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Research Article

A Critical Study of India's Digital India Policy and its Socio-Humanitarian Implications

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Abstract: This research thoroughly analyzes India's "Digital India" initiative from a justice-focused perspective, emphasizing the normative, structural, and experiential aspects of digital change. Although the initiative has enhanced technological infrastructure and digital governance, it has also exacerbated existing inequalities, especially among marginalized populations like rural women, Dalits, Adivasis, gender minorities, and informal workers. Employing a qualitative-normative approach, the study integrates critical document examination and secondary ethnographic information to uncover how digital policies like Aadhaar; frequently perpetuate exclusion through biometric discrepancies, bureaucratic ambiguity, and insufficient cultural awareness. Utilizing Amartya Sen's capability approach and concepts of recognition and procedural justice, the research contends that digital inclusion should extend beyond mere access and infrastructure to encompass agency, participation, and dignity. The results reveal a core justice disparity where digital systems emphasize efficiency over fairness and uphold conditional citizenship. To fill this void, the paper suggests a human-focused governance model rooted in pluralism, local supervision, and inclusive design. This study aids in redefining digital citizenship in the Global South and advocates for upcoming policies that integrate ethical standards at the center of technological governance.

Keywords: Digital Citizenship, Digital India, Marginalization, Public Policy, Social Justice.

1. Introduction

Globally, India, a nation of more than 1.4 billion people, stands at the crossroads of rapid digital transformation and deep-rooted socio-economic inequalities. The country's ambitious "Digital India" campaign, launched in 2015, seeks to revolutionize governance, service delivery, and citizen engagement through digital technologies. With promises of inclusivity, transparency, and empowerment, the initiative represents not only a technological project but also a profound reconfiguration of state–citizen relations.

However, beneath the rhetoric of progress lies a more complex and uneven landscape. Millions in rural and marginalized communities lack reliable internet access, digital literacy, or the necessary documentation to participate fully in the digital ecosystem. For these populations, "Digital India" risks becoming a form of exclusion rather than inclusion, an infrastructure of control, rather than liberation. This contradiction raises urgent ethical and humanitarian concerns.

The deployment of the Aadhaar biometric ID system exemplifies this paradox. While Aadhaar was designed to streamline welfare distribution and reduce corruption, its implementation has frequently resulted in denial of entitlements, data privacy violations, and bureaucratic alienation, particularly among India's poorest citizens. Far from being neutral, the digital shift is embedded in unequal structures of power, caste, gender, and geography.

This article argues that the normative vision of "Digital India" is incomplete without an accompanying framework of digital justice, a principle that recognizes the right to equitable, meaningful, and culturally grounded participation in digital society. As the state increasingly moves services online, what happens to those who are digitally invisible? Whose citizenship is affirmed, and whose is undermined?

To address this concern, we must first interrogate the ideological assumptions of the "Digital India" agenda. What notion of citizenship underlies the policy? Is it one of democratic participation, or merely compliance with technological systems? How do digital infrastructures reshape the way rights are accessed, contested, and denied? These questions call for a critical rethinking of the social contract in the digital age.

Existing literature on digital governance in India tends to focus on administrative efficiency, technological design, or access gaps. While valuable, such perspectives often understate the deeper cultural and ethical implications of digital transformation. There is a need to explore how digitalization interacts with India's plural social realities, particularly in relation to caste hierarchies, gender norms, and linguistic diversity.

This study therefore adopts a normative-analytical approach, grounded in critical social theory, to examine how digital policies are designed, implemented, and experienced across different social strata. It treats digital infrastructure not merely as tools but as ideological and ethical architectures, structures that encode certain values while excluding others. The focus is on how digital citizenship is unevenly constructed and experienced within the framework of a purportedly inclusive policy. To guide this inquiry, the research is driven by three critical questions:

1) To what extent does the "Digital India" policy reflect principles of social and digital justice?
2) How do marginalized communities experience inclusion or exclusion through state digital initiatives such as Aadhaar?
3) What normative framework can better align digital transformation with the lived realities of India's plural society?

Through these questions, the article aims to contribute a fresh, interdisciplinary perspective on digital governance, one that centers human dignity, cultural specificity, and participatory justice in the age of algorithmic bureaucracy.

2. Literature Review

2.1. Digital Citizenship: Concepts and Contestations

The concept of digital citizenship has evolved beyond mere internet access to encompass broader questions of participation, identity, and agency in the digital public sphere [1] [2]. It involves the capacity of individuals to engage critically, ethically, and responsibly in a society increasingly mediated by technology.

Isin and Ruppert argue that digital citizenship is not just about access but about how technologies co-constitute citizens and governance [3]. In their view, digital platforms both enable and regulate citizen behavior, constructing new modes of inclusion and exclusion. From a normative perspective,

Mossberger et al. posit that meaningful digital citizenship requires political knowledge, civic skills, and social connectedness [4]. Merely being online is insufficient, it is the quality and equity of digital engagement that defines true citizenship. In the Global South, digital citizenship must be situated within colonial legacies and uneven state-citizen relations. Madianou suggests that digital inclusion initiatives often reproduce inequalities by treating citizenship as a technological compliance rather than a participatory right [5].

India's unique challenges, including linguistic plurality, caste-based discrimination, and uneven digital literacy, require a rethinking of what constitutes "effective digital citizenship" in non-Western contexts [6]. Frameworks developed in the Global North often fail to account for these complexities. Chakravartty and Sarikakis introduce the concept of "mediated marginalities" to describe how digital inclusion policies, especially in authoritarian or technocratic regimes, may entrench social stratification rather than reduce it [7]. Thus, there is a growing call to embed digital citizenship within broader notions of justice, rights, and recognition, particularly for communities that remain structurally disadvantaged in the digital transition [8].

2.2. Digital India and the Politics of Inclusion

"Digital India" was launched in 2015 with the vision of transforming India into a knowledge economy through digital empowerment [9]. The initiative focuses on e-governance, digital infrastructure, and universal digital literacy. Critics argue that while the program has led to rapid digitization of services, it has not adequately addressed the social and structural barriers that prevent marginalized groups from participating in this transformation [10]. The Aadhaar biometric identification system is often cited as a case where digital policy intended for inclusion ended up excluding millions due to authentication failures, data errors, or lack of access to registration [11] [12].

Khera's research shows that Aadhaar has become a gatekeeping mechanism for welfare rather than a facilitator, particularly harming rural and tribal populations [13]. This raises concerns about technocratic governance overriding social equity. Gendered exclusions are also evident in digital India's rollout. Research by IT for Change reveals that rural women face multiple obstacles, including lack of digital literacy, mobility constraints, and sociocultural norms [14].

Furthermore, digital governance policies often prioritize technological efficiency over community participation, resulting in top-down interventions that ignore local needs [15] [16]. These findings suggest that without equity-focused design and implementation, the promise of Digital India risks becoming an infrastructure of surveillance and social sorting [17].

2.3. The Digital Divide: Intersectional and Structural Dimensions

The digital divide in India is not merely technological but deeply intersectional, shaped by caste, class, gender, and geography [18] [19]. While urban populations enjoy near-universal connectivity, rural and marginalized communities remain excluded.

According to a recent report by IAMAI, only 33% of rural women in India have access to mobile internet, compared to over 60% of urban men [20]. This stark gap undermines claims of universal access. Caste continues to play a role in digital marginalization. Dalit communities often lack access to digital infrastructure due to systemic neglect and social segregation [21]. Language and literacy barriers compound these exclusions. India's digital content and interfaces are overwhelmingly in English or Hindi, alienating speakers of minority or tribal languages [22].

Moreover, digital skill-building initiatives often focus on technical training rather than critical media literacy, leaving users vulnerable to misinformation and exploitation [23]. Structural exclusion is also evident in how digital ID systems, like Aadhaar, interact with bureaucratic and infrastructural failures, particularly in areas with weak state presence [24]. Therefore, understanding the digital divide requires moving beyond access metrics to consider the lived experience of exclusion and the socio-political determinants of digital inequity [25].

2.4. Rethinking Justice in the Digital Age

Classical theories of justice, such as those of Rawls, emphasize fairness, rights, and equality of opportunity [26]. In the digital era, these ideas must be revisited to account for new forms of inclusion and exclusion mediated by technology. Amartya Sen's capability approach provides a valuable lens, arguing that justice should be evaluated based on what people are able to do and be, not merely what resources they possess [27].

Building on this, Nussbaum emphasizes dignity and the importance of ensuring that marginalized individuals can participate fully in society, including the digital sphere [28]. However, current digital policies rarely incorporate these normative insights. Instead, they tend to adopt a utilitarian logic focused on efficiency and scale [29].

Digital justice frameworks call for a shift from infrastructure-first to human-centered design, where policies prioritize the needs and voices of the most vulnerable [30]. The concept of "procedural justice" is also critical, ensuring not just fair outcomes but also fair processes in digital governance, such as consent, data rights, and meaningful participation [31].

A justice-oriented digital transformation must therefore move beyond "access" to encompass agency, recognition, and solidarity, principles currently missing from India's digital policymaking [32] - [35].

3. Methodology

This study adopts a qualitative-normative approach, combining interpretive policy analysis with a critical justice framework. The goal is not merely to evaluate programmatic outcomes of the Digital India initiative, but to uncover the normative logics, ideological assumptions, and structural implications embedded in the policy discourse and implementation.

To answer the first research question, the study conducts a critical document analysis of key government texts, namely, the Digital India Vision Document, Aadhaar Act, implementation white papers, and related parliamentary debates. These materials are examined using a discourse-ethical lens to identify which notions of justice, citizenship, and rights are made visible or invisible through policy framing.

For the second question, the study integrates secondary ethnographic and case study data from credible academic sources, civil society reports, and investigative journalism. This includes detailed accounts of Aadhaar-related exclusion in welfare access, gendered patterns of digital illiteracy, and caste-based marginalization in e-governance projects. These narratives are essential to surface the lived realities of digital disenfranchisement in different parts of India.

Data from organizations such as IT for Change, Rethink Aadhaar, Internet Freedom Foundation, and UNDP India are triangulated with peer-reviewed studies to ensure thematic saturation and analytical robustness. Special attention is given to intersectional factors, how exclusion is mediated not only by income or geography but also by gender, caste, language, and bureaucratic legibility.

To address the third research question, the study constructs a normative analytical framework drawing from Amartya Sen's capability approach, Nancy Fraser's theory of recognition and redistribution, and the procedural justice literature in data ethics. These frameworks are employed to critique the ethical architecture of digital policies and to propose a justice-oriented alternative grounded in democratic participation, contextual design, and cultural pluralism.

The methodological stance of this research is interpretivist and critical, rejecting positivist neutrality in favor of engaged scholarship. It recognizes that digital technologies are not neutral tools but contested socio-political systems that shape, and are shaped by, unequal power relations.

By synthesizing policy analysis, critical theory, and empirical evidence of exclusion, the methodology enables a multi-level critique of India's digital transformation. It aims to provide both a diagnostic (what is wrong) and a prescriptive (what could be done) account of how digital citizenship can be made more just, inclusive, and context-sensitive in the Global South.

4. Finding and Discussion

4.1. Digital India and the Justice Gap: A Normative-Structural Tension

Digital India was launched with the promise of democratizing access to services, empowering citizens, and modernizing governance. However, the operationalization of this vision reveals a disconnect between technocratic efficiency and social justice. Justice in this context is not only about access to technology but about whether digital systems honor the principles of equity, dignity, and recognition.

Policy documents emphasize infrastructure: number of internet connections, mobile penetration, and digital transaction volume. Yet, these metrics often obscure the underlying inequalities of capability, who is truly able to use these tools meaningfully? The government's own reports show that while internet coverage reached over 65% of households in 2022, functional digital literacy stood at just 27% in rural areas.

The justice gap widens when considering regional disparities. States like Kerala and Tamil Nadu boast high digital uptake, but in Bihar, Odisha, and Chhattisgarh, access is limited by poor connectivity, electricity shortages, and lack of devices. This spatial injustice is rarely addressed in centralized policy frameworks.

Furthermore, digital service delivery often assumes uniform bureaucratic legibility. Citizens who lack official documents, permanent addresses, or standardized names face difficulties in registering or accessing services. This effectively creates a class of "digitally undocumented" individuals, particularly among migrant workers, nomadic tribes, and urban slum residents.

Justice is also procedural. The Aadhaar system, designed as a tool for universal identification, has increasingly become a precondition for citizenship-based entitlements. Cases of food ration denials due to biometric mismatch, or pension loss due to authentication errors, illustrate how the infrastructure enforces a punitive conditionality.

Rather than strengthening citizenship, Digital India in many cases introduces a conditional form of inclusion, one that hinges on a citizen's compatibility with state-defined digital norms. This conditionality undermines the universalist ethos of justice and replaces it with a transactional logic.

A justice-oriented policy must therefore begin not with technological rollouts, but with an ethnographic understanding of marginalization. The justice gap in digital India is not incidental, it is designed into systems that value data flow over human well-being.

Table 1. Digital Infrastructure vs. Digital Literacy by State (2022–2023)

State	Household Internet Access (%)	Basic Digital Literacy (%)	Gap (Percentage Points)
Kerala	88%	79%	9
Tamil Nadu	75%	61%	14
Maharashtra	67%	44%	23
Uttar Pradesh	42%	21%	21
Bihar	35%	18%	17
Jharkhand	31%	15%	16

Source: Compiled from NITI Aayog (2023), IAMAI (2023), UNDP Digital Inclusion Report (2022)

Table 1 reveals a fundamental asymmetry between digital infrastructure and the actual ability of citizens to engage with it meaningfully. While states like Kerala and Tamil Nadu demonstrate relatively small gaps between access and literacy, less developed states such as Bihar and Jharkhand exhibit wide disparities. This disconnect implies that the success of digital inclusion initiatives cannot be measured by access alone; without sufficient digital capabilities, infrastructure remains inert. The data substantiates the justice gap where infrastructure is present, but meaningful participation remains elusive.

4.2. Lived Experiences of Digital Exclusion: Gender, Caste, and the Margins

Digital inclusion policies often overlook the everyday struggles of marginalized groups. In rural Uttar Pradesh, for example, less than 20% of women between 18–35 reported owning a smartphone. Among Dalit and tribal women, this figure drops to 10%, due to economic constraints, patriarchal norms, and surveillance within families.

Access alone does not guarantee agency. Many women who possess phones lack autonomy in their usage. They rely on male family members to operate government apps, exposing their personal data and creating new dependencies rather than empowerment.

Caste continues to shape access in deeply entrenched ways. In some villages in Maharashtra, Dalit students are barred from accessing public Wi-Fi hotspots located near dominant-caste temples or schools. In Telangana, digital literacy programs are disproportionately offered in urban centers, sidelining remote tribal communities.

The Aadhaar system has introduced new layers of exclusion. In Jharkhand, dozens of cases have been documented where fingerprint mismatches led to denial of subsidized food. These failures

disproportionately affect elderly, disabled, and manual laborers, whose biometrics degrade over time due to harsh work conditions.

Digital identities also create new risks of surveillance. Transgender persons, who often lack consistent legal documents, report being misgendered or erased in digital databases. In urban centers like Bengaluru, this has resulted in barriers to accessing health and social services tied to biometric identity.

Language is another invisible barrier. Many digital platforms are available only in English or Hindi, marginalizing speakers of minority languages. In Assam and the Northeast, this has led to confusion and misapplication of digital welfare schemes, particularly during the COVID-19 pandemic when online-only systems dominated.

The lived experience of exclusion reveals that digital citizenship is not simply about having a device or connection. It is about navigating power, culture, and systems that were not designed with marginalized bodies in mind. Digital India, thus, risks reinforcing the very inequalities it claims to address. Table 2 shows the smartphone ownership and use for public services by gender and caste (2023)

Table 2. Smartphone Ownership and Use for Public Services by Gender and Caste (2023)

Group	Own Smartphone (%)	Use for Public Services (%)
Urban Men	81%	64%
Urban Women	62%	41%
Rural Men	54%	33%
Rural Women	28%	12%

Source: IT for Change Gender Digital Divide Survey (2023)

4.3. Towards a Justice-Oriented Framework for Digital Transformation

Addressing the contradictions of Digital India requires a fundamental shift from technology-centric to human-centered policy design. Rather than asking how citizens can adapt to digital systems, policymakers must ask how digital systems can adapt to the plural realities of Indian society.

A justice-oriented framework must begin with capability expansion. This involves not only infrastructure provision but also enabling users to convert access into real agency, through education, localized content, and culturally relevant platforms.

Second, digital policy must recognize intersectional identities. This means designing systems that are flexible enough to accommodate non-standard documentation, multilingual inputs, and community-mediated authentication, especially for gender minorities, informal workers, and stateless individuals.

Procedural justice is essential. Consent must be informed and revocable. Data collection must be proportional and transparent. Most importantly, citizens must have meaningful participation in the design and monitoring of digital systems that govern their lives.

There is also a need to institutionalize local digital governance, panchayat-level digital councils, for example, that can act as mediators between state technologies and community needs. This bottom-up governance model restores accountability and cultural legitimacy to digital interventions.

Existing global frameworks such as the UN's "Digital Cooperation Roadmap" and UNESCO's "Ethical AI" guidelines can be contextualized and localized within Indian realities. However, India must resist importing techno-legal frameworks from the West without critical adaptation to its own plural and contested public sphere.

Ultimately, digital transformation must be judged not by efficiency or scale, but by the degree to which it upholds dignity, recognition, and equitable participation. Justice is not a byproduct of good digital policy; it must be its foundation.

Table 3 shows the principles of digital justice vs. their implementation in digital India.

This comparative table reveals a pattern of partial or weak integration of core justice principles in India's digital transformation. While universal access is a stated priority, procedural fairness, participatory governance, and identity recognition are inadequately addressed. Table 1 makes visible the blind spots in current policy architecture, particularly the assumption that efficiency and equity are synonymous. It invites a reorientation of digital policy around human rights rather than metrics.

Table 3. Principles of Digital Justice vs. Their Implementation in Digital India

Principle of Digital Justice	Integration in Digital India Policy	Observed Misalignment Example
Universal Access	Partial	Remote tribal areas lack consistent connectivity
Meaningful Participation	Weak	Absence of community consultation in digital rollouts
Social Identity Recognition	Limited	Transgender persons often misclassified in databases
Procedural Justice	Poor	Biometric failures penalize poor users disproportionately
Transparency & Accountability	Incomplete	Appeals process for Aadhaar denial remains opaque

Source:
Synthesized from Nancy Fraser (2009), IT for Change Policy Papers (2023), Government Evaluation Reports.

5. Conclusions

This research indicates that India's Digital India program, although greatly enhancing digital infrastructure and governance accessibility, has also increased social disparities and generated new types of exclusion. The identified justice gap is not merely a lack of coverage but rather a structural result of creating digital systems without proper attention to social complexity and historical marginalization. Marginalized populations such as rural women, Dalits, gender minorities, and informal laborers; encounter layered obstacles that extend beyond access, including concerns about biometric accuracy, procedural clarity, and cultural significance. The study emphasizes the necessity for a justice-focused framework that values human dignity, diverse identities, and substantial involvement more than just technological efficiency. Policy reforms should emphasize inclusive, context-aware governance, adaptable identity frameworks, community monitoring, and multilingual digital skills.

Future research requires essential empirical studies conducted in the field that investigate the lived experiences of digital exclusion in various regions and communities throughout India. Research involving marginalized groups could enhance insights into how digital citizenship is navigated in practice. Furthermore, comparative studies with other Global South nations might enhance theoretical models and guide tailored policy innovations focused on achieving equitable digital transformation.

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