

Digitalization in Strengthening Good Governance: A Case Study of e-Government Implementation in Local Government

Nur Azizah Manggabarani¹

¹Public Administration Study Program, Bosowa University, Indonesia

ARTICLE INFO

Received: 17 August 2024
Revised: 26 October 2024
Accepted: 04 December 2024
Available online: 12 December 2024

Keywords:

Good Governance
E-Government
Implementation

Corresponding Author:

Nur Azizah Manggabarani

Email:

nurazizah@gmail.com

Copyright © 2024, Asian Digital Governance Problems, Under the license [CC BY- SA 4.0](https://creativecommons.org/licenses/by-sa/4.0/)



ABSTRACT

Purpose: This study aimed to examine how digitalization contributes to strengthening good governance through the implementation of e-government in Makassar City. It explored how digital systems foster transparency, accountability, citizen participation, and administrative efficiency within a local governance context.

Subjects and Methods: This research employed a qualitative case study approach involving government officials, IT officers, administrative staff, civil society representatives, and citizens directly involved in digital public services during 2024. Data were collected through semi-structured interviews, field observations, and document analysis, then analyzed thematically using the principles of qualitative thematic analysis.

Results: The findings indicate that digital platforms such as SIPAKATAU, SIPAKALEBBI, and SIPAKARUNG improved public access to information, accelerated administrative services, strengthened procedural accountability, and expanded citizen participation through online complaint systems. The study also identified challenges related to digital literacy, internet accessibility, and institutional adaptation among public employees.

Conclusions: Digital governance in Makassar contributed significantly to strengthening good governance, although sustainable implementation requires inclusive access, organizational adaptation, and continuous human resource development.

INTRODUCTION

The accelerating pace of digital transformation across the globe has fundamentally altered how governments operate, communicate, and engage with citizens (Moser-Plautz & Schmidhuber, 2023; Kuldosheva, 2021; Latupeirissa et al., 2024). Over the past two decades, the integration of digital technology into governance has become a defining feature of public sector reform, reshaping administrative structures and democratic practices in both developed and developing countries. This transformation has moved beyond the simple digitization of documents or online service delivery.

It now encompasses a deeper rethinking of how governments ensure transparency, accountability, participation, and efficiency the four pillars that anchor the notion of good governance. As digital tools penetrate public institutions, they introduce new forms of visibility, new expectations of responsiveness, and new modes of civic participation that challenge long-standing bureaucratic traditions. The ongoing question, however, is whether digitalization genuinely strengthens governance in ways that are equitable and sustainable, or whether it simply

reconfigures old administrative practices through new technological means (Creutzig et al., 2022; Xu et al., 2022; Sama et al., 2022).

The idea that digital technologies can enhance good governance has gained prominence in both international development and public administration discourse (Popova et al., 2023; Burlacu et al., 2024; Ravšelj et al., 2022). Organizations such as the United Nations, the World Bank, and the OECD have emphasized the potential of e-government systems to improve transparency, reduce corruption, and promote inclusive participation. Studies from various national contexts suggest that when effectively implemented, digital platforms can bridge the gap between the state and its citizens by creating accessible information channels and automating bureaucratic procedures.

This optimism is not without caution. Scholars have increasingly argued that digital reforms are not merely technical undertakings but sociopolitical processes that unfold within existing institutional cultures. The effectiveness of e-government, therefore, depends not only on the quality of the technology itself but also on the readiness of institutions, the digital literacy of citizens, and the ethical values that guide public servants. The interplay of these elements ultimately determines whether digitalization serves as a vehicle for democratization or merely as a managerial tool for administrative efficiency (Stratu et al., 2023; Johansson et al., 2023; Creutzig et al., 2022).

In developing countries, including Indonesia, the adoption of e-government has been both ambitious and uneven. Since the early 2000s, the Indonesian government has promoted digitalization as a pathway to bureaucratic reform and as part of its commitment to realizing transparent and accountable governance. National initiatives such as the SPBE (Sistem Pemerintahan Berbasis Elektronik) policy framework have encouraged regional governments to integrate technology into their public service systems. However, the success of these initiatives has varied considerably across regions, largely due to disparities in digital infrastructure, human resource capabilities, and local governance culture.

While some provinces and cities have made remarkable progress, others continue to struggle with fragmented systems, low adoption rates, and limited public engagement. These variations reveal that digital transformation is not simply a matter of policy compliance but a process deeply intertwined with local political will, administrative capacity, and community participation. Makassar City presents an instructive case within this national landscape. As one of the most rapidly developing cities in Eastern Indonesia, Makassar has positioned itself as a pioneer of local digital governance through the implementation of several e-government innovations, including the platforms Sipakatau, Sipakalebbi, and Sipakarung.

These platforms are designed to facilitate communication between citizens and government, streamline public service delivery, and enhance transparency in administrative processes. Their introduction marks a significant step toward aligning local governance practices with the principles of good governance. The real question extends beyond the existence of these systems to how they actually function in practice how they are used, perceived, and sustained by those who govern and those who are governed. Understanding the dynamics of implementation in Makassar therefore provides valuable insights into the practical realities and limitations of digital reform in a local governance context.

While numerous studies have examined e-government initiatives in Indonesia, few have explored their lived implications for governance transformation at the city level. Much of the existing research focuses on policy frameworks or technical design, often overlooking the socio-institutional interactions that determine their effectiveness. The present study seeks to address this gap by examining how digitalization in Makassar's local government contributes to strengthening the key elements of good governance. By focusing on transparency, accountability, participation, and efficiency, the study analyzes both the institutional and experiential dimensions of e-government practice.

It explores how digital platforms have influenced bureaucratic culture, citizen engagement, and administrative decision-making within the specific political and cultural context of Makassar. This approach allows the research to move beyond metrics and toward an interpretive

understanding of digital governance as a lived process. The significance of this research lies in its ability to link local experiences with broader theoretical and policy debates about digital governance. In doing so, it contributes to a growing body of literature that views digitalization not as a linear modernization project but as a negotiated process of change shaped by local realities.

By situating the Makassar case within the wider discourse on good governance, the study offers both empirical and conceptual insights into the ways digital initiatives can reinforce or challenge institutional integrity. Furthermore, it underscores the importance of understanding digital governance as a relational process one that depends on mutual adaptation between technology, institutional norms, and public expectations. Such an understanding is essential for policymakers and practitioners seeking to design digital reforms that are not only efficient but also democratic, inclusive, and ethically grounded (Anastasiadou et al., 2021; Berch et al., 2024; Tauchnitz & Ahmed, 2024).

In light of these considerations, this study sets out to explore the central question of how digitalization strengthens good governance within the local government of Makassar City. Through a qualitative case study approach, it investigates the mechanisms through which e-government initiatives are implemented, perceived, and experienced by both officials and citizens. The study's findings are expected to shed light on the evolving relationship between technology and governance in Indonesia, offering lessons that extend beyond the local context to inform the broader pursuit of digital democracy and accountable governance in the twenty-first century. Ultimately, this research affirms that digitalization, when thoughtfully designed and inclusively managed, holds transformative potential not only for administrative efficiency but also for the deepening of democratic values in public life.

METHODOLOGY

Research Design and Case Selection

This study adopted a qualitative case study design that seeks to explore, in depth, how digitalization has been shaping and strengthening the practice of good governance in the context of Makassar City's local government. The qualitative approach was selected because it provides the flexibility to capture the complexity and multi-dimensionality of governance transformation that cannot be fully represented through numerical data. A case study, as conceptualized by Yin, allows the researcher to examine the phenomenon within its real-life context, understanding not only what is implemented but also how and why it unfolds as it does within a particular institutional and socio-political landscape. Through this design, the study aimed to uncover the meanings, experiences, and institutional dynamics surrounding the city's digital transformation efforts. Makassar City was chosen as the research site because it represents one of the leading examples of e-government development in Eastern Indonesia. Over the past few years, the city government has introduced several digital platforms that aim to promote transparency, accountability, and more citizen-centered service delivery. Programs such as Sipakatau, Sipakalebbi, and Sipakarung have become important instruments through which the local administration attempts to modernize its bureaucratic structure and reduce the distance between government and citizens. This makes Makassar a compelling case for studying the real-world implications of digital governance on the principles of good governance, which include transparency, accountability, participation, responsiveness, and effectiveness. Understanding how these initiatives operate on the ground provides a nuanced view of how technology can both facilitate and complicate institutional reform.

Participants and Sampling Strategy

The participants in this study consisted of individuals who were directly involved in or affected by the city's e-government initiatives. They included local government officials responsible for digital programs, IT officers who manage the technical implementation, administrative staff who interact daily with digital systems, and citizens who use these platforms to access public services. The inclusion of community representatives and civil society actors enriched the data by incorporating external perspectives on how these technologies reshape public engagement. Participants were selected using a purposive sampling strategy, which ensured that only those with substantial experience and insight related to the e-government process were included. Data

collection continued until theoretical saturation was reached, which occurred after approximately twenty participants had been interviewed. This process allowed the study to capture a comprehensive range of experiences and viewpoints without redundancy.

Data Collection Techniques

Data collection was conducted through several complementary techniques to ensure depth and triangulation. The primary method involved in-depth semi-structured interviews designed to elicit participants' lived experiences and reflections on the benefits and challenges of the digitalization process. These interviews, each lasting between forty-five and sixty minutes, were conducted in both face-to-face settings and through virtual meetings depending on participants' availability. To supplement the interviews, document analysis was carried out by reviewing policy papers, strategic plans, government reports, and public communication materials related to Makassar's digital transformation agenda. These documents provided insight into institutional narratives, priorities, and discursive strategies behind the implementation of e-government. In addition, non-participant observation was conducted in selected service offices to witness firsthand how digital applications were used by both officials and citizens in routine administrative interactions. Field notes from these observations offered contextual grounding that enriched the interpretation of interview and document data.

Data Analysis Procedures

The analytical process followed the principles of thematic analysis as articulated by Braun and Clarke, which emphasize a systematic movement from data immersion to meaning construction. Initially, all interview transcripts, observation notes, and documents were read multiple times to achieve familiarity with the data. This was followed by a process of open coding where meaningful units of information were identified and labeled. These codes were then clustered into emerging themes that reflected recurring patterns across data sources. As themes began to take shape, they were refined and organized around key elements of good governance such as transparency, accountability, citizen participation, and administrative efficiency. The final stage of analysis involved interpreting these themes in relation to the theoretical frameworks guiding the study, namely the principles of good governance and the conceptual foundations of digital governance. NVivo software was used to organize and manage the coding process, ensuring consistency and analytical traceability.

Trustworthiness and Research Rigor

To maintain the trustworthiness and rigor of the research, several validation strategies were integrated throughout the process. Triangulation was achieved by combining interviews, documents, and observations, which allowed for the cross-verification of findings. Member checking was also employed by sharing preliminary interpretations with a few key participants to ensure that the researcher's understanding accurately reflected their intended meanings. Peer debriefing sessions with fellow researchers specializing in governance and digital policy further contributed to the analytical depth, as critical feedback encouraged refinement of the interpretative lens. An audit trail was maintained to document methodological decisions and the evolution of codes and themes, providing transparency and accountability in the analytical process.

Ethical Considerations

Ethical considerations were carefully observed at every stage of the research. Ethical clearance was obtained from the affiliated institution before data collection began. Participants were informed about the aims and procedures of the study, and their participation was entirely voluntary. Informed consent was secured in writing, and participants were assured of the confidentiality and anonymity of their responses. All data were securely stored and used solely for academic purposes. The researcher remained sensitive to the participants' comfort and privacy, particularly when discussing potential weaknesses or challenges in governance systems.

Theoretical Framework and Analytical Orientation

The overall interpretation of findings was situated within the framework of good governance principles developed by the United Nations Development Programme and the digital governance theories proposed by Heeks and subsequent scholars. These conceptual frameworks provided an analytical lens through which the empirical data could be understood not merely as administrative improvement but as part of a broader sociotechnical transformation in local governance. By integrating these frameworks, the study was able to connect local experiences in Makassar with global discourses on the digitalization of governance, offering a contextually grounded yet conceptually expansive understanding of how technology mediates institutional integrity, accountability, and civic trust.

RESULTS AND DISCUSSION

This section presents the findings of the study regarding the implementation of e-government in strengthening good governance within the local government of Makassar City during 2024. The findings were generated from interviews, field observations, and document analysis involving government officials, IT officers, administrative staff, civil society representatives, and citizens who actively interacted with the city's digital governance system. The analysis identified four major themes that reflect the influence of digitalization on governance practices: (1) transparency and public access, (2) accountability and administrative integrity, (3) citizen participation and responsiveness, and (4) efficiency and institutional adaptation.

The findings demonstrate that digitalization has transformed not only administrative procedures but also the interaction between government institutions and society. Digital platforms such as SIPAKATAU, SIPAKALEBBI, and SIPAKARUNG became central mechanisms for improving service accessibility, accelerating complaint handling, and strengthening institutional transparency throughout 2024. The implementation process also revealed several challenges, including unequal digital literacy, disparities in internet access, and varying levels of institutional readiness. All findings presented in this section are based on empirical data collected during the 2024 research period through interviews, observations, and government documents.

Transparency and Public Access in 2024

One of the most significant findings identified in this study concerns the improvement of transparency within public administration after the implementation of digital governance systems in 2024. Participants consistently explained that prior to digitalization, public information was often difficult to access and heavily dependent on direct interaction with government offices. Citizens frequently needed to visit several departments to obtain administrative updates or verify service requirements. The implementation of integrated digital platforms gradually reduced this dependency by enabling real-time online access to administrative information.

The interview findings indicate that transparency improved because citizens could independently monitor administrative progress through digital applications. Government officials also acknowledged that the digital system minimized opportunities for information concealment and increased procedural openness within bureaucratic activities.

Table 1. Perceived Changes in Transparency During 2024

| Participant Category | Before Digitalization | After Digitalization (2024) | Main Observation |
|-------------------------------|-----------------------|-----------------------------|--------------------------------------|
| Government Officials | Low–Moderate | High | Easier monitoring and reporting |
| Citizens | Low | Moderate–High | Better access to service information |
| Civil Society Representatives | Moderate | Very High | Increased public scrutiny |

Source: Interview data and field observations, 2024.

A government official explained:

“Before digitalization, people often had to visit the office repeatedly just to check administrative documents. In 2024, most information became available through the application. Citizens can monitor the process directly, and officials also become more careful because delays are immediately visible in the system.” (Participant 4, Government Official, 2024)

Similarly, a citizen participant stated:

“Public services are much more transparent now. We no longer depend on personal connections to get information because everything can be tracked online. Even though technical problems sometimes happen, the system is still more open compared to previous years.” (Participant 11, Citizen, 2024)

Field observations conducted in 2024 confirmed these findings. Several public service offices provided digital kiosks and mobile-based tracking systems that allowed citizens to independently verify administrative progress. Officers were also observed using dashboard-based monitoring systems instead of relying solely on manual records. These practices illustrate the transition toward digitally traceable governance. Despite these improvements, several participants noted that transparency remained uneven across social groups. Citizens living in peripheral districts reported unstable internet connectivity and limited digital literacy, which restricted their ability to fully access online public services.

A civil society representative explained:

“Transparency improved significantly in 2024, but not every citizen benefits equally. Communities in outer areas still experience internet limitations, and some residents are not familiar with digital applications.” (Participant 15, Civil Society Representative, 2024)

These findings indicate that transparency in digital governance depends not only on technological systems but also on equitable public accessibility.

Accountability and Administrative Integrity in 2024

The second major finding concerns the strengthening of accountability within Makassar’s local bureaucracy during 2024. Participants explained that digital systems increased procedural traceability by automatically recording administrative activities, complaint responses, approval processes, and service completion times. This digital traceability reduced opportunities for undocumented transactions and strengthened organizational discipline among public officials.

Table 2. Administrative Accountability Indicators

| Indicator | Before Digitalization | Digital Governance System in 2024 |
|-------------------------|------------------------------|---|
| Service Records | Manual and incomplete | Fully digitalized with timestamp verification |
| Complaint Response Time | Average 7 days | Average 2 days |
| Employee Monitoring | Manual reporting | Dashboard-based monitoring |

Source: Government reports and interview findings, 2024.

An IT officer explained:

“Every activity is now automatically recorded in the system. In 2024, supervisors can directly identify delays or procedural mistakes through digital tracking. Employees also became more disciplined because all activities are visible and measurable.” (Participant 7, IT Officer, 2024)

Another administrative staff member stated:

“Digitalization improved accountability because administrative processes became easier to monitor. In the past, some records were difficult to verify because everything was manual. Now, every process has digital evidence.” (Participant 6, Administrative Staff, 2024)

Observational findings also revealed that supervisors regularly used digital dashboards to evaluate staff performance and monitor service responsiveness. Several participants acknowledged that the awareness of continuous digital monitoring changed employee behavior and encouraged stronger compliance with administrative procedures. Accountability improvements were still influenced by institutional commitment and leadership consistency. Some departments continued to combine manual and digital systems, which occasionally created inconsistencies in data synchronization.

A senior government official explained:

“Technology alone cannot guarantee accountability. In 2024, some departments still depended partly on manual systems because organizational adaptation was still ongoing. Leadership commitment remains essential.” (Participant 2, Senior Government Official, 2024)

These findings demonstrate that digital accountability is closely connected to institutional culture and administrative leadership.

Citizen Participation and Government Responsiveness

The third major finding concerns the expansion of citizen participation and government responsiveness during 2024. The implementation of online complaint systems and digital feedback platforms significantly increased opportunities for citizens to communicate directly with local government institutions.

Table 3. Citizen Participation Patterns

| Type of Participation | Before Digitalization | 2024 Digital Participation |
|-----------------------|----------------------------|--------------------------------------|
| Service Complaints | Limited and manual | Integrated online reporting system |
| Policy Consultation | Occasional public meetings | Regular online consultation sessions |
| Public Feedback | Minimal | Continuous digital submissions |

Source: Government documentation and field interviews, 2024.

A community representative explained:

“In 2024, citizens became more active in submitting complaints because the process is easier. Previously, people had to visit government offices directly, which discouraged many residents from participating.” (Participant 13, Community Representative, 2024)

Another citizen participant stated:

“When public services are slow or infrastructure problems happen, citizens can immediately report them through online applications. Government responses are also faster compared to previous years.” (Participant 10, Citizen, 2024)

Government officials acknowledged that digital feedback systems influenced administrative evaluation and policy adjustment throughout 2024.

One official explained:

“Digital feedback helped us identify recurring problems more efficiently. Complaints submitted through the system became an important reference for evaluating service performance.” (Participant 5, Government Official, 2024)

Nevertheless, participation remained uneven across demographic groups. Younger and digitally literate citizens were more active in online engagement, while elderly citizens and marginalized communities participated less frequently.

A civil society representative explained:

“Digital participation increased significantly during 2024, but the most active users are still younger urban communities. Elderly residents and peripheral communities are less represented in online platforms.” (Participant 16, Civil Society Representative, 2024)

These findings indicate that digital governance can strengthen democratic participation while simultaneously reproducing certain social inequalities related to technological access.

Efficiency and Institutional Adaptation in 2024

The final theme concerns efficiency improvements and institutional adaptation during the implementation of digital governance in 2024. Interview and observational data demonstrate that digitalization accelerated administrative procedures and strengthened coordination between government departments.

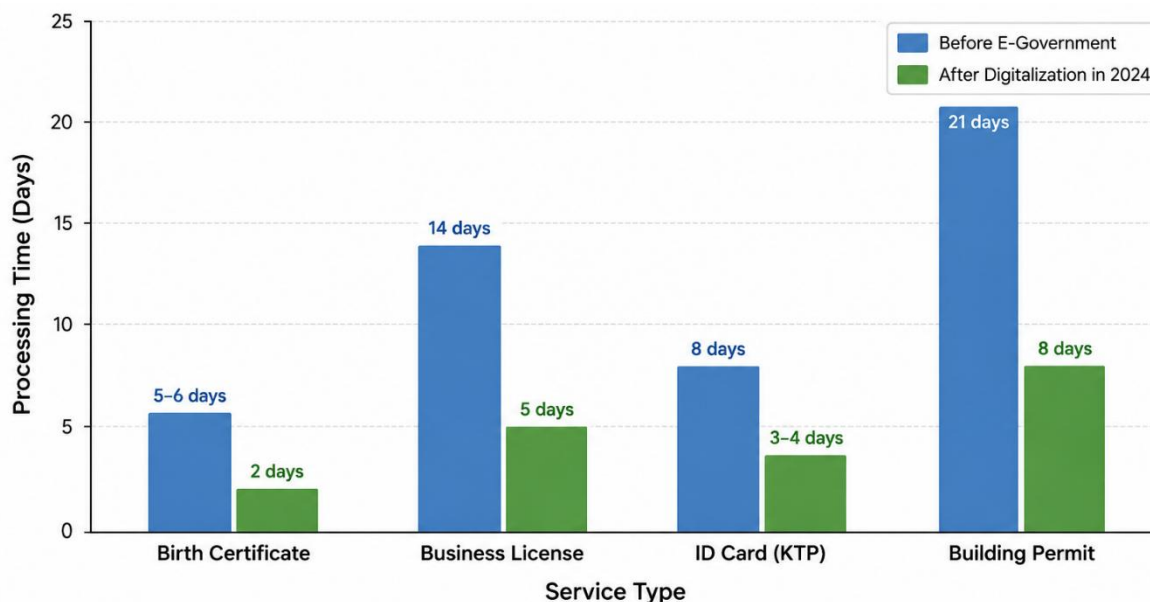


Figure 1. Average Public Service Processing Time

Source: Administrative reports and field observations, 2024.

An administrative officer explained:

“Administrative coordination improved significantly in 2024 because departments now share integrated databases. Verification processes became faster, and citizens no longer needed to repeatedly submit the same documents.” (Participant 8, Administrative Officer, 2024)

A citizen participant also stated:

“Public services are much faster now. Many administrative processes can already be completed online, so citizens do not need to visit offices repeatedly.” (Participant 12, Citizen, 2024)

Institutional adaptation was also supported through digital capacity-building programs for civil servants during 2024.

Table 4. Civil Servant Capacity Development Programs

| Program Focus | Number of Participants | Main Impact |
|----------------------------------|------------------------|---------------------------------------|
| Digital Literacy Training | 426 participants | Improved digital competence |
| Dashboard and Analytics Training | 357 participants | Better reporting accuracy |
| Data Ethics and Integration | 426 participants | Increased awareness of accountability |

Source: Human Resource Development Office, 2024.

A training coordinator explained:

“Many employees initially struggled to adapt to the digital system, especially older staff members. However, training programs throughout 2024 improved confidence and operational capability.” (Participant 9, Training Coordinator, 2024)

An IT officer further explained:

“The biggest challenge is not the technology itself, but changing work habits. Some employees are still more comfortable with manual procedures, so adaptation takes time.”
(Participant 7, IT Officer, 2024)

The findings indicate that efficiency improvements in Makassar’s e-government implementation during 2024 were strongly influenced by organizational learning and institutional adaptation. Technology accelerated administrative performance, but sustainable governance transformation depended on continuous human resource development and institutional commitment.

Discussion

Digital Governance and the Strengthening of Good Governance in Makassar City

The findings of this study demonstrate that the implementation of e-government in Makassar City during 2024 contributed significantly to strengthening several dimensions of good governance, particularly transparency, accountability, citizen participation, responsiveness, and administrative efficiency (Mutiarin et al., 2024; Mannayong, 2024; Wiwi et al., 2024; Pananrangi et al., 2024; Afshari et al., 2024; Isabella et al., 2024). The qualitative evidence obtained from interviews, observations, and document analysis indicates that digitalization reshaped not only administrative procedures but also the interactional relationship between government institutions and citizens. These findings support the argument that digital governance should be understood as a sociotechnical transformation in which technological systems, institutional culture, and public engagement operate simultaneously to influence governance quality.

The improvement of transparency emerged as one of the most visible consequences of digital transformation in Makassar. The implementation of SIPAKATAU, SIPAKALEBBI, and other digital platforms reduced bureaucratic opacity by enabling citizens to independently monitor administrative processes in real time. This condition reflects the theoretical perspective proposed by digital governance scholars who argue that transparency increases when information accessibility becomes decentralized and publicly verifiable. The findings reveal that citizens no longer relied heavily on personal networks or repeated office visits to obtain administrative information. Government officials also acknowledged that digital visibility increased procedural caution among employees because delays and service inconsistencies could be immediately identified through digital systems.

These patterns indicate that transparency was strengthened not merely through the availability of information, but through the institutionalization of traceable governance practices (Gupta et al., 2020; Mason, 2020; Schleifer et al., 2019; Lopez & Fontaine, 2019). At the same time, the findings reveal that transparency remained uneven due to disparities in internet access and digital literacy. Citizens living in peripheral areas experienced greater difficulty accessing online services, demonstrating that technological openness does not automatically produce equal accessibility. This condition reinforces previous studies emphasizing that digital governance may reproduce existing social inequalities when technological infrastructure and public digital competence remain unevenly distributed.

The strengthening of accountability within Makassar’s bureaucracy also reflects a broader institutional shift toward digitally traceable governance. Qiu et al. (2023), Görtz et al. (2022) said that, administrative activities that were previously dependent on manual documentation became increasingly standardized through automated recording systems, timestamp verification, and dashboard-based monitoring. These findings align with governance theories emphasizing that accountability improves when organizational processes become measurable, monitorable, and less dependent on discretionary decision-making. The implementation of digital systems reduced undocumented administrative activities and strengthened internal supervision mechanisms. Interview data suggest that employees developed stronger procedural discipline because their performance became continuously visible within the digital system. Such findings indicate that accountability was reinforced through both technological surveillance and organizational behavioral adjustment. The study also reveals that accountability remained closely tied to leadership commitment and institutional consistency. Several departments continued relying on hybrid

administrative systems combining digital and manual procedures, creating occasional synchronization problems. This situation confirms that technological systems alone are insufficient to guarantee administrative integrity unless accompanied by sustained institutional adaptation and managerial enforcement.

Citizen participation and government responsiveness also experienced substantial transformation during 2024. Digital complaint systems and online consultation mechanisms expanded opportunities for citizens to communicate directly with local government institutions (Bewinda et al., 2024; Indiahono, 2021; David et al., 2023). These findings support contemporary governance perspectives that position digital participation as an important mechanism for strengthening democratic interaction between state institutions and society. The increase in online reporting activity demonstrates that digitalization lowered procedural barriers that previously discouraged public participation. Citizens could submit complaints, monitor responses, and provide feedback without requiring physical interaction with government offices. Government officials also acknowledged that digital feedback influenced service evaluation and administrative adjustment processes.

This indicates the emergence of a more responsive governance structure in which public input became integrated into institutional decision-making processes. Nevertheless, participation patterns remained socially uneven. According to Hatuka (2024) younger citizens and urban communities were significantly more active within digital platforms compared to elderly populations and peripheral communities. Such findings demonstrate that digital participation remains influenced by educational background, technological familiarity, and internet accessibility. Participation within digital governance therefore cannot be separated from broader structural inequalities affecting public technological access and literacy (Anzar et al., 2024; Robinson et al., 2020).

The findings regarding efficiency and institutional adaptation illustrate how digital governance accelerated administrative coordination and service delivery in Makassar City. Public service processing times decreased substantially after the implementation of integrated digital systems, particularly in licensing, civil registration, and permit administration. These improvements were supported by shared databases, automated verification procedures, and stronger interdepartmental coordination. Observational findings confirmed shorter waiting times and reduced bureaucratic complexity within public service offices. The efficiency gains identified in this study correspond with previous research arguing that digital integration minimizes procedural fragmentation and reduces repetitive administrative practices.

The findings also demonstrate that efficiency improvements were not produced solely through technological automation, but through organizational learning and institutional adaptation. Civil servant training programs played a critical role in strengthening digital competence and improving administrative confidence among employees. Participants acknowledged that adaptation remained gradual, particularly among older employees who were more familiar with conventional bureaucratic procedures. This condition suggests that digital transformation is fundamentally dependent on human capacity development and organizational cultural change. Institutional readiness therefore becomes equally important as technological infrastructure in determining the sustainability of digital governance reform.

The findings collectively indicate that the implementation of e-government in Makassar City during 2024 succeeded in strengthening important elements of good governance, although several structural and institutional challenges remained unresolved. Transparency, accountability, participation, and efficiency improved through the integration of digital systems into administrative practice (Sarifudin & Damanik, 2024; Rhamadhani & Edeh, 2024; Sari & Muslim, 2023). The study also demonstrates that digital governance operates as a relational process requiring continuous interaction between technology, institutions, and citizens. Technological innovation alone cannot automatically produce democratic governance outcomes unless supported by equitable access, organizational adaptation, ethical leadership, and sustainable human resource development. The Makassar case therefore illustrates that digital transformation within local governance is not simply a technical modernization project, but a broader institutional transition toward more transparent, responsive, and accountable public administration.

CONCLUSION

The implementation of e-government in Makassar City during 2024 demonstrates that digitalization has contributed significantly to strengthening the principles of good governance through improved transparency, accountability, citizen participation, responsiveness, and administrative efficiency. The integration of digital platforms such as SIPAKATAU, SIPAKALEBBI, and SIPAKARUNG enabled citizens to access public information more easily, monitor administrative processes, and communicate directly with government institutions, while also encouraging greater procedural discipline and traceability within the bureaucracy. The findings further reveal that digital governance reshaped institutional practices by accelerating service delivery, improving interdepartmental coordination, and promoting a more responsive governance culture. Despite these achievements, the study identified persistent challenges related to unequal internet access, limited digital literacy, and varying levels of institutional readiness, particularly among peripheral communities and older administrative staff. These conditions indicate that sustainable digital governance requires not only technological infrastructure but also continuous human resource development, inclusive public access, ethical leadership, and organizational adaptation. The Makassar case therefore illustrates that digital transformation can function as an important instrument for strengthening democratic and accountable governance when supported by inclusive and adaptive institutional practices.

REFERENCES

- Afshari, H., Zolghadr, M., & Partovi, A. (2024). Public Policy in Tehran Toward E-Government Development and Smart City Implementation. *Digital Transformation and Administration Innovation*, 2(3), 114-130.
- Anastasiadou, M., Santos, V., & Montargil, F. (2021). Which technology to which challenge in democratic governance? An approach using design science research. *Transforming government: People, process and policy*, 15(4), 512-531. <https://doi.org/10.1108/TG-03-2020-0045>
- Anzar, M., Hasbullah, H., & Asraf, I. (2024). The influence of digital literacy on citizen engagement and participation in e-government services for inclusive digital governance. *Journal Social Civilecial*, 2(2), 87-98. <https://doi.org/10.71435/610495>
- Berch, V., Lankevych, A., Naturkach, R., Bysaha, Y., & Prodan, V. (2024). The role of digital technologies in building an inclusive and transparent society: an analysis of the legal mechanisms of democratic governance. *Amazonia Investiga*, 13(79), 177-188. <https://doi.org/10.34069/AI/2024.79.07.14>
- Bewinda, R., Rahmadany, A. F., & Achmad, M. (2024). Community Complaint Services Through Electronic Complaint Channels in Increasing the Effectiveness of Government Affairs Compulsory Basic Services. *Journal of Humanities and Social Sciences Studies*, 6(9), 89-97. <https://doi.org/10.32996/jhsss.2024.6.9.11>
- Burlacu, S., Crețu, R. C., Potcovaru, A. M. B., & Călin, A. M. (2024). Integrative digital governance: The role of public administration in promoting sustainable development amid post-pandemic technological innovations. In *Proceedings of the International Conference on Business Excellence* (Vol. 18, No. 1, pp. 725-732). Sciendo. <https://doi.org/10.2478/picbe-2024-0063>
- Creutzig, F., Acemoglu, D., Bai, X., Edwards, P. N., Hintz, M. J., Kaack, L. H., ... & Zumwald, M. (2022). Digitalization and the Anthropocene. *Annual review of environment and resources*, 47(1), 479-509. <https://doi.org/10.1146/annurev-environ-120920-100056>
- David, A., Yigitcanlar, T., Li, R. Y. M., Corchado, J. M., Cheong, P. H., Mossberger, K., & Mehmood, R. (2023). Understanding local government digital technology adoption strategies: A PRISMA review. *Sustainability*, 15(12), 9645. <https://doi.org/10.3390/su15129645>
- Görtz, M., Byczkowski, M., Rath, M., Schütz, V., Reimold, P., Gasch, C., ... & Hohenfellner, M. (2022). A platform and multisided market for translational, software-defined medical

- procedures in the operating room (OP 4.1): proof-of-concept study. *JMIR Medical Informatics*, 10(1), e27743. <https://doi.org/10.2196/27743>
- Gupta, A., Boas, I., & Oosterveer, P. (2020). Transparency in global sustainability governance: to what effect?. *Journal of environmental policy & planning*, 22(1), 84-97. <https://doi.org/10.1080/1523908X.2020.1709281>
- Hatuka, T. (2024). A conceptual framework for understanding neighbourhoods in the digital age. *Urban Studies*, 61(16), 3232-3246. <https://doi.org/10.1177/00420980241257392>
- Indiahono, D. (2021). Bureaucratic Reform by Building Trust in Citizens: Best Practices from Local Online Complaints. *Policy & Governance Review*, 5(2), 146-163. <https://doi.org/10.30589/pgr.v5i2.347>
- Isabella, I., Alfitri, A., Saptawan, A., Nengyanti, N., & Baharuddin, T. (2024). Empowering digital citizenship in Indonesia: Navigating urgent digital literacy challenges for effective digital governance. *Journal of Governance and Public Policy*, 11(2), 142-155. <https://doi.org/10.18196/jgpp.v11i2.19258>
- Johansson, J., Thomsen, M., & Åkesson, M. (2023). Public value creation and robotic process automation: normative, descriptive and prescriptive issues in municipal administration. *Transforming Government: People, Process and Policy*, 17(2), 177-191. <https://doi.org/10.1108/TG-11-2021-0193>
- Kuldosheva, G. (2021). Challenges and opportunities of digital transformation in the public sector in transition economies: Examination of the case of Uzbekistan.
- Latupeirissa, J. J. P., Dewi, N. L. Y., Prayana, I. K. R., Srikandi, M. B., Ramadiansyah, S. A., & Pramana, I. B. G. A. Y. (2024). Transforming public service delivery: A comprehensive review of digitization initiatives. *Sustainability*, 16(7), 2818. <https://doi.org/10.3390/su16072818>
- Lopez, L., & Fontaine, G. (2019). How transparency improves public accountability: The extractive industries transparency initiative in Mexico. *The Extractive Industries and Society*, 6(4), 1156-1167.
- Mannayong, J. (2024). Evaluation of the effectiveness of digital-based public services in Makassar City. *International Journal of Economics and Management Research*, 3(2), 147-165. <https://doi.org/10.55606/ijemr.v3i2.214>
- Mason, M. (2020). Transparency, accountability and empowerment in sustainability governance: a conceptual review. *Journal of Environmental Policy & Planning*, 22(1), 98-111. <https://doi.org/10.1080/1523908X.2019.1661231>
- Moser-Plautz, B., & Schmidhuber, L. (2023). Digital government transformation as an organizational response to the COVID-19 pandemic. *Government Information Quarterly*, 40(3), 101815. <https://doi.org/10.1016/j.giq.2023.101815>
- Mutiarin, D., Khaerah, N., Nyssa, A. V. I., & Nasrulhaq, N. (2024). E-government development: Catalysing agile governance transformation in Indonesia. *Journal of Contemporary Governance and Public Policy*, 5(1), 87-110. <https://doi.org/10.46507/jcgpp.v5i1.270>
- Pananrangi, A. R., Mustafa, D., Askar, A., & Rizal, A. (2024). Analyzing public policy effectiveness in enhancing accountability and transparency in service quality. *JPPi (Jurnal Penelitian Pendidikan Indonesia)*, 10(4), 696-705. <https://doi.org/10.29210/020244750>
- Popova, L., Seniv, B., Korol, V., Galushko, O., & Biriukov, I. (2023). The role of digital technologies in the public administration sphere. *Cuestiones Políticas*, 41(76). <https://doi.org/10.46398/cuestpol.4176.11>
- Qiu, H. S., Lieb, A., Chou, J., Carneal, M., Mok, J., Amspoker, E., ... & Dabbish, L. (2023, April). Climate coach: A dashboard for open-source maintainers to overview community dynamics. In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems* (pp. 1-18). <https://doi.org/10.1145/3544548.3581317>

- Ravšelj, D., Umek, L., Todorovski, L., & Aristovnik, A. (2022). A review of digital era governance research in the first two decades: A bibliometric study. *Future Internet*, 14(5), 126. <https://doi.org/10.3390/fi14050126>
- Rhamadhani, R. F., & Edeh, F. O. (2024). Citizen Participation and Digital Governance in Public Sector Accountability. *Sinergi International Journal of Accounting and Taxation*, 2(4), 200-210. <https://doi.org/10.61194/ijat.v2i4.715>
- Robinson, L., Schulz, J., Dunn, H. S., Casilli, A. A., Tubaro, P., Carvath, R., ... & Khilnani, A. (2020). Digital inequalities 3.0: Emergent inequalities in the information age. *First Monday*, 25(7). <https://dx.doi.org/10.5210/fm.v25i7.10844>
- Sama, L. M., Stefanidis, A., & Casselman, R. M. (2022). Rethinking corporate governance in the digital economy: The role of stewardship. *Business Horizons*, 65(5), 535-546. <https://doi.org/10.1016/j.bushor.2021.08.001>
- Sari, R., & Muslim, M. (2023). Accountability and transparency in public sector accounting: A systematic review. *Amkop Management Accounting Review (AMAR)*, 3(2), 90-106. <https://doi.org/10.37531/amar.v3i2.1440>
- Sarifudin, R., & Damanik, F. H. S. (2024). Enhancing transparency and accountability in public administration through information technology utilization. *Gema Wiralodra*, 15(1), 32-40. <https://doi.org/10.31943/gw.v15i1.661>
- Schleifer, P., Fiorini, M., & Auld, G. (2019). Transparency in transnational governance: The determinants of information disclosure of voluntary sustainability programs. *Regulation & governance*, 13(4), 488-506. <https://doi.org/10.1111/rego.12241>
- Stratu-Strelet, D., Gil-Gómez, H., Oltra-Badenes, R., & Oltra-Gutierrez, J. V. (2023). Developing a theory of full democratic consolidation: Exploring the links between democracy and digital transformation in developing eastern European countries. *Journal of Business Research*, 157, 113543. <https://doi.org/10.1016/j.jbusres.2022.113543>
- Tauchnitz, E., & Ahmed, S. (2024, October). Framing Ethical e-Governance: A Plaidoyer for a Human-Rights based Digital Democracy Approach. In *Proceedings of the 17th International Conference on Theory and Practice of Electronic Governance* (pp. 22-27). <https://doi.org/10.1145/3680127.3680182>
- Wiwi, W., Nur, A. C., & Mahyuddin, A. A. (2024). Digital Government (A Study of the Value of Usefulness and Technology Adoption in the Regional Development Information System/SIPD of Palopo City). *International Journal of Public Policy and Bureaucracy*, 1(1), 128-138.
- Xu, J., She, S., & Liu, W. (2022). Role of digitalization in environment, social and governance, and sustainability: Review-based study for implications. *Frontiers in psychology*, 13, 961057. <https://doi.org/10.3389/fpsyg.2022.961057>