

Reducing or Reproducing Inequality? A Critical Analysis of Gender, Technology and Sustainability through Problematizing Digital Inclusion Policies

Zmniejszanie czy narastanie nierówności? Krytyczna analiza płci i zrównoważoności poprzez problematyzację polityki cyfrowej w Indiach

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Abstract

This study critically examines India's Gender Digital Divide (GDD) through Carol Bacchi's *What's the Problem Represented to Be?* (WPR) framework, exploring how digital inclusion initiatives, framed around empowerment narratives and sustainability agendas reinforcing systemic inequalities. Moving beyond access-driven metrics and data-driven analytics, the evaluation shows how policy discourses privileged technocratic solutions and neoliberal logics, which may marginalise grassroots innovations, silence alternative framings and overlook intersectional realities of women's digital exclusion in developing economies. The study highlights contradictions in sustainability narratives discovering a plurality of sustainability definitions, where digital inclusion is promoted as a solution, but fails to address deeper inequalities for achieving Sustainable Development Goals (SDGs) in a complex socioeconomic context. The findings contribute directly to the advancement of policymaking strategies for SDG 5 (Gender Equality) and SDG 10 (Reduced Inequalities) specifically as it deals with the gendered inequalities in digital governance to promote strategies for advocating socially responsive and globally sustainable policy design.

Key words: sustainability, gender digital divide, poststructuralist discourse analysis, social policy analysis, digital policy

Streszczenie

Celem niniejszej pracy jest krytyczna analiza problem podziału cyfrowego ze względu na płeć (GDD) w Indiach, wykorzystując ramy Carol Bacchi z dzieła *What's the Problem Represented to Be?* (WPR), badając, w jaki sposób inicjatywy na rzecz włączenia cyfrowego, osadzone w narracjach o wzmocnieniu pozycji i programach zrównoważonego rozwoju, wzmacniają nierówności systemowe. Wykraczając poza metryki oparte na dostępie i analizy oparte na danych, wykazujemy, jak dyskursy polityczne faworyzują rozwiązania technokratyczne i logikę neoliberalną, co może marginalizować oddolne innowacje, wyciszać alternatywne ujęcia i pomijać interseksjonalne realia wykluczenia cyfrowego kobiet w gospodarkach rozwijających się. Analiza uwypukla sprzeczności w narracjach dotyczących zrównoważonego rozwoju, odkrywając wielość definicji zrównoważonego rozwoju, w których włączenie cyfrowe jest promowane jako rozwiązanie, ale nie rozwiązuje głębszych nierówności w osiągnięciu Celów Zrównoważonego Rozwoju (SDGs) w złożonym kontekście społeczno-ekonomicznym. Wyniki te wspomagają rozwijanie kształtowania polityki na rzecz SDG 5 (Równość płci) i SDG 10 (Zmniejszenie nierówności), w szczególności w zakresie zajmowania się nierównościami ze względu na płeć w zarządzaniu cyfrowym, aby promować strategie wspomagające społecznie wrażliwe i globalnie zrównoważone projektowanie polityki.

Słowa kluczowe: zrównoważoność, podział cyfrowy ze względu na płeć, analiza dyskursu poststrukturalistycznego, analiza polityki społecznej, polityka cyfrowa

1. Introduction

In the contemporary age of digital governance, access to technology is often equated with access to opportunity (Peng, 2022; Botelho, 2021; Usman et al., 2024). The narrative of digital inclusion has both an economic imperative and a moral prospect (Singh & Singh, 2022). Framed within the scope of socioeconomic inequalities, the problem of Gender Digital Divide (GDD) is positioned within policy discourse as the dilemma in the politics of power (Bacchi, 2012; Foucault, 1982) and empowerment in advancing digital and financial autonomy, exclusion, and participation of women in the digital space (Hilbert, 2011; Gurumurthy & Chami, 2021). Recently, sustainability has emerged as a defining imperative of development thinking, encompassing social, economic, environmental, and institutional dimensions (Kates et al., 2005). Central to this broader understanding of sustainability is the need for inclusive and resilient digital futures in which technological transformations do not simply replicate existing inequalities but also actively dismantle them (Eubanks, 2018; Dijk, 2020). Achieving equality in the digital spaces, therefore, is a necessary condition for sustainable development. Across multilateral development reports, policy white papers, and strategic agendas, the problem appears as a mere access gap (Ranchordás, 2022), that obscures the deeper structural, economic, and epistemic conditions that shape women's digital opportunities and that, if left unexamined, undermine the long-term sustainability of gender-inclusive development (Robinson et al., 2015; Kleine, 2013; Pearce and Rice, 2013). Beneath the seemingly progressive language of inclusion and empowerment, the co-construction of gender, technology, and power as a discursive formation with ontological certainty delimits the very agency of women, often problematizing what counts as exclusion, who is legible as excluded and how inclusion is to be pursued (Mohanty, 2003; Wajcman, 2004; D'Ignazio & Klein, 2020).

Globally, the discourse surrounding GDD reflects a familiar dilemma: that inclusion into digital infrastructure will yield better economic empowerment, social mobility, and civic participation (World Bank, 2016; OECD, 2018). This narrative is aided by the literature from transnational development agencies that constructs digital inclusion as a symbol and metric of modernity (UN Women, 2020), which fails to account for the historical, cultural, and political specificities of regions like South Asia, where digitality gets ruptured due to the complexity of caste, class, and social structures (Rao, 2018; Arora, 2019). However, the literature on sustainability shows the importance of usage being a very important pillar of this development process (Kleine, 2013; Robinson et al., 2015), ensuring equal economic rights to *enhancing the use of technology* for women (Hilbert, 2011). This transposes onto new terrains that are not much sensitive to the disruptive nature of technology. This is more evident in the Indian context, where the state's digital governance initiatives have foregrounded gender inclusion as a key development objective (Gurumurthy and Chami, 2021). Yet, the figure of digitally literate women has remained a nuanced concept that oscillates between different constructs, such as financial autonomy, digital education, safety, and community support (Rao, 2018; Arora, 2019), with sociocultural and behavioural factors that remain unassessed in the sustainability policy discourse (Hugé et al., 2013).

In this context, the issue of GDD has been broadly understood as the gendered gap in access to digital infrastructure (Bala and Singhal, 2018; Kerras et al., 2020), thus becoming a focal point of state and sustainable development initiatives that seek to integrate women into the digital economy. The policy discourse around the GDD is saturated with the logics of instrumentalism and developmental urgency (Ancheta-Arrabal et al., 2021). This construction bears an uncanny resemblance to what Spivak (2010) has famously theorised as the discursive mechanism through which the subaltern is spoken for but never permitted to speak. Like Gender equality policies, the GDD discourse is also centred in sociocultural mindset, resource allocation and *ideological androcentrism* (Risman and Davis, 2013). Any form of gender analysis is subjected to the constructed forms of social knowledge that, in turn, produce political subjects (Payne, 2014). Moreover, this construction of GDD in policy is marked by a persistent ahistoricism and decontextualization (Myry & Siivonen, 2024). It often neglects the struggles of women in using the internet, even if access is given, which is also a challenge very similar to women's rights to land, education, capital and mobility (Sindakis & Showkat, 2024; Dutta & Das, 2025; Sonne, 2025). What remains absent, are the voices, knowledge and resistance of women who contest the very terms on which digital participation is offered. In this context, the study has preferred Carol Bacchi's qualitative method for policy analysis, *What's the Problem Represented to Be?* (WPR) framework to focus on the gaps and identify the issues for further analysis, while exploring if new pragmatical definitions of the elements emerge from the policy papers.

Hence, the objectives of the study are:

- i. To critically explore how the GDD is problematised in India's digital policy discourse: through Carol Bacchi's WPR framework, identifying the underlying assumptions, gaps, and normative logics
- ii. To examine the intersection of gender, technology, and sustainability: by analysing how digital inclusion policies reproduce pre-existing structures of inequality, particularly in the context of SDGs, notably SDG 5.

- iii. To examine the practical and theoretical or ideological consequences of dominant digital governance and sustainability narratives: with attention to how these framings shape women's autonomy, access and agency in digital spaces under the sustainable development paradigm.

Bacchi's WPR has been used widely in in different national level policy analysis, being one of the most preferred qualitative frameworks that provides a structured method. Payne's (2014) study on gender equality schemes in the health sector in England is one of the seminal works that shows a great justification of using WPR for a similar problem statement of the present study. Bacchi's (1999) Study sees the problems of women within the *policy and politics* as inherently discursive, that needs a structured framework for gendered policy analysis. Therefore, the present study follows WPR to specifically focuses on contributing to the theoretical research body on understanding the problem of GDD in the context of developing economies, which has a global interest, specifically in sustainability discussions. Practically, the primary objective is to inform the implementation of SDG 5, exploring the limitations of access-based digital empowerment frameworks. It also intersects with specific targets of SDG 9 (Industry and Innovation), SDG 10 (Reducing Inequalities), and SDG 16 (Peace, Justice, and Strong Institutions), calling for more inclusive, reflexive, and equitable digital governance system to support more context-sensitive and gender-just sustainability targets.

By identifying the structural and socio-cultural dimensions of GDD, the study offers actionable insights for the policymakers to focus more on creating inclusive strategies. It aids in operationalizing SDG 5 by critically examining the deeper barriers to gender empowerment in the digital space. Through addressing systemic inequalities (Maharana, 2025), the goals under SDG 10 can be supported. The emphasis on institutional reflexivity and innovation aligns with SDG 9 and SDG 16, guiding the creation of transparent, participatory and accountable digital infrastructure. In doing so, the study equips policymakers from developing economies especially to revise the policies according to the global understanding in terms of context-driven strategies for sustainable digital transformation.

The study is presented in seven sections. In the next section, we have argued how problematization itself is seen as a suitable method for this study and how it is different from other discourse analysis methods. Section three attempts to frame GDD and sustainability within the discourses and prepare for a poststructuralist reading. Section four explains the criticality of choosing the corpora for the study, followed by a detailed discussion on the analysis, adhering to the framework in section five. The following section highlights the traces of different meanings and definitions of sustainability and argues for the plural use of the term. Lastly, we present a concluding remark with final remarks, future scopes, and implications.

2. Methodology

The present study departs from the dominant traditional approach to policy analysis that views policy as a rational response to pre-identified social problems, to be assessed by metrics of efficiency, effectiveness, or reach. Instead, it engages with a poststructuralist policy analysis that treats policy as a set of discursive production, in which the categories of inclusion, exclusion, empowerment, and development are not only articulated but also ontologically constituted (Archibald, 2020). At the heart of this epistemic reorientation lies Carol Bacchi's *What's the Problem Represented to Be?* (WPR) framework, which this study adopts and critically extends.

The aim of the WPR approach interrogates how the problem itself is framed within the policy, before its impact is to be analysed on the ground, as it believes that until the assumptions that underpin the framing of such policies is clear, it is inadequate assumption of how politically it would perform to achieve the goals. Developed in Bacchi's seminal work, *Policy as Discourse* (1999) and later refined in *Analysis Policy: What's the Problem Represented to Be?* (2009), the WPR framework emerges from Foucauldian poststructuralism (Lewis, 2018), particularly from the concepts of governmentality (Riemann, 2023), discourse and power or knowledge structures. Bacchi's central claim is deceptively simple, that policies do not merely address problems, they actively construct them. Policy in this sense is not reactive but productive; it brings certain problems into being through specific representations, that, once naturalised, delimit both the terms of intervention and the scope of resistance. In this way, it rejects the positivist belief in objective problem definitions and universal solutions. Instead, it draws on Foucault's (1982) concept of the problematization process by which certain phenomena are rendered problematic through historically specific discourses (Rydin, 2021). It is a method to de-naturalise the *problem*, treating it as a product of discursive practices rather than as a fixed or self-evident entity.

2.1. Problematization as method: a critical engagement with Bacchi's WPR Framework

In engaging with the politics of policy discourse, several critical methodologies present themselves as viable options, such as Critical Discourse Analysis (CDA) and Feminist Grounded Theory (FGT), both of which have informed significant research in Cyberfeminism. Yet while these methods offer valuable insights, they carry certain epistemological and analytical orientations that differ meaningfully from the objectives of the study. For instance, CDA was theorised by Fairclough (1992b) and Van Dijk (1993) share a commitment to interrogating the power relations in the language structure and representation. However, CDA is more suited for examining how dominant

ideologies are reproduced through linguistic practices and does not sufficiently account for the productive nature of discourse in constituting subjectivities, categories, and problems. Similarly, Feminist Grounded Theory (Charmaz, 2017) and Interpretivist Feminist Research (Reinharz & Davidman, 1992) offer a valuable bottom-up methodology for capturing lived experience, particularly that of marginalised groups. It is adept at generating thick, situated understandings of how gender operates; it is not oriented towards the discursive construction of policy problems, nor does it engage deeply with the textual and institutional mechanisms of power in the way WPR does. The distinction is very critical for a study like this one, which is not rooted in ethnographic fieldwork or grounded data collection, but in the discursive analysis of policy structures that construct gendered digital exclusion as a governable object. WPR, with its focus on problem representations, assumptions, gaps and effects, offers a precision of unique analytical tools, tailored to the ideological work of policy texts, making it the most appropriate framework for this inquiry.

Bacchi's framework offers a set of six interrelated questions designed to understand the discursive structure in policy texts - see Table 1.

Table 1. WPR Framework, source: (Bacchi, 2000)

No.	Question
1.	What's the Problem represented to be in a specific policy?
2.	What presuppositions or assumptions underlie this representation?
3.	How has this representation come about?
4.	What is left unproblematic in this representation? What are the silences? Can the problem be thought about differently?
5.	What effects are produced by this representation of the problem?
6.	How and where has this representation of the problem been produced, disseminated, and defended? How could it be disrupted and replaced?

These questions form a recursive analysis that focuses on discursive constructions and their political implications. The emphasis is not on establishing the causality but on reading for power, for the ways in which language, knowledge and authority coalesce to shape what is rendered visible, actionable, and thinkable within policy. In this sense, WPR is less a method than a mode of critique, one that seeks to trouble the common-sense assumptions of governance and reveal ideological and normative structures that sustain them.

2.2. Framing GDD and sustainability in WPR Framework

The GDD, as constructed in the policy discourse, is rarely approached through such a critical, post-structuralist lens. Most academic and institutional studies of GDD in India and elsewhere rely on the quantitative indicators, mostly focusing on the ownership of devices, frequency of use, levels of digital literacy and frame the divide as a question of access, to be solved through infrastructural or behavioural interventions. This approach, while valuable for certain empirical assessments, fails to ask the more fundamental question: How has the GDD been defined in a certain way, and what are the implications of this framing, especially in achieving long-term sustainability? This is where WPR becomes not only relevant but methodologically imperative. The framework allows the understanding of how GDD is represented in contemporary Indian digital policies, not just what is said, but how it is said, what is assumed, and what is left unsaid. This shifts attention away from more structural questions, such as the gendered control of digital resources, patriarchal norms that restrict mobility or device usage, or the political economy of data extraction from women's digital labour. Also, as GDD is saturated within instrumental logics, in which women's inclusion is linked to market growth, national competitiveness, or the efficiency of governance. Rarely does policy discourse engage with non-utilitarian and non-instrumental conceptions of digital participation which are essential pillars for constructing sustainable societies.

WPR offers the critical tool necessary to name and critique these gaps and expose how sustainability is often depoliticised, reduced to an access problem, and detached from its deeper ethical commitments to justice, resilience, and equity. By revealing how narrow framings of the GDD reinforce unsustainable models of development. Importantly, this study represents a novel application of WPR. To date, there is no significant body of scholarship that uses Bacchi's framework to analyse GDD policies, especially in the South Asian context. While WPR has been applied in studies of gender, health, welfare of the state (Monro et al., 2024), its potential within the domain of digital policy remains underexplored. By bringing WPR into conversation with digital inclusion and feminist political economy, this study opens up a new methodological process that treats policy not as a site of intervention (Bacchi, 2019), but as an ideological and political struggle of intersectionality (Crenshaw, 2015). Hence, we have reframed the questions as per the study's objectives are concerned (see Table 2).

Table 2. GDD reframing of WPR Framework

WPR Questions	GDD Reframing
Q1: Problem Representation	How is the <i>problem</i> of sustainability is represented through digital inclusion policies?
Q2: Underlying Assumptions	What assumptions about gender, technology, and governance underpin this representation of sustainability problems?
Q3: Genealogy of Representation	What historical, institutional and discursive developments have allowed this representation of sustainability emerged in digital policies?
Q4: What is Left Unproblematic	What social, gendered, structural or sustainability issues are not problematized in the policy texts?
Q5: Discursive Effects	What effects does the representation produce for how genders, race and ethnicity are positioned within digital systems, and what outcomes are generated?
Q6: Areas of Disruption	Where are these representations produced and reinforced within the policy ecosystem, and where are the potential spaces for contestation, reframing or alternative problem constructions?

By applying WPR to the GDD in India, this study aims to shift the conversation from questions of access and impact to questions of meaning, power and subjectivation (Shepherd, 2015; Van Dijk, 2017). It insists that what is at stake is not merely whether women are included in the digital space or not, but how they are situated and perceived, who defines the terms of social justice, democratic deepening, and sustainable measure, or just merely reroots the traditional perception of exclusion in new, technical forms (O'Hagan, 2020). WPR works as a structured methodological approach towards analysing policies from a pragmatic viewpoint to understand underlying issues that go beyond the quantification of digital development and include the metrics in sustainability literature.

2.3. Data collection process, selection criteria and reliability assessment

The study applies a WPR analysis of the documents selected through a purposive sampling technique, focusing on gender inclusivity for sustainability strategies in the digital policy documents. The empirical foundation of this study consists of a curated corpus of 30 national-level Indian policy documents drawn from various thematic domains. As the Selection Criteria of the corpus, a **3T Framework** has been designed keeping the focused pillars; **Time, Themes and Target Groups** to match the objectives of the study. Authors have purposively drawn the policies and segmented the documents as per these three pillars of selection segmenting policies according to Time period, Themes tracing the inclusive discourse for the Target Groups in the selected policies. This is to understand how policies have evolved over time, under which thematic development domains and whether are able to cater to the target groups of gender, marginalized groups and intersectional diversity.

The corpus spans policy developments from 2014 to 2024, encompassing the national policies that shaped gender-focused empowerment schemes, financial and digital literacy campaigns, cybersecurity frameworks and strategic sustainability plans. However, one policy is taken from 2008, *The Information Technology Act*, for its relevance to mark the preliminary stages of digital policies being formed in India. The policies majorly fall under six broad thematic categories; Digital Governance, Financial Autonomy, Digital Literacy, Digital health, Safety and Cybersecurity, and Digital Interventions (Annex. 1). Across these thematic domains, our analysis was to find the discourses catering to the target groups, understanding if the problems of inclusivity and sustainability can be traced in the policy pragmatics.

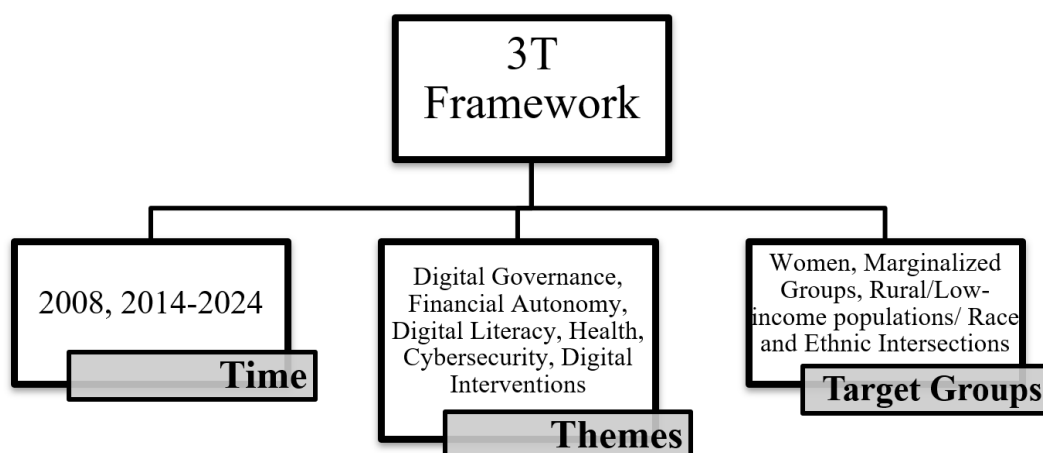


Figure 1. 3T Framework for selection criteria of the corpus

To bring all these discourses under one study and analyse India's digital policies, we had to borrow from all associated theories and WPR allows us to have a regulated procedure for selecting the sources with a defined methodological blueprint for avoiding replicability and generalizability that are criticized in other PDA methods (Lewis, 2018). Our argument evaluates the applicability or reliability of a policy's strength or evaluate any weakness. It is to run the policies through a six-question framework that answers how these policies would perform or whether the schemes include inclusivity and sustainability to the extent which is needed for development in the context of developing economies. In this regard, the authors have performed the analysis individually first and later compared the assessment as per the concerns raised. The findings yield agreements in most cases among the authors. With a further discussion and consultation with a topic expert, the consensus has reached an optimum level. In the next step, the findings were refined, finalized and showed to the topic expert. With this full consensus the external validity and agreement on transferability scope of the findings were achieved.

2.4. Corpus overview: Constructing GDD in policy discourse

Central to this selection are the Digital India initiative, the flagship program that positions technology as the backbone of India's digital transformation and sustainable growth. Complementing this vision, the National Digital Communications Policy advances the expansion of digital infrastructure through frameworks that emphasise market-led inclusion and economic competitiveness over deeper considerations of structural inequality. Similarly, the India Stack framework presents a technologically ambitious architecture for digital identity, payments, and data governance, yet largely sidesteps the question of who benefits, who is visible and who remains excluded within these infrastructures. Gender-specific initiatives such as the National Strategy for Women Empowerment (Draft 2021) and Skill India Digital Literacy Modules for Women further embed digital empowerment narratives yet often frame women's inclusion without critically addressing the structural barriers to sustainable digital autonomy. Broader governance strategies like the National E-Governance Plan (NEGP) and annual progress reports under Digital India similarly celebrate digital uptake without adequately interrogating its uneven socio-political impacts, particularly for women at the intersection of caste, class, and rurality.

The corpus also encompasses financial inclusion narratives, notably India's Digital Inclusion Story (Draft 2023) significantly talks about the sustainability practices that can be achieved through digitalisation, however, it lacks the focus on the gendered aspect of it. This document, along with Pradhan Mantri Jan Dhan Yojana (PMJDY), links banking access to agriculture, digital infrastructure, and financial incorporation. Initiatives like *Guidelines on Mobile as Digital Identity* and JAM Trinity Solution (*Wiping Every Tear from Every Eye*) further deepen the reliance on digital infrastructure as a mechanism of welfare delivery, yet often displace questions of surveillance, data extraction and agency. Efforts in promoting rural digital literacy, such as the *Rise of a New Era in Digital Payments* (Draft 2015) through PMGDISHA, are similarly seen in *Africa Rising* used in academic discourse to describe economic growth in sub-Saharan Africa (Wyche & Olson, 2018).

The *Digital Literacy Initiative to Empower Rural India* continue this trajectory of emphasising behavioural interventions while underplaying the socio-technical inclusion that limits sustainable empowerment. Health sector interventions, including Digital Health Mission, Telemedicine Practice Guidelines, Ayushman Bharat Digital Mission (ABDM), and the National Digital Health Blueprint, similarly foreground the benefits of digital infrastructure but often undertheorize how generated barriers to access, data privacy and inequalities in healthcare persist in these spaces. Policy documents such as the *Prevention and Control of Cybercrime against Women and Children* and the *Information Technology Act* engage with the question of digital safety, framed as a matter of securing vulnerable users rather than transforming the systemic digital cultures that result in technology-facilitated violence. The central question is, how policies specifically designed for women matter in the discussion of sustainability (Domańska et al, 2019). By assembling and critically analysing this corpus, this study insists that the project of bridging the GDD cannot be separated from the broader politics of how sustainability and inclusion are discursively and materially constructed.

3. Corpus analysis, findings and discussion

This section analyses the selected corpus of Indian digital governance policies to critical WPR analysis, with the global focus by answering six of Bacchi's guiding questions. This section explores the questions individually in the following section, followed by a section, solely expanding on problematizing sustainability, and next a cross-country policy comparison. This is to articulate the analysis, individually highlighting the findings with complementing discussions. Here, the policy drafts are mentioned along with page numbers and the year of publication. More details of these drafts can be found in Annexure 1.

3.1. Applying WPR: deconstructing gendered discourses and sustainability gaps in GDD policies

First, we investigate the basic representation of the *problem* (Q1), the assumptions underpinning this representation (Q2), the historical and political production of the representation (Q3), what is left unproblematic or silent in the construction of the policies (Q4), the effects produced by this problematization (Q5), and the mechanisms through

which this representation is defended or potentially disrupted (Q6). The corpus of documents was thoroughly analysed from all six questions for each policy paper first, carefully noting down the problem statements and after assessing all the documents, the authors have assessed the results and compared the problem statements constantly throughout the process, with agreement met in all cases. In the next step, the emerged problematizations in the policies were shown to one external auditor, who agreed on the same, achieving the external validity of the study.

3.1.1. How is the 'problem' of sustainability is represented through digital inclusion policies?

While investigating what the problem represented (Q1), we often wondered are these policy papers are talking about access for all, or if it is an ambitious attempt of digital empowerment without much empirical understanding of social nuances. In the contemporary Indian policy corpus, the GDD is predominantly represented as a problem of *lack, the lack of access, lack of skills and lack of financial integration*. Initiatives such as Digital India frame the problem very clearly: *Ensuring universal access to digital infrastructure is critical for inclusive growth* (Digital India, 2015, p.4), implying that physical access to technology equates to empowerment. Similarly, PMGDISHA problematizes GDD as the *absence of basic digital literacy among marginalised groups* (PMGDISHA Guidelines, 2017, p.3). In PMJDY, gendered inclusion is seen as a banking gap, claiming that *women beneficiaries can now directly participate in India's growth story* (PMJDY, 2015, p. 7) once they have digital accounts. These framing positions inclusion as a technocratic problem, solvable through expanding access. We are not denying that a developing country like India is surely in a problem of access, and policies should make sure that the access gap is bridged, but the statement, *once they have a digital account*, can bear a lot more sociocultural burden than it looks on the surface. It might not be as simple as giving a woman a mobile phone or a computer, it is to teach the family and community first why she needs one. This *once* problem reduces the access problem to data, whereas in policymaking, we expect more informed narratives. As Bacchi (2009) emphasises, how a problem is represented profoundly shapes the solutions imagined. By framing GDD merely as access failure, Indian digital policies obscure the structural and systemic dimensions of digital exclusion, erasing power differentials rooted in social hierarchy, caste and spatial injustice, moreover, as Eubanks (2018) critically notes in her work on digital welfare systems. Even a basic access problem can also be very difficult to address when underlying inequalities are not observed. In making digital policies, we often should look at the inequality policies as well, and merge the understanding to draft policy papers that are aware of this problem. SDG 1.4, ensures that everyone has equal rights to economic resources as well as access to basic services, while 5.B. targets to give women equal rights to economic resources for providing decent work for all (SDG 8.5), by increasing access to information and communications technology (SDG 9.C.), and promote digital inclusion for marginalised groups (SDG 10.2). It is noteworthy that our digital policies are aware about these goals and are active towards achieving these. To ensure that these goals are noted in the discourse, especially for developing nations cannot only stop at access-centered narratives, in which relational autonomy, community stigma, rights, and political voice become the barriers to even basic connectivity.

3.1.2. What assumptions about gender, technology, and governance underpin this representation of intersections in digital inclusion policies?

Understanding what assumptions underlie this representation (Q2) of access-oriented framing largely remains unquestioned in policy discourse. First, it goes back to the uncritical Technological Determinism (Van Dijk, 2017) that philosophers and thinkers have highly criticised for being a reductionist theory, which becomes a reality for especially in developing economies, however *reality* is never out of discourse of power (Foucault, 1982; Christensen, 2024). The fundamental proposition of this theory is that technology, given its disruptive nature, would define the society at any given point. For example, Marx's steam mill replaced the hand mill and rapidly changed society into an industrial, capitalist one (MacKenzie, 1984). The invention of highly technical weapons has entirely changed the face of geopolitics to change the global power narratives. However, when the agenda of sustainability demands to work on the grassroots, the disruptive nature of technology is threatened by a set of barriers that are too difficult to map. It might not be as simply put as digitally empowering society, with just the presence of technical interventions. The National Digital Communications Policy asserts, *universal broadband for all will transform India into a digitally empowered society* (NDCP, 2018, p. 12), assuming this relation in a linear causality between access and empowerment. A post-structural assessment of this would remind us of what Foucault (1982) identified as *regimes of truth*, where certain knowledge systems, here inevitably of technological development as *imaginaries of progress* (Ruggi et al., 2023), become normalised beyond further questioning. Second is the faith in individual responsibilities. PMGDISHA urges citizens to *take charge of their digital futures* (PMGDISHA, 2017, p.5), shifting the burden of overcoming structural barriers onto marginalised individuals. This reflects Bacchi's (2009) warning about problematizations that depoliticise structural oppression by framing inequality as personal failure. Third, the policies presume that market participation equals empowerment, as seen in PMJDY's quote, *women beneficiaries can now directly participate in India's growth story*. PMJDY celebrates digital banking for women as *unlocking economic potential* (PMJDY, 2015, p. 9), suggesting that financial visibility within the capitalist system is the apex of inclusion.

3.1.3. *What historical, institutional and discursive developments have allowed this representation of sustainability emerged in digital policies?*

Therefore, how this representation comes about (Q3) is what we searched for in the crafting of policy languages. It has been historically constructed within the larger global and national trajectories that align the narrative of technological determinism with modernisation. The Digital India programme, heavily influenced by global discourse on ICT4D (Information and Communication for Development), describes itself as *India's moment to leap-frog into a knowledge society* (Digital India, 2015, p. 2). Drawing on Foucauldian notions of governmentality (Fraser, 2020; Lorenzini, 2023), we see how such narratives produce citizens as subjects to be managed through technical infrastructures. The India Stack Framework operationalises this vision of embedding individuals within financial, identity and service delivery platforms, rendering them legible and governable through data. *India Stack will make India presence-less, paperless and cashless* (India Stack, 2016, p. 3), an aspiration that masks the deep inequalities in access, data privacy and autonomy. Spivak's (2010) concept of epistemic violence resonates here in a way that marginalised women are not permitted to define digitally on their terms but are spoken for within technocratic frameworks. The historical convergence of digital governance with neoliberal economic (Leggett, 2014) reforms further consolidates this managerial vision, where inclusion is valued for its role in expanding markets and enhancing state efficiency, not for its capacity to enable political agency or sustainable inclusion. The production of digital citizens through these initiatives is thus not an organic evolution but a tightly orchestrated political project serving particular economic and governance interests.

3.1.4. *What structural factors are not problematized and what effects does the representation produce within digital systems?*

Hence, what is left unproblematic (Q4), what are the silences, and what are the produced effects? (Q5) First, there is a silence around intersectionality. While the National Strategy for Women Empowerment (Draft, 2021) acknowledges women's barriers to technology, it homogenizes women as a category only, failing to engage with the compounded exclusions faced by other marginalised classes, the Dalit, Adivasi, queer and disabled women (Dixit and Banday, 2022). If empowerment for them equates to a number of bank accounts opened, a digital ID created, or UPI transactions conducted, then it might become only a misnomer. As Crenshaw (1992) reminds us, ignoring intersectionality reproduces systemic marginalisation under the guise of universal empowerment. As the PMJDY Annual Report states, *more than 23 crore women accounts have been opened* (PMJDY, 2021, p. 8), yet it says so little about how these accounts translate into their digital literacy, agency and autonomy. Moreover, it often becomes a cybersecurity issue when accounts are opened without digital awareness and education. Gray and Suri's (2019) analysis of digital labour economies reminds us that mere entry into digital systems often deepens exploitation rather than mitigating it. The bank accounts of these people become a means of online scams and other technology-facilitated crime and violence. The striking fact is that marginalised women's bank accounts or digital accounts are the highest used mediums for these crimes, and in most cases, these women are unaware of what is going on in their names and identity. Our analysis lies in the standpoint that *access* poses a bigger threat in this context, as these people are subjected to heightened surveillance and data extraction. India Stack claims, *every citizen's information will be seamlessly accessible* (India Stack, 2016, p. 5), but misses to address the risk of amplifying a deeper level of exclusion.

Second, even though a few pillars of social and economic sustainability are present while emphasising on reducing poverty (SDG 1), providing quality education through MOOCs (SDG 4), or increasing economic opportunities (SDG 8), the problem of environmental sustainability is noticeably scarce throughout the draft. There is a proven linkage between gender and e-waste management that comes with the materialistic idea of technological revolution. When dealing with gender in digital divide discourse, this is one of the most overlooked aspects. This is a much lesser explored area in GDD studies, which, along with ensuring women's participation in digitalisation, often overlooks how the role and experience of women are in the e-waste management. Third, policies like the Ayushman Bharat Digital Mission assume digital literacy and trust, neglecting the deep digital scepticism born from histories of surveillance and exclusion. Milan and Trere (2020) emphasise that digital citizenship is not merely about connectivity, which creates more problems than it aims to solve. Especially in developing nations, ignoring these dimensions becomes critically crucial.

3.1.5. *Where are these representations produced and reinforced within the policy discourses?*

Finally, in understanding how and where these representations are produced and disrupted (Q6), we have studied across literatures along with scanning every sentence of the policy drafts from our corpus. We understand this problematization process getting consolidated through a systematic narrative-building mechanism of policy discourses, international endorsements, corporate campaigning and success-driven storytelling. Flagship programmes such as Digital India and PMJDY are relentlessly showcased as global models of *smart governance* and *inclusive growth* (World Economic Forum, 2019), constructing access and market participation as self-evident presentations of the pictures of empowerment. Yet these narratives perform more than developmental aspiration, they function

as technologies of governance, disciplining marginalised bodies into legibility within data-driven capitalist systems, the very problem that Marx (Mackenzie, 1984) predicted. As Bacchi (2017) emphasises, problem representations not only frame realities but also actively shape what becomes visible, actionable and governable. By celebrating the mere presence of women within the digital infrastructures, policies such as the India Stack Framework and the Ayushman Bharat Digital Mission (ABDM), normalises this participation as a mode of compliance rather than a real digital awareness.

The GDD discourse crafted through these policy narratives obscures the deeper political economies that structure digital inclusion. As Couldry and Mejias (2019) argue in their theory of data colonialism, the extraction of human life into commodified data flows represents a new form of disposition, particularly impacting already marginalised communities. Within the ABDM, for instance, digital health identities are framed as pathways to universal healthcare access, yet the risks of biometric surveillance, algorithmic challenges, and usability issues due to technological illiteracy remain critically under-acknowledged. Similarly, the Guidelines on Mobile as Digital Identity (2017) promote mobile authentication as a liberatory tool, while displacing questions of autonomy, consent and infrastructural inequalities. It demands a fundamental reorientation towards sustainability itself, away from economic logics of inclusion, towards turning to a more social understanding of sustainable development to ensure justice in all aspects. In the Indian context, this calls for seeing the GDD problem from a personal, situational and collective inclusion strategies, rather than as integration into pre-existing technological orders (Ottemo et al., 2020). Community-centred alternatives already offer glimpses of this possibility in a collectivist society like India. (Hofstede, 2011). From this standpoint, gendered digital inclusion takes on multiple forms of interpretation of the sustainability discourse, that we discuss in the following section.

3.2. Silences and problems in sustainability narratives in the GDD policies

India's digital governance paradigm, exemplified by the policy papers under study, operates under a very nuanced tautology, as it equates technological inclusion with sustainable empowerment while systematically evading the dominance of infrastructural emphasis. Addressing gendered problems in the sustainability agenda is framed as a technical deficit to the access gaps, and presuming digital ownership solves it all. Even though in enhancing digital education, a lot of regional policies like digital Sakhi have come forward keeping the regional challenges intact, and these are the kind of focus that can ensure sustainability from the minute units rather than focusing on overall data of UPI adoption counts, Aadhar-linked delivery services and some bank accounts.

Sustainability suffers from the pacing problem, as this paradox is widely visible throughout the policy discourse. There are many contradictory pictures that show sustainability, in practice, keeps changing. It becomes an opportunity for the powerful, while materialising as intensified insecurity and marginalisation for the less digitally aware people (Taylor & Broeders, 2015). This is a structural feature of digital modernity under the pre-existing conditions of inequality (UNCTAD, 2024). Until the focus is not on gender equality policies, it is challenging to stop it getting replicated in the digital space, leading to the barriers of sustainable development remaining the same at the grounded level. In this sense, this section emphasises the multiple meanings of the general term, *sustainability* in policy papers, by pragmatically assessing how the notion of sustainability is perceived in different ways rather than a singular, universal trajectory the policy scripts. This has been examined before by Swyngedouw (2010), arguing that sustainability is a challenge of plurality and it is *inherently political*, that requires a *democratically organised process of socio-environmental (re)construction*.

This is evident in developing economies as the cultural complexity makes sustainability multidimensional. Boyer et al., (2016) also point out that sustainability at a human scale becomes a matter of democratic governance. It also depends on the conflicting notions of how social problems such as poverty, equality or peace are understood in a particular context, accepting and reconciling plurality (Boyer et al., 2016). As critical theorists have argued, what is sustainable for dominant groups may be deeply unsustainable for those on the unprivileged side of society (Fuchs, 2021; Blühndorn, 2023). Within GDD, these differences are visible, as the same digital identity systems that facilitate seamless transactions for urban elites often inflict insecurity, exclusion and risk for rural, Dalit, indigenous and poor women. The meaning of sustainable development, therefore, bears social innuendos as Escobar, (2015) reminds us, sustainability must be understood as historically situated and differentiated, where the sustainability of the digitally privileged coexists with the unsustainability of the digitally challenged.

The technocratic approach to sustainability might enact a risk where women's digitalisation becomes a question of giving up control and autonomy (Soldatic & St Guillaume, 2022; Georgiou, 2023). Also, the ecological costs of digital expansion, such as resource extraction for device manufacturing, e-waste dumping in marginalised communities, impact women even more (Heacock et al., 2016; Sovacool, 2019). This is silent in the policy discourse. Moreover, the epistemicide of grassroots knowledge systems further problematizes sustainability. State-led digital programs often lack the indigenous knowledge and traditions that are crucial for the specific sustainable progress of the community. This is a global problem that expands to gender, race and caste. *Technology is never neutral* (Kranzberg, 1986), and keeping this sentiment at the very central idea of policy making might ensure a more sustainable nation, with reduced inequalities and more opportunities for women across all sections of society.

Anything less would merely reproduce the silences that sustainability was meant to overcome, leaving the promise of ethics and justice delayed once again.

3.3. Global digital inclusion discourse

While India becomes a compelling subject of this research due to its importance in emerging context in technological development among other developing nations, it is quite necessary to situate the discussion on a global comparative perspective. In lieu of the findings of this study, we have discussed with the topic experts and analysed how the findings can be transferable to other such economies. For example, the gendered dimensions of digital policy are found to be on a similar ground, depending on the demographic scale and development landscape. A cross-country analysis thus helps us understand similar structural constraints, resonating with the barriers including socio-cultural norms, affordability issues and infrastructural deficits.

In India, the language of *inclusion* is often growth-centric in economic terms and overlooking social nuances. In Bangladesh, women's digital adoption policies involve community-centric model through Digital Bangladesh Vision, and Women Development Policy with a technocratic approach implementing growth-first strategies. In Nigeria, Kenya, Vietnam and Mexico the digital policies identify women as economic factors for whose digital connectivity will fuel GDP growth, fintech adoption and SME productivity. Sustainable growth in these countries is being mapped by the indexes catering to the digital growth markers. The ground reality however explores the social nuances that signify that the inclusion is saturated in few demographic points and often faces challenges in including ethnic minorities, whose connectivity markers may not directly influence positive growth. The present study argues why scaling digital markets is not equivalent to meeting sustainable development goals, as the SDG targets highlight the importance of meeting inclusivity by bridging unequal social relations, which is less visible in the policy languages, clarifying what sustainability problems these policies target to. It often creates less transparency in fully understanding these policies by the people on ground at implementing stage. It may lead to confusions in designing schemes, questionnaires and required documents.

As Indian schemes mostly operate through the ground level social workers and community-centric representatives, the special initiatives are being targeted to cater to women-only training programs, understanding how policies are nuances for women-specific problems that are heavily influenced by the community and family. It often creates a dualistic model of a single policy, that may indicate the mainstream, gender-neutral umbrella schemes, with a targeted intervention for women-only efforts. This add-on logic is also seen to be echoed in other countries, such as Indonesia, Philippines and South Africa. These countries have dedicated digital policies for the community itself or for an ethnicity in total. However, the underlying assumptions of mobility, care burdens, safety and cultural differences affecting women, creating a barrier remain quite unchallenged. From our assessment of the policy pragmatics, the problem of sustainability lies in the gendered digital policy is in this add-on logic of women as an economic factor only, which is very common across developing economies. A supposedly well-designed schemes become fragmented, projectized, when the urgency of visibility and speed in digital transformation of a country's development becomes more important than going deep into the intersectional problems of digital sustainability efforts.

4. Conclusion, implications and future scopes of the study

In this study, we have demonstrated how Bacchi's WPR approach, when applied to India's GDD policies, explores the profound gaps and limitations in the policies of digital governance. While these policies are followed and assessed for their apparent commitment to gendered inclusion and sustainability, the WPR framework reveals that their core representation is still far from being neutral. Instead, GDD is constructed ostensibly as a technical challenge of access, literacy and personal lack. We have argued that this representation systematically obscures the structural, historical and intersectional realities that shape the problem of digital exclusion itself. It heavily depends on the technocratic solutions, in which the data differences are privileged in men and women (Payne, 2014). Hence, it may need to assess women's lived experiences rather than relying on data reports and policy narratives, for the tendency to reduce complex social struggles to quantifiable metrics of device ownership or digital identity authentication. We have assessed the motivation and plannings to achieve sustainability in the corpus, discovering that multiple perceptions have been integrated while, negating the specific measures of building sustainability from the ground are quite missing in most of the papers, and even if it is found in papers like, Rise of a New Era in Digital Payments, the mention of inequality remains once or twice.

The study theoretically advances and strengthens the sustainability discourse examining the digital inequalities existing in the very development scripts that aims to achieve the SDG 5 and SDG 10. WPR opens space for revision and the radical reimagining of digital governance, that helps the policymakers and other stakeholders in the change-making space to achieve sustainability by providing better opportunities to women at first and then also further expanding the observation to deeper intersections of the society. The study looks into the very policies that are practically being implemented on ground with a very biased and non-inclusive approach to help the policymakers take better decision and be aware of this gap in the policy papers.

India has been rapidly growing on technological aspects, implementing Artificial Intelligence in grassroots development. While new AI policies are being designed and finally release, it is imperative to understand the gaps that remained in the digital policies, as AI policies might follow the similar pathways and the social disparity persists. This opens the future scope of the research as after assessing the emerging trend of AI, this study opens a new dimension to understand whether the gaps that are highlighted in the digital policies can be bridged by the AI policies or opens new avenues of AI Impact Divide. In this regard, our present study can be a guiding help to align the discussion with United Nations work on AI for Peace or Conflict, understanding AI Impact Divide. While this study is minutely pragmatic in nature in its analytical method, but it offers critical insights from the national-level policies only and may not capture the very regional and local variations in gendered digital initiatives. Future research could also expand by incorporating empirical fieldwork and intersectional case studies to validate the findings of this study. Comparatively similar studies can be done in other developing economies to understand the phenomenon across different demographics to help in contextualizing the problem of GDD policies on the context of sustainability within a broader global framework. In this aspect, a future study on a global comparative policy analysis can be done for understanding more inter-regional and cross-country policy differences.

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