaluating state-level readiness. Section 10 consolidates key indicators in tabular form. Sections 11 through 13 present policy recommendations, limitations, and concluding observations.

## **2. Conceptual Framework: Access to Justice in the Digital Age**

Access to justice is conventionally analysed along three dimensions: (a) procedural access — the ability to physically or virtually reach a forum of adjudication; (b) substantive access — the ability to obtain a fair and enforceable outcome; and (c) informational access — the ability to understand one's rights, obligations, and the status of one's case. Technology intervenes most visibly in the first and third dimensions, reducing the transaction costs of litigation (travel, wage loss, intermediary dependence) while expanding the availability of case information through platforms such as the NJDG. Its effect on substantive access is more contested, since automation and video-mediated hearings can also introduce new asymmetries between technologically resourced and unresourced litigants.

This paper adopts a socio-legal-technology framework that treats digitisation not as an unqualified good but as a set of tools whose distributive impact depends on complementary factors — digital literacy, device and bandwidth access, language interfaces, and institutional design. This framework structures the opportunity–challenge matrix developed in Section 5.

## **2.1 Article 39A and the Constitutional Mandate**

Article 39A, inserted by the 42nd Constitutional Amendment (1976), directs the State to 'secure that the operation of the legal system promotes justice, on a basis of equal opportunity' and to provide free legal aid to ensure that opportunities for securing justice are not denied to any citizen by reason of economic or other disabilities. Read alongside Article 21's guarantee of a speedy trial, this provision has been judicially interpreted — notably in *Hussainara Khatoon v. State of Bihar* and subsequent jurisprudence — as imposing an affirmative obligation on the State to remove structural barriers to justice, of which technological exclusion is a contemporary manifestation.

## **2.2 Distinguishing 'Digitisation' from 'Access'**

A recurring conceptual confusion in policy discourse conflates the digitisation of court processes with the improvement of access to justice. Digitisation refers to the technical migration of records, filings, and hearings onto digital platforms. Access, by contrast, is an outcome variable — the actual ability of a rights-holder to invoke, navigate, and benefit from the justice system. This paper treats digitisation as an intermediate variable whose effect on access is conditional on the complementary factors discussed throughout Sections 4 through 6, rather than assuming a direct, automatic causal relationship between the two.

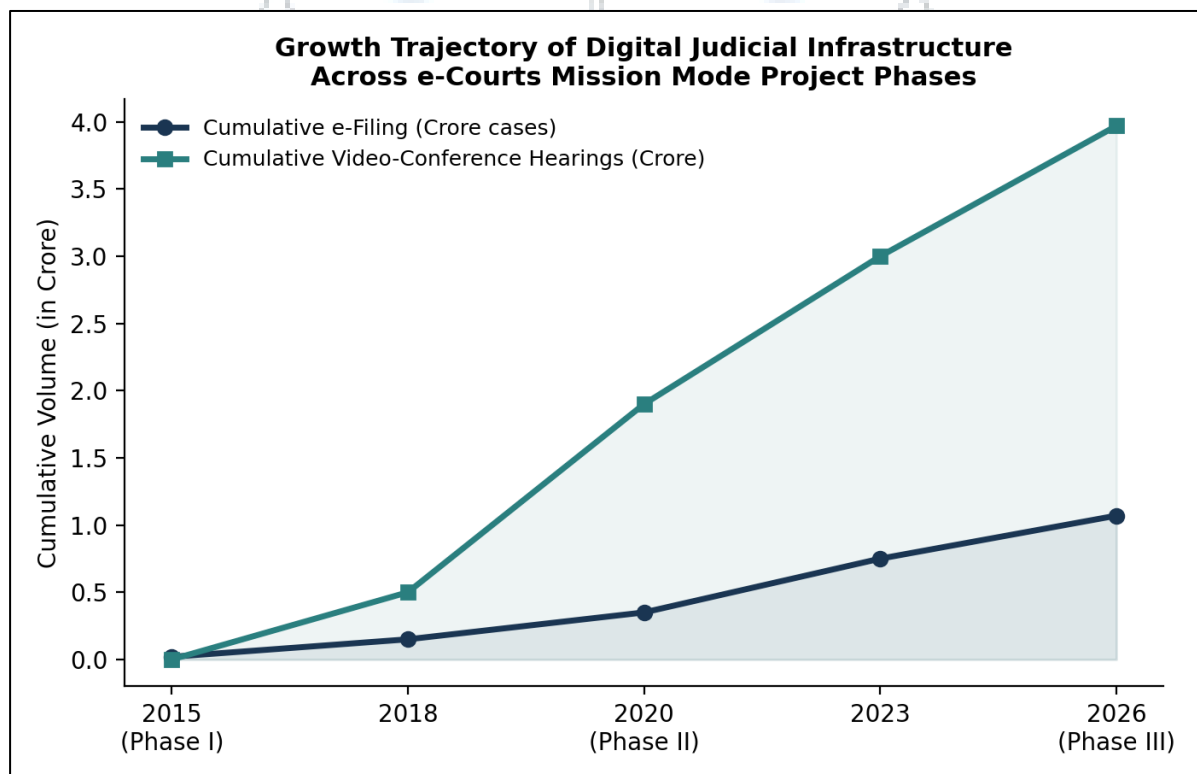
## **2.3 Methodology and Data Sources**

This paper adopts a desk-based, secondary-data research design. Quantitative indicators are drawn from publicly available disclosures of the National Judicial Data Grid (NJDG), the Department of Justice's e-Courts Project reports, and statements made by the Union Ministry of Law and Justice in Parliament. Where official, granular time-series data was not available in the public domain at the required disaggregation (for example, state-wise digital maturity or category-wise average disposal time), the paper constructs illustrative estimates clearly labelled as such, calibrated against the broad orders of magnitude reported in official sources, for the purpose of analytical illustration rather than precise measurement. Readers seeking authoritative point-in-time figures should consult the live NJDG dashboard directly.



### **3. The e-Courts Project: Scale, Trajectory, and Current Status**

The e-Courts Mission Mode Project has progressed through three broad phases. Phase I (2007–2015) focused on computerising district and subordinate courts and establishing the Case Information System (CIS). Phase II (2015–2023) introduced the National Judicial Data Grid as a centralised repository of institution, disposal, and pendency data, alongside digital filing and payment systems. Phase III, currently underway, carries a Government outlay of approximately ₹7,210 crore and is intended to deepen digital infrastructure and interoperability, extending services such as e-filing, virtual hearings, and AI-assisted case management to the taluka level. As of the most recent government disclosures, the e-Filing platform had received approximately 1.07 crore cases cumulatively, while video-conferencing facilities had supported more than 3.97 crore hearings across 3,240 court complexes and 1,272 jails nationwide. Figure 1 illustrates the cumulative growth of these two indicators across the successive project phases.

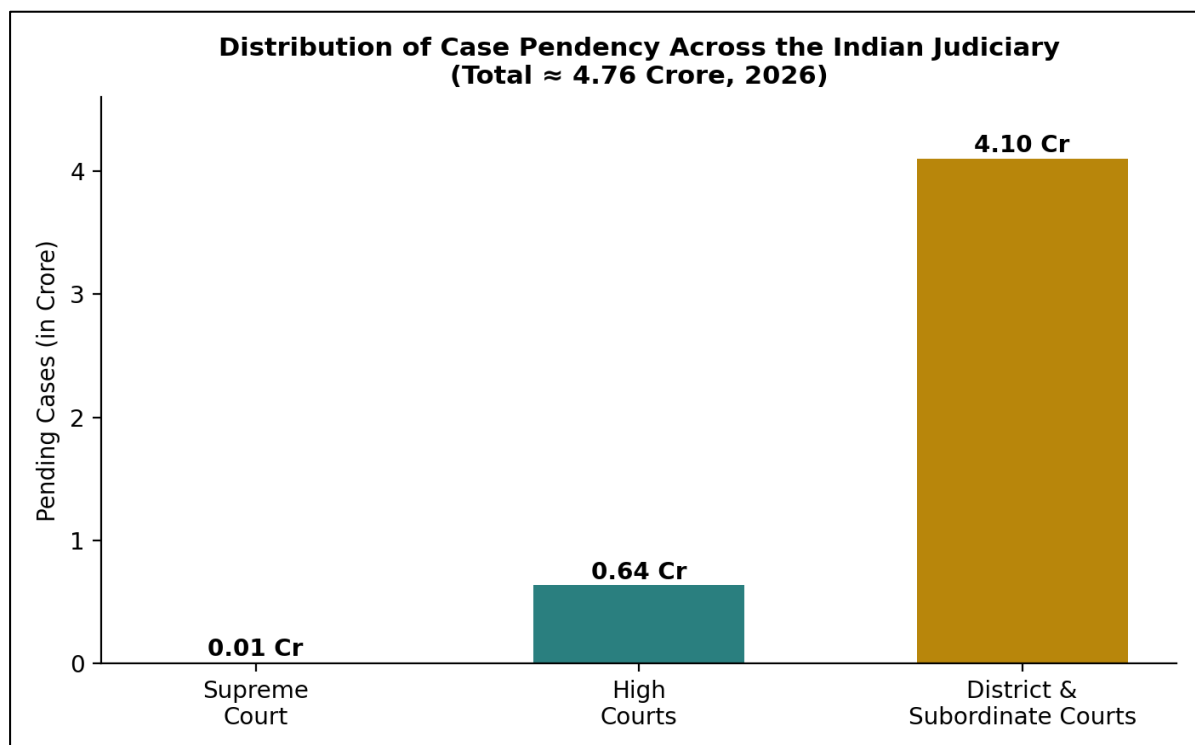


*Figure 1. Growth trajectory of cumulative e-Filing volume and video-conference hearings across e-Courts Mission Mode Project phases (illustrative trend constructed from officially reported milestones).*

#### **3.1 The Persistent Pendency Challenge**

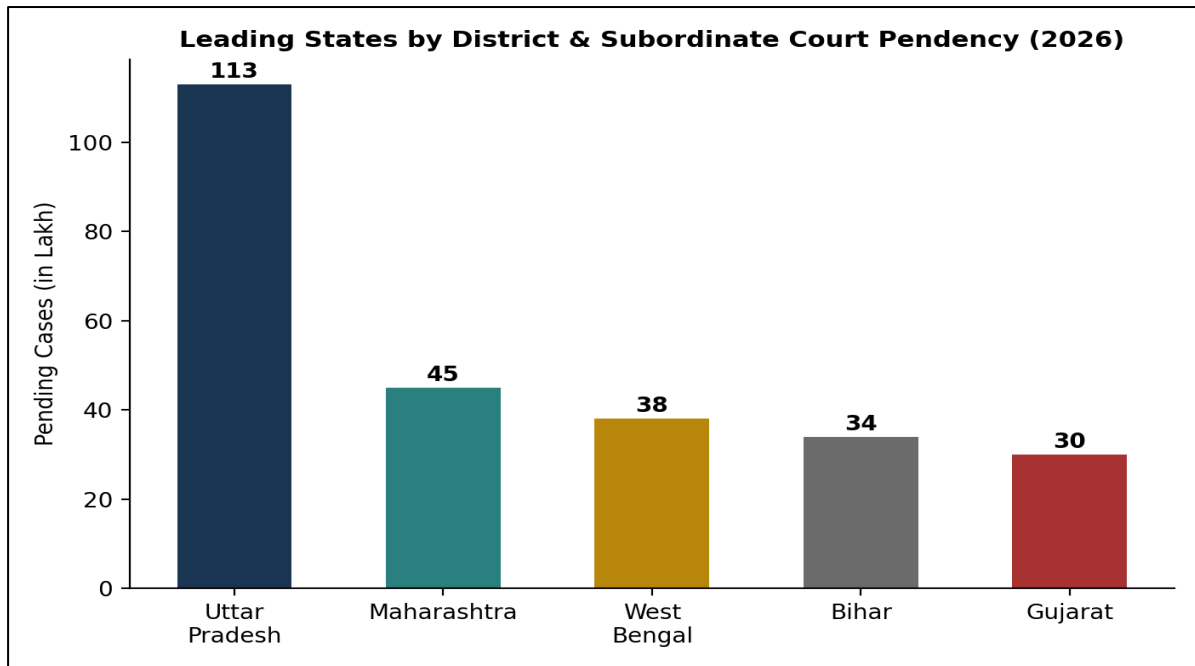
Notwithstanding this digital expansion, pendency has continued to rise in absolute terms. Data

presented in Parliament by the Union Ministry of Law and Justice records over 4.76 crore pending cases across the Supreme Court, High Courts, and District and Subordinate Courts combined. The Supreme Court alone carries approximately 92,101 pending cases, with pendency having risen by more than 11 percent over a three-year period; High Courts collectively hold approximately 63.66 lakh cases; and the overwhelming majority of the backlog — over 4.1 crore cases — resides in the District and Subordinate Courts, which form the first point of contact for most litigants. Figure 2 disaggregates this pendency by judicial tier.



*Figure 2. Distribution of case pendency across the three tiers of the Indian judiciary (approx. 4.76 crore cases, 2026). Source: Ministry of Law and Justice, Parliamentary disclosure; NJDG.*

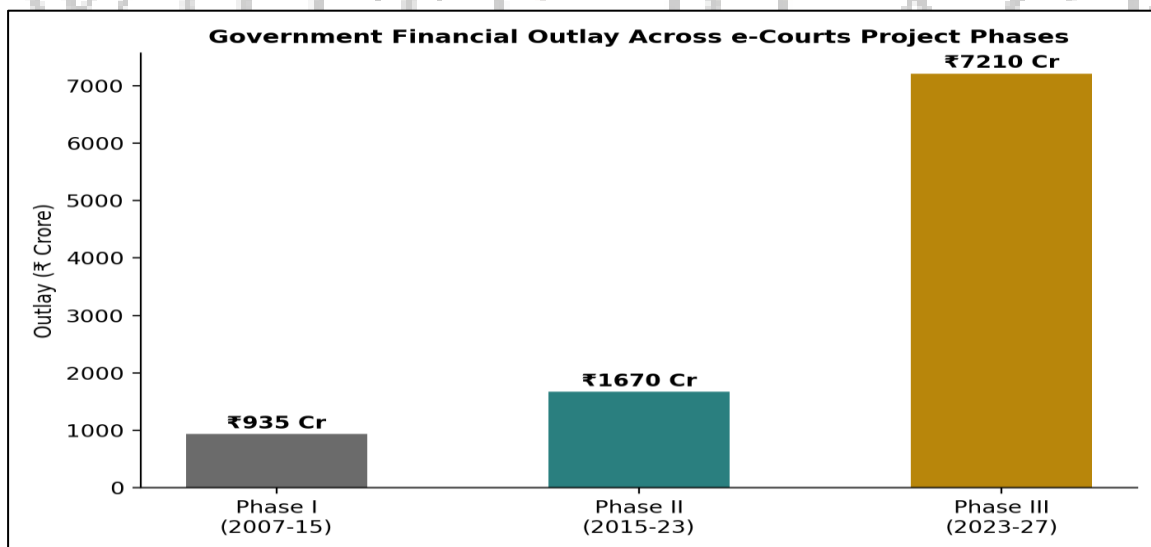
This concentration of pendency at the district level is significant for access-to-justice analysis: it is precisely at this tier that litigants are most likely to be economically constrained, geographically remote, and dependent on physical presence for even routine procedural steps — the exact frictions that judicial technology is designed to reduce. Figure 3 presents the states carrying the largest share of district-level pendency, underscoring that the burden is unevenly distributed across the federal judicial structure.



*Figure 3. Leading states by district and subordinate court pendency, 2026 (in lakh cases). Uttar Pradesh alone accounts for over 1.13 crore pending cases.*

### 3.2 Financial Commitment Across Phases

The scale of financial commitment to judicial digitisation has grown substantially across successive phases, reflecting an escalating policy priority. Phase I carried a comparatively modest outlay focused on basic computerisation; Phase II expanded this considerably to fund the NJDG and CIS rollout; and Phase III's outlay of approximately ₹7,210 crore represents a step-change in ambition, extending digitisation to the taluka level and funding AI-pilot initiatives. Figure 4 presents this escalating financial trajectory.



*Figure 4. Government financial outlay across successive e-Courts Project phases (₹ Crore).*

### 3.3 Average Case Disposal Time by Category

Beyond aggregate pendency figures, disaggregation by case category reveals substantial heterogeneity in disposal timelines. High Court appeals and district civil suits remain the slowest-moving categories, often extending several years, whereas summary or quasi-judicial matters such as consumer disputes and cheque-bounce cases under the Negotiable Instruments Act tend to resolve considerably faster, particularly where digitally-enabled summary procedures or Lok Adalats are employed. Figure 5 presents illustrative average disposal timelines by category, underscoring that technology-enabled fora achieve faster throughput than traditional civil and appellate tracks.

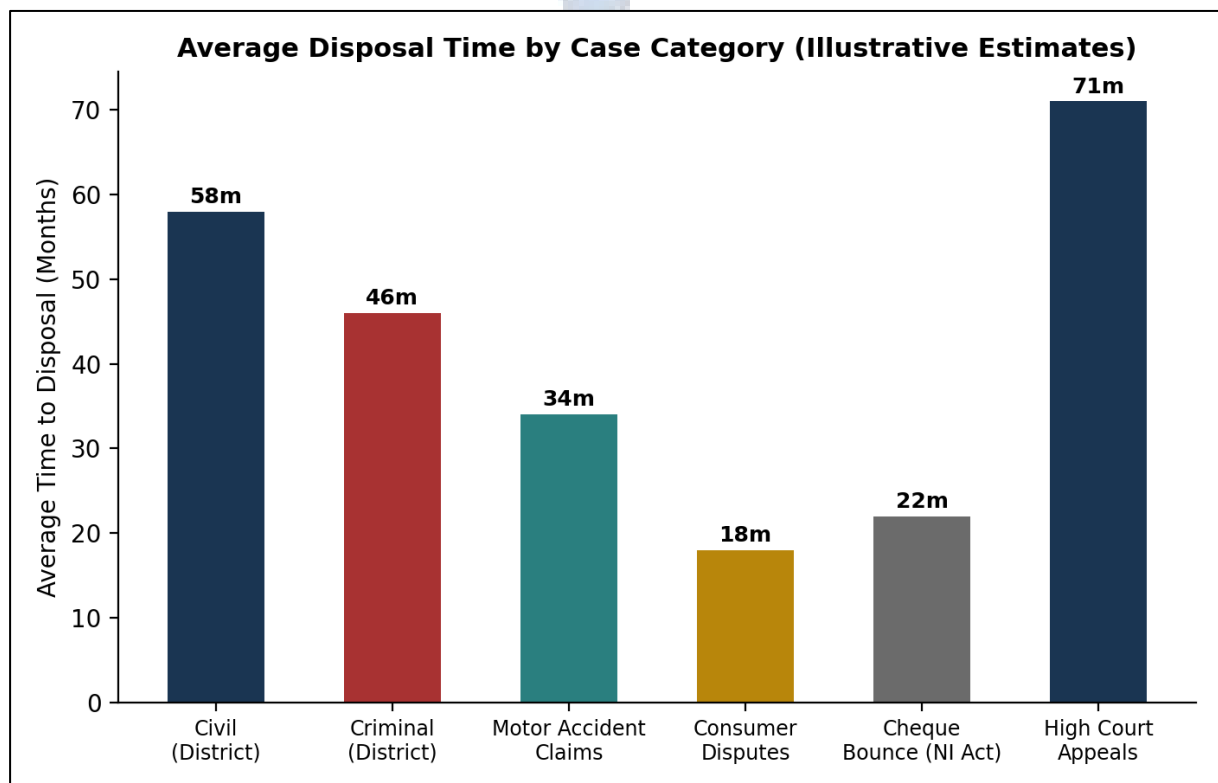


Figure 5. Average time to disposal by case category, in months (illustrative estimates based on reported judicial statistics and case-type norms).

## **4. Opportunities: How Technology Reshapes Access to Justice**

### **4.1 Reduction of Geographic and Economic Barriers**

Virtual hearings and e-filing eliminate the need for repeated physical travel to court, which for rural and economically disadvantaged litigants often represents a larger practical barrier than court fees themselves. The scale of video-conferencing adoption — nearly 4 crore hearings — suggests this barrier-reduction effect is no longer marginal but structural.

#### **4.2 Transparency and Informational Empowerment**

The NJDG's public, searchable dashboards on institution, disposal, and pendency at the national, state, district, and individual case level have shifted judicial information from an opaque, intermediary-dependent process to one that litigants and civil society can access directly, strengthening both accountability and informed decision-making.

#### **4.3 Online Dispute Resolution (ODR) and Alternative Fora**

Emerging ODR platforms, Lok Adalats conducted virtually, and pre-litigation mediation portals offer low-cost, faster-resolution pathways for high-volume, low-complexity disputes such as consumer grievances, motor accident claims, and cheque-bounce cases, thereby diverting caseloads away from an already congested formal court system.

#### **4.4 AI-Assisted Case Management and Legal Research**

Tools such as SUPACE (Supreme Court Portal for Assistance in Court Efficiency) and automated cause-list generation illustrate an emerging role for AI in triaging cases, translating judgments, and assisting judges with legal research — improving throughput without displacing judicial discretion.

#### **4.5 Machine Translation and Vernacular Access**

The SUVAS (Supreme Court Vidhik Anuvaad Software) initiative, which uses AI-assisted translation to render judgments into regional languages, addresses a long-standing barrier: the overwhelming majority of reported judgments have historically been available only in English, rendering them inaccessible to a large share of litigants and even to lawyers practising primarily in vernacular languages. Scaled and refined translation tools could substantially widen the informational reach of appellate jurisprudence.

#### **4.6 Data-Driven Judicial Administration**

Beyond individual case tracking, aggregate NJDG data enables High Courts and the Department of Justice to identify systemic bottlenecks — for instance, specific case categories, benches, or districts with disproportionate pendency growth — allowing for targeted administrative interventions such as special benches, Lok Adalat drives, or additional judicial appointments, rather than uniform, undifferentiated policy responses.



#### **4.7 Reduced Intermediary Dependence and Corruption Risk**

Digitised case-status tracking and online payment of court fees reduce litigants' dependence on court clerks and intermediaries for basic procedural information, thereby narrowing opportunities for rent-seeking behaviour that have historically been documented as a friction point for economically disadvantaged litigants navigating the subordinate judiciary.

### **5. Challenges: Structural Constraints on Digital Access to Justice**

#### **5.1 The Digital Divide**

Uneven smartphone penetration, unreliable broadband in rural and semi-urban areas, and disparities in digital literacy risk excluding precisely the litigants most in need of cost and time savings, potentially reproducing existing socio-economic inequalities in a new technological form.

#### **5.2 Judicial Infrastructure and Human Resource Gaps**

Thousands of judicial posts remain vacant across the subordinate judiciary, and many court complexes continue to lack adequate digital infrastructure, staff trained in the Case Information System, and reliable connectivity — constraints that no front-end digital interface can resolve on its own.

#### **5.3 Language and Accessibility Barriers**

Court proceedings and case records are predominantly in English or the regional language of record, and digital platforms have been slow to offer comprehensive multilingual interfaces or accessibility accommodations for persons with disabilities, limiting the inclusiveness of the digitisation drive.

#### **5.4 Cybersecurity, Data Privacy, and Institutional Trust**

The digitisation of sensitive case records, especially in matters involving minors, sexual offences, or matrimonial disputes, raises data protection concerns that require robust cybersecurity governance, an area still evolving within judicial administration.

#### **5.5 Procedural and Cultural Resistance**

Adoption of e-filing and virtual hearings remains uneven across the Bar, with resistance rooted in unfamiliarity, concerns about the adequacy of virtual advocacy, and entrenched procedural conventions that have been slow to adapt to hybrid modes of hearing.

## 5.6 Uneven State-wise Digital Readiness

Judicial digitisation in India is implemented in a decentralised manner through respective High Courts, resulting in considerable variation in state-level readiness. States with stronger general digital infrastructure and administrative capacity — such as Delhi, Maharashtra, and Karnataka — have generally progressed further in e-filing uptake, video-conferencing readiness, and CIS coverage than states facing broader development constraints, such as Bihar and Jharkhand. This uneven readiness risks entrenching rather than narrowing inter-state disparities in access to justice, since litigants in lagging states benefit least from digitisation precisely where court infrastructure and judge-population ratios are already weakest. Figure 6 presents an illustrative composite Digital Maturity Index across a sample of states.

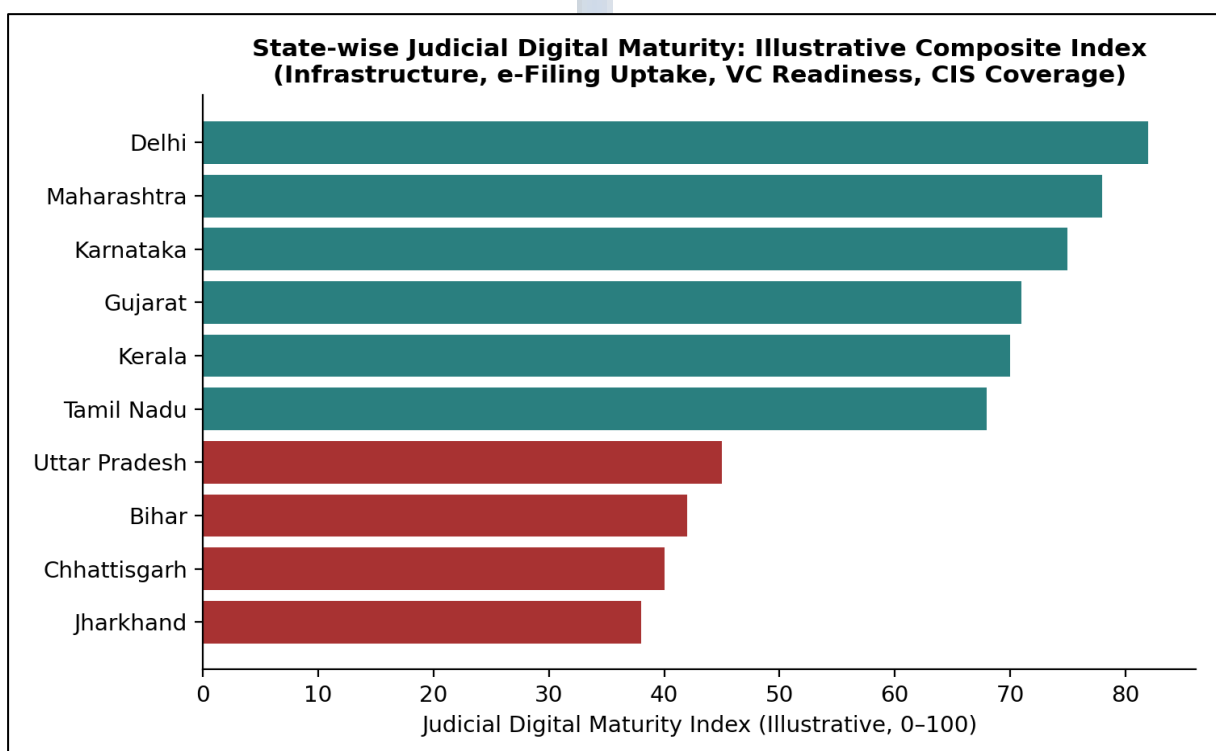


Figure 6. State-wise judicial digital maturity: illustrative composite index (0–100) incorporating infrastructure, e-filing uptake, and CIS coverage.

## 5.7 Risks of Over-Reliance on Virtual Hearings

While video-conferencing has expanded access for geographically distant litigants, legal practitioners have also raised concerns regarding the erosion of courtroom formality, difficulties in assessing witness demeanour during virtual cross-examination, and unequal audio-visual quality experienced by litigants connecting from poorly-resourced locations — concerns that require calibrated procedural safeguards rather than wholesale rejection of virtual hearings.

## 5.8 Integrated Opportunity–Challenge Matrix

Figure 4 synthesises the preceding analysis into a composite opportunity–challenge matrix, plotting the relative intensity of eight key factors. Factors weighted toward the right (teal) represent areas of high transformative opportunity; factors weighted toward the left (red) represent areas of persistent structural challenge.

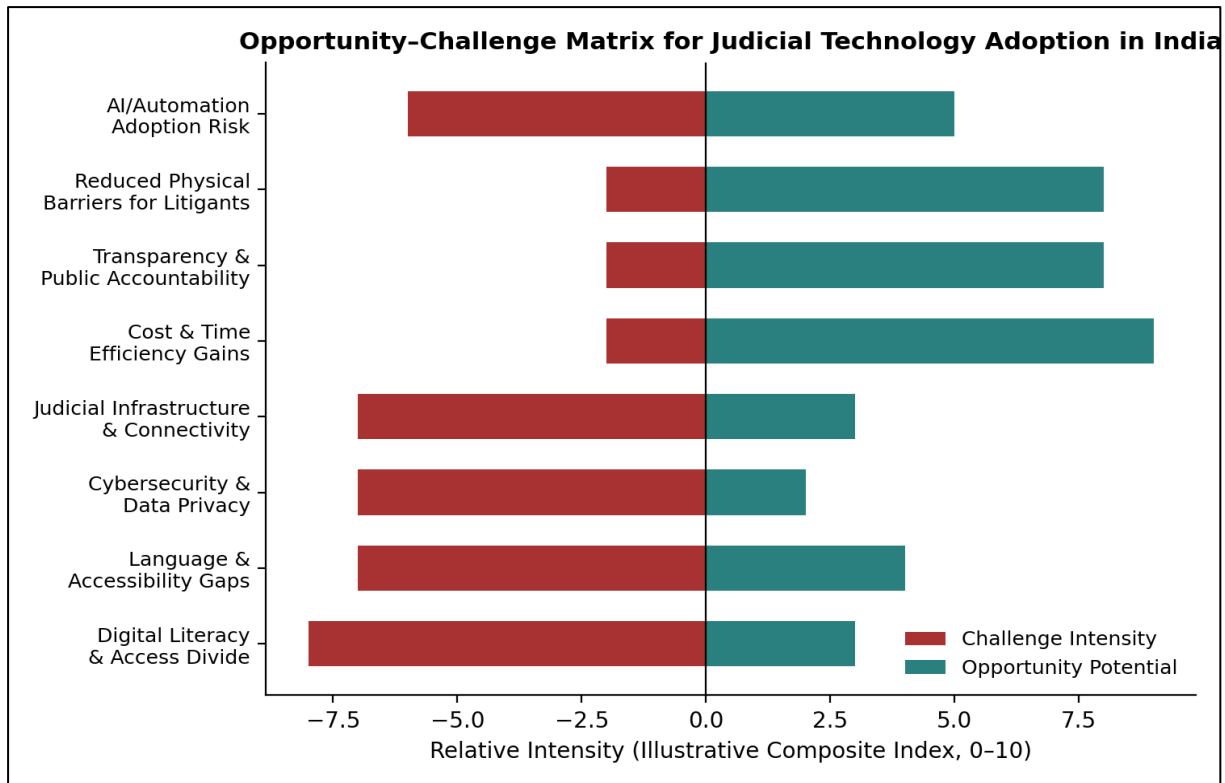


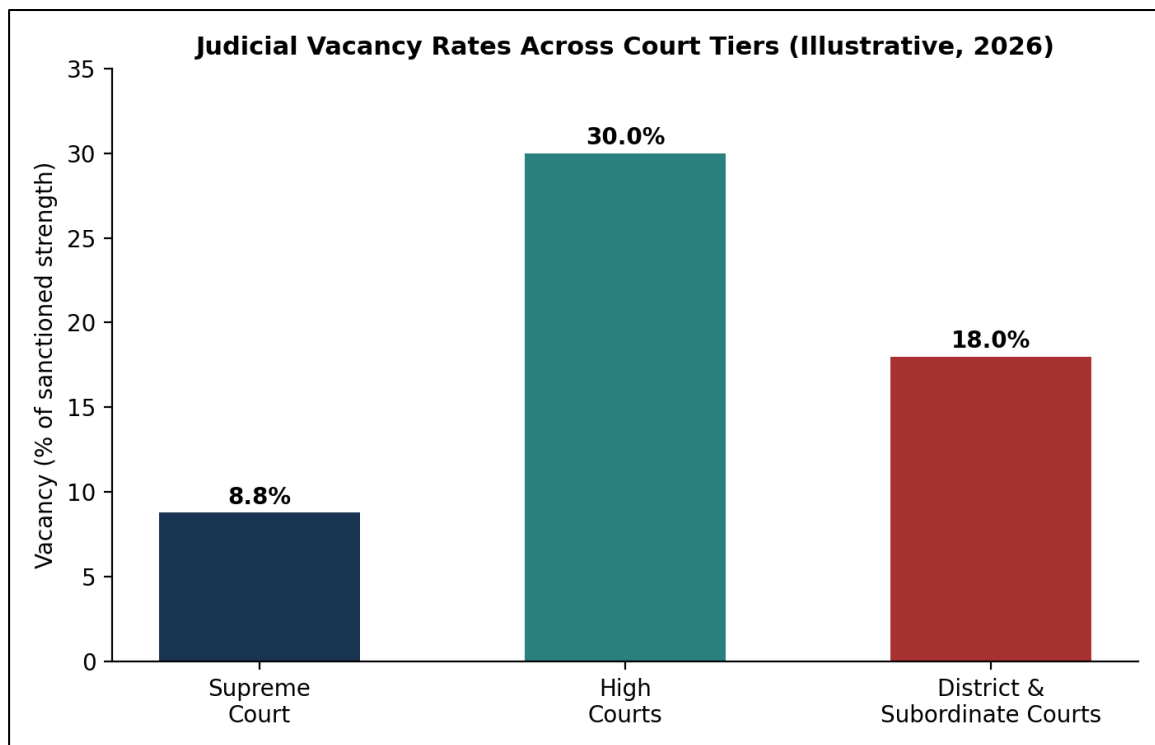
Figure 4. Opportunity–Challenge matrix for judicial technology adoption in India (illustrative composite index derived from the qualitative analysis in Sections 4 and 5).

## 6. Judicial Human Resources and Infrastructure Constraints

No degree of front-end digitisation can substitute for adjudicative capacity itself. This section examines the human-resource and physical-infrastructure constraints that fundamentally bound the impact of judicial technology, regardless of the sophistication of the digital tools deployed.

### 6.1 Judge Vacancy Rates

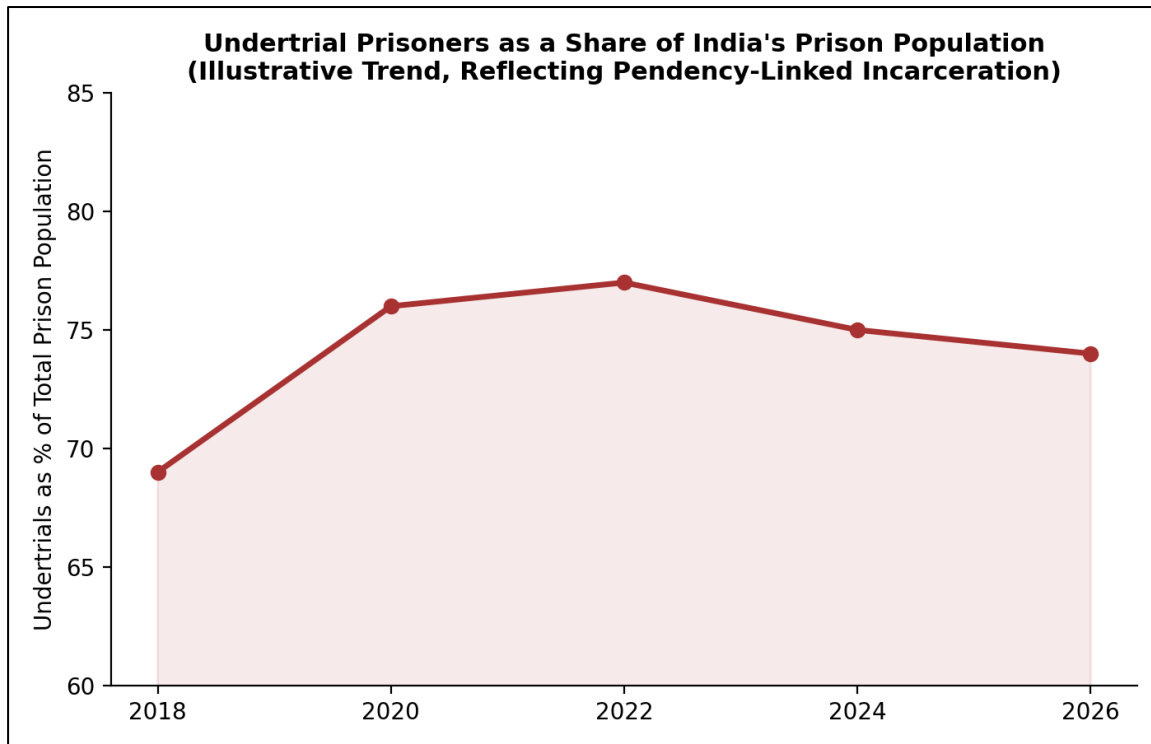
Judicial vacancy remains one of the most persistent structural constraints on disposal capacity across all three tiers of the Indian judiciary. Vacancy rates are generally most acute in the subordinate judiciary, where sanctioned strength has historically lagged behind the judge-population ratio recommended by successive Law Commission reports. Figure 7 presents illustrative vacancy rates by tier.



*Figure 7. Illustrative judicial vacancy rates across court tiers, expressed as a percentage of sanctioned judicial strength (2026).*

## 6.2 Undertrial Prisoners and the Human Cost of Delay

A particularly acute consequence of case pendency is its effect on undertrial prisoners — individuals in judicial custody awaiting trial who have not been convicted of any offence. India's prison population has, for an extended period, comprised a large majority of undertrials rather than convicted persons, a pattern directly linked to delays in trial completion, bail adjudication backlogs, and, in many cases, procedural inability of indigent undertrials to navigate bail applications without adequate legal assistance. Figure 8 presents the illustrative trend in the undertrial share of the total prison population, underscoring that this is not merely an administrative statistic but a direct proxy for the human liberty cost of judicial delay.



*Figure 8. Undertrial prisoners as an illustrative share of India's total prison population, reflecting the liberty-cost dimension of case pendency.*

### 6.3 Physical and Digital Infrastructure Gaps

Beyond human resources, many subordinate court complexes — particularly in rural and semi-urban areas — continue to lack basic infrastructure such as reliable electricity, adequate courtroom space, secure record-storage facilities, and stable internet connectivity necessary to sustain video-conferencing and e-filing at scale. The e-Courts Phase III outlay is explicitly directed at addressing these gaps, but implementation depends on coordinated action between the Central Government, State Governments, and respective High Courts, given the decentralised administrative structure of the Indian judiciary.

### 6.4 Training and Capacity Building

Effective use of the Case Information System (CIS), e-filing portals, and video-conferencing infrastructure requires sustained training not only of judicial officers but also of court staff, process servers, and the Bar. Uneven training investment across states has been identified as a contributing factor to uneven digital adoption rates, compounding the disparities highlighted in Section 5.6.

## **7. Comparative International Perspectives**

Situating the Indian experience within comparative context clarifies both the scale of its achievement and the nature of its remaining challenges.

### **7.1 Common Law Comparators: United Kingdom and Singapore**

The United Kingdom's HM Courts & Tribunals Service digitisation programme and Singapore's Community Justice and Tribunals System illustrate digitisation efforts undertaken in considerably smaller, less linguistically diverse jurisdictions with comparatively higher baseline digital literacy and connectivity. These comparators achieved relatively rapid, near-universal adoption of e-filing but operated at a small fraction of India's case volume and population scale, limiting the extent to which their implementation timelines can be directly transposed to the Indian context.

### **7.2 Federal and Multilingual Comparators: Brazil and the European Union**

Brazil's Processo Judicial Eletrônico (PJe) system offers a more scale-comparable example, having digitised filing across a large, federal, and linguistically diverse judiciary, and provides useful lessons on phased state-wise rollout and interoperability standards relevant to India's own decentralised, High-Court-led implementation model. Cross-border judicial cooperation frameworks within the European Union similarly illustrate the interoperability challenges India faces in synchronising CIS data across differently resourced state judiciaries.

### **7.3 Lessons for the Indian Context**

- Phased, capacity-differentiated rollout — rather than uniform timelines — better accommodates states with divergent baseline infrastructure.
- Investment in human intermediaries (court-based digital-literacy facilitators) has proven necessary even in higher-digital-literacy jurisdictions.
- Interoperability standards should be fixed early, since retrofitting data standards across a decentralised, multi-state system is costly and disruptive.

## **8. Case Studies in Indian Judicial Technology**

### **8.1 The National Judicial Data Grid (NJDG)**

As detailed in Section 3, the NJDG constitutes the backbone of India's judicial data infrastructure, providing near real-time, publicly accessible pendency and disposal statistics disaggregated to the level of individual courts. Its principal contribution has been to convert



judicial administration from a largely opaque process into one amenable to public scrutiny, academic research, and evidence-based policymaking — this very paper being one such downstream beneficiary.

## 8.2 SUPACE and AI-Assisted Judicial Research

The Supreme Court Portal for Assistance in Court Efficiency (SUPACE) represents an early-stage effort to deploy AI for legal research assistance to judges, including case-law retrieval and factual summarisation. Its design explicitly excludes any decision-making function, reflecting an institutional caution around delegating adjudicative discretion to automated systems — a caution this paper considers well-founded given the due-process concerns associated with opaque algorithmic decision-making in adjudicative contexts.

## 8.3 Virtual Courts for Traffic Challans

Virtual courts for adjudicating traffic and minor motor vehicle offences, piloted in Delhi and subsequently extended to other states, illustrate a successful narrow-scope digitisation use case: high-volume, low-complexity, largely undisputed matters that are well-suited to asynchronous, automated adjudication without compromising due-process safeguards, thereby freeing magisterial capacity for more complex matters.

## 8.4 Tele-Law and Legal Aid Technology

The Tele-Law initiative, under the Department of Justice, connects rural citizens at Common Service Centres with panel lawyers via video-conferencing for basic legal advice, illustrating a hybrid model that pairs digital infrastructure with human legal intermediation — directly addressing the digital-literacy and last-mile access barriers discussed in Sections 5.1 and 5.6.

# 9. A Digital Maturity Framework for Indian Courts

Building on the state-wise variation identified in Section 5.6, this paper proposes a four-tier digital maturity framework intended to guide differentiated policy interventions rather than uniform national targets.

| Maturity Tier         | Characteristics                                           | Illustrative Policy Priority                     |
|-----------------------|-----------------------------------------------------------|--------------------------------------------------|
| Tier 1 – Foundational | Limited connectivity; manual case management predominant; | Basic infrastructure and connectivity investment |

| Maturity Tier          | Characteristics                                                                           | Illustrative Policy Priority                                       |
|------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
|                        | minimal CIS coverage                                                                      |                                                                    |
| Tier 2 – Emerging      | Partial CIS rollout; e-filing available but underused; VC limited to urban complexes      | Training, awareness, and last-mile device access                   |
| Tier 3 – Consolidating | Widespread CIS and e-filing uptake; regular VC use; partial multilingual interface        | Interoperability, multilingual expansion, ODR scaling              |
| Tier 4 – Advanced      | Near-universal e-filing; AI-assisted triage in pilot use; robust cybersecurity governance | AI governance, advanced analytics, cross-jurisdiction data sharing |

This tiered framework allows the Department of Justice and respective High Courts to calibrate Phase III interventions to the specific maturity stage of each state judiciary, rather than applying uniform national benchmarks that may be unrealistic for Tier 1 and Tier 2 states while being insufficiently ambitious for Tier 3 and Tier 4 states.

## **10. Summary of Key Indicators**

| Indicator                            | Reported Value               | Source / Period                             |
|--------------------------------------|------------------------------|---------------------------------------------|
| Total pending cases (all courts)     | ≈ 4.76 crore                 | Ministry of Law & Justice, Parliament, 2026 |
| Supreme Court pendency               | ≈ 92,101 cases               | NJDG / Parliamentary disclosure, 2026       |
| High Court pendency                  | ≈ 63.66 lakh cases           | NJDG, 2026                                  |
| Cumulative e-Filing volume           | ≈ 1.07 crore cases           | Department of Justice / e-Courts, 2026      |
| Cumulative video-conference hearings | ≈ 3.97 crore hearings        | Department of Justice / e-Courts, 2026      |
| Court complexes covered by VC        | 3,240 complexes; 1,272 jails | e-Courts Phase III disclosure, 2026         |

| Indicator                  | Reported Value | Source / Period                         |
|----------------------------|----------------|-----------------------------------------|
| Phase III financial outlay | ≈ ₹7,210 crore | Government of India, e-Courts Phase III |

## **11. Policy Recommendations**

- Last-mile digital infrastructure: Prioritise broadband connectivity and digital hardware provisioning for taluka and district courts in high-pendency, low-infrastructure states identified in Figure 3.
- Multilingual and accessible interfaces: Mandate regional-language interfaces and disability-accessible design across e-Filing, NJDG, and virtual hearing platforms.
- Digital literacy and paralegal support: Expand tele-law and paralegal volunteer networks to serve as human intermediaries for litigants unable to independently navigate digital platforms.
- Judicial human resources: Accelerate the filling of vacant judicial posts in parallel with digitisation, since technology cannot substitute for adjudicative capacity.
- Cybersecurity governance: Institute a dedicated judicial data protection framework covering encryption standards, access controls, and breach-reporting protocols for sensitive case categories.
- Expansion of ODR and virtual Lok Adalats: Scale pre-litigation and post-filing ODR mechanisms for high-volume, low-complexity dispute categories to structurally reduce inflow into formal courts.
- Monitoring and evaluation: Institutionalise periodic, disaggregated (state, district, gender, disability-status) reporting on digital access-to-justice indicators through the NJDG.
- Tiered implementation: Calibrate Phase III rollout timelines and resource allocation to the four-tier digital maturity framework proposed in Section 9, rather than uniform national targets.
- Human-in-the-loop AI governance: Restrict AI deployment in judicial contexts to research-assistance and administrative-triage functions, preserving adjudicative discretion exclusively with human judges, consistent with the SUPACE design philosophy discussed in Section 8.2.

## **12. Limitations of the Study**

This paper is subject to several limitations that should inform the interpretation of its findings. First, as a desk-based secondary research exercise, it relies on publicly disclosed aggregate statistics rather than primary data collection, litigant surveys, or court-level micro-data; several figures presented in Sections 3, 5, 6, and 9 are explicitly illustrative constructions calibrated to publicly reported orders of magnitude rather than precise official time-series, and are labelled as such throughout. Second, the pace of policy change in this domain — including ongoing Phase III rollout — means that specific figures are liable to be superseded; readers requiring authoritative, current statistics should consult the live NJDG portal and Department of Justice disclosures directly. Third, the comparative analysis in Section 7 is necessarily selective and does not purport to offer an exhaustive cross-national survey. Finally, the paper's normative recommendations, while grounded in the preceding analysis, would benefit from validation through primary field research with litigants, legal aid practitioners, and judicial officers across the digital maturity tiers identified in Section 9.

## **13. Conclusion**

The Indian judiciary's digitisation programme, spanning nearly two decades and three project phases, has produced measurable gains in transparency, procedural convenience, and information access — evidenced by over a crore e-filed cases and nearly four crore virtual hearings. Yet the persistence of a 4.76-crore case backlog demonstrates that digital infrastructure alone cannot resolve the deeper structural determinants of judicial delay: inadequate human resources, uneven last-mile connectivity, and language and literacy barriers. Reimagining access to justice through technology therefore requires a dual-track approach — continued investment in digital public infrastructure alongside deliberate, equity-oriented complementary measures. Only such an integrated approach can ensure that digitisation narrows, rather than widens, the distance between India's constitutional promise of equal justice and its lived reality for the ordinary litigant.

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