

# DIGITAL GOVERNANCE AND TRANSPARENCY: HOW OPEN DATA INITIATIVES ENHANCE GOVERNMENT ACCOUNTABILITY

Rahmat Hidayat \*

\* Sekolah Pascasarjana Universitas Terbuka, Tangerang Selatan, Indonesia

Contact details: Sekolah Pascasarjana Universitas Terbuka, Gedung Pascasarjana, Jl. Cabe Raya, Pondok Cabe, Pamulang, Tangerang Selatan, 15418, Indonesia



## Abstract

**How to cite this paper:** Hidayat, R. (2025). Digital governance and transparency: How open data initiatives enhance government accountability. *Journal of Governance & Regulation*, 14(3), 194–204.  
<https://doi.org/10.22495/jgrv14i3art18>

Copyright © 2025 The Author

This work is licensed under a Creative Commons Attribution 4.0 International License (CC BY 4.0).  
<https://creativecommons.org/licenses/by/4.0/>

**ISSN Print:** 2220-9352  
**ISSN Online:** 2306-6784

**Received:** 16.12.2024  
**Revised:** 26.03.2025; 22.08.2025  
**Accepted:** 29.08.2025

**JEL Classification:** D73, H83, O33  
**DOI:** 10.22495/jgrv14i3art18

This study explores the nexus between digital governance and transparency in Indonesia, emphasizing the impact of open data initiatives on strengthening governmental accountability. It aims to evaluate how effectively these initiatives foster public trust and contribute to more efficient governance. Employing a qualitative research design, the study utilizes case studies of open data programs implemented across various government institutions. Data collection involved document analysis, in-depth interviews, and public questionnaires to assess citizen perceptions and engagement with open data platforms. The results suggest that open data significantly enhances transparency and facilitates public oversight of government activities, aligning with global observations that open data fosters participatory governance (Janssen et al., 2012). The availability of real-time, accessible information empowers citizens to monitor government actions actively and promotes civic involvement (Zuiderwijk & Janssen, 2014). However, challenges such as inconsistent data quality, limited digital literacy, and bureaucratic resistance remain critical obstacles to maximizing the impact of these initiatives. Moreover, this paper contributes to the growing body of literature on digital governance by presenting empirical insights from Indonesia, an understudied context in open data research. It underscores the transformative potential of open data in promoting transparency and offers policy recommendations to strengthen implementation frameworks, thus advancing more accountable and citizen-centric governance.

**Keywords:** Administrative Processes in Public Organizations, Information and Internet Services, Performance of Government, Public Sector Accountability, Technological Change

**Authors' individual contribution:** The Author is responsible for all the contributions to the paper according to CRediT (Contributor Roles Taxonomy) standards.

**Declaration of conflicting interests:** The Author declares that there is no conflict of interest.

## 1. INTRODUCTION

In recent years, the intersection of technology and public administration has become a focal point in governance discourse, particularly within developing nations (Kierkegaard, 2009). The rise of digital governance, defined as the strategic integration of information and communication technology (ICT) in

the public sector, is increasingly viewed as a transformative approach to enhance governmental transparency and accountability (Lnenicka & Nikiforova, 2021). In Indonesia, a country marked by ethnic diversity and ongoing economic challenges, open data initiatives have gained momentum as instruments to strengthen governance systems. These efforts facilitate the dissemination of public

information and empower citizens to actively participate in oversight, thereby increasing political responsiveness and institutional trust (Rajamäe-Soosaar & Nikiforova, 2024).

Digital governance includes various components such as e-governance, which supports the delivery of public services through digital tools, and open data, which refers to the systematic release of government-held data for public access (Ho & Ni, 2004). These mechanisms are built on the premise that enhanced information accessibility leads to greater citizen engagement, improved institutional accountability, and more substantial public confidence in government (Ansell & Torfing, 2021). In response to longstanding issues like bureaucratic inefficiency and corruption, Indonesia has made meaningful progress toward a more participatory and transparent governance model through the adoption of open data policies (Young et al., 2020).

The Indonesian government has acknowledged the need to leverage open data to enhance transparency and foster accountability in public administration. In 2014, it initiated the Open Data Indonesia program aimed at making governmental data accessible to the public. This initiative is part of a larger initiative to increase transparency and fight against corruption in Indonesia's political system. To ensure the utility of such data, the government seeks to establish a participatory environment where citizens, civil society organizations, and private sector actors can monitor governmental activities, offer policy input, and hold public officials accountable for their decisions and conduct (Jaeger & Matteson, 2009). However, the connection between open data and accountability is complex. While open data empowers the public to scrutinize government performance, assess policy outcomes, and expose inefficiencies or corruption, the act of releasing data itself may be perceived as a form of accountability. In such contexts, open data initiatives compel public institutions to be more transparent and responsive, making them a critical component of efforts to promote accountability in governance (Casady et al., 2020; Young et al., 2020).

However, using open data initiatives in Indonesia is not without problems. Despite the government's efforts to increase its openness, factors still limit the effectiveness of the open data. These include issues with the data, the digital divide, and the public's lack of knowledge about the existing open data (Tjondronegoro et al., 2022; World Bank, 2023). In addition, the effectiveness of these initiatives depends on the government representatives' willingness to open up and engage with citizens in the process (Kim et al., 2009; United Nations Office on Drugs and Crime [UNODC], 2021). The interaction of these factors has implications that need to be addressed to determine the effectiveness of open data in enhancing government accountability in Indonesia. The debate on digital governance and transparency has been developing fast in the last few years, and scholars have been examining the implications of open data for democracy, people's participation, and public sector reform (Organization for Economic Co-operation and Development [OECD], 2023). Research shows that open data can enhance government accountability by giving citizens the necessary tools to exercise oversight and advocacy (Mulgan, 2007; Transparency International, 2023). For instance, studies have shown that transparency improves the delivery of public services since public officers

tend to be efficient if their performance is open to the public (Open Contracting Partnership, 2024).

Given the country's specific post-colonial context, Indonesia's digital governance and transparency issue is especially relevant. Indonesia's shift from an authoritarian regime to a democratic system at the close of the 20th century was a turning point in its governance as it sought to eliminate tyranny and corruption. The process of democratization that has followed has been accompanied by increasing recognition of the need for transparency and accountability as key attributes of effective governance (World Economic Forum, 2018). Thus, open data initiatives are technological solutions and a shift towards a more transparent and responsive government (Linkov et al., 2018). This paper examines the link between digital governance, open data policies, and government accountability in Indonesia. It will identify how the use of open data increases transparency and accountability and the advantages and disadvantages that come with it (Algazo et al., 2021). In this study, the role of open data in improving good governance in Indonesia will be analyzed and discussed based on the perceptions of various stakeholders, which include government officials, civil society organizations, and citizens (Kirana & Majid, 2022).

The study uses primary and secondary data sources, including government publications, academic research, and case studies showcasing effective open data initiatives in Indonesia. It will also incorporate best practices and lessons from countries with similar digital governance frameworks to assess how these strategies can be further strengthened in the Indonesian context (Open Government Partnership, 2023a; Tjondronegoro et al., 2022). The research ultimately seeks to contribute to the ongoing discourse on digital governance and transparency, offering insights for policymakers, practitioners, and scholars on the potential of open data to foster greater government accountability (Bertot et al., 2010; Janssen, 2011; OECD, 2023; World Bank, 2023).

In summary, digital governance and open data initiatives present a timely and strategic opportunity for Indonesia to address longstanding issues of transparency and accountability (Asogwa et al., 2022; Zeleti et al., 2016). These initiatives are not only designed to reform administrative systems but also aim to shift the mindsets of both public officials and citizens, fostering a culture of openness and trust (Open Government Partnership, 2023b; UNODC, 2021). The success of such efforts, however, depends on the active collaboration of all stakeholders, including government agencies, civil society, and the private sector, to overcome persistent challenges in data accessibility, quality, and usability (Lourenço, 2016; Tjondronegoro et al., 2022; Matheus & Janssen, 2013; World Bank, 2023). As Indonesia continues strengthening its democratic institutions, integrating open data into governance will play a crucial role in developing a more citizen-centric and responsive government (OECD, 2023; Jopang et al., 2024). In addition, the research questions are:

*RQ1: How do digital platforms influence transparency and accountability in government decision-making processes?*

*RQ2: What are the effects of digital governance on citizen trust in government transparency?*

The remainder of this paper is organized as follows. Section 2 reviews the relevant literature to establish the theoretical framework for digital governance. Section 3 outlines the research methodology, detailing the qualitative approach employed. Section 4 discusses the research results, and Section 5 provides an in-depth analysis. Finally, Section 6 offers the conclusion, outlines practical implications, and suggests directions for future research.

## 2. LITERATURE REVIEW

The foundation of Indonesia's digital governance initiatives is built upon open data and government accountability principles. These efforts should be understood as complex, multi-dimensional developments influenced by administrative structures and historical, social, and political dynamics (OECD, 2023; Khairunnisa et al., 2024). Persistent challenges such as bureaucratic inefficiency and corruption, which have long plagued Indonesian public institutions, continue to shape how digital reforms are implemented (OECD, 2019; Tjondronegoro et al., 2022). The country's legacy of centralized governance and bureaucratic secrecy remains relevant in present-day discussions about transparency and citizen engagement. Moreover, Indonesia's significant digital divide presents another barrier to inclusive digital transformation (Cho & Choi, 2004). Limited access to technology and uneven levels of digital literacy among citizens undermine trust in government initiatives and restrict meaningful public participation (Sutrisno et al., 2024; World Bank, 2023). This reinforces the urgent need for policy approaches that are inclusive and responsive to the population's diverse capabilities and access levels, ensuring that digital governance benefits all segments of society (Heeks, 2005).

### 2.1. Digital governance in Indonesia

The integration of digital technologies has significantly transformed governance and public administration globally, including in Indonesia (Vargas-Murillo et al., 2025). With the rapid expansion of the digital economy, the Indonesian government has the opportunity to harness digital tools to improve institutional efficiency and citizen engagement (Marwan et al., 2022). Building on prior research, this study explores various forms of digital democracy and examines how Indonesian government institutions utilize these models to support public administration reforms. Through qualitative methods such as document analysis, field observations, and stakeholder interviews, evidence suggests that digital democracy has been successfully incorporated into Indonesia's governance and public service delivery systems (Syamsiar, 2023; Cahlikova & Mabillard, 2019). Innovative digital technologies have facilitated more efficient communication and information exchange among governmental bodies, legislators, civil society organizations, and citizens (Weerakkody et al., 2017; Tjondronegoro et al., 2022). Furthermore, implementing these technologies has played a crucial role in enhancing the accessibility, responsiveness, and overall quality of public services in Indonesia.

### 2.2. Open data initiative in Indonesia

Open data portals primarily serve as platforms for accessing raw datasets, whereas web-based applications are typically developed for more targeted, practical use cases (Matheus et al., 2023). Despite the increasing focus on digital transparency, there remains a limited understanding of the most effective strategies for realizing open government objectives (Tai, 2021). Although transparency through digital tools appears straightforward, its implementation is often complex and demanding (Bertot et al., 2010). While mechanisms such as open budgeting have shown success in specific sectors (Lourenço, 2023), expanding these practices to broader domains remains a significant challenge. Luna-Reyes et al. (2014) point out that many open government platforms fail to deliver meaningful outcomes; some are difficult to navigate, while others offer only an idealized representation of government-public interaction. To improve usability and impact, the design of government websites must align with user expectations and public preferences (Matheus et al., 2018). Supporting this view, Machová and Lnenicka (2017) argue that incorporating a range of website functionalities can enhance digital transparency and public engagement.

A key advantage of open data initiatives lies in their potential to enhance government accountability. Making official data accessible to the public allows citizens to monitor how decisions are made and resources are utilized (Bhatnagar, 2003). For instance, transparency in public spending data enables communities to observe how budgets are allocated and to challenge any instances of inefficiency or misappropriation (UNODC, 2021; Open Contracting Partnership, 2024). This visibility encourages a culture of accountability as public officials become increasingly conscious of being observed and evaluated by citizens. Furthermore, open data significantly contributes to promoting civic engagement. In Indonesia, where citizen involvement in policymaking has historically been limited, the availability of open data catalyzes increased participation. It empowers individuals to identify local issues, advocate for reforms, and engage in informed dialogue with authorities (Open Government Partnership, 2023a; Tjondronegoro et al., 2022). This participatory approach not only enhances democratic processes but also provides valuable feedback to decision-makers about the public's preferences and needs. Ultimately, implementing open data fosters a more interactive and inclusive governance framework, bridging the gap between government institutions and the people they serve (World Bank, 2023).

Open data initiatives are increasingly vital in expanding the concept of open government by emphasizing transparency, accountability, and active citizen participation (UNODC, 2021; OECD, 2016). These initiatives are essential to democratic governance, as they empower the public to engage with governmental processes, monitor public resource usage, and influence decision-making. However, the effectiveness of such programs depends on their ability to adapt to context-specific challenges, including Indonesia's distinct political, legal, and cultural landscape (Streib & Navarro, 2006). As Indonesia continues to integrate open government practices, stakeholders have stressed

the importance of establishing a comprehensive legal framework to guide the management and dissemination of public sector information. These principles emphasize the need for accessible, understandable, and meaningful data that can be easily used by the public (Shim & Eom, 2009; Syamsiar, 2023). When effectively implemented, such frameworks lay the foundation for stronger governance and serve as preventive measures against corruption. In light of the persistent corruption and misuse of power in national and local government institutions, open data principles are essential for restoring public trust and fostering greater accountability (Algazo et al., 2021).

### 3. RESEARCH METHODOLOGY

This section outlines the methodological framework used to assess the impact of open data on government accountability in Indonesia. It provides a detailed explanation of the research strategy, including data collection and analytical procedures. A qualitative approach was adopted to obtain comprehensive insights from key stakeholders directly involved in or influenced by open data initiatives (Denzin & Lincoln, 2018; Miles et al., 2013). Given that open data remains a relatively new area in Indonesia (Gil-Garcia et al., 2017), especially within the context of governance, an exploratory qualitative design was deemed suitable for uncovering the nuances of this emerging phenomenon (Creswell & Poth, 2017).

This approach allows the study to explore participants' attitudes, perceptions, and experiences regarding data transparency (Algazo et al., 2021) and its influence on government accountability. It also considers broader contextual factors that may shape or inform these perspectives, thereby adding depth to the interpretation. Using thematic analysis, the study engages with the theoretical framework to analyze how individuals perceive the role of open data in fostering accountability within government institutions. Furthermore, it emphasizes the importance of situating these perceptions within Indonesia's socio-political context to gain a holistic understanding (Janssen et al., 2017). Due to the novelty of the topic and its evolving nature, an exploratory design was essential in uncovering key insights into the relationship between open data and governance.

This study employed purposive sampling to ensure the selection of participants who could provide rich, relevant insights on the topic (Ahmad & Wilkins, 2024). In qualitative research, this method allows researchers to intentionally select individuals with in-depth knowledge or experience related to the subject matter (Ahmad & Wilkins, 2024; Palinkas et al., 2015). The sample consisted of key stakeholders, including government officials, representatives from civil society organizations, and members of the public. Participants were selected based on specific criteria: direct involvement in or familiarity with open data initiatives, active governance or civic engagement roles, and the capacity to offer diverse viewpoints on how open data influences government accountability. This approach was intended to comprehensively

understand the topic by incorporating varied perspectives from across stakeholder groups (Nikolopoulou, 2022).

This study utilized a questionnaire to collect comprehensive insights into the impact of open data initiatives on governmental accountability (Nikolopoulou, 2022). A total of 281 participants completed the questionnaires, providing a substantial dataset for analysis. In addition to surveys, the research incorporated case studies and interviews, employing a semi-structured format. This approach allowed for a flexible interview schedule, enabling the exploration of participants' perspectives while permitting them to introduce additional topics and themes for discussion. The semi-structured interview format is particularly advantageous in qualitative research, as it balances the consistency of structured interviews with the depth and adaptability of unstructured conversations. This method facilitates the collection of comparable, reliable data while allowing interviewers to delve deeper into specific issues raised by participants, thereby enriching the understanding of the research questions (Brinkmann & Kvale, 2014).

The interview guide was designed following an in-depth review of relevant literature and theoretical models concerning open data and government accountability (Brinkmann & Kvale, 2014). It featured open-ended questions to explore participants' perspectives on the influence of open data initiatives on governmental accountability, the mechanisms through which this influence operates, and other contextual factors that may shape this relationship. Interviews were conducted in person or via video conferencing, depending on the availability and preferences of the participants. This adaptable approach enabled the inclusion of diverse voices across various locations, thus enriching the study's representativeness. Prior to each interview, participants were informed about the study's objectives, the voluntary nature of their participation, and their right to withdraw at any point without consequence. Informed consent was obtained from all participants, and they were assured that their identities would remain confidential and their responses anonymous (Braun & Clarke, 2006).

### 4. RESULTS

This study demonstrates that open data initiatives have played a significant role in strengthening government accountability in Indonesia. A detailed evaluation of various open data platforms and their implementation across different governmental sectors revealed transparency and improvements in public engagement. The results indicate that open data practices contribute to greater accountability, as evidenced by increased access to public information, more responsive behavior from government agencies, and enhanced public trust. These outcomes suggest that digital governance is valuable for advancing a more transparent and accountable administration in Indonesia. The following data, obtained through questionnaire responses, further support this conclusion:

Table 1. Data from questionnaires

No.	Item	Results	Total	No.	Item	Results	Total
	Respondent	281 people					
1	Gender	Male	62.30%	9	Digital governance services do not misuse personal information	Disagree	3%
		Female	37%			Strongly disagree	0.20%
		Prefer not to say	0.70%			Strongly agree	33.50%
2	Age	18-25 years	7.10%	10	Digital governance services comply with personal data protection laws	Agree	51.20%
		26-35 years	28.50%			Neutral	12.80%
		36-45 years	49.10%			Disagree	2%
		46-55 years	13.20%			Strongly disagree	0.50%
		56-70 years	2.10%			Strongly agree	32%
3	Job	Student	9%	11	Digital governance and personal data are necessary for its function	Agree	54.40%
		Government employee	78.60%			Neutral	12.10%
		Entrepreneur	1%			Disagree	0.80%
		Freelance	11.4			Strongly disagree	0.70%
4	Digital governance and transparency can make work easier	Strongly agree	51.60%	12	Digital governance and transparency can provide timely information	Strongly agree	38.40%
		Agree	44.80%			Agree	56.20%
		Neutral	3.60%			Neutral	5.40%
5	All activities are faster with digital governance and transparency	Strongly agree	49.50%	13	Digital governance and transparency formation are relevant to the needs	Strongly agree	33.50%
		Agree	45.60%			Agree	58%
		Neutral	4.90%			Neutral	8.20%
6	Digital governance and transparency are very important for social society	Strongly agree	47%	14	Digital governance can be accessed wherever and whenever they want	Strongly agree	42%
		Agree	47.30%			Agree	50.90%
		Neutral	5.70%			Neutral	6%
7	Digital governance feels comfortable in making transactions	Strongly agree	37.40%	15	Digital governance and transparency give satisfaction in finding the latest information	Disagree	1.10%
		Agree	50.50%			Strongly agree	37.40%
		Neutral	10.30%			Agree	54.80%
		Disagree	1.80%			Neutral	7%
8	Digital governance services ensure the confidentiality of personal information	Strongly agree	32%	16	Efficiency and implementation for digital governance and transparency	Disagree	0.80%
		Agree	47.70%			Strongly agree	40.60%
		Neutral	16.70%			Agree	54.40%
		Disagree	3.60%			Neutral	5%
9	Digital governance services do not misuse personal information	Strongly agree	29.20%	17	Digital governance and transparency, accompanied by support services	Strongly agree	38.80%
		Agree	50.20%			Agree	54.40%
		Neutral	17.40%			Neutral	6.80%

Ongoing surveys examining public perceptions of digital governance and technology in Indonesia reveal broad support across demographic groups, including age, gender, and occupation, for advancing digital infrastructure and e-government services. Respondents consistently emphasized the importance of making digital technologies accessible to all segments of society. Recommendations include expanding public access to free Wi-Fi, offering digital literacy and technology training for small and medium-sized enterprises (SMEs), and enhancing public services through user-friendly digital platforms (Akomea-Frimpong, Jin, & Osei-Kyei, 2022). The results highlight varying perspectives on digital governance, though overall sentiment remains positive. Across different demographic categories, there was a shared optimism regarding the potential of digital technology and its effective management. The surveys further underscore a public consensus on strengthening e-governance systems to improve service delivery and ensure inclusivity in Indonesia's digital transformation.

Moreover, participant feedback strongly emphasized human capital development, highlighting the necessity of equipping individuals with appropriate skills and knowledge to manage and utilize modern technologies effectively. Respondents proposed several practical measures, including providing free public Wi-Fi, educational seminars, and awareness campaigns tailored to support SMEs adopting digital business practices (Al-Mahameed, 2024; Akomea-Frimpong, Jin, & Osei-Kyei, 2022). Additionally, they advocated for

digitalizing government services to enhance accessibility and efficiency. While the overall sentiment expressed in the responses was largely positive, neutral, and critical comments indicate that current digital initiatives may still fall short in addressing key challenges. This study offers more profound insight into public perceptions of digital governance and underscores the need for ongoing engagement in an environment marked by rapid technological change.

The data gathered highlights the urgent need to strengthen Indonesia's digital infrastructure and governance capabilities. A common theme among participants was a general awareness of the benefits of digital transformation (Al-Mahameed, 2024). However, the repeated emphasis on workforce development revealed a significant concern: the lack of adequately trained personnel. Even the most advanced technological solutions may not produce the desired outcomes without sufficient human capacity. The recommendations offered by respondents reflect strategic approaches aimed at overcoming these limitations, emphasizing inclusion, education, and active governmental intervention as foundational steps toward building a digitally inclusive society. Below is a direct quote from one of the participants, offering further insight into these findings:

*"The most important thing is to prepare human resources for this because no matter how sophisticated the technology is, without the support of human resource capabilities, it will be useless"* (Sammy, personal communication, June 20, 2024).

This quotation highlights the pivotal role of human resources in ensuring the effective use of technology. It reinforces the importance of investing in human resource development as a foundational element for successfully implementing new technological systems. The ability to adopt and utilize digital tools efficiently relies heavily on the workforce's skills and competencies, regardless of the sophistication of the technology itself. Even the most advanced innovations may fail to achieve their intended outcomes without adequately trained personnel. Therefore, organizations must prioritize continuous training and professional development initiatives that strengthen human capital and support the optimal deployment of technological solutions.

*"Free fast WiFi in every public facility in every environment"* (Rose, personal communication, June 18, 2024).

The evidence indicates a clear need for enhanced infrastructure to improve digital accessibility. Ensuring the availability of high-speed, free Wi-Fi in all public spaces would significantly increase access to digital tools and resources, promoting digital inclusion among various segments of the population. Such an initiative has the potential to expand educational access, streamline the delivery of government services, and stimulate local economic activity by drawing in both residents and visitors. Additionally, improved digital infrastructure can drive economic growth by enabling seamless interaction with online platforms. Investing in this public infrastructure demonstrates a strong commitment to modernizing service delivery and narrowing the digital divide, fostering a more connected and informed society.

*"Increase the number of seminars or outreach for SMEs so that they understand digital business"* (Jasmine, personal communication, June 19, 2024).

The findings highlight the importance of educational initiatives to support small businesses in adapting to the digital economy. As digital technologies transform the business landscape, SMEs must evolve to remain competitive. Expanding the availability of seminars and outreach programs tailored to SMEs is essential in enhancing their understanding of digital business practices. These initiatives can provide valuable knowledge in digital marketing, online commerce, and data-driven decision-making, equipping SMEs with the tools needed for sustainable growth. By fostering a culture of continuous learning, such programs help bridge the digital skills gap and facilitate the successful integration of digital strategies within SME operations.

## 5. DISCUSSION

### 5.1. Digital platforms significantly enhance transparency and accountability in governmental decision-making processes

Digital platforms are essential in advancing transparency and accountability within governmental decision-making processes. By offering accessible information on public policies, budgets, and administrative actions, these platforms enable citizens to make informed decisions and actively engage with political leaders. Recent studies have emphasized social media's and digital tools' transformative potential in fostering civic participation (Furman, 2019). These platforms allow users to share opinions, raise concerns, and pose

questions directly to government representatives, creating a more interactive form of governance (Open Government Partnership, 2023b). This two-way communication empowers the public and cultivates a culture of accountability, wherein public officials are more responsive to citizen input and more attuned to societal expectations (The University of Chicago Institute for Climate and Sustainable Growth, n.d.; United Nations Educational, Scientific and Cultural Organization-International-Institute for Educational Planning [UNESCO-IIEP], n.d.).

In addition, digital platforms play a crucial role in advancing open data initiatives and improving the ability of citizens to scrutinize governmental decisions. This functionality is essential for fostering trust between the public and the government by promoting a participatory approach to governance (Bhatnagar, 2003). An evaluation of data collected in Indonesia regarding the application and development of digital technologies reveals a complex and nuanced understanding of stakeholder perspectives, concerns, and aspirations. The analysis highlights several core areas of focus for this research, including data security, platform usability, accessibility, and the governance of digital systems. These findings underscore the urgency of addressing these factors to optimize digital platform usage and reinforce government transparency and accountability (Kaushal et al., 2024). Furthermore, the study captures a range of respondent perspectives, offering a comprehensive view of public sentiment regarding digital governance and outlining the potential benefits and risks associated with ongoing digital transformation (Cho & Choi, 2004).

#### 5.1.1. Data security concerns

A prominent concern expressed by respondents is the urgent need to enhance data security measures (Rajamäe-Soosaar & Nikiforova, 2024). Participants voiced significant apprehension regarding the ability of both government institutions and private sector entities to safeguard the privacy of the personal data they collect. This skepticism is rooted in past incidents involving data breaches and the perception that current regulatory frameworks are inadequate for ensuring data protection (Aji Nugroho et al., 2023). As a result, many individuals experience discomfort when engaging in digital interactions due to fears about misusing or mishandling their information.

To address these concerns, respondents recommended the implementation of more stringent security protocols, including encryption technologies, periodic security audits, and transparent data management practices. There was a strong consensus among participants that the government should establish and enforce comprehensive data protection policies in alignment with global standards. Additionally, many emphasized the importance of launching public education initiatives to raise awareness about digital rights and inform users how to protect their data. This collective call for stronger data security represents a crucial step toward rebuilding public trust in digital platforms and promoting safer engagement in the digital environment.

#### 5.1.2. User experience and accessibility

In addition to concerns about data security, a significant portion of participant feedback focused

on the usability of digital services. Respondents emphasized the importance of designing user-friendly interfaces and offering clear instructions to help individuals navigate digital platforms effectively. They noted that overly complex systems and poor navigational design can discourage users, particularly those with limited digital literacy, from engaging with digital tools (Bertot et al., 2010). As a result, the need for intuitive design was strongly reinforced, along with recommendations for conducting usability testing to ensure that platforms are accessible and easy to use for the intended audience.

Participants also stressed the critical role of efficient customer support systems in fostering trust and satisfaction. They indicated that when users encounter technical difficulties, prompt and accessible assistance is vital for maintaining confidence in digital services. Suggestions included implementing real-time support tools such as chatbots and dedicated helplines to efficiently address user inquiries and resolve issues. Another key area of concern was accessibility. Several respondents highlighted the need to improve internet infrastructure, especially in remote and underserved regions, by expanding coverage and reliability. To bridge the digital divide, it was recommended that the government provide free public Wi-Fi in communal areas. Overall, participants recognized that universal internet access is a fundamental requirement to ensure that all citizens benefit equally from digital public services (Cahlikova & Mabillard, 2019).

### *5.1.3. Infrastructure and server capabilities*

In addition to improving accessibility, participants highlighted the urgent need to strengthen digital infrastructure, particularly server performance and reliability (Mensah et al., 2021). Many respondents expressed dissatisfaction with frequent service interruptions and slow system responses, negatively impacting their overall user experience. To address these challenges, there was a strong call for increased investment in robust server infrastructure to ensure continuous availability and optimal functionality of digital services (Kierkegaard, 2009). Such infrastructure upgrades are essential to accommodate the growing demand for online platforms and to ensure that users can engage with digital services seamlessly and without disruption.

### *5.1.4. Digital literacy and training programs*

The findings also highlighted a shared understanding among participants regarding the urgent need to strengthen digital literacy across all sectors of society. Respondents strongly recommended the development of inclusive and comprehensive training initiatives aimed at improving digital competencies among the general public and the workforce (Badran, 2021; Kirana & Majid, 2022). Special emphasis was placed on creating targeted programs for SMEs to help them better understand digital business strategies and effectively incorporate technology into their daily operations. Participants proposed collaborative efforts among government bodies, academic institutions, and private sector actors as a practical pathway for designing and delivering these training programs. By empowering individuals and businesses

with essential digital skills, such efforts can foster innovation, boost productivity, and contribute meaningfully to national economic development.

### *5.1.5. Integration of government services*

A prominent theme emerging from the data was the widespread call for integrating all government digital services into a unified platform. Participants expressed dissatisfaction with the current fragmented system, noting that navigating multiple disconnected applications often leads to confusion and inefficiency. A centralized platform was seen as a necessary solution to enhance the user experience by offering streamlined, convenient, and accessible access to a range of public services. Among the suggestions put forward was creating a comprehensive digital portal allowing citizens to access various services, submit applications, and retrieve relevant information more efficiently (Kusumasari, 2018).

Additionally, several respondents advocated implementing a single digital identity system for all online government transactions. Such a system would simplify procedures, reduce redundancies, and enhance data security by minimizing the number of platforms storing sensitive personal information. Adopting a centralized and secure digital infrastructure would improve usability and reinforce data protection mechanisms across government services (Nafi'ah, 2022).

## **5.2. Digital governance enhances citizen trust by promoting transparency and accountability in government operations**

Digital governance has the potential to significantly influence public trust in government transparency (OECD, 2019). When implemented effectively, it enhances the accessibility and dissemination of information, allowing citizens to comprehend governmental actions and decision-making processes better. This increased visibility can foster greater public trust as individuals feel more informed and included in governance activities. Moreover, digital platforms can contribute to improved accountability by enabling real-time monitoring of government performance and facilitating prompt responses to public concerns. However, concerns related to data privacy and the potential misuse of personal information for unethical purposes can undermine these benefits (Streib & Navarro, 2006). Therefore, ensuring robust data protection protocols is essential. With strong security measures, digital governance systems can promote transparency and accountability, ultimately strengthening citizens' confidence in public institutions.

### *5.2.1. Transparency and accountability*

The findings further emphasized the critical importance of transparency and accountability in the governance of digital technologies (Lnenicka et al., 2024). Respondents highlighted the necessity for government agencies to be open and transparent in managing data and making decisions related to digital services (Syamsiar, 2023). A commonly proposed solution was the development of accessible feedback and reporting mechanisms that would allow users to voice their concerns, report

issues, and offer suggestions for service improvement. This study also explores the concept of accountability within digital governance, noting that government institutions must ensure their digital services are secure but also inclusive and user-centric. To achieve this, clear regulations regarding data management practices should be established, including penalties for organizations that fail to protect user data or provide substandard digital services adequately (Young et al., 2020). Implementing such measures would help build public trust and enhance the effectiveness of digital governance frameworks.

### 5.2.2. International collaboration and benchmarking

Finally, the data revealed a strong interest among respondents in learning from the digital governance experiences of other countries. Many participants emphasized the importance of benchmarking Indonesia's digital government performance, particularly in terms of security and service efficiency, against international models (Zeleti et al., 2016). This comparative and collaborative approach was seen as a valuable strategy for knowledge exchange and adopting best practices, which could significantly enhance the quality and reliability of digital public services in Indonesia. Given the current momentum around digital transformation in government and public administration, continued inquiry into how global insights can inform Indonesia's progress is relevant and necessary (Wirtz et al., 2022).

As illustrated throughout the discussion, digital transformation encompasses far more than adopting new technologies; it represents a complex, multidimensional process shaped by historical, social, political, and administrative influences. This analysis also considers the broader implications of the insights presented, particularly in relation to digital governance frameworks. It critically evaluates the proposed solutions, assessing their strengths and limitations, and situates them within the existing academic discourse on e-governance. In the Indonesian context, digital governance is not a novel initiative. Instead, it emerges from a longstanding effort to address systemic bureaucratic inefficiencies and persistent corruption (Gil-Garcia et al., 2017). As the discussion rightly notes, these enduring institutional challenges have intensified the push for modernization through digital technologies. However, it is important to recognize that the development and implementation of digital governance strategies cannot be separated from the broader socio-political realities of the country.

In addition, the social implications of the digital divide are particularly pronounced in Indonesia, where significant disparities exist in access to technology and the Internet between urban and rural communities (Aulia & Kurniawan, 2018; Nafi'ah, 2022). These inequalities limit the reach of digital services, shape levels of citizen engagement, and influence public trust in government-led digital initiatives. The text appropriately acknowledges these challenges, which is crucial in the context of developing inclusive policies for a population characterized by varying degrees of digital literacy and access (Heeks, 2005). Addressing this divide remains essential for future digital initiatives to ensure that all citizens, regardless of their geographic or socioeconomic background, can access and benefit from public digital services.

Bridging this gap is vital to fostering meaningful civic participation and reinforcing the legitimacy of government efforts (Machová & Lnenicka, 2017; Shim & Eom, 2009).

## 6. CONCLUSION

This study reveals that Indonesian citizens express significant concern regarding the effectiveness of digital governance, data security, and the usability of digital services. One of the central findings is the public's growing emphasis on the protection of personal data, reflecting a broader global concern with digital privacy. Respondents also underscored the importance of accessible, user-friendly interfaces and equitable access to digital platforms, particularly as government services increasingly digitalized. These insights point to the need for a comprehensive strategy that combines infrastructure development, digital literacy programs, and the seamless integration of public services to build an inclusive and robust digital ecosystem. The findings provide actionable insights for policymakers, industry stakeholders, and educators to strengthen Indonesia's digital transformation. Addressing citizens' concerns and recommendations, especially regarding security, accessibility, and ease of use, can support the development of a trustworthy digital environment. This requires sustained investments in public digital infrastructure, equitable access to the Internet, and user-centered digital service design. A coordinated, whole-of-government approach that integrates user feedback will be vital to improving the responsiveness and accountability of public institutions in the digital era.

This study contributes to the growing literature on digital governance in developing countries by offering grounded perspectives from citizens. While it proposes valuable strategies for improving governance through digital technologies, the analysis also reveals gaps in implementation and highlights the need for empirical validation. In particular, the historical, political, and socio-cultural dimensions of Indonesia's digital transformation must be more explicitly addressed in public policy and academic research. Understanding these contextual layers is key to shaping inclusive and sustainable governance frameworks. Several areas for further investigation emerge from the findings. Future studies should examine the long-term impact of open data initiatives on public trust and accountability in Indonesian governance, conduct case studies of practical applications of open data mechanisms to understand how they influence public oversight, assess the readiness and effectiveness of training programs designed to enhance digital skills among public officials and citizens, explore the relationship between digital literacy and the adoption of open data tools, especially in rural or underserved communities, perform comparative studies with other countries that have successfully implemented open data strategies, identifying best practices and lessons learned, investigate the role of user experience and accessibility in improving digital service engagement and public satisfaction.

The open data initiative represents a significant step toward enhancing Indonesia's transparency, accountability, and civic engagement. However, persistent challenges, including digital inequality, limited awareness, and infrastructural gaps,

continue to hinder its full potential. Addressing these issues requires ongoing collaboration between government, academia, civil society, and the private sector. Scholars and practitioners must actively monitor, analyze, and shape the evolving digital

governance landscape. Only through inclusive, evidence-based policymaking and adaptive learning can Indonesia realize the transformative promise of open data and digital governance.

## REFERENCES

- Ahmad, M., & Wilkins, S. (2024). Purposive sampling in qualitative research: A framework for the entire journey. *Quality & Quantity*, 59, 1461–1479. <https://doi.org/10.1007/s11135-024-02022-5>
- Aji Nugroho, A., Sri Rahayu, N., & Ranintya Yusuf, R. (2023). The role of e-government to improve the implementation of merit system in Indonesian local governments. *KnE Social Sciences*, 8(11), 516–542. <https://doi.org/10.18502/kss.v8i11.13570>
- Akomea-Frimpong, I., Asogwa, I. E., & Tenakwah, E. J. (2022). Systematic review of sustainable corporate governance of SMEs: Conceptualisation and propositions. *Corporate Ownership & Control*, 19(3), 74–91. <https://doi.org/10.22495/cocv19i3art5>
- Akomea-Frimpong, I., Jin, X., & Osei-Kyei, R. (2022). Mapping studies on sustainability in the performance measurement of public-private partnership projects: A systematic review. *Sustainability*, 14(12), Article 7174. <https://doi.org/10.3390/su14127174>
- Algazo, F. A., Ibrahim, S., & Yusoff, W. S. (2021). Digital governance emergence and importance. *Journal of Information System and Technology Management*, 6(24), 18–26. [https://www.researchgate.net/publication/357398959\\_DIGITAL\\_GOVERNANCE\\_EMERGENCE\\_AND\\_IMPORTANCE](https://www.researchgate.net/publication/357398959_DIGITAL_GOVERNANCE_EMERGENCE_AND_IMPORTANCE)
- Al-Mahameed, M. (2024). Towards a legal framework for corporate governance amid artificial intelligence. *Corporate Law & Governance Review*, 6(3), 113–121. <https://doi.org/10.22495/clgrv6i3p12>
- Ansell, C., & Torfing, J. (2021). *Public governance as co-creation: A strategy for revitalizing the public sector and rejuvenating democracy*. Cambridge University Press. <https://doi.org/10.1017/9781108765381>
- Antoni, D., Akbar, M., & Fatoni, F. (2018). Electronic government rukun tetangga model. *Journal of Information Systems*, 14(2), 64–73. <https://doi.org/10.21609/jsi.v14i2.661>
- Asogwa, I. E., Varua, M. E., & Tenakwah, E. S. (2022). Examining the relationship between sustainability reporting processes and organizational learning and change. *Corporate Ownership & Control*, 20(1), 145–161. <https://doi.org/10.22495/cocv20i1art14>
- Aulia, G., & Kurniawan, T. (2018). The implementation of open data program in the special capital region (DKI) of Jakarta Province. In *Proceedings of the 2018 International Conference on Sustainable Information Engineering and Technology* (pp. 96–100). Institute of Electrical and Electronics Engineers (IEEE). <https://doi.org/10.1109/siet.2018.8693197>
- Badran, A. (2021). Developing smart cities: Regulatory and policy implications for the state of Qatar. *International Journal of Public Administration*, 46(7), 519–532. <https://doi.org/10.1080/01900692.2021.2003811>
- Bertot, J. C. (2009). Public access technologies in public libraries: Effects and implications. *Information Technology and Libraries*, 28(2), 81–91. <https://doi.org/10.6017/ital.v28i2.3176>
- Bertot, J. C., Jaeger, P. T., & Grimes, J. M. (2010). Using ICTs to create a culture of transparency: E-government and social media as openness and anti-corruption tools for societies. *Government Information Quarterly*, 27(3), 264–271. <https://doi.org/10.1016/j.giq.2010.03.001>
- Bhatnagar, S. (2003). E-government and access to information. In *Global Corruption Report 2003* (pp. 24–32). Transparency International. <https://repository.globethics.net/handle/20.500.12424/177364>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Brinkmann, S., & Kvale, S. (2014). *InterViews: Learning the craft of qualitative research interviewing* (3rd ed.). SAGE Publications.
- Cahlikova, T., & Mabilard, V. (2019). Open data and transparency: Opportunities and challenges in the Swiss context. *Public Performance & Management Review*, 43(3), 662–686. <https://doi.org/10.1080/15309576.2019.1657914>
- Casady, C. B., Eriksson, K., Levitt, R. E., & Scott, W. R. (2020). (Re)defining public-private partnerships (PPPs) in the new public governance (NPG) paradigm: An institutional maturity perspective. *Public Management Review*, 22(2), 161–183. <https://doi.org/10.1080/14719037.2019.1577909>
- Castro, C., & Lopes, I. C. (2022). E-government as a tool in controlling corruption. *International Journal of Public Administration*, 46(16), 1137–1150. <https://doi.org/10.1080/01900692.2022.2076695>
- Cho, Y. H., & Choi, B.-D. (2004). E-government to combat corruption: The case of Seoul metropolitan government. *International Journal of Public Administration*, 27(10), 719–735. <https://doi.org/10.1081/PAD-200029114>
- Creswell, J. W., & Poth, C. N. (2017). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). SAGE Publications.
- Denzin, N. K., & Lincoln, Y. S. (2018). *The SAGE handbook of qualitative research* (5th ed.). SAGE Publications.
- Furman, J. (2019). *Unlocking digital competition: Report of the digital competition expert panel*. Crown. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/785547/unlocking\\_digital\\_competition\\_furman\\_review\\_web.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/785547/unlocking_digital_competition_furman_review_web.pdf)
- Gil-Garcia, J. R., Dawes, S. S., & Pardo, T. A. (2017). *Digital government and public management research: Finding the crossroads*. *Public Management Review*, 20(5), 633–646. <https://doi.org/10.1080/14719037.2017.1327181>
- Heeks, R. (2005). E-government as a carrier of context. *Journal of Public Policy*, 25(1), 51–74. <https://doi.org/10.1017/S0143814X05000206>
- Heeks, R. (2017). *Decent digital and the digital gig economy: A developing country perspective on employment impacts and standards in online outsourcing, crowdwork, etc.* (GDI Development Informatics Paper No. 71). Global Development Institute. [http://hummedia.manchester.ac.uk/institutes/gdi/publications/workingpapers/di/di\\_wp71.pdf](http://hummedia.manchester.ac.uk/institutes/gdi/publications/workingpapers/di/di_wp71.pdf)
- Herdiana, D., Royani, Y. M., & Wahidah, I. (2022). The public value of e-government at the village level. *Publica: Jurnal Pemikiran Administrasi Negara*, 14(1), 78–90. <https://doi.org/10.15575/jpan.v14i1.18011>
- Ho, A. T.-K., & Ni, A. Y. (2004). Explaining the adoption of e-government features: A case study of Iowa county treasurers' offices. *The American Review of Public Administration*, 34(2), 164–180. <https://doi.org/10.1177/0275074004264355>

- Jaeger, P. T., & Matteson, M. (2009). E-government and technology acceptance: The case of the implementation of Section 508 guidelines for websites. *Electronic Journal of E-Government*, 7(1), 87–98. <https://surl.lu/urhadz>
- Janssen, K. (2011). The influence of the PSI directive on open government data: An overview of recent developments. *Government Information Quarterly*, 28(4), 446–456. <https://doi.org/10.1016/j.giq.2011.01.004>
- Janssen, M., Charalabidis, Y., & Zuiderwijk, A. (2012). Benefits, adoption barriers and myths of open data and open government. *Information Systems Management*, 29(4), 258–268. <https://doi.org/10.1080/10580530.2012.716740>
- Janssen, M., Matheus, R., Longo, J., & Weerakkody, V. (2017). Transparency-by-design as a foundation for open government. *Transforming Government: People, Process and Policy*, 11(1), 2–8. <https://doi.org/10.1108/TG-02-2017-0015>
- Jibladze, M., Manvelidze, I., Zoidze, I., & Phartenadze, G. (2024). E-governance under the framework of open governance in Georgia: Current situation, problems and opportunities. *Public Administration and Policy: An Asia-Pacific Journal*, 27(2), 193–205. <https://doi.org/10.1108/PAP-05-2023-0074>
- Jopang, Aryatama, S., Muazzinah, Qamal, & Ansar. (2024). Exploring the relationship between e-government, transparency, and citizen trust in government services. *Global International Journal of Innovative Research*, 2(6), 1354–1363. <https://surl.cc/ukcklx>
- Kaushal, R., van de Kerkhof, J., Goanta, C., Spanakis, G., & Iamnitchi, A. (2024). Automated transparency: A legal and empirical analysis of the Digital Services Act transparency database. In *FaccT'24: Proceedings of the 2024 ACM Conference on Fairness, Accountability, and Transparency* (pp. 1121–1132). Association for Computing Machinery (ACM). <https://doi.org/10.1145/3630106.3658960>
- Khairunnisa, T., Purnomo, E. P., Anand, P., & Hung, C-F. (2024). Enhancing local government performance in Indonesia: An open government data perspective. <https://doi.org/10.2139/ssrn.5071204>
- Kierkegaard, S. (2009). Open access to public documents — More secrecy, less transparency! *Computer Law & Security Review*, 25(1), 3–27. <https://doi.org/10.1016/j.clsr.2008.12.001>
- Kim, S., Kim, H. J., & Lee, H. (2009). An institutional analysis of an e-government system for anti-corruption: The case of OPEN. *Government Information Quarterly*, 26(1), 42–50. <https://doi.org/10.1016/j.giq.2008.09.002>
- Kirana, N. W. I., & Majid, N. (2022). Challenges of digital transformation on good governance for improving public services quality. In *4th Economics, Business, and Government Challenges 2021* (pp. 43–47). NST Proceedings. <https://doi.org/10.11594/nstp.2022.2307>
- Kitchin, R. (2014). *The data revolution: Big data, open data, data infrastructures & their consequences*. SAGE Publications. <https://doi.org/10.4135/9781473909472>
- Kusumasari, B. (2018). Digital democracy and public administration reform in Indonesia. *International Journal of Electronic Governance*, 10(3), 317–337. <https://doi.org/10.1504/ijeg.2018.095937>
- Linkov, I., Trump, B. D., Poinssatte-Jones, K., & Florin, M.-V. (2018). Governance strategies for a sustainable digital world. *Sustainability*, 10(2), Article 440. <https://doi.org/10.3390/su10020440>
- Lnenicka, M., & Nikiforova, A. (2021). Transparency-by-design: What is the role of open data portals? *Telematics and Informatics*, 61, Article 101605. <https://doi.org/10.1016/j.tele.2021.101605>
- Lnenicka, M., Nikiforova, A., Luterek, M., Milic, P., Rudmark, D., Neumaier, S., Santoro, C., Casiano Flores, C., Janssen, M., & Rodríguez Bolívar, M. P. (2024). Identifying patterns and recommendations of and for sustainable open data initiatives: A benchmarking-driven analysis of open government data initiatives among European countries. *Government Information Quarterly*, 41(1), Article 01898. <https://doi.org/10.1016/j.giq.2023.101898>
- Lourenço, R. P. (2016). Evidence of an open government data portal impact on the public sphere. *International Journal of Electronic Government Research*, 12(3), 21–36. <https://doi.org/10.4018/IJEGR.2016070102>
- Lourenço, R. P. (2023). A framework for public eServices transparency. *International Journal of Electronic Government Research*, 19(1), 1–19. <https://doi.org/10.4018/IJEGR.317415>
- Luna-Reyes, L. F., Bertot, J. C., & Mellouli, S. (2014). Open government, open data and digital government [Editorial]. *Government Information Quarterly*, 31(1), 4–5. <https://doi.org/10.1016/j.giq.2013.09.001>
- Machová, R., & Lnenicka, M. (2017). Evaluating the quality of open data portals on the national level. *Journal of Theoretical and Applied Electronic Commerce Research*, 12(1), 21–41. <https://doi.org/10.4067/S0718-18762017000100003>
- Marwan, A., Garduño, D. O.-C., & Bonfigli, F. (2022). Detection of digital law issues and implication for good governance policy in Indonesia. *Bestuur*, 10(1), 22–32. <https://doi.org/10.20961/bestuur.v10i1.59143>
- Matheus, R., & Janssen, M. (2013). Transparency of civil society websites: Towards a model for evaluating website transparency. In *Proceedings of the 7th International Conference on Theory and Practice of Electronic Governance (ICEGOV 2013)* (pp. 30–33). ACM. <https://doi.org/10.1145/2591888.2591915>
- Matheus, R., Faber, R., Ismagilova, E., & Janssen, M. (2023). Digital transparency and the usefulness for open government. *International Journal of Information Management*, 73, Article 102690. <https://doi.org/10.1016/j.ijinfomgt.2023.102690>
- Matheus, R., Janssen, M., & Maheshwari, D. (2018). Data science empowering the public: Data-driven dashboards for transparent and accountable decision-making in smart cities. *Government Information Quarterly*, 37(3), Article 101284. <https://doi.org/10.1016/j.giq.2018.01.006>
- Mensah, I. K., Luo, C., & Thani, X. C. (2021). The moderating impact of technical support and internet self-efficacy on the adoption of electronic government services. *International Journal of Public Administration*, 45(14), 1039–1052. <https://doi.org/10.1080/01900692.2021.1961150>
- Miles, M. B., Huberman, A. M., & Saldana, J. (2013). *Qualitative data analysis: A methods sourcebook* (3rd ed.). SAGE Publications.
- Mulgan, R. (2007). Truth in government and the politicization of public service advice. *Public Administration*, 85(3), 569–586. <https://doi.org/10.1111/j.1467-9299.2007.00663.x>
- Nafi'ah, B. A. (2022). Challenges of implementing an electronic-based government system in local governments. *KnE Social Sciences*, 7(9), 117–127. <https://doi.org/10.18502/kss.v7i9.10932>
- Ngatikoh, S., Kumorotomo, W., & Retnandari, N. D. (2020). Transparency in government: A review on the failures of corruption prevention in Indonesia. In *Proceedings of the Annual Conference of Indonesian Association for Public Administration (IAPA 2019)* (pp. 181–200). Atlantis Press. <https://doi.org/10.2991/aebmr.k.200301.010>
- Nikolopoulou, K. (2022, August 11). *What is purposive sampling? Definition & examples*. Scribbr. <https://www.scribbr.com/methodology/purposive-sampling/>

- Okunogbe, O., & Santoro, F. (2022). The promise and limitations of information technology for tax mobilization. *The World Bank Research Observer*, 38(2), 295–324. <https://doi.org/10.1093/wbro/lkac008>
- Open Contracting Partnership. (2024, August 24). *Empowering auditors: Indonesia uses data-driven oversight to clean up its corruption-prone procurement sector*. <https://www.open-contracting.org/2024/08/28/empowering-auditors-indonesia-uses-data-driven-oversight-to-clean-up-its-corruption-prone-procurement-sector>
- Open Government Partnership. (2023a). *Actions for transparent and accountable digital governance*. <https://www.opengovpartnership.org/actions-for-transparent-and-accountable-digital-governance/>
- Open Government Partnership. (2023b). *Indonesia open government partnership national action plan 2023-2024*. [https://www.opengovpartnership.org/wp-content/uploads/2023/01/Indonesia\\_Action-Plan\\_2023-2024\\_EN.pdf](https://www.opengovpartnership.org/wp-content/uploads/2023/01/Indonesia_Action-Plan_2023-2024_EN.pdf)
- Organization for Economic Co-operation and Development (OECD). (2019). *Digital innovation: Seizing policy opportunities*. <https://doi.org/10.1787/a298dc87-en>
- Organization for Economic Co-operation and Development (OECD). (2023). *Digital government*. <https://www.oecd.org/gov/digital-government/indonesia-digital-government-2023.htm>
- Organization for Economic Co-operation and Development (OECD). (2016). *Open government in Indonesia*. <https://doi.org/10.1787/9789264265905-en>
- Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration and Policy in Mental Health and Mental Health Services Research*, 42(5), 533–544. <https://doi.org/10.1007/s10488-013-0528-y>
- Rajamäe-Soosaar, K., & Nikiforova, A. (2024). Exploring Estonia's open government data development as a journey towards excellence: Unveiling the progress of local governments in open data provision. In *Proceedings of the 25th Annual International Conference on Digital Government Research* (pp. 920–931). Association for Computing Machinery (ACM). <https://doi.org/10.1145/3657054.3657161>
- Sayogo, D. S., Yuli, S. B. C., & Wiyono, W. (2020). Challenges and critical factors of interagency information sharing in Indonesia. *Transforming Government: People, Process and Policy*, 14(5), 791–806. <https://doi.org/10.1108/tg-11-2019-0108>
- Shim, D. C., & Eom, T. H. (2009). Anticorruption effects of information and communication technology (ICT) and social capital. *International Review of Administrative Sciences*, 75(1), 99–116. <https://doi.org/10.1177/0020852308099508>
- Streib, G., & Navarro, I. (2006). Citizen demand for interactive e-government: The case of Georgia consumer services. *The American Review of Public Administration*, 36(3), 288–300. <https://doi.org/10.1177/0275074005283371>
- Sutrisno, E., Silitonga, M. S., Yusuf, R. R., & Nugroho, A. A. (2024). Digital divide: How is Indonesian public service affected? *Jurnal Penelitian Pengkajian Indonesia*, 10(3), 454–463. <https://doi.org/10.29210/020244613>
- Syamsiar. (2023). The role of digitalization in enhancing public service effectiveness in Indonesia. *Jurnal Ilmiah Ilmu Administrasi Publik: Jurnal Pemikiran dan Penelitian Administrasi Publik*, 13(1), 465–472. <https://doi.org/10.26858/jiap.v13i1.51026>
- Tai, K.-T. (2021). Open government research over a decade: A systematic review. *Government Information Quarterly*, 38(2), Article 101566. <https://doi.org/10.1016/j.giq.2021.101566>
- The University of Chicago Institute for Climate and Sustainable Growth. (n.d.). *Social media engagement increases government action, decreases pollution*. <https://climate.uchicago.edu/impacts/social-media-engagement-increases-government-action-decreases-pollution/>
- Tjondronegoro, D., Liew, A. W.-C., Verhelst, T. Green, D., Bernot, A., Hasan, R., & Rifai, B. (2022). *The state of open data implementation in Indonesia*. Griffith University. [https://www.griffith.edu.au/\\_data/assets/pdf\\_file/0023/1610393/RO70-Tjondronegoro-et-al-web.pdf](https://www.griffith.edu.au/_data/assets/pdf_file/0023/1610393/RO70-Tjondronegoro-et-al-web.pdf)
- Transparency International. (2023). *Annual report 2022*. [https://files.transparencycdn.org/images/2022\\_TransparencyInternationalAnnualReport\\_English.pdf](https://files.transparencycdn.org/images/2022_TransparencyInternationalAnnualReport_English.pdf)
- United Nations Department of Economic and Social Affairs. (2020). *United Nations e-government survey 2020: Digital government in the decade of action for sustainable development*. United Nations. <https://surl.li/rwnkpp>
- United Nations Educational, Scientific and Cultural Organization-International-Institute for Educational Planning (UNESCO-IIEP). (n.d.). *Using digital tools to promote transparency and accountability*. <https://surl.li/qdaqiq>
- United Nations Office on Drugs and Crime (UNODC). (2021, June). *Promoting open data to fight corruption in Indonesia*. <https://www.unodc.org/roseap/en/what-we-do/anti-corruption/topics/2021/09-promoting-open-data-to-fight-corruption-indonesia.html>
- Vargas-Murillo, A. R., Pari-Bedoya, I. N. M. d. I. A., Gordillo Bedoya, S. M., Arcos Flores, Y. M., Trujillo Pajuelo, M. L., & Morales Cauti, G. P. (2025). Digital open data governance: Enhancing e-government accountability and transparency. In *Proceedings of the 2024 8th International Conference on E-Society, E-Education and E-Technology* (pp. 74–78). Association for Computing Machinery (ACM). <https://doi.org/10.1145/3704217.3704236>
- Weerakkody, V., Kapoor, K., Balta, M. E., Irani, Z., & Dwivedi, Y. K. (2017). Factors influencing user acceptance of public sector big open data. *Production Planning & Control*, 28(11–12), 891–905. <https://doi.org/10.1080/09537287.2017.1336802>
- Wirtz, B. W., Becker, M., & Langer, P. F. (2022). An integrated model of digital open government. *International Journal of Public Administration*, 46(13), 951–970. <https://doi.org/10.1080/01900692.2022.2050386>
- World Bank. (2023). *Unlocking the power of open data for inclusive development*. <https://www.worldbank.org/en/news/feature/2023/04/13/unlocking-open-data-indonesia>
- World Economic Forum. (2018). *Agile governance: Reimagining policy-making in the Fourth Industrial Revolution*. [https://www3.weforum.org/docs/WEF\\_Agile\\_Governance\\_Reimagining\\_Policy-making\\_4IR\\_report.pdf](https://www3.weforum.org/docs/WEF_Agile_Governance_Reimagining_Policy-making_4IR_report.pdf)
- YCP. (2021, June 4). *Discovering the six pillars of Indonesia's smart cities*. <https://ycp.com/insights/article/discovering-the-six-pillars-of-indonesias-smart-cities#:~:text=Smart%20People,in%20mind%20for%20future%20projects>
- Young, S. L., Wiley, K. K., & Searing, E. A. M. (2020). “Squandered in real time”: How public management theory underestimated the public administration — Politics dichotomy. *The American Review of Public Administration*, 50(6–7), 480–488. <https://doi.org/10.1177/0275074020941669>
- Zeleti, F. A., Ojo, A., & Curry, E. (2016). Exploring the economic value of open government data. *Government Information Quarterly*, 33(3), 535–551. <https://doi.org/10.1016/j.giq.2016.01.008>
- Zuiderwijk, A., & Janssen, M. (2014). Open data policies, their implementation and impact: A framework for comparison. *Government Information Quarterly*, 31(1), 17–29. <https://doi.org/10.1016/j.giq.2013.04.003>