

Haryana's E-Governance Model under Digital India: An Analysis

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Abstract

The Digital India initiative has redefined governance paradigms in India by integrating information and communication technologies into public administration, service delivery, and citizen engagement. Within this national framework, Haryana has emerged as a prominent sub-national actor experimenting with institutionalized e-governance reforms aimed at transparency, efficiency, and inclusivity. This paper critically examines Haryana's e-governance model as a component of Digital India, assessing its conceptual foundations, institutional architecture, flagship digital platforms, and sectoral applications. It situates Haryana's experience within broader debates on digital state capacity, cooperative federalism, and administrative modernization. Drawing on secondary data, policy documents, government reports, and scholarly literature, the study analyses initiatives such as Antyodaya Saral, e-Office, Parivar Pehchan Patra, Meri Basal Mera Byora, and sector-specific digital interventions in land records, welfare delivery, education, health, and urban governance. The paper argues that while Haryana's e-governance model demonstrates significant administrative innovation and convergence with Digital India goals, persistent challenges related to digital divide, data governance, institutional coordination, and accountability limit its transformative potential. The study concludes by offering policy recommendations to strengthen inclusivity, interoperability, and democratic oversight in Haryana's evolving digital governance ecosystem.

Keywords: E-Governance, Digital India, Haryana, Public Administration, Digital State, Cooperative Federalism

1. Introduction

The expansion of digital technologies has fundamentally altered the nature of governance in contemporary states. E-governance, understood as the strategic use of information and communication technologies (ICTs) in public administration, has moved beyond automation toward reshaping state–citizen relations, administrative accountability, and policy implementation (Heeks, 2006). In India, this transition has been institutionally anchored through the Digital India programme launched in 2015, which seeks to transform India into a digitally empowered society and knowledge economy (Government of India, 2015). Within India's federal structure, states play a decisive role in translating Digital India's national vision into operational governance outcomes. Haryana, a relatively small but economically significant state, has actively pursued e-governance reforms since the early 2000s, intensifying these efforts after 2015 through convergence with Digital India initiatives. Haryana's experience is particularly significant because it combines administrative reform, welfare digitization, and data-driven governance within a politically competitive and socio-economically diverse context (Kumar & Singh, 2021). This paper examines Haryana's e-governance model within

the broader framework of Digital India. It asks three interrelated questions:

First, what conceptual and institutional foundations shape Haryana's approach to e-governance? Second, how have flagship digital platforms transformed service delivery and administrative processes? Third, what structural challenges and governance dilemmas constrain the effectiveness of Haryana's digital governance trajectory?

2. Conceptual Framework: E-Governance and Digital State Capacity

E-governance is not merely a technological intervention but an administrative and political reform process. Early definitions emphasized efficiency and cost reduction, while contemporary scholarship highlights participation, transparency, and state capacity (UNDP, 2016). The concept of the "digital state" underscores the ability of governments to integrate data, platforms, and institutions to deliver public value while safeguarding democratic norms (Dunleavy et al., 2006). In the Indian context, e-governance is embedded within a developmental state framework where digital tools are used to address scale, diversity, and administrative fragmentation (Bhatnagar, 2014). However, scholars caution that technological determinism risks obscuring structural inequalities and bureaucratic power relations (Heeks & Bailur, 2007). Therefore, assessing Haryana's e-governance model requires attention to institutional design, political leadership, bureaucratic capacity, and citizen access. Digital India provides a multi-layered framework consisting of digital infrastructure as a utility, governance and services on demand, and digital empowerment of citizens (Government of India, 2015). States such as Haryana function as implementing laboratories where national digital architecture intersects with local administrative realities, making sub-national analysis crucial for evaluating Digital India's outcomes.

3. Evolution of E-Governance in Haryana

Haryana's engagement with e-governance predates Digital India. Early initiatives such as the Haryana State Wide Area Network (HARSAC-SWAN) and computerization of land records laid the groundwork for later reforms (Haryana Government, 2014). The establishment of the Haryana State Electronics Development Corporation (HARTRON) played a key role in institutionalizing IT capacity within the state administration. Post-2015, Haryana aligned its e-governance strategy explicitly with Digital India. The creation of the Department of Information Technology, Electronics and Communication (DITECH) reflected an effort to centralize digital policy coordination. This period witnessed a shift from department-centric computerization toward citizen-centric service delivery platforms, reflecting national priorities of minimum government and maximum governance (Sharma, 2019). The political leadership's emphasis on technology-driven governance further accelerated this transition. Digital dashboards, real-time monitoring systems, and outcome-based governance indicators became central to administrative practice, signaling a move toward data-enabled governance rather than isolated e-services (Chakrabarty, 2020).

4. Institutional Architecture of Haryana's E-Governance Model

Haryana's e-governance model operates through a multi-institutional architecture involving state departments, district administrations, and centralized digital agencies. HARTRON functions as the technical backbone, while DITECH provides policy direction and

coordination. District-level e-governance societies ensure last-mile implementation through Common Service Centres (CSCs), aligning with the Digital India emphasis on rural digital access (Government of Haryana, 2022). A defining feature of Haryana's model is the integration of vertical schemes under horizontal digital platforms. Rather than fragmented departmental portals, the state has increasingly adopted unified service delivery systems. This approach reflects lessons from earlier e-governance failures, where siloed applications limited scalability and user adoption (Heeks, 2006). However, institutional centralization also raises concerns regarding bureaucratic autonomy and data ownership. The concentration of digital decision-making within a few nodal agencies has improved coordination but risks marginalizing sector-specific expertise and democratic oversight (Kumar & Singh, 2021).

5. Flagship E-Governance Initiatives in Haryana

5.1 Antyodaya Saral

Antyodaya Saral represents Haryana's most visible e-governance innovation. Conceived as a unified service delivery platform, it integrates over 600 citizen services across departments through online portals and physical Saral Kendras. The platform aims to simplify access, reduce discretion, and enhance transparency by standardizing service timelines (Government of Haryana, 2021). Empirical assessments suggest that Antyodaya Saral has reduced transaction costs for citizens and improved grievance redressal mechanisms (NITI Aayog, 2022). However, dependence on digital literacy and internet access continues to limit its inclusivity, particularly among elderly and marginalized populations.

5.2 Parivar Pehchan Patra (PPP)

The Parivar Pehchan Patra is a family-based digital identification system designed to integrate welfare databases and target beneficiaries more accurately. By linking household data with service eligibility, PPP seeks to minimize duplication and exclusion errors (Government of Haryana, 2020). While PPP exemplifies data-driven governance, it also raises significant concerns regarding privacy, consent, and data security. Scholars argue that the absence of a comprehensive data protection framework at the state level undermines citizen trust and accountability (Bhandari, 2022).

5.3 e-Office and Administrative Digitization

The adoption of e-Office has transformed internal administrative processes in Haryana by enabling file tracking, digital signatures, and paperless workflows. This reform has enhanced inter-departmental coordination and reduced procedural delays, aligning with Digital India's emphasis on efficiency (Sharma, 2019). Nevertheless, the transition has been uneven across departments, reflecting variations in bureaucratic capacity and resistance to change. Training deficits and legacy administrative cultures continue to impede full institutionalization of digital workflows.

6. Sectoral Applications of E-Governance in Haryana: Ground-Level Realities

Haryana's sector-wise deployment of e-governance illustrates both the potential and the limitations of digital reforms when translated into routine administrative practice. While official narratives emphasize efficiency and transparency, field-level outcomes vary

significantly across sectors depending on institutional capacity, local socio-economic conditions, and the degree of human mediation involved.

6.1 Land Records and Revenue Administration

Digitization of land records through platforms such as Jamabandi, e-registration, and online mutation systems has substantially improved procedural transparency in Haryana's revenue administration. Citizens can now access ownership records, transaction histories, and mutation status without repeated visits to tehsil offices, reducing dependence on intermediaries (World Bank, 2020). These reforms have also supported faster property registration and enhanced legal clarity in urban and peri-urban areas. However, digitization has not eliminated disputes arising from inheritance claims, fragmented holdings, or outdated cadastral maps. In rural regions, inaccuracies in legacy records are often carried forward into digital databases, requiring manual corrections by patwaris and revenue officials. As a result, technology has improved access to information but has not fully resolved structural problems rooted in land tenure complexity and administrative discretion.

6.2 Agriculture and Rural Service Delivery

E-governance initiatives in agriculture, particularly *Meri Fasal Mera Byora*, aim to integrate crop registration, insurance enrollment, and compensation for crop loss through a single digital interface. The platform has enhanced the state's ability to map cropping patterns and process claims more systematically (Kumar, 2021). For farmers with reliable internet access and familiarity with digital tools, the system has reduced paperwork and transaction delays. Nevertheless, adoption remains uneven. Small and marginal farmers often depend on village-level intermediaries, CSC operators, or local officials for registration and updates. Delays in data entry, discrepancies in land records, and mismatches between satellite assessments and ground conditions have generated grievances, particularly during instances of crop damage. These experiences underline that digital agriculture governance remains heavily dependent on institutional support and field verification.

6.3 Health Sector Digitization

Haryana has expanded e-governance in the health sector through online appointment systems, digital health records, and telemedicine platforms, particularly in district hospitals and urban health facilities. During the COVID-19 pandemic, digital tools played a critical role in monitoring bed availability, vaccination coverage, and disease surveillance (UNICEF, 2021). However, routine integration of digital health services into primary healthcare remains limited. Connectivity issues, shortage of trained personnel, and frequent system downtimes constrain effective utilization in rural health centres. Medical staff often treat digital reporting as an additional administrative task rather than a clinical support tool, reducing its impact on service quality. This reflects broader challenges of aligning digital systems with frontline health delivery realities.

6.4 Education and School Administration

E-governance in education has focused on online student databases, teacher attendance monitoring, and digital learning platforms. These systems have improved administrative oversight and data availability for planning purposes. During pandemic-related school closures,

digital platforms facilitated continuity of instruction for a segment of students with adequate access (UNICEF, 2021). Yet, the digital divide significantly shaped educational outcomes. Students from economically weaker households faced limited access to devices and stable internet connectivity, leading to learning gaps. Teachers reported constraints in adapting digital content to diverse learning needs, and monitoring mechanisms sometimes prioritized compliance over pedagogical effectiveness. Thus, while e-governance strengthened administrative control, its contribution to educational equity remains contested.

6.5 Urban Governance and Municipal Services

Urban local bodies in Haryana have adopted digital platforms for property tax collection, building approvals, and grievance redressal. Cities such as Gurugram have demonstrated relatively high uptake due to better infrastructure and citizen familiarity with digital services. Online systems have improved revenue realization and reduced processing time for approvals (Government of Haryana, 2022). In smaller towns, however, digital municipal services coexist with manual processes, reflecting limited staffing and technical capacity. Citizens often use digital platforms primarily for grievance registration rather than routine service interaction, indicating partial rather than comprehensive digital transformation. These patterns suggest that urban e-governance outcomes remain closely tied to local administrative capacity and resource availability.

7. Haryana's E-Governance Experience and Cooperative Federalism

Haryana's e-governance trajectory illustrates how Digital India operates in practice through India's system of cooperative federalism. While Digital India provides a standardized national digital backbone—such as Aadhaar authentication, DigiLocker, UMANG, and BharatNet—the operational responsibility for service delivery, beneficiary identification, and grievance redressal rests primarily with state governments. Haryana's experience demonstrates that effective digital governance depends less on formal federal design and more on administrative coordination between central platforms and state-specific policy priorities (Chakrabarty, 2020). In practice, Haryana has selectively adapted central digital infrastructure rather than merely replicating national templates. Platforms like Antyodaya Saral and Parivar Pehchan Patra are built on centrally supported identity and authentication systems, but they reflect state-level policy choices regarding welfare targeting, family-based data integration, and service rationalization. This indicates a functional rather than constitutional form of cooperative federalism, where coordination occurs through technical interoperability and shared databases rather than formal intergovernmental negotiations. However, this arrangement also exposes structural asymmetries. Haryana remains fiscally and technically dependent on central ministries for funding, cyber security protocols, and digital standards. Delays in central approvals, changes in national digital architecture, or disruptions in Aadhaar-based authentication directly affect state service delivery. Thus, while Digital India enables states like Haryana to innovate administratively, it simultaneously constrains autonomy by embedding governance within centrally controlled digital ecosystems (Kumar & Singh, 2021).

8. Operational Challenges and Ground-Level Constraints

Despite measurable progress, Haryana's e-governance model encounters significant operational challenges at the ground level. The most persistent constraint is the uneven nature of digital access across regions and social groups. While urban districts such as Gurugram and Faridabad demonstrate high adoption of online services, rural and semi-urban areas continue to rely heavily on intermediaries, including CSC operators and local officials, which partially reintroduces discretion and informal practices (UNDP, 2016). Digital literacy remains a limiting factor, particularly among elderly citizens, women, and informal workers. Field-level reports indicate that many beneficiaries access digital services only during grievance situations rather than as routine governance tools, suggesting limited internalization of digital citizenship (Government of Haryana, 2022). Language barriers and user-interface complexity further reduce usability, despite policy claims of citizen-centric design. Another major challenge relates to data accuracy and updating. Platforms such as Parivar Pehchan Patra rely on self-declared household data, which often lags behind demographic realities such as migration, marital changes, or employment shifts. Errors in family records have led to delays in welfare access and increased grievance filings, placing additional administrative burden on frontline officials. These issues underline that digital databases, while efficient, cannot substitute continuous field verification and human discretion.

9. Policy Gaps, Data Governance, and Accountability Concerns

Haryana's rapid digitization has outpaced the development of a comprehensive data governance framework at the state level. While digital platforms collect extensive personal and household-level data, mechanisms for informed consent, data minimization, and independent oversight remain underdeveloped. In the absence of a robust state-level data protection policy, accountability is largely administrative rather than legal, limiting citizens' ability to challenge errors or misuse (Bhandari, 2022). Algorithmic decision-making in welfare eligibility and service prioritization also raises concerns about transparency. Beneficiaries are often unaware of the criteria used to accept or reject applications, particularly in automated workflows. This opacity risks transforming administrative discretion into "digital discretion," where accountability becomes harder to trace (Heeks & Bailur, 2007). Institutionally, coordination gaps persist between line departments, district administrations, and digital agencies. While centralized dashboards enhance monitoring, they sometimes encourage target-oriented compliance rather than qualitative service improvement. Officials report pressure to meet digital performance indicators, occasionally at the cost of contextual responsiveness. This reflects a broader governance tension between measurable outputs and substantive outcomes.

10. Conclusion

Haryana's e-governance model represents a pragmatic and evolving attempt to embed Digital India within everyday administrative practice. The state has successfully moved beyond isolated computerization toward integrated platforms that streamline service delivery, improve monitoring, and reduce procedural delays. Initiatives such as Antyodaya Saral and e-Office demonstrate tangible administrative gains, while data-driven tools have enhanced policy targeting in sectors such as welfare and agriculture. At the same time, the Haryana experience

confirms that digital governance is not inherently transformative. Technology amplifies existing institutional capacities and limitations rather than replacing them. Persistent digital divides, data governance gaps, and coordination challenges indicate that e-governance must be complemented by investments in human capacity, legal safeguards, and participatory mechanisms.

Going forward, Haryana's digital governance strategy must prioritize inclusivity, transparency, and accountability alongside efficiency. Strengthening offline support systems, institutionalizing data protection norms, and enabling citizen feedback beyond grievance portals will be critical for sustaining legitimacy. Haryana's experience thus offers valuable lessons for other Indian states: digital governance succeeds not through technology alone, but through its careful integration with democratic administration and social realities.

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