

# Digital Justice or Digital Divide? A Quantitative Examination of E-Courts and Access to Justice Among Rural People in Coimbatore

Ms. Nisitha M S<sup>1</sup>, Ms. Athira K S<sup>2</sup>, Ms. Dhanya R<sup>3</sup>

<sup>1,2</sup>Assistant Professor, Department of Criminology and Forensic Science, Nehru Arts and Science College, Coimbatore, Tamil Nadu, India

<sup>3</sup>Department of Criminology and Forensic Science, Nehru Arts and Science College, Coimbatore, Tamil Nadu, India

## ABSTRACT

Digitalization of court system through the use of e-Courts has provided fresh avenues for the enhancement of efficiency, accessibility, and transparency in the delivery of justice of India. The efficacy and the limitations of the e-Courts are explored in this work with the reference to the socio-demographic variables of residence, age, possession of smartphones, and trust in technology. Using a pre-coded questionnaire, responses were gathered from 100 members representative of rural, semi-urban, and urban locations to achieve diversity in viewpoints. Descriptive statistics, ANOVA, and correlation tests were carried out to analyse correspondence between socio-demographic characteristics and the accessibility of e-Court. The conclusions indicate no appreciable differences in residence groups in relation to internet access, digital a customization, comprehension, or utilization of the e-Courts, although there was a weak but negative correlation between residence and availability of smartphones, with rural respondents being slightly disadvantaged. The conclusions imply that e-Court usage barriers are systemic rather than demographic, necessitating universal digital competency, infrastructural investment, and simplicity of use to facilitate equitable access. The research underlines the necessity of surmounting obstacles like the insufficiency of legal expertise, constraints of technical know-how, and risks of cyber saturation for realizing the complete potential of the e-Courts in democratizing justice. The study proposes evidence-based policy interventions to take digital legal services to weaker sections, thereby promoting Sustainable Development Goal 16- Peace, Justice, and Strong Institutions.

**Keywords:** E-Courts, Access to Justice, Digital Divide, Marginalized Communities,

## INTRODUCTION

Digital era has revolutionized the face of the society, including the education system, industries and now it has emerged in the justice system. India does not constitute an exception to how the digital age has transformed many facets of society, including the legal system. Through the use of digital technology, e-courts have the potential to improve the effectiveness, accessibility, and usability of legal procedures. E-courts allow anyone to engage in judicial proceedings from a distance, regardless of where they are physically located, by removing geographical restrictions. People who live in rural or isolated areas of India will especially benefit from this. It is stressed that using e-court systems successfully requires digital

knowledge, necessitating educational measures to guarantee equitable access to justice. The study emphasizes how important it is to have strong technology infrastructure and regulations in place to safeguard confidentiality and privacy. Legal and ethical issues are raised regarding the admissibility of electronic evidence and the protection of basic rights.

The digitization of judicial systems has emerged as a transformative step in modern governance, aiming to enhance transparency, efficiency, and inclusivity in justice delivery. In India, the e-Courts Mission Mode Project represents a significant reform initiative that integrates information and communication technologies into the legal process. By introducing services such as e-filing, online case status tracking, and virtual hearings, the project seeks to minimize delays and reduce procedural complexities that often restrict access to timely justice (Manral, 2024). Particularly during the COVID-19 pandemic, digital platforms proved indispensable in sustaining judicial operations, ensuring continuity of hearings, and reducing geographical and logistical barriers that hinder participation, especially for citizens from rural and marginalized regions (LexisNexis, 2024).

Despite its progress, the e-courts framework also highlights challenges that must be addressed to ensure equitable access. Disparities in digital literacy, limited internet penetration, and inadequate infrastructure continue to affect vulnerable populations, potentially creating new forms of exclusion within the justice system (Ahmadhilsr, n.d.). Moreover, concerns about data privacy, evidence authenticity, and the risk of widening the digital divide demand careful policy interventions and capacity-building measures (Government, e-Courts Phase-III aims to enhance ease of justice with digital courts: Centre, 2024). Against this backdrop, examining the effectiveness of e-courts in bridging systemic inequalities and their impact on marginalized communities becomes essential to understanding whether digitization can truly democratize access to justice in India.

Despite the laudable expansion of e-Courts in India, significant obstacles remain in translating digital justice into equitable outcomes. The e-Courts initiative has enabled online filing, virtual hearings, and wide-scale digitization of records helping reduce delays and enhance transparency through tools such as the National Judicial Data Grid (NJDG) and e-Sewa Kendras (Government, Economic Times, 2024) (Rattan Jyoti, 2022); Nevertheless, rural residents and individuals with low literacy levels continue to struggle with barriers such as unreliable internet connectivity, limited device availability, and insufficient digital skills. This creates a “rural divide” that prevents large segments of the population from fully utilizing e-Court services (Patnaik, 2023). Without sustained investments in infrastructure and digital training, e-Courts risk reinforcing, rather than reducing, inequalities in justice access.

Beyond issues of access, the rapid digitalization of judicial processes has introduced novel psychological stresses on the judiciary and legal professionals. Extended screen exposure, multitasking across multiple digital platforms, and adapting to online hearings can contribute to digital intoxication a phenomenon marked by cognitive overload, mental fatigue, and reduced concentration (Korunovska, 2019). While most existing studies emphasize the benefits of e-Courts for efficiency, transparency, and speed, little attention has been given to the mental and cognitive effects of prolonged digital engagement in the justice system. Addressing this gap is essential, as technology intended to streamline legal procedures may inadvertently create stress, decision-fatigue, and burnout among both legal actors and litigants.

## OBJECTIVES

To identify Socio-demographic predictors influencing access to digital justice.

To analyse the relationship between Digital literacy and E-Court service utilization.

To assess whether E-Court services have improved access to justice.

## REVIEW OF LITERATURE

The use of technology in the Indian judiciary has been explored in a number of empirical works, with varying scope and emphasis. Waseem, et al., (2023), conducted a mixed-method survey with 250 rural litigants in Uttar Pradesh, where surveys and semi-structured interviews were utilized to gauge awareness and usage of e-court facilities. The results indicated that although 64% of the participants recognized having heard about e-courts, just 27% had ever tried using them, primarily because of digital illiteracy and infrastructural constraints. This served to underscore the persistent digital divide in rural judicial access. Agarwal and Panda (2018) employed a strict quantitative approach to examine the digital divide between Indian states through a state-level panel of ICT access measures (e.g., internet and mobile penetration). Applying a demand–supply econometric model to district-level census and telecom data, they evaluated factors shaping ICT availability. Education, income, and social category had a significant impact on ICT demand, whereas infrastructural factors—such as electricity and network coverage—formed the supply. The research brings to light how socio-economic structural inequalities shape differences in digital access (Agarwal, 2018).

Vaidehi, Reddy, and Banerjee (2021) used a nationally representative data to study both first-order (ownership/infrastructure) and second-order (ICT skills for use) digital divides by caste groups. Applying non-linear decomposition methods, they estimated that more than 50% of the digital divide between marginalized castes and other castes was due to differences in education levels and income. This research emphasizes that structural socio-economic inequalities play an important role in determining digital inclusion outcomes for India (Rajam, 2021).

Bhatnagar and Huchhanavar (2023) constructed a predictive model using a humongous dataset of 4.2 million cases filed within a decade in over 7,000 lower courts. Using AutoML and decision forest classifiers, they produced a remarkable 81.4% model accuracy to predict case delays. This work illustrates how big data analytics can identify pendency risks and guide judiciary resource planning—providing a tech-driven solution to addressing systemic inefficiencies (Bhatnagar, 2023)

## RESEARCH METHODOLOGY

### Research Design

The research has a descriptive and analytical research design. The descriptive component captures the demographic and usage snapshot of respondents, while the analytical component is employed to test hypotheses on accessibility, convenience, and e-Court adoption barriers. Quantitative method is employed with data collected using a structured questionnaire.

### Signification of Study

The significance of the study is to find the effectiveness of E-court in terms of the accessibility and convenience. Data was collected through a sample of 100 respondents. A stratified sampling method was employed to cover both urban and rural areas of Coimbatore. Respondents were selected from various occupational and educational backgrounds to include a broad range of experience with digital judicial services.

### Universe of the study

The universe of the study is people of Coimbatore, due to availability of mixed proportion of rural and urban people. So that comparative study of both populations can be done.

### Sample Collection

Sample collection was done within a sample size of 100 people covering the urban and rural population of Coimbatore district.

### Hypothesis

H1: There is a significant correlation between Education and access to E-courts

H0: There is no significant relation between Unemployment and Digital Justice.

### Tools of the Study

Primary Data was collected through a Semi-structured questionnaire was used to collect the data. The questionnaire contains questions which enquire about the objectives such as accessibility, digital independence, awareness about E-courts and the social barriers in accessing justice through digital mode. For Secondary data Journals, Articles, Government reports on Digital justice through e-courts in India were referred.

### Inclusion and Exclusion

- Individuals who are aged between the category 30-80 years are only taken.
- People who reside in Coimbatore City, both Urban and Rural.
- Individuals who are below the age of the 30 years are excluded.
- Legal practitioners such as Lawyers and Judges are excluded since the study focus on common people.

### Data Analysis

The collected data were subjected to SPSS analysis.

- Descriptive Analysis – Frequencies and percentages were used to present socio-demographic data such as age, gender, education, and residence.
- Chi-Square Test – To examine the associations between categorical variables. For example, level of education and awareness of e-Courts, or rural/urban location and actual adoption of e-Courts.
- t-Test and ANOVA – Used to compare mean differences in digital confidence and digital intoxication across groups.

### Limitations

- Study is being conducted only on a population of 100 respondents, which may not represent the whole population of the Universe or the whole state.
- The responses may involve personal biasness or social desirability.
- The study does not evaluate the prior internet knowledge of each individual of the study.
- The responses are subjective and even if the respondents do not have education or internet knowledge they might know about the Digital courts

## RESULT AND DISCUSSION

The research revealed a balanced distribution of the respondents, with 48% being from rural settings and the most frequent age group being 30–40 years (27%). ANOVA results indicated there were no statistically significant differences in residence types by smartphone availability, internet accessibility, digital trust, awareness, or e-Courts use. Correlation analysis revealed a weak negative correlation between residence and smartphone availability, indicating slightly lower availability within the rural settlement. In general, the research indicates that barriers to the use of e-Courts are uniform in rural, semi-urban, and urban societies, although digital literacy and consciousness are still areas of focus.

**Table 1**

AGE					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	30-40	27	27.0	27.0	27.0
	40-50	18	18.0	18.0	45.0
	50-60	12	12.0	12.0	57.0
	60-70	23	23.0	23.0	80.0
	70-80	20	20.0	20.0	100.0
	Total	100	100.0	100.0	

The age group of the respondents is shown in such a manner that most is dominated by the 30–40 years category (27%), then 60–70 years (23%), and 70–80 years (20%). 18% of the respondents are from the 40–50 years category, with the smallest percentage coming from the youngest group of 50–60 years at 12%. Overall, the sample includes representation from each of the five age groups, and overall, approximately equal numbers between younger and older categories to ensure diversity of views for the usage and accessibility of the e-Courts.

**Table 2**

RESIDENCE					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	rural	48	48.0	48.0	48.0
	semi urban	28	28.0	28.0	76.0
	urban	24	24.0	24.0	100.0
	Total	100	100.0	100.0	

The distribution of the respondents by residence shows that the sample is predominantly comprised of rural (48%), followed by semi-urban (28%) and urban (24%) areas. This distribution helps the study to aggregate a balanced combination of rural, semi-urban, and urban opinions from varying living environments and most of all, rural living areas. This representation helps in comparing rural, semi-urban, and urban differences with regards to digital access and e-Court awareness.

**Table 3**

		RESIDENCE	LANGUAGE ACCESS	LACK OF TECHNICAL SKILL	SMARTACCESS	AGE
RESIDENCE	Pearson Correlation	1	.073	-.054	-.199*	-.001
	Sig. (2-tailed)		.469	.596	.047	.990
	N	100	100	100	100	100

LANGUAGE ACCESS	Pearson Correlation	.073	1	-.059	-.120	.041
	Sig. (2-tailed)	.469		.560	.233	.686
	N	100	100	100	100	100
LACK OF TECHNICAL SKILL	Pearson Correlation	-.054	-.059	1	-.031	-.025
	Sig. (2-tailed)	.596	.560		.763	.804
	N	100	100	100	100	100
SMARTACCESS	Pearson Correlation	-.199*	-.120	-.031	1	-.144
	Sig. (2-tailed)	.047	.233	.763		.152
	N	100	100	100	100	100
AGE	Pearson Correlation	-.001	.041	-.025	-.144	1
	Sig. (2-tailed)	.990	.686	.804	.152	
	N	100	100	100	100	100

The test of correlation established that there were no statistically significant correlations between any of the variables but that there was a weak and significant negative correlation between smartphone availability and residence ( $r = -0.199, p = 0.047$ ). The outcome was that respondents in certain residential areas, say rural areas, were less likely to have smartphone availability than their counterparts in urban areas. However, no significant correlations among residence and absence of language access, technical competence, or age were found, as all the p-values were larger than 0.05. Language access, absence of technical competence, and age, in turn, did not have significant relationships among themselves or with smartphone access. Overall, the findings support that residence is barely correlated with smartphone access, whereas other variables are predominantly independent within the sample.

**Table 4**

		Sum of Squares	df	Mean Square	F	Sig.
SMART ACCESS	Between Groups	.794	2	.397	2.353	.101
	Within Groups	16.366	97	.169		
	Total	17.160	99			

INTERNET ACCESS	Between Groups	.113	2	.057	.434	.649
	Within Groups	12.637	97	.130		
	Total	12.750	99			
DIGITAL CONFIDENCE	Between Groups	3.002	2	1.501	.759	.471
	Within Groups	191.908	97	1.978		
	Total	194.910	99			
LEGAL INFO	Between Groups	1.908	2	.954	.596	.553
	Within Groups	155.402	97	1.602		
	Total	157.310	99			
HEARD OF E-court	Between Groups	.261	2	.131	.572	.566
	Within Groups	22.179	97	.229		
	Total	22.440	99			
USED E-court	Between Groups	.049	2	.024	.103	.902
	Within Groups	22.991	97	.237		
	Total	23.040	99			
INDEPENDENT TASK	Between Groups	7.104	2	3.552	1.804	.170
	Within Groups	191.006	97	1.969		
	Total	198.110	99			
LANGUAGE ACCESS	Between Groups	1.275	2	.637	.320	.727
	Within Groups	193.485	97	1.995		
	Total	194.760	99			
LACK OF technical skill	Between Groups	5.312	2	2.656	1.370	.259
	Within Groups	188.048	97	1.939		
	Total	193.360	99			
	Total	208.750	99			

The ANOVA results showed that there was no difference among the dependent measures smartphone availability, availability of internet, familiarity with digital devices, acquaintance with e-Courts, actual use, and barriers such as language, disability, or insufficiency in technical skills on a statistically significant basis between residence categories as all values of significance were above 0.05. This suggests rural, semi-urban, and urban sample respondents had generally equivalent levels of access, awareness, and challenges regarding e-Courts. While small differences in the mean scores were seen across groups, these were insufficient to be termed statistically significant.

**Table 5**

Correlations						
		RESIDENCE	INTERNET ACCESS	SMARTACCESS	LEGAL INFO	DIGITAL CONFIDENCE
RESIDENCE	Pearson Correlation	1	.089	-.199*	-.087	-.121
	Sig. (2-tailed)		.376	.047	.389	.231
	N	100	100	100	100	100
INTERNET ACCESS	Pearson Correlation	.089	1	-.155	.001	.069
	Sig. (2-tailed)	.376		.122	.991	.494
	N	100	100	100	100	100
SMARTACCESS	Pearson Correlation	-.199*	-.155	1	.041	-.075
	Sig. (2-tailed)	.047	.122		.684	.458
	N	100	100	100	100	100
LEGAL INFO	Pearson Correlation	-.087	.001	.041	1	.036
	Sig. (2-tailed)	.389	.991	.684		.719
	N	100	100	100	100	100
DIGITAL CONFIDENCE	Pearson Correlation	-.121	.069	-.075	.036	1
	Sig. (2-tailed)	.231	.494	.458	.719	
	N	100	100	100	100	100

\*. Correlation is significant at the 0.05 level (2-tailed).

The correlation assessment shows that the majority of variables are not statistically related to each other. The only notable relationship found was the relationship between residence and access to smartphones ( $r = -0.199$ ,  $p = 0.047$ ), whereby respondents from rural areas were found marginally less likely to have access to smartphones compared to residents in urban areas. No strong correlations between residence and internet accessibility, legal knowledge, or digital trust were obtained since all p-values were larger than 0.05. Likewise, internet accessibility, availability of smartphones, legal knowledge, and digital trust were mostly unrelated to each other. Overall, the evidence points towards the evidence that with the exception of a marginal association of residence with access to smartphones, the large variables under consideration are unrelated.

**Recommendations**

- Enhance Digital Literacy - Provide training sessions to citizens, particularly new e-Court users, to enhance digital confidence and avoid impediments to use.
- Enhance Infrastructure - Provide good-quality internet connectivity and low-cost smartphones in urban and rural areas.

- Awareness Campaigns - Launch legal awareness campaigns to enlighten citizens regarding the e-Court services, processes, and advantages.
- Simplify User Interfaces - Design e-Court portals in local language with simple navigation to cater to varying users.
- Support Systems - Establish help desks or cyber kiosks on court campuses and in villages to facilitate support for those with technical and procedural problems.
- Monitor and Evaluate – Regularly measure user satisfaction and detect issues to ascertain the efficacy of e-Court systems.

## CONCLUSION

The research tested the effectiveness and accessibility of e-Courts in Coimbatore, particularly regarding residence, age, smartphone accessibility, and digital assurance. Results showed no rural-urban disparity in internet access, knowledge, or digital literacy, although a low negative correlation showed slightly weaker smartphone accessibility in rural areas. This supports the contention that the digital justice divide is primarily systemic, not demographic. The findings highlight the importance of universal digital literacy, better infrastructure, and accessible systems to improve accessibility and alleviate problems such as limited legal acumen or digital intoxication. Overall, e-Courts have tremendous potential to democratize justice, subject to bridging gaps in skills, awareness, and infrastructure being addressed effectively. E-Courts have the potential to democratize justice but rely on closing systemic divides in digital capacity, knowledge, and infrastructure rather than residential distinctions.

## REFERENCES

1. Agarwal, T. a. (2018). Pattern of digital divide and convergence in access to ICT facilities among the Indian States. *Journal of Infrastructure Development*, 10, 37--51.
2. Ahmadhilsr, T. (n.d.). *Justice in the Digital Age: The Indian Judiciary's Evolution from Echoes to Algorithms*. Retrieved from Legal services India: <https://www.legalserviceindia.com/legal/article-17666-justice-in-the-digital-age-the-indian-judiciary-s-evolution-from-echoes-to-algorithms.html>
3. Bhatnagar, M. a. (2023). Predicting delays in indian lower courts using automl and decision forests. In *International Conference on Computing, Intelligence and Data Analytics* (pp. 166--180). Springer.
4. Government, E. (2024, August 2). *Economic Times* . Retrieved from E-Courts Phase-III aims to enhance ease of justice with digital courts: Centre.: <https://government.economictimes.indiatimes.com/news/governance/e-courts-phase-iii-aims-to-enhance-ease-of-justice-with-digital-courts-centre/112212132>
5. Government, E. (2024, August 2). e-Courts Phase-III aims to enhance ease of justice with digital courts: Centre. Mumbai, Maharashtra, India.
6. Korunovska, J. a. (2019). The effects of information and communication technology use on human energy and fatigue: A review. *arXiv preprint arXiv:1910.01970*.
7. LexisNexis. (2024, June 27). *LexisNexis*. Retrieved from LexisNexis Blogs: <https://www.lexisnexis.in/blogs/digital-courts-future-of-the-indian-legal-system/>
8. Manral, Y. (2024). REVOLUTIONIZING JUSTICE: THE RISE OF E-COURTS IN INDIA. *The Legal gazette*.
9. Patnaik, A. (2023, November 29). Leap to e-judiciary needs to cover three divides. *The Indian Express*.

10. Rajam, V. a. (2021). Explaining caste-based digital divide in India. *Telematics and Informatics*, 65, 101- 719.
11. Rattan Jyoti, R. V. (2022, July 15). Role of Information and Communication Technologies in the Metamorphosis of Justice Administration in India: A Legal Study. *Indian journal of Public Administration*.
12. Waseem, Sharma, A., & Kumar, A. (2023). Transforming Access to Justice in the Digital Age: The Role of E-Courts. *NUJS J. Regul. Stud*, 8, 43.