GovTech and the Paradox of Digital Inclusion in Indonesia: Innovation Policy in Practice

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ABSTRACT

Indonesia is often celebrated as a success story of digital government transformation through the Electronic-Based Government System (SPBE), which is framed as a vehicle for inclusive development. However, this paper uncovers a paradox at the heart of GovTech: the more it promises inclusivity, the more it risks reproducing inequality. Based on qualitative research that combines policy analysis, interviews with key stakeholders and observations of both field practices and digital discourse, we examine how power and policy intersect in the making of Indonesia's GovTech. The study highlights three critical dynamics: first, regulatory frameworks that strengthen technological oligopolies and intensify bureaucratic silos; second, a widening gap between inclusive policy rhetoric and top down implementation; and third, the exclusionary impacts on rural and marginalized communities. These findings show that efficiency driven reforms often prioritize political performance over participatory governance, leaving vulnerable groups systematically sidelined. By situating Indonesia's experience in the broader Global South debates, this paper challenges the assumption that GovTech naturally leads to inclusion. Instead, it argues that democratic reforms such as participatory co design and hybrid service delivery are essential to ensure that technological innovation serves equity and democratic legitimacy.

Keywords: Digital Transformation, Digital Politics, GovTech, Innovation Policy, Social Inclusion

INTRODUCTION

Digital transformation in governance has emerged as one of Indonesia's central policy priorities in recent years. The government has consistently emphasized that bureaucratic digitalization is not merely a technical adjustment, but a broader strategy to strengthen political legitimacy, improve administrative efficiency and expand social inclusion. This ambition has been institutionalized through the Electronic-Based Government System *(Sistem Pemerintahan Berbasis Elektronik or SPBE),* reinforced under Presidential Regulation No. 132/2022 and subsequent updates in 2023, which together serve as the main framework for Indonesia's GovTech agenda. In official discourse, SPBE is celebrated as a major milestone in bureaucratic modernization and is promoted as a pathway toward transparent, accountable and citizen centered governance.

Yet, closer examination reveals that the promise of GovTech as a vehicle for inclusion does not always align with realities on the ground. Instead of broadening participation and improving access, GovTech in Indonesia often reproduces inequalities through technocratic design, centralized decision-making and political instrumentalization. While SPBE is promoted as a cornerstone of digital transformation, its implementation frequently exposes bureaucratic fragmentation, duplication of platforms, and the proliferation of state-led applications that confuse rather than empower citizens. This paradox illustrates a deeper contradiction: the more technology is embedded into governance, the more visible the gap becomes between the rhetoric of inclusion and the lived experiences of exclusion, especially among marginalized communities.

The persistence of the digital divide remains central to this paradox. Data from Indonesia's Central Statistics Agency (BPS) shows a sharp disparity in internet access between urban and rural populations 85 percent of households in cities are connected, compared to only 47 percent in rural areas (BPS, 2023). This gap is not only infrastructural but also reflects stark differences in digital literacy and capability. As government services increasingly migrate to digital platforms, rural residents, the elderly and informal workers face disproportionate barriers to access. In other words, GovTech in Indonesia tends to assume a universal readiness for digital engagement, while the reality is that many communities remain excluded from these transformations.

Beyond access, the technocratic nature of policy design further complicates inclusivity. SPBE is largely driven by central bureaucracies in collaboration with major state owned and private technology corporations. This reflects what scholars describe as a form of *technological oligopoly*, where a small cluster of actors dominates both infrastructure and decision-making. Such arrangements leave little space for local communities, independent innovators, or civil society groups to meaningfully shape the direction of digital governance. Rather than serving as a participatory process, GovTech in practice reflects a top-down political agenda, in which the symbolic value of showcasing digital progress often outweighs the substantive task of designing services that address grassroots needs (Bimber, 1990; Eubanks, 2018).

Field evidence reinforces this critique. Instead of promoting system integration, SPBE has often resulted in a proliferation of fragmented applications at both national and local levels. Citizens are frequently confronted with multiple platforms each requiring separate log-ins and procedures that duplicate rather than streamline services. Many local governments, eager to demonstrate digital innovation, launch their own applications without ensuring sustainability, interoperability or actual usefulness. This reflects what can be called *political optics*: the creation of digital tools that signal modernization but fail to meaningfully enhance citizen participation or service delivery (Hänninen, 2025).

On June 20, 2024, Indonesia's National Data Center (PDN) was hit by a severe ransomware attack that locked national data while the perpetrators demanded a ransom. The incident disrupted hundreds of government institutions, raised public

concerns over personal data protection, and questioned the effectiveness of the country's existing cybersecurity policies (Imanuel Toding Bua & Nur Isdah Idris, 2025). This data breach was not merely a technical issue but also a social and political phenomenon that shook public trust in the government. Its impacts were far-reaching, including disruptions to public services, risks of personal data misuse, and heightened public anxiety over digital security in an era of information transparency (Syahril et al., 2024).

At the heart of this issue lies a narrow understanding of digital inclusion. As van Dijk (2005) argues, inclusion is not limited to access, but encompasses skills, opportunities and meaningful benefits from technology use (Dijk, 2005). Yet in Indonesia, inclusion is often reduced to expanding internet coverage, without sufficient attention to literacy training, data protection or participatory mechanisms in service design. The consequences are evident. In the health sector, elderly patients struggle to navigate digital health applications, while in education, parents in rural areas face obstacles in accessing online learning platforms. Instead of facilitating broader access, GovTech in these cases exacerbates exclusion among the very groups it was intended to serve.

This paper, as the result of original research, engages critically with these contradictions by examining SPBE as Indonesia's flagship GovTech program. While earlier studies on e-government in Indonesia have tended to focus on infrastructure readiness or administrative efficiency, fewer have systematically addressed the paradox of digital inclusion (Werang et al., 2025). By situating Indonesia's GovTech transformation within its political and social context, this study highlights how power asymmetries, technocratic policymaking and rhetorical commitments to inclusion shape citizens' lived experiences.

Rather than treating GovTech as a purely technical innovation, this paper approaches it as a political project. The findings demonstrate that digital transformation in governance is deeply embedded in struggles over participation, legitimacy and equity. By placing Indonesia at the center of analysis, the study makes two contributions. Academically, it adds to the literature on digital governance in the Global South by emphasizing the need to view GovTech through the lens of inclusion and exclusion. Practically, it offers recommendations for realigning GovTech reforms toward democratic participation through co-design processes that engage marginalized groups and hybrid service delivery models that ensure no citizen is left behind.

Ultimately, the Indonesian experience demonstrates that GovTech is not merely about digitizing bureaucracy. It is about redefining the relationship between state and society in the digital age. The promise of inclusive digital transformation will only be realized if technological ambition is matched by equity, participation and democratic legitimacy.

METHODS

This paper is the result of qualitative research designed to examine the paradox of digital inclusion in the implementation of Indonesia's *Electronic-Based Government*

System (*Sistem Pemerintahan Berbasis Elektronik* or SPBE). A qualitative approach was chosen because the issues under study are not merely technical, but deeply connected to power relations, policy design, and the social experiences of citizens navigating digital transformation. As Creswell and Poth (2024) emphasize, qualitative inquiry is well suited to capture meaning, narratives, and practices that cannot be reduced to numbers alone (Creswell & Poth, 2024).

Data for this study were drawn from three main sources. First, policy documents, including national regulations such as Presidential Regulation No. 132/2022 on the National SPBE Architecture and the 2023 SPBE Evaluation Report issued by the Ministry of Administrative and Bureaucratic Reform (KemenPANRB). These documents were examined to understand how the language of inclusion is framed and how technocratic logics shape policy design. Second, in-depth interviews with key stakeholders at the central, local and civil society levels, which provided diverse perspectives on both the opportunities and challenges of GovTech implementation. Third, field observations and digital discourse analysis, focusing on citizens direct experiences with SPBE-based services as well as public debates on social media platforms.

All data were analyzed using critical discourse analysis, which makes it possible to reveal how policy language, political narratives, and bureaucratic practices interact to shape the realities of GovTech. As Fairclough (2013) notes, discourse analysis goes beyond textual content to uncover the social and political contexts in which texts are embedded (Fairclough, 2013). This approach helps to illuminate the contradiction between the government's rhetoric of inclusion and the exclusionary outcomes often experienced by marginalized groups.

To strengthen the credibility of findings, the study applied data triangulation by cross-checking information from policy documents, interviews, field observations, and digital discourses. Triangulation, as Patton (2014) highlights, enhances the trustworthiness of qualitative research by allowing inconsistencies to be identified and explained (Patton, 2014). In addition, transparency in data handling and systematic coding ensured that interpretations were traceable and grounded in evidence.

Through this methodological design, the study not only describes the implementation of SPBE but also critically analyzes the political and social dimensions of GovTech in Indonesia. The focus is to unpack the paradox of digital inclusion and exclusion, and to underline that digital transformation in governance is not a neutral process but a contested arena that determines who is included and who is left behind.

RESULT AND DISCUSSION

1. The Rhetoric of Inclusion and the Reality of Exclusion in GovTech Implementation

The digitalization of Indonesia's bureaucracy has been a long and complex journey, marked by both opportunities and persistent challenges. Initial efforts began with the early *e-government* initiatives in the early 2000s, notably Presidential Instruction No. 3

of 2003 on the National Strategy for *e-Government*. At that time, digitalization was framed as a pathway to more efficient and transparent administration. However, the implementation was fragmented, with ministries, agencies, and local governments developing their own applications independently. Rather than simplifying access for citizens, this created a patchwork of overlapping systems that often made bureaucracy more complicated to navigate.

Recognizing this problem, the government introduced the *Electronic-Based Government System* (*Sistem Pemerintahan Berbasis Elektronik* or SPBE) as a framework for integration. The initial regulation, Presidential Regulation No. 95/2018, emphasized the need for coherence, transparency, and accountability. This was later reinforced through Presidential Regulation No. 132/2022 on the National SPBE Architecture, which provided a more comprehensive blueprint for digital governance. In its 2023 evaluation report, the Ministry of Administrative and Bureaucratic Reform (KemenPANRB) explicitly highlighted inclusivity as one of SPBE's primary goals, promising that no citizen would be left behind in the process of digital transformation (KemenPANRB, 2023).

On paper, these reforms promised remarkable opportunities. Digital platforms were expected to streamline public services, reduce administrative costs, and enhance transparency. More ambitiously, GovTech was celebrated as a tool to expand citizen participation and to strengthen accountability by making government more accessible and responsive (Mergel et al., 2019). This is why SPBE has been promoted as one of Indonesia's flagship programs in bureaucratic reform and as a showcase of its digital modernization to the global community.

Yet, findings from this research reveal a striking paradox: while inclusivity dominates the rhetoric of SPBE, exclusion continues to shape its reality. Interviews, field observations, and analysis of public discourse all point to the same conclusion that GovTech delivers efficiency for some, but leaves many others behind. In practice, inclusivity remains selective, benefiting urban, digitally literate citizens, while rural populations, the elderly and marginalized groups struggle to access or even trust these digital systems.

A district government official in East Java noted: "SPBE looks impressive on paper, but in the villages people cannot access the applications. Internet is unstable, and many residents are not used to digital services. Inclusion is still only a slogan." A digital rights activist echoed this sentiment, emphasizing the lack of meaningful public involvement: "Inclusion is supposed to mean participation. But with SPBE, citizens are treated as passive users, not partners in designing the system."

Field observations confirm these concerns. In a village in Surabaya, an application for population administration services was barely used. Most residents continued to visit the village office directly, finding face-to-face interaction more reliable. One villager explained, "When the app doesn't work, we don't know who to ask. It's easier to just go to the office." (Field observation, 2025). Instead of widening access, digital services

in this case reinforced barriers, as the system assumed a level of digital readiness that many communities did not possess.

The issue is not limited to infrastructure or skills. At a structural level, SPBE's design remains highly technocratic and centralized. Policy documents frequently invoke the language of inclusion, but they lack clear mechanisms for engaging citizens, particularly marginalized groups, in decision-making. Strategic directions are determined by central bureaucrats in collaboration with large state owned and private technology corporations. This reflects what Bimber (1990) described as technological determinism, where technological pathways are shaped by elites rather than by democratic deliberation (Bimber, 1990). In such contexts, inclusion functions more as a political symbol than as a substantive practice.

The digital divide data reinforces this argument. According to Indonesia's Central Statistics Agency (BPS) 2023, 85% of urban households have internet access, compared to only 47% in rural areas (BPS, 2023). This disparity illustrates what van Dijk (2005) calls the "deepening divide," where access is only the first barrier, followed by gaps in skills, usage, and tangible outcomes (Dijk, 2005). SPBE, therefore, tends to consolidate advantages for those already digitally literate, while widening exclusion for vulnerable populations.

Public perceptions captured through social media discourse add another dimension to this paradox. Analysis of conversations on X (formerly Twitter) with hashtags #SPBE and #LayananDigital between 2023 and 2024 revealed that many citizens complained about fragmented services and confusing applications. A widely shared post read: "They said digital would make things easier, but every service uses a different app, logins don't connect, and data isn't integrated. Who is this inclusive for if people are just more confused?" Such expressions suggest that citizens increasingly view GovTech as political optics a demonstration of modernization rather than as a genuine expansion of accessibility.

The healthcare sector illustrates this problem vividly. In a community health center (puskesmas) in Malang, a mandatory digital queueing application excluded most elderly patients who could not use smartphones. Many ended up arriving earlier for manual registration, while staff were forced to operate parallel systems. As one health worker admitted, "We are required to use the app, but most elderly patients cannot. In the end, we still provide manual service." (Field observation, 2025). This example demonstrates that when GovTech is designed without sensitivity to social realities, it not only fails to deliver inclusivity but actively creates new forms of exclusion.

Taken together, these findings highlight the core paradox of GovTech in Indonesia: inclusivity is a central theme in rhetoric, but exclusion dominates in practice. This aligns with Kitchin's (2014) concept of critical digital governance, which argues that digital technologies are never neutral but are embedded in power relations (Kitchin, 2014). In the case of SPBE, inclusion is deployed as a legitimizing narrative, while the actual design reinforces elite control and marginalization. Similarly, Eubanks (2018)

warns that digitizing public services can often automate inequality accelerating administrative processes for some while deepening exclusion for others (Eubanks, 2018). Madon (2009) further emphasizes that in many Global South contexts, GovTech initiatives fail to reach those most in need because they are designed from the top down, with little grassroots involvement (Madon et al., 2009).

In the Indonesian context, this study demonstrates that SPBE embodies precisely this paradox. For digitally literate citizens in urban centers, it brings speed and efficiency. But for rural residents, the elderly, and those with limited literacy, it represents confusion, inaccessibility and exclusion. Ultimately, GovTech in Indonesia illustrates that digital transformation is not only about technology it is a political project. Inclusion, in this sense, remains more rhetorical than substantive, serving as a symbol of modernization rather than as a lived reality for all citizens.

2. The Paradox of GovTech: Administrative Efficiency vs. Democratic Governance

The digital transformation of Indonesia's bureaucracy through GovTech policies has often been praised for improving administrative efficiency. The Electronic-Based Government System (SPBE), introduced under Presidential Regulation No. 95 of 2018 and updated by Presidential Regulation No. 132 of 2022 on the National SPBE Architecture, was launched as the central instrument to realize faster, more transparent, and accountable governance. In official discourse, digitalization is celebrated as a milestone in bureaucratic modernization cutting lengthy administrative chains, minimizing face-to-face interactions prone to informal levies, and providing public services that are faster and more measurable. This narrative resonates with global debates on GovTech, where technology is often framed as a vehicle for reducing bureaucratic burdens through process automation and data integration (Mergel et al., 2019; OECD, 2019).

Our research confirms that the claims of efficiency are not unfounded. Field observations in one major city in East Java demonstrated how a digital civil registry service allowed citizens to independently print population documents without queuing at local offices. Younger, digitally literate residents described the system as "practical" and "time-saving." Interviews with officials from the Ministry of Administrative Reform (Kementerian PANRB) also revealed their pride in SPBE's performance dashboards, which they believe provide real-time monitoring of bureaucratic performance. From the perspective of administrative efficiency, SPBE has indeed simplified procedures, reduced bureaucratic burdens, and presented the image of a more modern state apparatus.

Yet beneath this image of efficiency lies a fundamental paradox. Efficiency in many cases manifests as what Eubanks (2018) terms *administrative optics* the use of digital technologies to display an image of accountability without addressing substantive problems (Eubanks, 2018). A local official admitted during an interview that performance indicators in SPBE dashboards were sometimes "adjusted" to meet central targets, even though actual service quality remained stagnant. This dynamic

reflects the dominance of what Habermas (1996) describes as instrumental rationality, where success is measured by speed, quantitative metrics, and technical outputs, while the communicative rationality of citizens' lived experiences is sidelined (Habermas, 1996). What emerges is an image of progress that prioritizes optics over substance.

The design and implementation of SPBE also highlight the concentration of power among large state-owned enterprises (SOEs) and major technology vendors, echoing Bimber's (1990) notion of *technological oligopoly* (Bimber, 1990). The majority of SPBE projects were developed through centralized agreements with these dominant actors, leaving little room for local innovators or grassroots communities to influence the system. An interview with a digital activist revealed this frustration: "They call SPBE inclusive, but who is really included? Everything is decided at the top with big vendors. We are only users, not decision-makers." This pattern underscores how GovTech in Indonesia, instead of decentralizing governance, reinforces centralized control and fosters what could be described as a form of digital feudalism.

Citizen participation within SPBE similarly reflects what Fung (2006) calls thin participation (Fung, 2006). While online complaint systems and feedback platforms exist, they often function symbolically rather than substantively (Fung, 2006). Citizens can submit complaints, but these rarely influence decision-making or policy outcomes. A resident of Malang, for example, noted: "I submitted a report through the app, but there was no response." Such practices reduce participation to mere legitimacy exercises, rather than mechanisms of democratic deliberation.

Moreover, SPBE's efficiency often proves selective, disproportionately benefiting digitally literate groups while marginalizing others. In a local health center, for instance, the adoption of a digital queuing system facilitated access for young users but became an obstacle for elderly citizens unfamiliar with smartphones. Officials had to reintroduce manual systems alongside digital platforms to avoid excluding vulnerable groups. This finding exemplifies Eubanks' (2018) notion of automating inequality: far from bridging gaps, technology can exacerbate them, creating new layers of exclusion while serving others more effectively (Eubanks, 2018).

Policy documents emphasize SPBE as a citizen centered reform. However, our findings reveal that its primary orientation remains bureaucratic and political focused on administrative efficiency, image management, and control consolidation. This aligns with Mori (2011) broader observation that GovTech initiatives in the Global South are often top-down and technocratic, neglecting grassroots realities (Mori, 2011). Indonesia represents a clear case of this tendency: digital government serves political and administrative priorities while sidelining the very communities it claims to empower.

Thus, Indonesia's GovTech embodies a profound paradox. On one hand, SPBE has delivered measurable administrative efficiency, streamlined procedures, and projected a modernized bureaucratic image. On the other hand, it has entrenched technological

oligopolies, marginalized participatory governance and deepened social exclusion. This paradox reflects a broader tension between two competing logics: instrumental rationality, dominated by technocrats, political elites and deliberative rationality, rooted in inclusion, transparency and citizen voice. So far, SPBE has overwhelmingly aligned with the former. Rather than bridging efficiency and democracy, GovTech in Indonesia risks widening the gap between them.

Ultimately, these findings underscore that GovTech cannot be understood as a neutral technological project. It is a political endeavor that illustrates the entanglement of power, technology and the rhetoric of inclusion. While administrative efficiency has been achieved, democratic governance remains elusive. Without substantive mechanisms for citizen participation, co-design with grassroots communities and protection for vulnerable groups, GovTech in Indonesia is likely to reproduce inequality rather than dismantle it.

CONCLUSION

This study demonstrates that Indonesia's GovTech transformation, embodied in the Electronic-Based Government System (SPBE), is marked by a profound paradox. On the one hand, SPBE has achieved important gains in administrative efficiency by reducing bureaucratic layers, speeding up public services, and showcasing a more modern and accountable state apparatus. For many digitally literate citizens, especially younger groups, online services have become more practical and time saving, while the government emphasizes performance dashboards to highlight transparency and measurable progress.

On the other hand, the findings reveal that this efficiency comes with significant social and political trade-offs. Much of what is celebrated as progress often reflects administrative optics prioritizing performance indicators and public image rather than addressing substantive improvements in service quality. The dominance of state owned enterprises and large technology firms in shaping SPBE underscores a concentration of power that sidelines local innovators and civil society. Moreover, citizen engagement remains largely symbolic: people are positioned as end users rather than active partners in shaping digital governance. In practice, the system is driven by technocratic rationality, privileging control and quantifiable outcomes, while inclusive and deliberative processes remain underdeveloped.

The paradox of GovTech in Indonesia, therefore, lies in the tension between efficiency and democracy. While digital reforms deliver faster services for some, they risk deepening exclusion for vulnerable populations such as rural communities, the elderly and those with limited digital skills. Instead of reducing inequality, technology may unintentionally reinforce existing divides. This underscores that GovTech is not a neutral tool but a political project shaped by institutional interests and power relations.

To move beyond this paradox, Indonesia needs to rethink GovTech as more than a tool of efficiency. Future reforms should prioritize three directions. First, developing meaningful participation mechanisms that allow marginalized groups to be involved from design to evaluation. Second, fostering collaborative models that combine the expertise of major technology actors with the knowledge of local innovators, civic organizations and academic communities. Third, shifting evaluation criteria away from narrow efficiency targets toward broader measures that capture equity, inclusion and citizens' lived experiences.

Indonesia's experience also offers valuable lessons for the wider Global South, where similar tensions between modernization and inclusion are emerging. It shows that digital reforms cannot be considered successful if they only produce administrative gains without addressing deeper democratic and social challenges. This study also points to future research opportunities. Comparative studies across Indonesian regions or between different countries could help uncover how local contexts shape GovTech outcomes. Likewise, mixed method approaches, combining qualitative insights with quantitative measures of digital inequality, would enrich our understanding of the long term effects of digital reforms.

Theoretically, this paper contributes to the study of digital governance by showing how GovTech embodies not just technological change but also political contestation between efficiency and democracy. Practically, it highlights that inclusive design and grassroots participation are not optional, but essential, if digital reforms are to strengthen rather than weaken democratic governance. By connecting empirical evidence with policy debates, this study contributes both to scholarly discussions and to the practical task of ensuring that GovTech aligns technological ambition with social justice and democratic legitimacy. Ultimately, the future of GovTech in Indonesia will not be judged by how quickly it accelerates bureaucracy, but by how deeply it empowers citizens especially those who have long been left at the margins to take part in shaping the governance of their own society.

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