

Digital Governance in Indonesia: Benefits, Challenges, and Strengthening Strategies in Realizing Good Governance

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Abstract

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The development of digital governance or digital-based governance has become the main focus of bureaucratic transformation in various countries, including Indonesia. This study analyzes the implementation of digital governance in Indonesia using the literature review method, reviewing the benefits, challenges, and strengthening strategies implemented. The results of the study show that digital governance can improve bureaucratic efficiency, government transparency, and public participation. However, its implementation faces various obstacles, such as gaps in technology infrastructure between regions, low digital literacy of people and government apparatus, and cyber security threats. The strengthening strategies needed include improving infrastructure, digital literacy, data security, and cross-sector collaboration between the government, the community, and the private sector. The integrated implementation of these strategies is expected to strengthen the implementation of inclusive, accountable, and responsive governance. This research emphasizes that digital governance is not just a technological modernization, but a comprehensive transformation that involves innovation, regulation, and public participation to realize the principles of good governance in the digital era.

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1. Introduction

The development of digital governance or digital-based governance has become a global phenomenon that continues to accelerate. Various countries are trying to integrate digital technology into government processes to improve efficiency, transparency, and public participation.¹ This change is not just about utilizing technology as an administrative tool, but as a governance transformation strategy that is more adaptive and responsive to the needs of modern society. In Indonesia, the implementation of digital governance has begun to show significant developments, especially after the issuance of Presidential Regulation Number 95 of 2018 concerning Electronic-Based Government System (*Sistem Pemerintahan Berbasis Elektronik/SPBE*). This regulation is a legal framework for government agencies in utilizing Information And Communication Technology (ICT) to realize a clean, effective, efficient, transparent, accountable government, and provide quality public services. SPBE is also a foothold in efforts to strengthen the principles of good governance at all levels of government.

Although progress has been seen, the challenges faced are still quite complex. Data from the Central Bureau of Statistics (*Badan Pusat Statistik/BPS*) in 2022 shows that 78% of households in Indonesia have internet access, but there is a striking gap between urban and rural areas. This gap hinders equitable access to digital-based public services. In addition, a Katadata Insight Center survey in 2021 revealed that only 37.8% of the population has adequate digital literacy, so some people still have

¹ Rajan Gupta, Sunil Kumar Muttoo, and Saibal Kumar Pal. "Regional E-governance development index for developing nations." *Digital Government: Research and Practice* 1, no. 3 (2020): 1-26.

difficulty utilizing digital services optimally.² Low digital literacy also has the potential to increase the risk of misuse of information, the spread of fake news, and cybercrime. The issue of data security is a serious concern in the government's digitalization process. A report by the State Cyber and Cryptography Agency (*Badan Siber dan Sandi Negara / BSSN*) in 2022 recorded more than 1.6 billion network traffic anomalies that have the potential to be cyberattacks. These threats include data leaks, system hacks, and ransomware attacks. If not handled systematically, this risk can reduce public trust in digital-based government services and hinder the success of digital transformation in the public sector.

In the framework of good governance, there are three main pillars that play an important role, namely bureaucratic efficiency, government transparency, and public participation.³ Bureaucratic efficiency focuses on simplifying public service procedures, reducing administrative barriers, and optimizing the use of technology to improve the speed and quality of services. Government transparency includes the disclosure of information related to policies, budgets, and agency performance, so that the public can objectively monitor the running of government. Meanwhile, public participation emphasizes the active involvement of the community in policy formulation and service supervision, both through face-to-face forums and digital platforms.

² Rizki Ameliah, Rangga Adi Negara, and Indriani Rahmawati. "Survei Literasi Digital Indonesia 2021." Katadata Insight Center, (2021): 18-60.

³ Yves Vanderbeken, Tim Huygh, Laury Bollen, and Remko W. Helms. "Adopting the digital platform model for citizen services-proposed waves towards a government platform organization." *Association for Information Systems AIS Electronic Library (AISeL)* (2023): 1-10.

The three pillars reinforce each other. Transparency encourages public participation because information disclosure allows the public to provide relevant input. Public participation, in turn, can accelerate bureaucratic improvements through constructive feedback. Bureaucratic efficiency will also be more optimal if the community is involved in identifying obstacles and solutions. Thus, the success of digital governance is not only determined by the availability of technological infrastructure, but also by quality interaction between the government and the community. This study aims to analyze the implementation of digital governance in Indonesia with a focus on benefits, challenges, and strengthening strategies. Through a literature review study, this discussion is expected to provide a comprehensive understanding of the development of digital governance in Indonesia, as well as offer practical recommendations to realize inclusive, accountable, and competitive governance in the era of digital transformation.

2. Literature Review

The concept of digital governance is basically an evolution from a conventional governance system to a governance that utilizes digital technology comprehensively. According to Gupta et al.⁴ digital governance refers to the use of Information and Communication Technology (ICT) to improve government performance in providing public services, formulating policies, and building community involvement. This transformation not only impacts the administrative

⁴ Rajan Gupta, Sunil Kumar Muttoo, and Saibal Kumar Pal. "Regional E-governance development index for developing nations." *Digital Government: Research and Practice* 1, no. 3 (2020): 1-26.

process, but also on the pattern of interaction between the government, the community, and the private sector. Tan et al.⁵ emphasize that digital governance marks a shift from traditional bureaucracies that tend to be slow and hierarchical towards a more open, adaptive, and participatory model of governance. These changes allow for faster decision-making, simplification of procedures, and increased access to information for the public. Thus, digital governance does not only focus on technological modernization, but also on reforming bureaucratic systems and culture to be more responsive to the needs of citizens.

In the framework of good governance, Vanderbeken et al.⁶ identified three main pillars that are the foundation of the implementation of digital governance, namely transparency, accountability, and public participation. Transparency ensures the disclosure of data and information so that the public can supervise government performance. Accountability demands clear accountability from the government for every policy and service provided. Meanwhile, public participation encourages active community involvement in the policy formulation, implementation, and evaluation process. These three pillars complement each other and form an effective digital governance ecosystem.

Several studies in Indonesia show that the successful implementation of digital governance is greatly influenced by government commitment, infrastructure

⁵ Evrim Tan and Joep Crompvoets. "A New Era Of Digital Governance." In *The new digital era governance*, Wageningen Academic, (2022): 13-49.

⁶ Yves Vanderbeken, Tim Huygh, Laury Bollen, and Remko W. Helms. "Adopting the digital platform model for citizen services-proposed waves towards a government platform organization." *Association for Information Systems AIS Electronic Library (AISeL)* (2023): 1-10.

quality, community digital literacy, and data security. Presidential Regulation Number 95 of 2018 concerning SPBE is an important milestone that regulates the integrated use of ICT in the government environment. However, the digital divide between regions, low levels of digital literacy, and the risk of cyberattacks are still challenges that must be overcome. By referring to the existing literature, it can be concluded that the implementation of digital governance in Indonesia requires not only technological development, but also institutional reform, human resource capacity building, and active community involvement. This review is the basis for the research to further examine the benefits, challenges, and strategies for strengthening digital governance in Indonesia in order to realize an inclusive, transparent, and accountable government.

3. Method

This study uses the literature review study method to analyze the implementation of digital governance in Indonesia. This method was chosen because it allows researchers to review various academic sources, official reports, and relevant regulatory documents, so as to gain a comprehensive understanding of the developments, benefits, challenges, and strategies for strengthening digital governance. Literature review is also effective for compiling thematic analyses based on findings from previous studies, so as to form a strong conceptual framework and support policy recommendations. The first stage is the identification of the literature. The search was conducted using keywords such as “digital governance Indonesia”, “e-government Indonesia”, “SPBE”, and “good governance”. Literature sources are

obtained from scientific articles, books, journals, and policy documents related to SPBE. The literature selection is focused on publications that are relevant to the Indonesian context, with priority on publications in the last 5 years, so that the information obtained is up-to-date and in accordance with the conditions of digital transformation in Indonesia.

The second stage is the selection and evaluation of sources. The selection criteria include topic relevance, quality of research methodology, data reliability, and contribution to understanding digital governance implementation. The selected literature was then critically analyzed to identify patterns, gaps, and determinants of success or failure of digital governance. The third stage is thematic analysis and synthesis. The analysis was carried out by grouping findings based on the main themes, namely bureaucratic efficiency, government transparency, public participation, implementation challenges, and strengthening strategies. The synthesis is carried out by uniting findings from various sources so as to form a complete and interrelated narrative, which describes the condition of digital governance in Indonesia as a whole.

The last stage is the preparation of a report on the results of the research. The results of the literature analysis are organized into three main sub-chapters, namely the benefits of digital governance, implementation challenges, and strengthening strategies, so as to facilitate the systematic understanding and presentation of information. This literature review method allows research to provide in-depth

analysis without geographical limitations, while presenting a strong theoretical basis for the development of digital governance in Indonesia.⁷

4. Results

4.1. Benefits of Digital Governance in Indonesia

The implementation of digital governance in Indonesia brings a number of significant benefits, both for the government and society. One of the main benefits is increased bureaucratic efficiency. The digitization of public services allows governments to simplify procedures that previously required manual and multi-layered processes. According to Jauhari,⁸ administrative digitization accelerates the completion of public services by reducing bureaucratic barriers, so that the time and costs required can be minimized. A concrete example in Indonesia is the licensing service that can now be accessed online through the SPBE system, which previously took weeks to just a few days.

In addition to efficiency, digital governance also increases government transparency. Electronic systems allow the public to access information about policies, budgets, and the performance of government agencies more quickly and easily. The principle of information disclosure is in line with the provisions of Law Number 14 of 2008 concerning Public Information Disclosure. With better access

⁷ Rajan Gupta, Sunil Kumar Muttoo, and Saibal Kumar Pal. "Regional E-governance development index for developing nations." *Digital Government: Research and Practice* 1, no. 3 (2020): 1-26.

⁸ Arief Jauhari, M. Shabri Abd Majid, Hasan Basri, and Muslim A. Djalil. "Are E-government and Bureaucratic Reform Promoting Good Governance Towards A Better Performance Of Public Organization?." *Calitatea* 21, no. 175 (2020): 25-30.

to information, the public can monitor the decision-making process and evaluate government policies.⁹ Online platforms and official government portals facilitate the public to examine the achievements of government programs and provide constructive input.

The third benefit is increased public participation in governance processes. Digital governance provides the public with the opportunity to be directly involved in policy evaluation and oversight through complaint applications such as "Lapor!" and official government social media. According to Sabani,¹⁰ public participation facilitated by digital technology not only increases government accountability but also strengthens the public's sense of ownership of the government. With more active public involvement, the resulting policies tend to be more responsive to the needs of the community and support the creation of inclusive governance.

In addition to these three main benefits, digital governance also supports the integration of data and information between government agencies, so that coordination between institutions becomes more effective. This allows governments to make data-driven policies, reduce redundancy, and strengthen administrative accountability. All of these benefits show that the implementation of digital governance is not just a modernization of technology, but also a strategy to create a

⁹ Yves Vanderbeken, Tim Huygh, Laury Bollen, and Remko W. Helms. "Adopting the digital platform model for citizen services-proposed waves towards a government platform organization." *Association for Information Systems AIS Electronic Library (AISeL)* (2023): 1-10.

¹⁰ Alvedi Sabani. "Investigating The Influence of Transparency On The Adoption Of E-Government in Indonesia." *Journal of Science and Technology Policy Management* 12, no. 2 (2021): 236-255.

more efficient, transparent, and participatory government, in accordance with the principles of good governance.

4.2. Digital Governance Challenges in Indonesia

Although the benefits of digital governance are significant, its implementation in Indonesia faces complex challenges. One of the main challenges is the inequality of technological infrastructure. Based on data from the Central Statistics Agency (BPS, 2022), around 78% of households in Indonesia have internet access, but there is a significant gap between urban and rural areas. Remote areas, especially in eastern Indonesia, still face limited stable and fast internet access. This inequality hinders people's ability to access government services optimally, so that some groups still find it difficult to take advantage of the available digital systems.

The second challenge is related to people's digital literacy. Digital literacy includes not only technical skills in using technological devices, but also understanding how to utilize digital services effectively and safely. A survey by the Katadata Insight Center shows that only 37.8% of the Indonesian population has an adequate level of digital literacy.¹¹ This low literacy makes it difficult for some people, especially the elderly and residents in remote areas, to use digital services. In addition, the lack of digital literacy increases the risk of spreading misinformation, online fraud, and misuse of public services.¹²

¹¹ Rizki Ameliah, Rangga Adi Negara, and Indriani Rahmawati. "Survei Literasi Digital Indonesia 2021." Katadata Insight Center, (2021): 18-60.

¹² Irva Yunita, and Indrawati Indrawati. "Open Access jurnal dalam meningkatkan kemampuan literasi digital." *Publishing Letters* 1, no. 2 (2021): 10-15.

The third aspect is data security and cyber threats. The digitization of public services increases the potential risk of cyberattacks, data leaks, and system hacks. A report by the State Cyber and Cryptography Agency (*Badan Siber dan Sandi Negara /BSSN*, 2022) recorded more than 1.6 billion network traffic anomalies that have the potential to be cyber attacks in Indonesia. This threat requires the government to implement strict security protocols, increase the capacity of human resources in the cyber field, and ensure public data protection so that public trust in digital services is maintained.

In addition to these three challenges, resistance to change at the bureaucratic level is also a significant obstacle. Digital transformation requires changes in organizational culture, improving employee competencies, and full commitment from institutional leaders. Dias¹³ emphasized that the commitment of local governments is a determining factor for the success of digital governance implementation. Regions with visionary and pro-innovation leadership tend to adopt SPBE faster than regions with less support. These overall challenges show that the implementation of digital governance in Indonesia requires a holistic approach, including infrastructure improvements, digital literacy improvement, cybersecurity strengthening, and the development of adaptive organizational culture. Without comprehensive addressing these barriers, the potential benefits of digital governance cannot be fully realized, and gaps in access and quality of public services will persist.

¹³ Gonalo Paiva Dias. "Determinants of e-government implementation at the local level: an empirical model." *Online Information Review* 44, no. 7 (2020): 1307-1326.

4.3. Strategies to Strengthen Digital Governance in Indonesia

To optimize the benefits of digital governance and overcome existing challenges, a comprehensive strengthening strategy is needed in Indonesia. One of the main strategies is to increase the technological infrastructure evenly. The government has launched various programs, such as the Palapa Ring project and the provision of village internet networks through the Bakti Kominfo program, which aims to expand internet access to remote areas.¹⁴ Adequate infrastructure will allow all levels of society to access government digital services optimally, so that the digital gap between regions can be reduced.

The second strategy is to increase the digital literacy of the community and government apparatus. Digital literacy is the main requirement for people to be able to use digital services effectively and safely. Training, socialization, and education programs related to the use of digital technology can improve technical skills and awareness about data security. Syaifurrohman¹⁵ emphasized that the capacity of state civil servants (*Aparatur Sipil Negara/ASN*) in adopting technology is also an important factor in the successful implementation of SPBE. Therefore, the development of digital competencies among government employees must be a priority to ensure that public services can run efficiently and professionally.

The third strategy is to strengthen cybersecurity and protect public data. Threats to digital systems can be minimized through the implementation of strict

¹⁴ Kominfo. "Laporan Program Bakti Kominfo dan Palapa Ring 2022." Kementerian Komunikasi dan Informatika Republik Indonesia, (2022), <https://www.komdigi.go.id/berita/>

¹⁵ Gonalo Paiva Dias. "Determinants of e-government implementation at the local level: an empirical model." *Online Information Review* 44, no. 7 (2020): 1307-1326.

security protocols, the development of encryption systems, and the improvement of competent human resources in the cyber field. According to Jauhari,¹⁶ data protection and information security are important foundations in building public trust in digital services. Thus, cybersecurity is not only a technical issue, but also a strategic aspect that supports the sustainability of digital governance.

The fourth strategy is cross-sector collaboration. Collaboration between the government, the private sector, academia, and society is essential in creating innovative solutions that are sustainable. Ahad and Barsei¹⁷ shows that the involvement of the private sector in the development of public service infrastructure and applications, such as “*Lapor!*” and “*Qlue*”, can accelerate the adoption of digital systems and improve the quality of services. Active participation of the community is also needed to provide input related to service needs and policy evaluation, so that the resulting policies are more targeted and responsive.

This overall strategy shows that strengthening digital governance requires a holistic approach that includes aspects of technology, human resources, security, and collaboration. With the integrated implementation of these strategies, digital governance in Indonesia can achieve the main goal of creating an efficient, transparent, accountable government, and increasing public participation in national

¹⁶ Arief Jauhari, M. Shabri Abd Majid, Hasan Basri, and Muslim A. Djalil. "Are E-government and Bureaucratic Reform Promoting Good Governance Towards A Better Performance Of Public Organization?." *Calitatea* 21, no. 175 (2020): 25-30.

¹⁷ Madya Putra Yaumil Ahad and Adhityo Nugraha Barsei. "Collaborative Governance Sistem Pemerintahan Berbasis Elektronik: Best Practice Dari Pemerintah Daerah Di Indonesia: Collaborative Governance In The Implementation Of Electronic-Based Governance Systems: Best Practices From Local Governments In Eastern Indonesia." *Jurnal Transformasi Administrasi* 13, no. 01 (2023): 52-74.

development. This strategy is also in line with the principle of good governance which is the foundation of the implementation of modern government in the digital era.

5. Discussion

The results of the study show that digital governance in Indonesia has great potential in improving bureaucratic efficiency, government transparency, and public participation. Bureaucratic efficiency is achieved through the digitization of public services that simplify procedures and speed up administrative processes. This is in line with the principles of good governance, which emphasizes the effectiveness and optimization of resources to achieve the best results for the community.¹⁸ This increase in efficiency not only reduces administrative burdens, but also lowers the cost and time required for people to obtain government services. Government transparency is also increased through the use of digital platforms that provide open access to information. The public can monitor government performance, understand the decision-making process, and identify potential irregularities. Thus, digital governance strengthens public accountability and provides a basis for more objective policy evaluation.

In addition, public participation facilitated by digital technology encourages active community involvement in policy formulation, implementation, and evaluation. Complaint applications such as "*Lapor!*" or the government's official

¹⁸ Arief Jauhari, M. Shabri Abd Majid, Hasan Basri, and Muslim A. Djalil. "Are E-government and bureaucratic reform promoting good governance towards a better performance of public organization?." *Calitatea* 21, no. 175 (2020): 25-30.

social media are a means for citizens to provide input, criticism, and suggestions, which in turn improves the quality of public services. However, this discussion also highlighted the various challenges that are still faced. The gap in technology infrastructure between regions results in unequal access to digital services, so that some people, especially in remote areas, are still left behind. Low digital literacy is an additional obstacle, because people who do not understand the correct use of technology will find it difficult to utilize government services optimally. Data security issues are also an important concern; Cyberattacks and potential data leaks can reduce public trust in digital systems, so the government must ensure strict information protection.

The strengthening strategy implemented shows the need for a holistic approach. Improving infrastructure, digital literacy, cybersecurity, and cross-sector collaboration have proven to be key factors to overcome the obstacles to implementing digital governance in Indonesia. Full support from central and local governments, as well as the involvement of the private sector, allows for the acceleration of digital transformation more effectively. In addition, public understanding of the benefits of digital governance will increase participation and reduce resistance to change. Conceptually, digital governance is not only a modernization of technology, but also a reform of bureaucratic systems and culture. This shows that technology is just a tool; Successful implementation depends on integration between technology, regulations, human resource capacity, and public participation. This research emphasizes that digital governance can be an important instrument in realizing efficient, transparent, accountable, and responsive

governance, as long as infrastructure, literacy, and security challenges can be overcome in an integrated manner.

6. Conclusion

Digital governance in Indonesia shows significant developments in supporting the implementation of efficient, transparent, and participatory governance. The implementation of SPBE as the main regulatory framework has provided a legal basis for the use of information and communication technology in administrative processes, public services, and policy-making. The main benefits obtained include the acceleration of bureaucracy, the disclosure of information to the public, and increased public involvement in policy evaluation and supervision. These three pillars strengthen each other and become an important foundation for the creation of the principle of good governance. However, the implementation of digital governance faces various challenges. The gap in technological infrastructure between urban and remote areas, the low level of digital literacy of people and government officials, and cybersecurity risks are significant obstacles. These barriers have the potential to reduce the effectiveness of digital services and reduce public trust in electronic-based government systems.

To overcome these obstacles, a comprehensive strengthening strategy is needed. Increasing access to technology infrastructure equally, developing digital literacy, strengthening cybersecurity, and cross-sector collaboration between the government, society, and the private sector are the keys to success. The synergy of these strategies not only allows for the optimization of the benefits of digital

governance, but also encourages the creation of an inclusive, accountable, and sustainable governance system. Overall, digital governance is not just a modernization of technology, but a comprehensive transformation that integrates innovation, regulation, and public participation. The success of its implementation will depend heavily on the ability of the government and society to face challenges, take advantage of opportunities, and adapt to technological dynamics and evolving public needs.

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