Transforming Land Administration through E-Governance: An Empirical Study on Land-Related Services in Coimbatore District, Tamil Nadu

R. Govindarasu
Gandhigram Rural Institute Deemed to be University

***Abstract*—This study examines the effectiveness of e-governance in land services within the Coimbatore district of Tamil Nadu, focusing on structural aspects, awareness, challenges and impact. Utilizing primary data collected from rural respondents, the study evaluates digital land service platforms operating under the Digital India Land Records Modernization Programme (DILRMP). The Study findings indicate that although Tamil Nadu has established robust digital infrastructure and achieved high user satisfaction, significant gaps persist regarding awareness, access and digital literacy. As structural barriers continue to limit usage, the benefits are distributed unevenly. The study concludes that while e-governance enhances transparency and efficiency, inclusive strategies are required to ensure equitable access.**

***Index Terms*—E-governance, Land Records, DILRMP, Digital Inclusion, Public Administration.**

I. INTRODUCTION

The integration of Information and Communication Technology (ICT) into governance has brought about a significant transformation in the public service delivery system in India. Land administration a critical sector impacting rural livelihoods and economic growth had historically been plagued by inefficiency, a lack of transparency and procedural delays. To address these challenges, the Government of India launched the 'Digital India Land Records Modernization Programme' (DILRMP), aimed at digitizing land records and improving service delivery. Tamil Nadu stands as a leading state in implementing e-governance for land-related services through platforms such as TNREGINET and e-Sevai centres.

II. REVIEW OF LITERATURE

E-governance is widely recognized as a tool for enhancing transparency, efficiency and accountability in public administration. Regarding land administration, digitization plays a pivotal role in reducing corruption, improving accessibility and strengthening property rights.

Chugh (2018) emphasizes that digitizing land records is essential for achieving better administrative outcomes, despite persistent challenges such as outdated records and limited accessibility in rural areas. Through the DILRMP scheme, the Government of India aims to create an integrated land information system that ensures transparency and reduces reliance on government offices. Shenbaga Sri and Sujitha (2026) point out that, with a significant portion of land records having been digitized, digital land systems have improved accessibility and reduced fraud. However, they also identify issues regarding the system's reliability and inconsistent implementation. Furthermore, Rekha (2025) argues that digital land records enhance legal certainty and reduce disputes, but also raise concerns regarding data security and system integration. Comprehensive studies on e-governance (Kumar et al., 2014; Yadav & Singh, 2013) indicate that while Information and Communication Technology (ICT) enhances the outcomes of governance processes, its success depends on infrastructure, organizational capacity and digital literacy. Hannah Ead (2026) notes that advanced technologies such as block chain could further strengthen land registration systems; however, challenges in implementing them persist. Studies indicate that while e-governance initiatives enhance efficiency and transparency, issues regarding

accessibility and inclusivity persist. This study, conducted in the Coimbatore district, underscores the need for empirical research focused on the local context.

2.1 Objectives

- To examine the features of e-governance systems in land services.
- To assess the level of awareness among users.
- To identify the challenges involved in accessing digital land services.
- To evaluate the impact of e-governance on service delivery.

2.2 Research Methodology

This study adobe a descriptive research design, utilizing primary data collected from respondents in the Coimbatore district. A semi structured questionnaire was administered to farmers and landowners. Data analysis was conducted using percentage methods to describe the patterns of awareness, usage, challenges and satisfaction.

III. RESULTS AND DISCUSSION

3.1 Awareness of E-Governance

The level of awareness observed among the study participants (58.18%) indicates a moderate level of penetration of e-governance initiatives in the area. However, the distribution of this awareness is uneven, revealing significant insights into information dissemination methods. Awareness is generated largely through informal social networks such as family, friends and local officials rather than through the government's official communication channels. This suggests that, even though formal systems are in place, institutional communication strategies may not be sufficiently effective or appropriately targeted.

The reliance on the exchange of personal information suggests that awareness regarding TPSC did not stem from a systematically planned initiative, but rather emerged gradually through social interaction.

Awareness regarding services further highlights existing disparities. Almost all respondents were aware of Patta and Chitta services, reflecting their central importance in land ownership verification. However, awareness drops sharply concerning more specialized services such as FMB, Patta transferandEncumbrance Certificates. This reveals that users primarily utilize the system for immediate and familiar needs, rather than exploring its full range of capabilities.It is significant that a substantial proportion of the population (41.82%) lacks awareness. This indicates that, despite the existence of technical readiness, a large segment of the population drops out of the service at the initial stage. From an administrative perspective, this reflects a gap between service delivery and actual public outreach.

3.2 Challenges in Accessing Services

This study highlights the multifaceted nature of digital exclusion and draws a clear distinction between the barriers faced by non-users of digital technology and the challenges encountered by those who subsequently adopt it.

For those who do not use the service, the barriers are largely structural in nature. A lack of internet access (41.67%) and a preference for traditional methods (41.67%) are equally significant factors; this indicates that both structural and behavioral elements influence the adoption of the service. The persistence of traditional administrative practices indicates either a lack of trust in digital systems or a preference for existing methods. The finding regarding limited digital literacy (33.33%) further reinforces the view that skill development initiatives alone cannot guarantee the successful implementation of a system.

The situation is favorable for users; 51.61% of them face no significant challenges. This indicates that, once initial access barriers are overcome, the system is generally easy to use. However, the remaining users encounter issues that affect the service's performance and their satisfaction.

Process-related issues (19.35%) indicate that the user interface and operational procedures particularly for first-time users are not fully comprehensible. Long wait times (16.13%) point to flaws in background processes or demand exceeding the system's capacity. Connectivity issues (9.68%) reflect infrastructure-related limitations in rural internet services.

A significant concern emerging from the data is the widespread nature of errors (noted by 20% of respondents). This leads to serious consequences, including errors in land records, land disputes, delays in financial transactions and legal complications. The ineffectiveness of grievance redressed mechanisms evidenced by the fact that 45.5% of complaints remain

unresolved not only erodes user trust but also highlights a significant weakness in the organization's accountability framework.

3.3 Impact of E-Governance

The impact assessment reveals that e-governance has delivered significant benefits to users particularly in terms of efficiency, transparency and convenience. A high satisfaction rate of 87.10% indicates strong user acceptance and reflects the system's effectiveness in addressing traditional administrative challenges. The fact that 70.97% of users are able to access services on the same day marks a significant improvement over previous manual procedures, which required multiple in-person visits and long waiting times. Reducing wasted time yields broad economic benefits; in particular, it greatly benefits farmers who require timely access to land-related services to secure loans and avail themselves of government schemes.

In-person visits to government offices have decreased (52.73%), reflecting the success of this system in decentralizing service delivery and minimizing bureaucratic interactions. Similarly, reliance on intermediaries has declined (47.27%), indicating enhanced transparency and reduced opportunities for corruption.

A particularly noteworthy finding is that 100% of the respondents who utilized digital land services for financial purposes found them beneficial. This highlights the role of e-governance in facilitating financial inclusion and strengthening the linkages between land ownership and formal credit systems. However, the overall positive impact sentiment (52.73%) closely mirrors the system's adoption rate. This reinforces the argument that the benefits primarily accrue to the users and that adoption is the primary determinant of impact. In other words, the system is effective, but its effectiveness depends on access.

IV. CONCLUSION

Overall, the findings of this study indicate that Tamil Nadu's e-governance system for land-related services is operationally robust and possesses the potential to deliver significant administrative improvements. However, the study also reveals a critical gap between the system's capabilities and its actual reach.

While users experience high levels of performance, satisfaction and transparency, a significant portion of the population is excluded due to structural, informational and behavioral barriers. This creates a dual reality: a system that is highly beneficial to its users, yet largely inaccessible to those who cannot use it. Therefore, the central challenge is not technological performance, but rather inclusive adoption. To address this, there must be a shift from infrastructure-centric approaches to people-centric strategies that focus on awareness, digital literacy, trust-building and local support mechanisms.

REFERENCES

[1].Chugh G. Examining e-governance: A study of land records management system in India. 2018.
[2].Chenbaga Sree M, Sujitha P. Challenges and improvements on digitalization of land records. Int J Law. 2026;12(2):178–183.
[3].Government of India. Digital India Land Records Modernization Programme (DILRMP): Year End Review. 2023.
[4].Rekha V. Digitalization of land records: A legal perspective on e-governance and property rights. Indian J Legal Rev. 2025;5(11):18–28.
[5].Khanna A, Singh P, Angra PK. Blockchain-enabled e-governance framework for land record management. 2026.
[6].Kumar P, Kumar D, Kumar N. E-governance in India: Challenges and solutions. 2014.
[7].Yadav N, Singh VB. E-governance: Past, present and future in India. 2013.