

The Role of Data Governance in Enhancing Government Transparency and Accountability

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ABSTRACT

This study aims to analyze the role of data governance in enhancing government transparency and accountability, as well as to identify the factors that support its implementation. The research employs a literature review method with a qualitative approach and descriptive analysis. Data were collected from Google Scholar, ScienceDirect, and various documents published by international organizations and credible government institutions during the period 2017–2026. The initial search process yielded 60 articles and documents, which were subsequently screened based on relevance, quality, and alignment with the research objectives, resulting in 49 sources being included in the analysis. Data analysis was conducted through thematic categorization, identification of key concepts, comparison of research findings, and interpretation. The results indicate that data governance plays a significant role in improving data quality, strengthening public information disclosure, reducing information asymmetry, and supporting government oversight and accountability processes. The findings also reveal that the successful implementation of data governance is influenced by policy quality, human resource capacity, and the level of information system integration across government agencies.

ABSTRAK

Penelitian ini bertujuan untuk menganalisis peran data governance dalam meningkatkan transparansi dan akuntabilitas pemerintahan serta mengidentifikasi berbagai faktor yang mendukung implementasinya. Penelitian menggunakan metode tinjauan pustaka dengan pendekatan kualitatif dan analisis deskriptif. Data diperoleh dari Google Scholar, ScienceDirect, serta berbagai dokumen dari organisasi internasional dan lembaga pemerintah yang kredibel pada periode 2017–2026. Proses pencarian awal menghasilkan 60 artikel dan dokumen, kemudian diseleksi berdasarkan relevansi, kualitas, dan kesesuaian dengan tujuan penelitian sehingga diperoleh 49 literatur yang digunakan dalam analisis. Teknik analisis data melalui tahapan pengelompokan tema, identifikasi konsep utama, perbandingan temuan penelitian, serta interpretasi. Hasil penelitian menunjukkan bahwa data governance berperan dalam meningkatkan kualitas data, memperkuat keterbukaan informasi publik, mengurangi asimetri informasi, serta mendukung proses pengawasan dan pertanggungjawaban pemerintah. Temuan penelitian juga menunjukkan bahwa keberhasilan implementasi data governance dipengaruhi oleh kualitas kebijakan, kapasitas sumber daya manusia, dan tingkat integrasi sistem informasi antarinstansi.

1. INTRODUCTION

Data governance has become an issue that is receiving increasing attention in public administration studies alongside the growing utilization of digital technology in government administration. Digital transformation has encouraged government institutions to collect, manage, store, and utilize vast amounts of data to support decision-making processes and public service delivery. This situation positions data as a strategic asset that determines the quality of government governance. Poorly structured data management can lead to various problems, such as information inconsistency, data duplication, reporting errors, and reduced public trust in public institutions (Bernardo et al., 2024). This condition indicates that data management requires a set of policies, standards, procedures, and monitoring mechanisms capable of ensuring data quality, security, and

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integrity throughout all governmental processes.

The study of data governance has evolved from the need for organizations to ensure that data are managed systematically and can be effectively utilized to support institutional objectives. Data governance is generally understood as a framework that regulates roles, responsibilities, policies, and data management processes to ensure that data are accurate, consistent, secure, and accountable. In the context of the public sector, the implementation of data governance is closely associated with efforts to establish government governance that is more transparent and responsive to societal needs. The existence of clear regulations regarding data management enables each organizational unit to have the same guidelines for generating, verifying, and distributing information (Acev et al., 2025; Guillen-Aguinaga et al., 2025). Such standardization helps reduce the potential for administrative errors while simultaneously improving the quality of information used in the public policy formulation process.

Transparency is one of the primary principles of good governance. This principle requires openness of information so that the public can understand the processes, decisions, and use of resources carried out by the government. Data governance plays a role in supporting transparency by providing accurate, up-to-date, and easily accessible data for various stakeholders. Systematically organized information provides opportunities for the public to monitor the implementation of government programs and the use of public budgets (Lourenço, 2023; OECD, 2022). The availability of verifiable data also helps reduce opportunities for information manipulation because every dataset has a clear source, recording mechanism, and validation procedure. This relationship indicates that the quality of transparency is strongly influenced by the quality of data management implemented within public organizations.

Government accountability is closely related to the ability of public institutions to explain and account for every action and decision that has been taken. Achieving accountability requires the support of valid data so that evaluation and monitoring processes can be conducted objectively. Data governance provides a foundation that enables every governmental activity to be properly documented through integrated and standardized recording systems. The availability of comprehensive data facilitates auditing processes, performance measurement, and the tracing of various decisions that have been made (Aryawati et al., 2024). This capability helps governments demonstrate compliance with regulations while strengthening institutional legitimacy in the eyes of the public. The role of data governance in this context becomes increasingly relevant as public demands for transparency and accountability continue to increase over time.

The development of the open government concept has further reinforced the urgency of implementing data governance in the public sector. Modern governments are required to provide broader access to information so that the public can participate in development processes and policy oversight. The implementation of information openness requires high-quality data to ensure that the information provided can truly be utilized by the public. Inaccurate or poorly managed data may instead lead to misunderstanding, distrust, and information conflicts (Danaher et al., 2023). The data governance framework helps ensure that published data have undergone adequate verification and quality control processes. This situation makes data governance one of the elements supporting the successful implementation of open government across various levels of public organizations.

Previous literature indicates that the implementation of data governance provides various benefits for public sector organizations, including improved data quality, administrative efficiency, reduced risk of errors, and strengthened evidence-based decision-making. Studies examining the relationship between data governance and transparency have found that effective data governance enhances information openness because data become more accessible and understandable to users (Damaris et al., 2025; Hanisch et al., 2023; Kim et al., 2026). Other studies have shown that public organizational accountability tends to improve when data management systems are available to enable more accurate activity tracking and performance evaluation processes (Pudjono et al., 2025; Tahir et al., 2025; Waddington et al., 2019). These findings demonstrate that data governance functions not only as a technical instrument but has also evolved into a strategic component in developing effective governance that is oriented toward public service.

Although the benefits of data governance have been widely discussed in various studies, its implementation still faces several complex challenges. Many government organizations continue to experience limitations in human resources, technological infrastructure, and interagency coordination in data management. Differences in data standards among organizational units often create difficulties in data integration and information exchange processes. Other challenges arise from limited awareness of data quality and suboptimal monitoring mechanisms for public information management. These challenges indicate that the

success of data governance is determined not only by the availability of technology but is also influenced by institutional aspects, organizational culture, and leadership commitment in implementing sustainable data governance.

Based on the above discussion, data governance can be understood as a foundation that supports the realization of transparency and accountability in government administration. Structured data management enables public information to be presented more accurately, consistently, and reliably, while accountability processes become easier to implement through clear and integrated documentation. The relationship among data governance, transparency, and accountability indicates that these three aspects mutually reinforce one another in improving the quality of government governance. The study of the role of data governance is becoming increasingly relevant to expand understanding of how data management can support the realization of a more transparent, accountable government capable of meeting public expectations for high-quality public services. Therefore, this study aims to analyze the role of data governance in enhancing government transparency and accountability and to identify its contribution to supporting public governance that is more effective, transparent, and oriented toward the interests of society.

2. THEORETICAL FRAMEWORK AND HYPOTHESES

Data Governance

Data governance is understood in various studies as a data management framework that encompasses policies, standards, procedures, and control mechanisms to ensure data quality, security, and integrity within public organizations (Machado et al., 2022). The implementation of data governance in the government sector plays a role in improving data consistency across institutions, reducing information duplication, and strengthening data reliability as a basis for decision-making. Most studies emphasize that the primary weakness in digital government governance lies in the suboptimal integration of data, making data governance the main instrument for building information systems that are more structured and reliable (Muchsin, 2025; Wagola et al., 2023). This condition demonstrates that the primary foundation of data governance lies in policy consistency and coordination among institutions in managing public information in an integrated manner.

Government Transparency

Government transparency refers to the openness of public information that enables citizens to access data related to policies, programs, and the use of public budgets (Arwati & Latif, 2019). Data governance directly contributes to improving transparency through the provision of more accurate, accessible, and standardized data. The literature also indicates that open public data enhances public participation in policy oversight and strengthens social control over government activities (Guo & Zhang, 2026; Luo et al., 2025). The better the quality of data management, the higher the level of transparency that can be achieved by public institutions. This indicates that transparency depends on the quality, consistency, and validity of the data presented to the public.

Public Accountability

Public accountability is associated with the government's ability to explain and justify every decision and the use of public resources to society (Shen, 2026). Data governance strengthens accountability through more structured, transparent, and traceable data documentation systems. Most studies confirm that the availability of valid data enables auditing, performance evaluation, and policy monitoring processes to be conducted more objectively. This condition demonstrates that accountability is highly dependent on the quality of the data management system implemented within government organizations (Ahmed et al., 2025; Nugraha et al., 2024). Therefore, data governance serves as an essential instrument to ensure that every governmental activity can be clearly accounted for based on verifiable data evidence.

Good Governance

Good governance is understood as a system of government administration that emphasizes the principles of transparency, accountability, effectiveness, and public participation (Almuqsith, 2025). Data governance is a key supporting element in achieving good governance because it provides valid information as the basis for decision-making. The literature also indicates that data integration across institutions can improve bureaucratic efficiency and reduce information inconsistencies in the public policy formulation process (Kautsar &

Mujahidin, 2025; Umasugi, 2025). Therefore, good governance is highly dependent on the quality of data management utilized by the government. This confirms that the success of bureaucratic reform is largely determined by the government's ability to establish an integrated and reliable data system.

Digital Transformation

Digital transformation in the public sector is characterized by the increasing utilization of information technology in government services and administration (Kasim et al., 2025). Digital transformation accelerates the need for integrated, secure, and real-time accessible data systems. Data governance is a key factor in ensuring that digitalization maintains the quality and security of public data. The literature also indicates that without effective data governance, digital transformation is at risk of generating information fragmentation and data inconsistency across institutions (X. Li et al., 2026; Y. Li & Zhu, 2026; Sarjito & Thamrin, 2026; Xu & Zuo, 2026). Therefore, digital transformation can only generate optimal outcomes when supported by a strong and sustainable data governance framework.

3. RESEARCH METHOD

This study employs a literature review method using a qualitative approach. This approach was selected because it enables researchers to understand, interpret, and synthesize various concepts, theories, and empirical findings related to the role of data governance in enhancing government transparency and accountability. The analysis was conducted descriptively to describe the development of the literature, patterns of research findings, and the conceptual relationships among data governance, transparency, and accountability in the public sector.

The research data were obtained from secondary literature collected through academic searches on Google Scholar and various credible scientific websites and databases, such as ScienceDirect, SpringerLink, MDPI, Emerald Insight, ResearchGate, Sage Journal, and Taylor & Francis Online. In addition, several supporting documents, including policy reports, data governance guidelines, and institutional publications, were obtained from the official websites of international organizations and government institutions, such as the OECD Library and government portals relevant to the research topic.

The literature search was conducted using keywords such as "data governance," "government transparency," "public accountability," "digital government," "open government data," "public sector governance," and various related keyword combinations. The literature search was limited to publications from the 2017–2026 period to obtain a more up-to-date overview of the development of data governance concepts and implementation in digital government.

The initial search identified 60 articles and documents relevant to the research topic. Subsequently, a step-by-step selection process was conducted based on predetermined inclusion and exclusion criteria. The inclusion criteria comprised publications that directly discussed data governance, government transparency, public sector accountability, digital governance, or the relationships among these variables; were available as scientific articles, conference proceedings, research reports, or policy documents with full-text access; and were published between 2017 and 2026. Meanwhile, the exclusion criteria included duplicate articles, publications discussing only technical aspects of information technology without relevance to government governance, documents containing incomplete information, and literature lacking substantial relevance to the research focus.

The screening process showed that 49 articles and documents met all eligibility criteria and were used as the primary sources for analysis. The selected literature was then analyzed using descriptive qualitative analysis through the stages of thematic classification, identification of key concepts, comparison of research findings, and interpretation of the relationships among data governance, transparency, and government accountability. The results of this analysis were subsequently used to develop a conceptual synthesis that provides a comprehensive overview of the contribution of data governance in supporting governance that is more transparent, accountable, and effective.



Figure 1. Research Methodology Flow Diagram

4. DATA ANALYSIS AND DISCUSSION

Data governance is the primary foundation for public information management in the era of digital government. This concept refers to a set of policies, procedures, standards, roles, and monitoring mechanisms that regulate how data are collected, stored, processed, shared, and utilized within organizations. In the context of government, data governance functions to ensure that the data used in public service delivery and decision-making processes are of high quality, accurate, consistent, secure, and accountable. The existence of data governance has become increasingly relevant because nearly all modern governmental activities depend on data, ranging from development planning, budget management, healthcare services, and education to the evaluation of public programs. When data governance operates effectively, governments have a greater capacity to provide reliable information to the public. Conversely, weak data governance often results in information inconsistency, service delays, decision-making errors, and a low level of public trust in government institutions.

The discussion of data governance can be explained through the perspective of Good Governance Theory, which positions transparency, accountability, participation, effectiveness, and the rule of law as the fundamental principles of government administration. This theory explains that the quality of governance is greatly influenced by the ability of institutions to provide open and accessible information to the public (Akbar & Ariesmansyah, 2024; Tjahjadi et al., 2021). Data governance serves as an instrument that enables these principles to be realized in public administration practice. Transparency cannot function optimally if the published data are inaccurate or difficult to verify. Accountability is also difficult to achieve if data are unavailable to measure performance and evaluate the use of public resources. This perspective demonstrates that data governance is not merely a technical aspect of information management but rather an integral part of efforts to establish high-quality governance. The better the implementation of data governance, the greater the opportunity for governments to strengthen legitimacy and public trust in the policies they implement.

Another relevant theory is Information Governance Theory, which emphasizes the importance of data control, quality, security, and strategic value within organizations. This theory views data as an asset that must be managed systematically to generate maximum benefits for organizations (Ghaffari et al., 2024). In the public sector, high-quality data enable governments to conduct more accurate planning, identify public needs more precisely, and allocate resources more effectively. The Information Governance framework also emphasizes the importance of clearly defined responsibilities in data management so that every piece of information has a clear source and can be traced. This condition is closely related to government accountability because auditing, evaluation, and monitoring processes require well-documented data. The relationship between Information Governance and accountability indicates that the quality of data governance determines the quality of accountability that governments can provide to the public.

The relationship between data governance and transparency can also be understood through Agency Theory. According to this theory, there is a relationship between the public as the principal and the government as the agent responsible for carrying out public mandates (Ramadhan et al., 2022). The primary issue in this relationship is the occurrence of information asymmetry between the government and the public.

When governments possess more information than the public, the potential for abuse of authority, data manipulation, and corrupt practices becomes greater. Data governance serves as a mechanism that can reduce this information gap by providing accurate, transparent, and easily accessible data. The resulting transparency enables the public to monitor government actions more effectively. Agency Theory explains that the smaller the information gap between the government and the public, the higher the level of accountability that can be achieved in government administration.

The findings of previous studies indicate that data governance has a positive relationship with transparency and accountability in the public sector. Various studies have found that government organizations implementing clear data governance standards tend to have higher reporting quality than organizations that do not yet have integrated data management systems (Bernardo et al., 2024; Gao et al., 2026; Kim et al., 2026). Other studies have shown that government data openness enhances public participation in monitoring public policies because the available information is easier to understand and verify (Khaerani & Samsu, 2025; T.-M. Yang & Wu, 2021). Studies on digital government have also found that data integration across government institutions can reduce the duplication of administrative work and improve the efficiency of public service delivery (Syafarudin & Abd, 2025; C. Yang et al., 2024). These findings demonstrate that data governance has broad impacts, not only on information quality but also on organizational effectiveness, public trust, and the quality of governmental decision-making.

One of the most successful examples of data governance implementation can be found in Estonia through its national data exchange system known as X-Road (e-Estonia, 2026a). This system enables various government institutions and private sector organizations to exchange data securely through a national interoperability platform. According to the Government of Estonia, approximately 99% of public services are available online 24 hours a day, while only a few specific services, such as marriage, divorce, and property transactions, still require physical presence. In addition, the nationwide use of digital signatures is estimated to save time and costs equivalent to approximately 2% of Estonia's Gross Domestic Product (GDP) annually. The X-Road system also implements an audit trail mechanism that allows citizens to identify who has accessed their personal data, thereby enhancing transparency and accountability in public data management (e-Estonia, 2026b). Estonia's success demonstrates that integrated data governance can improve bureaucratic efficiency, strengthen public trust, and support the sustainable digital transformation of government.

The success of data governance can also be observed in South Korea through the integrated public service platform Government24 (Government24, 2026). This portal integrates various central and local government services into a single digital system that is accessible to the public. According to the Government of South Korea, the Government24 platform provides access to more than 90,000 public administrative services through a single integrated portal. The success of this digital transformation has also led South Korea to become one of the highest-ranked countries in the United Nations E-Government Development Index (EGDI) 2024, with a score of 0.9679, placing it among the countries with the highest level of digital government maturity in the world (United Nations, 2024). Data integration across government institutions enables faster public service delivery, reduces document duplication, and improves the efficiency of government administration. The South Korean case demonstrates that data governance supported by data interoperability and digital services can enhance the quality of public services while strengthening bureaucratic transparency.

In Indonesia, the implementation of data governance has been realized through the One Data Indonesia policy established under Presidential Regulation Number 39 of 2019 (Government of the Republic of Indonesia, 2019). This program aims to unify data standards, metadata, reference codes, and data interoperability across government institutions. Through the national One Data Indonesia portal, the government has successfully compiled more than 590,000 datasets that are accessible to the public and various government agencies (One Data Indonesia, 2026). The presence of this platform has helped reduce data inconsistencies among ministries and government agencies that previously often produced different figures for the same development indicators. In addition to improving the quality of development planning and evaluation, national data integration also strengthens public information transparency and supports evidence-based policymaking. Although challenges remain in terms of data harmonization and institutional capacity, the continuously increasing number of datasets indicates that data governance has become an essential foundation for Indonesia's digital government transformation.

These three case studies demonstrate that the success of data governance is determined not only by technology but also by data standards, system interoperability, clear regulations, and strong accountability mechanisms. Estonia excels in terms of interoperability and transparency of data access, South Korea leads

in the nationwide integration of digital public services, while Indonesia focuses on harmonizing and standardizing data across government institutions. All three cases demonstrate that effective data governance can improve government efficiency, strengthen transparency, and deliver public services that are more responsive to societal needs, despite differing levels of maturity. Data governance has become one of the key prerequisites for achieving digital government that is effective, accountable, and sustainable.

Although the benefits of data governance are substantial, its implementation still faces various challenges. One of the primary issues is the low quality of data produced by public organizations. Data entry errors, duplicate data, outdated information, and differences in definitions across government institutions often result in inconsistencies that reduce the credibility of public information. These problems cause decision-making processes to become less accurate and may lead to policies that do not correspond to the needs of society. This condition demonstrates that transparency is closely related to the quality of the information being published. Information that is openly available but inaccurate may create misunderstandings that negatively affect public trust in government (Shahbazi & Bunker, 2024).

Another challenge that frequently arises is the limited availability of human resources in the field of data management. Many public organizations still face shortages of personnel with competencies in data management, data analytics, information security, and digital governance. Digital transformation often progresses more rapidly than the development of public officials' capacities, resulting in a skills gap in managing increasingly complex information systems (Tagscherer & Carbon, 2023). Consequently, many information systems that have already been developed are not utilized optimally, and the quality of the resulting data remains far below expectations. This challenge demonstrates that the success of data governance requires continuous investment in human resource development to ensure that data can be managed professionally and responsibly.

The next challenge is related to the weak coordination among government institutions. Many government agencies have different information systems, data standards, and work procedures, making data exchange difficult to implement. This condition results in information fragmentation that hinders national data integration. When data are not effectively interconnected, the processes of monitoring, program evaluation, and policy formulation become less efficient. Furthermore, the public often receives different information from different institutions, creating confusion and reducing trust in government (Amin & Hong, 2026; Widaningrum, 2017). This coordination challenge demonstrates that the success of data governance requires a cross-sectoral approach capable of integrating the diverse interests of organizations within a unified governance framework.

The first solution to overcome these various challenges is to strengthen national data standards and policies that are uniformly implemented across all government institutions. Clear standards regarding data formats, metadata, data quality, information security, and system interoperability will reduce differences in interpretation while improving information consistency across organizations. Integrated policies also help clarify the responsibilities of each party involved in data management, thereby making monitoring processes more effective. The implementation of national standards enables governments to establish a more harmonized data ecosystem and facilitate rapid information exchange. This step serves as the foundation for creating stronger transparency because the public receives consistent information from various government sources.

The second solution is to enhance human resource capacity through training, certification, and competency development in the field of data governance. Government officials need to have an adequate understanding of data quality, information security, data analytics, and the ethics of public data usage. The rapid pace of digital transformation requires increasingly complex technical and managerial capabilities; therefore, the competencies of public officials must evolve in line with technological advancements and organizational needs. Continuous training programs can help improve employees' ability to manage data accurately, validate information, understand interoperability principles, and implement appropriate data security standards. These efforts will reduce the risk of data management errors, improve the quality of the information produced, and strengthen the government's ability to provide evidence-based accountability supported by valid data to the public.

The third solution is to strengthen information system integration through the development of an integrated data platform that enables real-time, secure, and standardized data exchange among government institutions. System integration has become an urgent necessity because many government organizations

still operate within fragmented data environments, causing information to be dispersed across multiple disconnected platforms. The development of an integrated system will facilitate data synchronization, reduce information duplication, accelerate public service delivery, and improve the efficiency of government administration. The ability to access the same data simultaneously will also strengthen interagency coordination and produce more consistent policies. Furthermore, system integration enables monitoring and auditing processes to be conducted more effectively because all data management activities can be traced through a single interconnected information ecosystem.

Overall, this discussion demonstrates that data governance plays a highly strategic role in enhancing government transparency and accountability. The success of data management is determined not only by the availability of information technology but also by the quality of policies, the capacity of human resources, and the level of system integration utilized by public organizations. Various theories and previous research findings indicate that effective data governance can strengthen information openness, improve the quality of decision-making, and increase the likelihood of establishing public trust in government institutions. Findings from various international and national case studies further confirm that structured data management is one of the primary foundations for achieving government that is effective, responsive, and accountable. If the various implementation challenges can be addressed through strengthened policies, competency development for public officials, and information system integration, data governance will become an even stronger instrument in supporting the realization of governance that is transparent, accountable, and oriented toward high-quality public service.

Table 1. Data Governance in Enhancing Government Transparency and Accountability

No	Aspect	Key Findings
1	Data Governance Concept	Data governance is a system of policies, standards, procedures, roles, and monitoring mechanisms that regulate data management to ensure accuracy, consistency, security, quality, and accountability.
2	Good Governance Theory Perspective	Data governance serves as an instrument for achieving transparency, accountability, effectiveness, participation, and good governance.
3	Information Governance Theory Perspective	Data are regarded as strategic assets that must be managed systematically to support the quality of decision-making, monitoring, auditing, and public accountability.
4	Agency Theory Perspective	Data governance reduces information asymmetry between the government and the public, thereby enhancing transparency and public oversight of government.
5	Impact on Transparency	Effective data governance produces public information that is more accurate, open, easily accessible, and easily verifiable by the public.
6	Impact on Accountability	The availability of well-documented data facilitates performance evaluation, auditing, monitoring, and accountability for the use of public resources.
7	Previous Research Findings	Government organizations implementing data governance demonstrate better reporting quality, decision-making, and organizational effectiveness.
8	Open Government Data	Government data openness enhances public participation in policy oversight and promotes public trust.
9	Interagency Data Integration	Data interoperability reduces duplication of work, improves bureaucratic efficiency, and accelerates public service delivery.
10	Strategic Impact	Data governance contributes to improved information quality, organizational effectiveness, public trust, and the quality of data-driven policymaking.
11	Estonia Case Study	The X-Road system enables nationwide interoperability, provides 99% of public services online, and generates savings equivalent to approximately 2% of GDP annually through digitalization and data audit trails.
12	South Korea Case Study	Government ²⁴ integrates more than 90,000 public services and supports South Korea's position as one of the countries with the highest level of e-government maturity in the world.
13	Indonesia Case Study	The One Data Indonesia program has successfully integrated more than 590,000 datasets to improve data consistency, transparency, and evidence-based decision-making.
14	Success Factors	The success of data governance is determined by clear data standards, system interoperability, strong regulations, technology, and accountability mechanisms.
15	Implementation Challenges	The main challenges include poor data quality, duplicate data, information inconsistency, weak interagency coordination, and limited human resources for data management.

16	Impact of the Challenges	Poor data quality may reduce policy accuracy, hinder transparency, and diminish public trust in government.
17	Solution 1: Data Standardization	Strengthening national standards for data formats, metadata, data quality, security, and interoperability can improve the consistency of public information.
18	Solution 2: Human Resource Development	Training, certification, and competency enhancement for public officials in data governance are essential to support digital government transformation.
19	Solution 3: System Integration	The development of an integrated data platform enables real-time data exchange, reduces information fragmentation, and strengthens cross-agency coordination.
20	General Conclusion	Data governance is the primary foundation of digital government that can enhance transparency, accountability, public service efficiency, policy quality, and public trust when supported by adequate regulations, human resources, and system integration.

5. CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS

This study concludes that data governance plays a highly strategic role in enhancing government transparency and accountability through structured, accurate, consistent, secure, and accountable data management. The findings indicate that the quality of data governance influences the quality of public information delivered to society as well as the government's ability to account for every policy and program that is implemented. Various case studies, such as X-Road in Estonia, Open Government Data in South Korea, and One Data Indonesia, demonstrate that the implementation of data governance can improve the effectiveness of public service delivery, strengthen information openness, and enhance public trust in government. Nevertheless, the implementation of data governance still faces challenges, including suboptimal data quality, limited human resource competencies, and the lack of integrated information systems across government institutions. Therefore, continuous efforts are required to strengthen data governance within the public sector.

This study provides both theoretical and practical implications regarding the importance of data governance in achieving better governance. From a theoretical perspective, the findings reinforce Good Governance Theory, Information Governance Theory, and Agency Theory, which explain that effective data management can enhance transparency, reduce information asymmetry, and strengthen public accountability. From a practical perspective, the findings indicate that governments should position data governance as an integral component of their digital transformation strategy through strengthened regulations, data standardization, enhanced human resource capacity, and the development of integrated information systems to continuously improve the quality of public services, the effectiveness of decision-making, and public trust in government institutions.

This study has several limitations because it employs a literature review method that depends on previous research findings, reports, and available documents; therefore, the findings are conceptual and descriptive in nature. The literature analyzed was also limited to publications from the 2017–2026 period, meaning that relevant studies published outside this timeframe may not have been included in the review. In addition, this study did not conduct direct empirical testing within specific government institutions; therefore, it cannot specifically describe differences in the level of success of data governance implementation across various public organizational contexts or different levels of government.

Governments are recommended to strengthen the implementation of data governance through the development of integrated policies, national data standardization, enhanced human resource competencies, and the establishment of information systems capable of effectively supporting interoperability across government institutions. Public organizations should improve the quality of data management through continuous training, strengthened monitoring mechanisms, and the utilization of digital technologies that support data accuracy and security. Future research is recommended to employ empirical approaches, including quantitative, field-based qualitative, or mixed methods, to obtain a more comprehensive understanding of the influence of data governance on government transparency and accountability, as well as to identify the factors that determine the successful implementation of data governance across various sectors and levels of government.

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