

The Effect of E-Government Information System Implementation on Public Service Quality and Transparency: Case Study at Sei Putih Barat Village

Hapipah Zahra Sirait¹, Windi Ayunanda², Eva Ulina Gultom³, Albar Al Buqhory⁴, Elvandry pasaribu⁵, Irawan^{6,*}

^{1,2,3,4,5,6}Faculty of Social Sciences, Accounting Study Program, Universitas Pembangunan Panca Budi, Medan, Indonesia

E-mail : ¹hapipahzahrasirait@gmail.com, ²windiayunanda07@gmail.com, ³evagultom145@gmail.com, ⁴albaralbuqhory21@gmail.com, ⁵elvandrypasaribu04@gmail.com, ⁶irawan@dosen.pancabudi.ac.id

*E-mail Corresponding Author: irawan@dosen.pancabudi.ac.id

Abstract

The implementation of an electronic-based government system (e-government) is a strategic effort by the government to improve the quality of public services and government transparency, including at the village level. This study aims to analyze the effect of the implementation of the e-government information system on the quality of public services and transparency in Sei Putih Barat Village. This study uses a quantitative approach with a survey method. Data were collected through questionnaires distributed to village residents as respondents and analyzed using statistical analysis techniques. The data plan used is 60 data. The expected results of this study show that the implementation of e-government information systems has a positive and significant effect on the quality of public services. In addition, the implementation of e-government also has a positive and significant effect on the transparency of village administration. These findings indicate that the optimization of e-government implementation can improve service quality and public information disclosure at the village level. This study is expected to serve as evaluation material for village governments in developing digital-based public services and transparency.

Keywords : *E-government, Public Service Quality, Transparency.*

I. INTRODUCTION

The development of information and communication technology (ICT) has driven major changes in governance in various countries, including Indonesia. The use of digital technology in government administration, or e-government, has become one of the main strategies for improving the quality of public services and strengthening government transparency and accountability. Digital bureaucratic transformation through e-government is intended to respond to public demands for faster, more efficient, and more open services in the digital age. Research shows that digital transformation not only simplifies service processes but also strengthens interactions between the government and the public with the aim of rebuilding public trust in government services (Saputra et al., 2024).

The implementation of e-government at the local level, as examined in various case studies, has been shown to have a positive relationship with the quality of public services. Previous studies have stated that e-government is a fundamental policy that can transform the quality of services from conventional to more modern, with the hope of increasing the effectiveness of service provision to the public (Aritonang, 2017). In addition, digital-based service innovations are seen as an important effort to ensure

that government services can meet the needs of the community in a more responsive and efficient manner (Salsabillah et al., 2024).

Apart from the public service aspect, e-government also plays an important role in increasing government transparency. According to Musri and colleagues, the implementation of e-government has been proven to significantly increase transparency in state administration by providing more open and accessible information to the wider community (Musri et al., 2024). This open access to information allows the public to be more effectively informed about and monitor the governance process, which is an important indicator of good governance.

However, the implementation of e-government at the village level has not always been optimal, as there are still various challenges such as limited technological infrastructure, human resource competencies, and the level of digital literacy among the community. This condition can be seen from the results of a study which shows that although e-government has the potential to accelerate the delivery of public services and open access to information, these challenges still need to be overcome so that the benefits can be felt comprehensively by the community (Permana, 2024).

Thus, this study will empirically examine the effect of e-government information system implementation on the quality of public services and government transparency in Sei Putih Barat Village. The findings of this study are expected to provide a clearer picture of the effectiveness of e-government in the context of village administration and serve as input for policymakers to improve public services and governance in the future (Pertiwi et al., 2021).

II. RESEARCH METHODOLOGY

A. Stewardship Theory

Stewardship Theory, proposed by F. David Schoorman (1997), provides a strong conceptual framework for understanding the dynamics of public organization management, including village administration. In this case, the village administration acts as a steward that is motivated to act in the best interests of the village community (principal) because the village administration is a responsible steward. The implementation of e-government is in line with the principles of Stewardship Theory, which emphasizes the importance of efficiency, effectiveness, transparency, and accountability in government administration.

B. E-government

E-government is the use of information and communication technology by the government in the administration of government and public services. The application of e-government aims to improve efficiency, effectiveness, and the quality of public services through an integrated digital system. Aritonang (2017) states that e-government is capable of transforming public services from a conventional system into a modern service that is faster, more transparent, and more accountable. In the context of village administration, e-government is realized through village information systems, village websites, and administrative service applications that enable the community to access services and information more easily.

C. Quality of Public Services

The quality of public services is the level of excellence of services provided by the government to the community in accordance with the needs and expectations of service users. The quality of public services can be seen from the aspects of timeliness of service, ease of procedure, clarity of information, and responsiveness of government officials. Salsabillah et al. (2024), explains that digital-based public services have the potential to improve service quality if supported by a reliable and easy-to-use system. With e-government, the service process becomes more efficient, transparent, and oriented towards public satisfaction.

D. Transparency

Transparency is a principle of openness in government administration that enables the public to obtain information easily, accurately, and in a timely manner. Transparency is one of the main pillars in realizing good governance. According to Rusdiana & Nasihudin (2018), in accordance with applicable regulations, transparency is the act of providing accurate and open financial information to the public, based on the belief that the public has the right to know openly and comprehensively how the government manages the resources it provides. Local governments and their communities will be horizontally responsible for transparent regional financial management, which will result in efficient, accountable, and responsive governance that addresses the desires and needs of the community (Purba & Amrul, 2018).

According to (Musri et al., 2024), the implementation of e-government contributes significantly to increased transparency because digital systems enable the government to convey public information openly and make it accessible to the wider community. Good transparency will increase public trust in the government, including at the village level.

E. The Relationship Between E-Government and Public Service Quality and Transparency

The implementation of e-government is closely related to improvements in public service quality and government transparency. The digitization of services enables the government to provide faster, more accurate, and more responsive services, while also opening up broad access to public information. Research by Agustina (2021) and Hasan et al., (2024) shows that e-government has a positive effect on service quality and transparency, although there are still challenges in the form of limited human resources and technological infrastructure. Therefore, the effectiveness of e-government is highly dependent on the level of implementation and readiness of village governments and communities.

In the study by Pertiwi et al., (2021), the research shows that e-government in transparency uses an implementation system that is carried out in coordination with the community to identify problems or benefits arising from the implementation of e-government in realizing transparency. Furthermore, research by (Yaya & Sukardi, 2025) shows that the implementation of e-government and community participation have a significant positive effect on the performance of village governments. GGG has been proven to strengthen the influence of e-government implementation on the performance of village governments, but it does not significantly

moderate the influence of community participation on the performance of village governments.

Furthermore, (Putri & Sigit, 2025) shows that the implementation of e-Government can improve the efficiency of public services, although challenges such as the lack of technological infrastructure remain a major obstacle. Based on these research results, the focus of the study will be directed at evaluating the impact of e-government implementation on the quality of public services and transparency. The limitation of this study lies in its scope, which only covers Sei Putih Village, so the results may not be entirely relevant to other areas.

Conceptual Framework

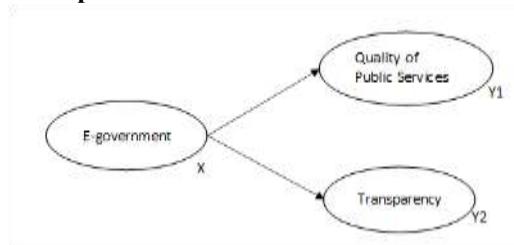


Figure 1. Conceptual Framework

In this framework, the implementation of E-government information systems acts as an independent variable (X). Good implementation is characterized by ease of access to services, speed of process, accuracy of information, and availability of systems that can be used by the wider community. This independent variable is assumed to have an influence on two dependent variables, namely public service quality (Y1) and transparency (Y2). The hypothesis obtained in this study is as follows:

H₁: The implementation of the E-government information system has a positive and significant effect on the quality of public services in Sei Putih Barat Village.

H₂: The implementation of the E-government information system has a positive and significant effect on the level of service transparency in Sei Putih Barat Village.

Optimal E-government implementation is believed to improve the quality of public services, as the service process becomes faster, procedures are simpler, and services are more responsive to community needs. This contributes to increased public satisfaction with the services provided by the village government. In addition, E-government also affects government transparency, as digital systems enable the provision of public information that is open and easily accessible, such as service information, work programs, and budget management. This transparency plays an important role in increasing public trust and supporting the realization of good governance.

This study uses a quantitative approach with a causal associative research method, which is a study that aims to determine the effect of independent variables on dependent variables. A quantitative approach was chosen because this study focuses on measuring variables numerically and testing hypotheses through statistical analysis. This method is considered appropriate for analyzing the effect of e-government information system implementation on public service quality and government transparency in Sei Putih Barat Village. The research data used in this study is primary data obtained directly from respondents (residents of Sei Putih Barat Village) through the distribution of structured questionnaires.

Based on this description, the research framework illustrates that the implementation of the E-government information system affects the quality of public services and transparency in Sei Putih Barat Village, which will then be tested empirically through field research.

Table 1. Variable and Scale

Variable	Definition	Indikator	Scale
<i>E-government</i>	E-government is the use of information and communication technology by the government in the administration of government and public services.	1. Technology Infrastructure 2. Information Quality 3. System Service Quality 4. Human Resource Capacity	Likert
Public Service Quality	Public service quality is the level of excellence in service provided by the government to the community in accordance with the needs and expectations of service users.	1. <i>Tangibles</i> 2. <i>Reliability</i> 3. <i>Responsiveness</i> 4. <i>Assurance</i> 5. <i>Empathy</i>	Likert
Transparency	Transparency is the principle of openness in government administration that enables the public to obtain information easily, accurately, and in a timely manner.	1. Information Disclosure 2. Accountability 3. Accessibility 4. Public Participation	Likert

Source: processed data (2025)

III. RESULTS

Based on research objectives and theoretical framework described above, this study is expected to show that implementation of e-government information system has positive and significant effect on public service quality in Sei Putih Barat Village. This study is in line with e-government theory which states that utilization of information technology in government can improve efficiency, effectiveness, and quality of public service. Aritonang (2017) asserts that e-government can transform public services from a conventional system to a modern service system that is faster, more structured, and more responsive. With a digital-based information system, the village administration service process is expected to be more accessible, have clear procedures, and reduce waiting times for the community.

In addition, the research results are also expected to show that the implementation of e-government has a positive and significant effect on the transparency of village administration. This finding is in line with the theory of transparency in the concept of good governance, which emphasizes the importance of public information disclosure and government accountability. Musri et al., (2024) state that e-government enables the government to provide information openly and in real-time, so that the public can easily access information related to services, policies, and government administration management. In the context of Sei Putih Barat Village, the implementation of a village information system is expected to increase public information disclosure, such as information on administrative services, village programs, and budget management, which will ultimately strengthen public trust in the village government.

The relationship between e-government implementation, public service quality, and government transparency is expected to be mutually reinforcing. Improving public service quality through e-government not only provides convenience and satisfaction for the community, but also creates a more open service system that can be monitored by the public. This is in line with the opinion of Salsabillah et al. (2024), who state that the quality of digital-based public services will improve if the information system used is capable of providing accurate, easily accessible, and accountable information. Thus, e-government acts as a strategic instrument in improving service quality and government transparency.

However, the results of the study also reveal that the effectiveness of e-government implementation is greatly influenced by several

factors. Rizky et al. (2025) state that the main factors include technological infrastructure readiness, competent human resource capacity, political commitment from government leaders, and supportive regulations. Hasan et al., (2024), emphasize that although e-government has great potential in improving service quality and transparency, the limited competence of the apparatus and low digital literacy of the community can be inhibiting factors. According to (Sari, 2020), the lack of digital literacy among the public is a major obstacle in accessing and utilizing e-government services in various regions. Therefore, if the impact is not optimal, this can be explained by the limited ability of village officials to manage information systems and the low utilization of technology by the public.

Overall, the discussion of the results of this study is expected to reinforce previous theories and findings that state that the implementation of e-government information systems plays an important role in improving the quality of public services and government transparency. The findings of this study are expected to not only contribute academically to the development of e-government studies, but also provide practical implications for village governments in formulating policies and strategies for developing more effective and sustainable digital-based public services.

IV. CONCLUSION

Based on the results of the discussion described above, it can be concluded that the implementation of the e-government information system has a positive and significant effect on the quality of public services in Sei Putih Barat Village. The use of information technology in the delivery of village administrative services has improved efficiency, speed of service, clarity of procedures, and the responsiveness of village officials to the needs of the community. This shows that e-government plays a strategic role in improving the quality of public services at the village government level.

In addition, this study also concluded that the implementation of e-government information systems has a positive and significant effect on the transparency of village administration. The application of digital systems enables public information disclosure, ease of access to information, clarity of policies, and increased accountability of information conveyed to the public. This increased transparency contributes to the growth of public trust in village administration and supports the realization of the principles of good governance.

The results of this study reinforce previous theories and findings that e-government not only

serves as a tool for modernizing government administration, but also as a means of improving the quality of public services and government transparency. However, the effectiveness of e-government implementation still depends heavily on the readiness of technological infrastructure, the capacity of village officials, and the level of digital literacy among the community.

Based on the results of this study, the government of Sei Putih Barat Village is advised to continue optimizing the implementation of the e-government information system by improving the quality of technological infrastructure, strengthening the capacity of village officials, and developing service systems that are easily accessible and usable by the community. In addition, efforts are needed to improve the digital literacy of the community so that the use of electronic-based services can run effectively. For future research, it is recommended to expand the coverage area and add other relevant variables in order to obtain more comprehensive research results with stronger generalizability.

V. REFERENCES

Agustina, D. P. (2021). Improving the Quality of Public Services Through the Implementation of E-Government in Bali. *Equity: Journal of Economic Education*, 9(2), 424–430.

Algiffary, M. A., & Sutabri, T. (2023). Analysis of E-Lapkin Service Quality Using the E-Servqual Method in the Palembang City Government. *Restikom Journal: Research in Information Technology and Computers*, 5(1), 21–31.

Aritonang, D. M. (2017). The Impact of E-Government System on Public Service Quality in Indonesia. *European Scientific Journal*, 90–111.

Hasan, R., Setiawan, A., Raffi, M. K., & Nursetiawan, I. (2024). Implementation of E-Government to Improve Public Transparency in the Provision of Integrated Services in Ciamis Regency. *DIALEKTIKA Journal: Journal of Social Sciences*, 22(2), 438–447.

Kartius, N. A., & Angelina, N. (2024). *Good Governance: Transparency in Public Services at the Pasir Penyu Subdistrict Office, Indragiri Hulu Regency*. 1(1), 14–25.

Musri, M., Pasaribu, F. R., Khudri, N., Ariyati, Y., & Rahman, Y. (2024). Implementation of E-Government in Improving Transparency and Accountability in State Administration. *Journal of Education and Teaching Review*, 7, 8888–8893.

Permana, A. I. (2024). Implementation of E-Government to Improve Public Services in North Pelawi, Langkat. *JIPTI: Journal of Community Service*, 1(3), 38–44.

Pertiwi, A., Dema, H., Mustanir, A., & Anugrah, E. (2021). The Implementation of E-Government in Realizing Transparency in Village Governance (A Study of the Bulo Timoreng Village Administration). *Praja: Scientific Journal of Governance*, 9, 130–139.

Purba, R. B., & Amrul, A. M. (2018). Implementation of Local Government Financial Accounting Systems, Public Transparency, and Control Activities for Financial Accountability in the Local Finance Agency of Tanah Datar Regency. *Journal of Accounting and Business Research*, 18(2), 65–78.

Putri, A. Y., & Sigiro, B. (2025). Implementation of E-Government System in Improving Accessibility and Quality of Public Services in Depok City Regional Government. *Journal of Social and Political Sciences*, 4(1), 1–10.

Rizky, J., Cempaka, R., & Aprilia, N. (2025). The Use of E-Government to Improve Transparency and Accountability in Public Services. *NETWORK: Journal of Information Technology, Communication, and Computer Science*, 1(1), 20–29.

Rusdiana, A., & Nasihudin. (2018). Performance Accountability and Research Reporting. *Research and Publication Center, SGD State Islamic University Bandung*.

Salsabillah, N. W., Zuhri, S., & Swastiawati, Y. (2024). Analysis of Digital-Based Public Service Quality in Jakarta: E-Governance Quality (E-Govqual) and Importance Performance Analysis (IPA) Methods. *Transparency: Journal of Administrative Science*, 7, 163–173.

Saputra, W. N., Ema, I., Sari, I. N., & Ramadhani, Q. T. (2024). Digital Bureaucratic Transformation in Public Services: A Case Study of E-Government Implementation. *Journal of Social, Economic, and Humanities (Sosiera)*, III, 82–94.

Sari. (2020). Challenges and Strategies for Infrastructure Improvement in the Implementation of E-Government in Indonesia. *Public Policy Journal*, 8(2), 65–75.

Yaya, R., & Sukardi. (2025). The Effect of E-Government Implementation and Community Participation on Village Government Performance with Good Government Governance as a Moderating Variable. *Balance: Journal Of Accounting And Business*, 10(1), 69–81.