

Open Data Policy and Privacy Challenges: Balancing Transparency and Security in Digital Governance in Indonesia

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ABSTRACT

Purpose: This study examines the evolving dynamics of Indonesia's open data policy within the broader context of digital governance. It aims to understand how the state negotiates the balance between transparency and data protection, particularly after the implementation of the One Data Indonesia initiative and the enactment of the Personal Data Protection Law. The research explores how institutional culture, ethical reasoning, and governance structures shape the interpretation and practice of openness in a rapidly digitalizing public sector.

Subjects and Methods: Using a qualitative, interpretive approach, the study analyzes policy documents, legal frameworks, and institutional reports, complemented by semi-structured interviews with policymakers, data officers, and civic actors. Data were interpreted through thematic and critical policy analysis to uncover the narratives, tensions, and ethical dilemmas surrounding open data implementation in Indonesia's bureaucratic institutions.

Results: The findings reveal that open data governance in Indonesia remains fragmented across ministries and local governments. Bureaucratic actors often view transparency as both an obligation and a risk, constrained by overlapping regulations and fear of data misuse. Ethical ambiguities persist as institutions struggle to harmonize openness with privacy protection amid growing concerns over cybersecurity and public trust.

Conclusions: The study concludes that Indonesia's open data reform represents a moral and institutional negotiation rather than a purely technical project. Sustainable transparency requires legal clarity, digital infrastructure, ethical literacy, and civic engagement to build a culture of trust that reconciles openness with security.

INTRODUCTION

In the past decade, the discourse on open data has evolved from a technical conversation about data accessibility into a broader political and ethical debate about the nature of transparency in the digital state (Sleigh & Vayena, 2021; Carlsson & Rönnblom, 2022). Governments around the world have adopted open data initiatives to promote accountability, stimulate innovation, and enhance evidence-based decision-making. Yet, as these policies mature, they increasingly confront a paradox: the very act of making data open also exposes the state to new vulnerabilities related to privacy, cybersecurity, and institutional trust.

This tension between transparency and protection has become a defining feature of digital governance in the twenty-first century, demanding new ways of thinking about how openness and

security can coexist within democratic systems (Ogunleye, 2024; Vidal et al., 2023; Krogh et al., 2022). Indonesia offers a particularly compelling context for examining this tension. As one of the largest democracies in the Global South, Indonesia has committed itself to the principle of open governance through a series of reforms aimed at modernizing its bureaucratic infrastructure (Buehler et al., 2024; Hidayat, 2023; Syukri, 2024). The One Data Indonesia initiative, formalized under Presidential Regulation No. 39 of 2019, represents a landmark in this journey.

It seeks to standardize data management across ministries and agencies, ensuring that public information is accurate, interoperable, and accessible to both policymakers and citizens. Complementing this effort, the enactment of the Personal Data Protection Law in 2022 reflects an equally strong commitment to privacy and data security. Together, these frameworks embody the dual aspirations of openness and protection, yet they also reveal the practical and ethical challenges of reconciling them within a complex administrative environment (Lescrauwaet et al., 2022; Farayola & Olorunfemi, 2024; Nair & AB, 2025).

While Indonesia's digital transformation has been celebrated as a step toward greater transparency, its implementation has revealed deep institutional and moral complexities (Aminah & Saksono, 2021; Wijaya, 2024; Pitaloka & Nugroho, 2021). In practice, the release of public data is often constrained by fragmented coordination among agencies, inconsistent standards, and uncertainty about the limits of lawful disclosure. For many public officials, transparency remains an uneasy ideal valued in principle but approached with caution in practice.

The bureaucratic culture that has long equated information control with authority continues to influence how openness is understood and enacted. These tensions are not unique to Indonesia but are intensified by its political diversity, multi-level governance structure, and varying levels of digital literacy across regions. Consequently, the promise of open data has not yet translated into a coherent practice of public accountability. At the same time, the proliferation of data breaches and cyber incidents has heightened public anxiety about the security of digital systems. The 2023 cyberattack on the national data center, for example, exposed millions of citizens' personal records and cast doubt on the state's ability to safeguard its information infrastructure.

Such incidents reinforce a sense of institutional vulnerability, leading officials to prioritize protection over openness. This dilemma exemplifies what contemporary scholars describe as the governance paradox of digital modernity: the pursuit of transparency simultaneously creates new demands for control. The challenge, therefore, is not to abandon openness but to design a model of digital governance that can balance the public's right to information with the ethical imperative to protect individual privacy and national security Nisha (Nishat, 2024; Ijaiya, 2024; Vesmaş, 2024).

Scholarly research over the last five years has increasingly highlighted that open data policies succeed or fail not merely on the strength of technology or legislation but on the alignment of institutional culture, ethical norms, and citizen engagement. Studies by Thakor & Merton (2023), suggest that transparency must be understood as a relationship of trust rather than a technical condition of disclosure. This perspective calls attention to how open data systems are lived and interpreted by the actors who produce and manage them. In the Indonesian context, this means examining how bureaucratic values, political incentives, and civic expectations intersect to shape the practice of digital openness.

By focusing on these intersections, this study aims to illuminate the deeper social processes that underlie policy implementation and to uncover the moral and institutional logics that define the balance between transparency and security. Against this backdrop, the present study explores how Indonesia's open data policies are being operationalized within the broader framework of digital governance and how actors across different institutions interpret and negotiate the boundaries between openness and privacy. It adopts a qualitative, interpretive approach that moves beyond compliance metrics to understand the lived experience of policy enactment.

Through document analysis, expert interviews, and interpretive policy analysis, the study seeks to reveal how transparency is performed, resisted, and redefined in everyday governance practices. Ultimately, this research contributes to ongoing global debates on the ethics of digital governance by demonstrating that openness and protection are not opposing principles but

interdependent conditions that must be continuously balanced through institutional learning, ethical reflection, and civic participation.

METHODOLOGY

Research Design

This study employs a qualitative research design that is rooted in interpretive and policy-analytic traditions. The central aim is to explore the delicate balance between transparency and privacy within Indonesia's growing landscape of digital governance. The qualitative approach is chosen not only as a methodological option but also as a philosophical orientation that recognizes social and institutional realities as dynamic and constructed through ongoing interaction among policy actors, systems, and discourses. Rather than searching for statistical causality, the research seeks to understand how meanings of openness, data security, and citizen trust are formed and negotiated within different levels of governance and civic engagement. As Creswell and Poth have explained, qualitative inquiry provides the intellectual space to explore complexity and meaning behind institutional practices that cannot be captured by quantitative measurement. In this context, the interpretive design allows the researcher to see how open data principles are translated and sometimes contested by public institutions responsible for data management. The research aims to understand not only the official intentions written in policy documents but also how those intentions are realized, resisted, or transformed through everyday administrative routines and governance cultures.

Research Focus and Scope

The study focuses on the digital governance ecosystem of Indonesia, emphasizing the policies and frameworks that define how data is shared and protected across state and civic boundaries. The primary focus is on the One Data Indonesia initiative, which was established through Presidential Regulation Number 39 of 2019, and the Personal Data Protection Law, enacted as Law Number 27 of 2022. These two regulations represent the dual aspirations of the Indonesian state to build an open yet secure data governance system. The scope of the research covers national and subnational institutions involved in open data implementation. It also considers the emerging concerns related to data misuse, surveillance, and the ethics of digital transparency. The selected period, from 2019 to 2025, captures the acceleration of digital transformation in the public sector, the growing use of data-driven decision-making, and the ongoing debate about how privacy can be protected without undermining the spirit of openness. Through this temporal and institutional focus, the study situates the Indonesian case within global discussions on the ethics of digital governance.

Data Sources and Collection Procedures

Data collection relied on three main sources, which were analyzed together to build a rich and contextual understanding of the issue. The first source consisted of official policy documents, including laws, presidential and ministerial regulations, and strategic plans published by relevant government institutions such as the Ministry of Communication and Informatics, the National Development Planning Agency, and the Open Government Indonesia platform. These documents serve as the formal articulation of policy intentions and reveal the institutional language surrounding transparency and privacy. The second source of data came from semi-structured interviews with individuals directly involved in the design, management, or advocacy of open data and data protection policies. Participants were selected using purposive sampling to ensure that different institutional and professional perspectives were represented. Each interview lasted between one to one and a half hours, conducted either online or face-to-face depending on participant availability. The interviews explored participants' understanding of transparency, data ethics, and privacy challenges, as well as their reflections on institutional responsibilities in maintaining public trust. The third source included public statements, press releases, and expert commentaries, which were analyzed to understand how the discourse of open data and privacy circulates within the media and public debates. By combining documentary, interview, and discursive materials, the study ensures methodological triangulation and offers a multi-layered understanding of how digital governance is imagined and practiced in Indonesia.

Data Analysis

The study uses thematic analysis to interpret the data. This approach allows the researcher to identify patterns and meanings that emerge from the data without imposing a rigid theoretical framework. The process began with repeated reading of the collected materials to gain familiarity with their content. Initial coding was then carried out to identify recurring concepts and expressions that relate to the broader questions of transparency, privacy, and governance ethics. The codes were gradually refined into broader themes that reflect the key tensions within the policy landscape, such as institutional fragmentation, regulatory ambiguity, and technological sovereignty. Thematic analysis was complemented by the perspective of critical policy analysis, which focuses on how power, ideology, and institutional interests shape policy outcomes. This approach helps the researcher move beyond surface interpretations and instead reveal the deeper assumptions that govern how data is managed, shared, and secured in the digital state. The interpretive process was iterative and recursive. Insights from one theme informed the reading of another, allowing for a more coherent and interconnected understanding of how the principles of openness and security are negotiated in practice. Throughout the process, the researcher maintained an awareness of context and tone, ensuring that interpretation remained grounded in the lived realities of institutions and actors involved.

RESULTS AND DISCUSSION

The Complex Trajectory of Open Data in Indonesia’s Digital Governance

The study finds that the implementation of open data policy in Indonesia is marked by a combination of remarkable progress and persistent structural constraints. The initiative known as One Data Indonesia was designed to unify data standards and improve the coordination of public information management. In practice, however, its realization across ministries, agencies, and local governments reveals a fragmented and uneven process. The policy has opened a new space for transparency, yet it operates within long-standing bureaucratic traditions that privilege control, hierarchy, and discretion.

Interviews and document analysis show that the idea of openness is interpreted differently among institutions. For many government officers, data continues to be viewed as an institutional asset that must be managed carefully rather than as a public good to be shared freely. This mindset is rooted in the legacy of centralized governance, where information was traditionally equated with authority. A senior policy officer at the national planning agency explained that releasing data often feels like surrendering control, reflecting the persistence of an administrative culture that associates transparency with risk rather than accountability. These institutional and technical barriers are summarized in the following table, which captures the multiple dimensions that shape the dynamics of open data implementation.

Table 1. Institutional and Technical Barriers in Open Data Implementation

Category	Observed Challenges	Illustrative Evidence (Interview or Document)
Institutional Coordination	Fragmented authority between central and local agencies causing duplication and inconsistency	“Every ministry builds its own platform and integration becomes political.” (Interview with BAPPENAS officer, 2024)
Technical Infrastructure	Outdated metadata and lack of interoperability between systems	KOMINFO’s 2023 report shows that almost half of available datasets lack standard metadata formats
Human Capacity	Limited data management skills and insufficient training for staff	“We still rely on manual spreadsheets and offline transfer.” (Local data manager, 2024)
Legal and Ethical Ambiguity	Confusion in interpreting Freedom of Information and Data Protection laws	“We are uncertain whether disclosure violates privacy obligations.” (Policy analyst, 2025)

Source: Interview data with BAPPENAS officials, local government information officers, policy analysts, and government IT specialists (2024–2025); KOMINFO Open Data Report (2023).

The issue of institutional fragmentation was repeatedly emphasized by participants involved in national planning and intergovernmental coordination. One participant explained that the challenge is not merely technological but also political because ministries continue to prioritize institutional autonomy over integration.

“Coordination among ministries is still difficult because each institution already has its own digital ecosystem. Some agencies are reluctant to integrate their databases due to administrative competition and concerns over authority. In many situations, data sharing depends more on political relationships than technical standards. This condition slows interoperability and weakens the idea of a unified national data system.”
(Participant 1 – Senior Officer, BAPPENAS, 2024)

The interview above demonstrates that institutional ego and sectoral interests continue to influence digital governance practices. The persistence of isolated systems creates duplication and weakens interoperability despite the existence of national integration policies. Similar concerns also emerged regarding technical infrastructure limitations within government institutions.

“Many public institutions still use outdated servers and incompatible software. Some datasets cannot be synchronized automatically because metadata standards differ between agencies. In smaller regions, internet infrastructure and storage capacity are also limited. This makes real-time integration difficult despite national digitalization policies.” (Participant 4 – Government IT Specialist, 2024)

The participant’s statement indicates that technological modernization has not been implemented evenly across regions and institutions. Technical disparities between central and local governments create unequal capacities in maintaining integrated data ecosystems. Beyond infrastructure problems, participants also emphasized that human resource limitations remain a major challenge in sustaining digital governance reforms.

“Many employees responsible for data management do not have formal training in digital governance. Staff rotation also creates problems because trained officers are frequently reassigned. As a result, institutional memory is weak and data management practices become inconsistent. Capacity building programs still need to be expanded significantly.” (Participant 7 – Local Government Information Officer, 2024)

This interview suggests that institutional reform cannot rely solely on technological investment. Administrative adaptation and continuous training are equally important in ensuring sustainable implementation. Legal uncertainty further complicates the situation, especially regarding the relationship between transparency obligations and privacy protection regulations.

“There is still uncertainty about which datasets can be published safely under the Personal Data Protection Law. Officials are concerned that disclosure could unintentionally violate privacy regulations. Because legal interpretation differs between agencies, many institutions choose the safest option, which is limiting access.”
(Participant 10 – Policy Analyst, National Agency, 2025)

The findings indicate that Indonesia’s open data governance remains shaped by institutional caution, fragmented coordination, and uneven administrative readiness. Although transparency policies have expanded significantly, implementation continues to reflect the influence of bureaucratic path dependency in which older structures of authority remain dominant within digital governance practices.

Negotiating Ethics Between Transparency and Privacy

The findings reveal that the most persistent dilemma in Indonesia’s open data policy lies in the ethical negotiation between transparency and privacy. Officials express consistent support for openness yet also show deep concern over potential data misuse. This ambivalence is shaped by the dual obligation of the state to disclose public information and to protect personal data under

the newly enacted Personal Data Protection Law. In interviews, policy actors repeatedly described the difficulty of determining where the line between legitimate openness and privacy violation should be drawn. This uncertainty produces hesitation, especially when datasets involve sensitive sectors such as health, education, or citizen identity. The ethical dilemma is not only legal but also moral, as officials struggle to reconcile accountability to the public with their duty to prevent harm. The central ethical tensions observed during the study are summarized in the following table.

Table 2. Ethical Dilemmas and Interpretive Patterns in Policy Practice

Emerging Theme	Description	Interpretive Insight
Data Ownership Anxiety	Officials worry that releasing data weakens institutional control	Reflects a bureaucratic mindset that links authority to data possession
Privacy and Transparency Paradox	Conflicting obligations between data disclosure and protection	Reveals uncertainty in defining ethical boundaries of openness
Technological Dependence	Reliance on external digital platforms raises questions of sovereignty	Shows the tension between technological modernization and state autonomy
Symbolic Openness	Data portals exist but often contain outdated or incomplete information	Demonstrates compliance-driven rather than value-driven transparency

Source: Interviews with ministry officials, health sector policy officers, civil society representatives, and digital governance researchers (2024–2025).

One participant explained that resistance toward openness is closely connected to bureaucratic traditions that associate information with institutional power.

“Many institutions still consider data as a strategic asset that reflects bureaucratic authority. Releasing information is sometimes perceived as reducing institutional control. This mindset originates from administrative traditions where information management was closely tied to power. Consequently, openness is approached very cautiously.” (Participant 13 – Ministry Official, 2024)

The interview demonstrates that transparency challenges are deeply cultural rather than merely technical. Institutional caution is reinforced by fears of losing authority and organizational legitimacy. Similar ethical concerns also emerged in sectors managing sensitive citizen information.

“In sectors like healthcare, transparency must be balanced carefully with patient confidentiality. Officials often struggle to determine whether anonymization is sufficient to protect identities. Fear of legal consequences creates hesitation in releasing datasets. Ethical judgment becomes as important as technical procedure.” (Participant 16 – Health Sector Policy Officer, 2025)

This statement illustrates that ethical governance requires more than formal regulation. Public officials are required to make complex moral decisions regarding disclosure, privacy, and public accountability. The ethical debate becomes even more complicated when institutions depend heavily on external digital infrastructure and technological platforms.

“Indonesia still relies heavily on foreign digital infrastructure and software platforms. This dependence raises concerns about technological sovereignty and long-term security. Institutions want modernization, but they also fear losing control over strategic information systems. The issue is both technical and political.” (Participant 19 – Digital Governance Researcher, 2024)

The interview above suggests that technological modernization simultaneously creates new forms of dependency and vulnerability. Questions of sovereignty and cybersecurity increasingly

influence how institutions interpret transparency policies. Civil society actors also criticized the tendency of institutions to implement symbolic rather than substantive openness.

“Several government portals appear transparent symbolically, but many datasets are outdated or incomplete. Openness becomes procedural rather than transformative. Public access exists formally, yet meaningful participation is still limited. Transparency should involve usability, not only publication.” (Participant 21 – Civil Society Representative, 2024)

The findings reveal that transparency in Indonesia continues to function as a contested ethical and political practice. Although openness is increasingly institutionalized, implementation often prioritizes procedural compliance rather than transformative accountability. Institutional caution reflects both bureaucratic anxiety and the broader uncertainty of governing within the digital era.

Institutional Rationalities and the Search for Balance

Each government institution involved in digital governance interprets the balance between transparency and security in its own way. While the central government promotes openness as a means to improve planning and accountability, line ministries often prioritize risk management and legal compliance. Local governments, operating with fewer resources, tend to focus on fulfilling minimal reporting requirements rather than pursuing innovation. This diversity of interpretation produces a mosaic of practices that are partially aligned but rarely coherent.

The following table summarizes how major institutions frame their approach to transparency and security.

Table 3. Institutional Framing of Transparency and Security Balance

Institution	Dominant Policy Framing	Implementation Pattern	Observed Implication
Ministry of Communication and Informatics	Emphasizes data protection and cybersecurity	Strengthens security protocols but limits open access	Reinforces control-oriented culture
National Development Planning Agency	Promotes integration and accountability	Encourages data standardization across agencies	Improves coordination but restricts civic innovation
Local Governments	Focus on compliance with national mandates	Publish limited and selective datasets	Creates uneven transparency across regions
Open Government Indonesia	Advocates public participation in data use	Facilitates community engagement and data literacy	Encourages awareness but lacks formal authority

Source: Interviews with KOMINFO officials, BAPPENAS planners, regional government officers, and Open Government Indonesia representatives (2024–2025).

Participants from national institutions emphasized that cybersecurity considerations remain central within digital governance implementation.

“Our priority is ensuring that digital governance does not compromise cybersecurity and personal data protection. Openness is important, but security vulnerabilities can threaten public trust. Therefore, institutions must strengthen verification and protection mechanisms before expanding access. Digital governance requires cautious implementation.” (Participant 24 – KOMINFO Official, 2025)

The statement above indicates that security concerns significantly shape institutional attitudes toward transparency. Public trust is perceived as dependent not only on openness but also on the state’s ability to protect sensitive information. In contrast, planning institutions tend to frame transparency as an instrument for policy coordination and administrative efficiency.

“One Data Indonesia is intended to improve coordination and policy accuracy through standardized datasets. Integration allows planning processes to become more evidence-based and efficient. However, achieving interoperability across agencies remains institutionally challenging. Coordination requires long-term commitment from all stakeholders.” (Participant 26 – BAPPENAS Planner, 2025)

This perspective demonstrates that data integration is viewed as an essential component of governance reform and national planning. Nevertheless, implementation remains dependent on interinstitutional cooperation that is often difficult to achieve consistently. At the regional level, local governments continue to face practical constraints in implementing transparency initiatives.

“Local administrations focus primarily on complying with national reporting obligations. Limited budgets and technical capacity reduce opportunities for innovation. Many regions publish only the minimum datasets required by central regulations. Transparency practices therefore differ significantly between provinces.” (Participant 28 – Regional Government Officer, 2024)

The interview suggests that uneven institutional capacity contributes to unequal transparency outcomes across Indonesia. While some regions develop innovative digital governance practices, others remain limited by administrative and financial constraints. Civil society representatives also emphasized the importance of public participation in strengthening meaningful transparency.

“Our role is to encourage participation and strengthen public awareness regarding data accessibility. Civil society engagement is necessary to ensure transparency has social value. However, advocacy institutions often lack the formal authority needed to enforce compliance. Collaboration with government agencies remains essential.” (Participant 30 – Open Government Indonesia Representative, 2025)

The findings indicate that transparency in Indonesia is shaped by multiple institutional rationalities rather than a single coherent governance vision. Openness is continuously negotiated within a framework of political caution, administrative control, and security considerations. This condition produces a model of managed openness in which transparency is permitted but strategically bounded according to institutional priorities and perceived risks.

Digital Governance Integration Patterns and Public Data Accessibility

The findings indicate that the implementation of digital governance in Indonesia demonstrates uneven integration between institutions and regions. Although the national government promotes interoperability through the One Data Indonesia initiative, implementation patterns reveal disparities in infrastructure readiness, institutional coordination, and accessibility of public information. Urban-based institutions generally show stronger adaptation toward digital governance systems, while regional institutions continue to face limitations in technological infrastructure and administrative capacity.

These disparities influence the quality of transparency practices and public access to government information. The following figure illustrates the pattern of institutional integration and data accessibility within Indonesia’s digital governance ecosystem. The existence of fragmented infrastructures and unequal digital capacities weakens the effectiveness of interoperability between institutions. The figure also illustrates that transparency initiatives are continuously negotiated within a broader context of ethical governance and cybersecurity concerns. Public institutions attempt to expand accessibility while simultaneously maintaining control over strategic information systems. Consequently, digital governance evolves through a process of managed openness rather than unrestricted transparency.

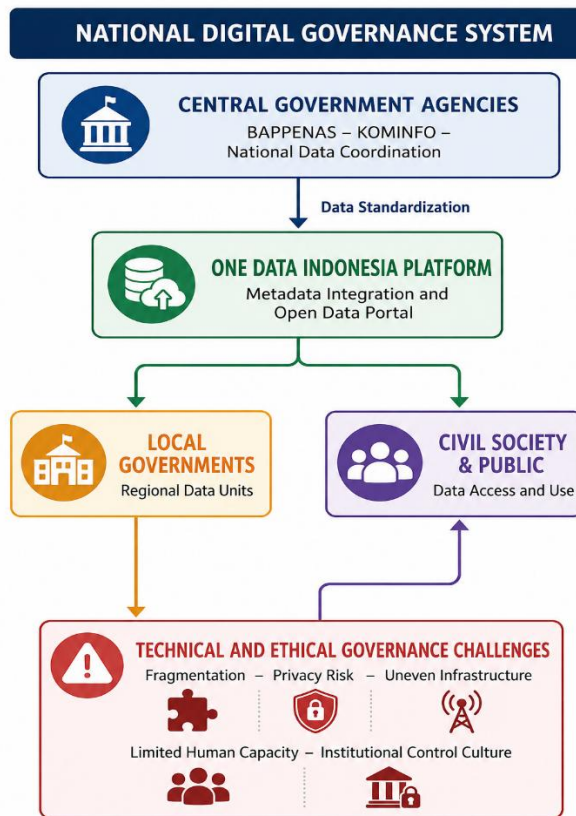


Figure 1. Institutional Integration and Public Data Accessibility in Indonesia’s Digital Governance

Figure 1 demonstrates that Indonesia’s digital governance system operates through multilayered institutional interactions involving central government agencies, regional administrations, and civil society actors. Although the One Data Indonesia platform was intended to function as an integrative mechanism, the findings suggest that coordination remains highly dependent on institutional readiness and administrative willingness.

To strengthen the visual findings above, additional institutional data are summarized in the following table.

Table 4. Patterns of Digital Governance Readiness Across Institutions

Governance Dimension	Central Government Institutions	Local Governments	Civil Society Organizations
Data Integration Capacity	High institutional coordination and standardized systems	Partial integration with inconsistent standards	Limited direct access to integrated systems
Technical Infrastructure	Relatively advanced digital infrastructure	Uneven infrastructure between regions	Dependent on publicly accessible portals
Human Resource Readiness	Availability of specialized digital staff	Limited digital governance expertise	Strong advocacy but limited technical authority
Transparency Orientation	Focus on accountability and control	Compliance-oriented transparency	Participatory and citizen-centered transparency
Privacy and Security Awareness	Strong emphasis on cybersecurity protection	Limited institutional cybersecurity capacity	Concerned about ethical governance and data misuse

Source: Interview findings with government officials, regional administrators, civil society representatives, and digital governance researchers (2024–2025).

Digital governance readiness differs substantially across institutional levels. Central government agencies possess stronger technological infrastructure and coordination mechanisms, while local governments continue to struggle with technical adaptation and administrative consistency. Civil society organizations demonstrate strong commitment toward participatory transparency, although their influence remains limited by restricted institutional authority and uneven access to integrated datasets.

One participant highlighted that institutional-disparities significantly influence the implementation of digital governance reforms across regions.

“Digital governance capacity in Indonesia remains highly unequal between central institutions and local administrations. Ministries at the national level generally have stronger technological systems and better-trained personnel. Meanwhile, many local governments still face budget limitations, infrastructure shortages, and inconsistent technical standards. This imbalance creates fragmented transparency practices across regions and affects the quality of public data accessibility.” (Participant 32 – Digital Governance Consultant, 2025)

The interview above reinforces the argument that digital governance reform in Indonesia cannot rely solely on regulatory expansion. Institutional adaptation requires long-term investment in infrastructure, human resource development, and coordination mechanisms that are capable of reducing disparities between central and regional governance capacities. Without these adjustments, transparency initiatives risk remaining symbolic and procedurally fragmented rather than substantively transformative.

Discussion

Institutional Fragmentation and the Persistence of Bureaucratic Control

The findings demonstrate that Indonesia’s open data governance continues to face strong institutional fragmentation despite the introduction of the One Data Indonesia initiative. Recent scholarship has increasingly emphasized that fragmentation within digital governance systems is not merely a technical issue but also a political and administrative phenomenon. Hidayat (2023) argued that the failure of data integration across Indonesian institutions is closely connected to bureaucratic competition and institutional territoriality. The present study supports this argument by showing that ministries and regional agencies continue to prioritize organizational autonomy over interoperability. Even when formal coordination frameworks exist, institutions remain reluctant to fully integrate their systems because information is still perceived as a source of bureaucratic authority (Lekkas & Souitaris, 2023; Chen & Greitens, 2022).

This condition reflects what Setyawan et al. (2025) describe as the persistence of traditional governance logic within digital reform agendas. Digital transformation often adopts the language of modernization while preserving hierarchical structures and centralized control practices. The findings of this study reveal that fragmentation is reproduced through duplicated platforms, inconsistent metadata standards, and uneven administrative commitment. As a result, open data implementation becomes dependent on institutional willingness rather than systematic governance integration.

The interviews conducted in this study further reinforce the argument that bureaucratic culture remains central in shaping digital governance outcomes. Officials repeatedly described how institutional ego and administrative competition obstruct collaborative data management. These findings indicate that technological innovation alone cannot dismantle long-standing governance traditions that equate information control with institutional legitimacy (Claus & Tracey, 2020).

At the same time, the literature suggests that fragmentation should not be interpreted solely as policy failure. Instead, it reflects a transitional phase in which governments attempt to reconcile older bureaucratic structures with newer expectations of openness and accountability. The Indonesian case therefore illustrates how digital governance reform is negotiated gradually

through institutional adaptation rather than immediate transformation (Rahman et al., 2024; Fitriyanti, 2024; Muhammaditya et al., 2022; Buehler et al., 2024).

Ethical Negotiation Between Transparency, Privacy, and Digital Security

A second major discussion emerging from the findings concerns the ethical tension between transparency and privacy protection. Recent studies have shown that the implementation of personal data protection regulations often generates uncertainty among public institutions regarding disclosure practices. Kurnia (2024) found that many Indonesian agencies struggle to distinguish between information that should remain protected and data that must be disclosed for public accountability. The present study confirms these concerns by demonstrating that institutional hesitation is shaped not only by legal ambiguity but also by moral anxiety.

Participants frequently described the difficulty of balancing openness with the responsibility to prevent misuse of sensitive information (Sjöström et al., 2022; Cheng et al., 2024). This dilemma became particularly visible in sectors such as healthcare, education, and citizen administration, where transparency obligations intersect directly with privacy concerns. The findings therefore support comparative observations made by Clarke et al. (2020), who identified similar patterns of administrative caution following the implementation of stricter privacy regulations in other governance contexts.

The discussion also aligns with technical debates concerning the trade-off between data utility and anonymization. Xu & Zhang (2022) demonstrated that stronger privacy protection mechanisms often reduce the analytical value of public datasets. This helps explain why Indonesian policymakers remain ambivalent toward extensive anonymization practices. Officials fear that excessive restriction may reduce the usefulness of open data for planning, research, and public participation. Consequently, transparency and security are not understood as opposing values but as interconnected governance responsibilities that require continuous recalibration (Manginte, 2024).

Another important dimension emerging from the findings is the growing influence of cybersecurity concerns within digital governance debates. Reports from BSSN (2023) documented repeated data breaches affecting Indonesian public institutions, increasing institutional anxiety regarding digital vulnerability (Marwenny et al., 2024; Azzahidi & Junianse, 2023). Participants in this study similarly expressed concern that weak cybersecurity infrastructure could expose sensitive citizen information if transparency policies are implemented without adequate safeguards. These findings challenge simplistic assumptions that resistance toward openness merely reflects bureaucratic conservatism. In contexts of fragile digital infrastructure, institutional caution may also represent an attempt to protect public trust and administrative legitimacy.

The findings therefore demonstrate that ethical governance within digital systems requires more than formal regulation. Transparency policies must be accompanied by operational ethics, institutional literacy, and adaptive governance mechanisms capable of balancing accountability with protection. Without these elements, openness risks becoming procedural while privacy protection becomes excessively restrictive.

Managed Openness and the Future of Democratic Digital Governance

The third discussion emerging from the findings relates to the broader political meaning of transparency within Indonesia's evolving digital governance landscape. Recent literature increasingly conceptualizes transparency not as a simple act of information disclosure but as a relational process between governments and citizens. Distel et al. (2022) argued that transparency becomes meaningful only when it creates interaction, interpretation, and civic engagement rather than merely publishing datasets. The findings of this study strongly support this perspective.

Many participants described the persistence of symbolic openness, where institutions formally comply with transparency requirements while limiting substantive accessibility and participation. Public data portals often contain incomplete or outdated information, reducing their usefulness for civic engagement and democratic oversight. In this context, transparency

functions more as administrative performance than transformative accountability. The findings therefore reinforce concerns raised by Wirtz et al. (2019), who observed that public trust declines when transparency is framed solely as bureaucratic compliance rather than collaborative governance.

The Indonesian case also reflects broader patterns identified in studies of digital governance within the Global South (Hicks, 2021; Karinda et al., 2024; Permana, 2023; Ali et al., 2018). Motadi and Sikhwari (2024) argued that open data reforms in developing democracies frequently combine aspirations for modernization with enduring cultures of administrative control. Similarly, Tomsa (2017) observed that Southeast Asian governments often adopt the discourse of openness while maintaining selective disclosure practices to preserve political stability. The present study confirms that Indonesia's transparency model operates through what may be described as managed openness, where information sharing is permitted but strategically regulated according to institutional priorities and perceived risks.

Despite these limitations, the findings also reveal important opportunities for democratic transformation. The increasing involvement of civil society organizations, digital advocacy networks, and civic technology communities demonstrates the emergence of participatory governance practices that challenge purely state-centered approaches to transparency. Although these actors still possess limited formal authority, their growing engagement indicates the possibility of more collaborative and citizen-oriented data governance in the future.

The study therefore suggests that Indonesia's open data governance should not be understood simply as successful or unsuccessful reform. Instead, it represents a transitional process in which institutions, technologies, and citizens continuously negotiate the meaning of accountability, security, and democratic participation. Transparency in the digital era is no longer a static administrative principle but an evolving relationship shaped by ethical negotiation, institutional learning, and public trust.

CONCLUSION

Indonesia's pursuit of open data reveals that transparency in the digital era is not merely a technical reform but an ongoing ethical and institutional negotiation shaped by tensions between openness, security, and entrenched bureaucratic habits. Although initiatives like One Data Indonesia and the Personal Data Protection Law mark important progress, their effectiveness depends on institutional capacity, ethical literacy, and consistent interpretation across agencies. The study shows that transparency functions as a relationship of trust rather than simple data release, and Indonesia's pluralistic governance structure both enables innovation and creates inconsistency. Strengthening digital governance therefore requires integrating secure and interoperable systems with cultural change, inter-agency coordination, and meaningful public engagement. Ultimately, true openness emerges when transparency is practiced as a moral commitment to accountability, enabling Indonesia to build a digital governance model that is both secure and genuinely democratic.

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