Analysis of E-Government Service Quality Using the E-GovQual Method (A Case Study at the Department of Communication and Information of Muara Enim Regency)

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Abstract

This study analyzes the quality of e-government services using the E-GovQual method at the Department of Communication and Information of Muara Enim Regency. Data collection was conducted through questionnaires, interviews, and observations with a total of 110 respondents. Validity test results indicated that all variable indicators exceeded the R-table value (R-count > 0.1562), confirming their validity. Reliability tests demonstrated consistent results for each variable: efficiency (0.581), trust (0.562), reliability (0.605), and citizen support (1.000). The findings reveal that the service quality of the Muara Enim Regency e-government website is generally satisfactory. However, several aspects, particularly user trust and citizen support, require improvement to enhance overall service effectiveness and user satisfaction.

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Introduction

Public service quality is one of the most critical determinants of institutional performance and citizen satisfaction in modern governance. According to Lewis and Booms (1983) and Tjiptono (2016), service quality refers to the extent to which the service provided aligns with or exceeds user expectations. When a public institution is capable of delivering high-quality, transparent, and responsive services, it not only strengthens public trust but also enhances the institution's legitimacy and credibility. Conversely, inadequate service delivery can lead to dissatisfaction, inefficiency, and the erosion of public confidence in government institutions. Thus, measuring and improving service quality are central to ensuring effective governance and sustainable public administration.

In the digital transformation era, e-government has emerged as a strategic innovation to improve accessibility, efficiency, and accountability in public service delivery. E-government refers to the use of information and communication technology (ICT) by government agencies to provide information and services to citizens, businesses, and other stakeholders. This digital approach aims to minimize bureaucratic barriers, enhance transparency, and promote citizen participation. In Indonesia, the development of e-government systems has been accelerated by national policies such as the Electronic-Based Government System (SPBE), which emphasizes digital integration and service quality improvement at both central and regional levels.

Within this national framework, the Government of Muara Enim Regency has implemented an e-government system to support public communication and service delivery through the official website (www.muaraenimkab.go.id). The platform serves as an interface for citizens to access public information, government announcements, and administrative services. However, despite the availability of this system, there has been limited empirical evaluation regarding how effectively it meets user expectations. Without systematic assessment, it becomes difficult to identify whether the e-government platform has achieved its intended goals of efficiency, accessibility, and satisfaction. The absence of such evaluation creates a research gap that this study seeks to address.

To evaluate the quality of e-government services comprehensively, a structured and validated measurement model is necessary. One of the models that has gained prominence in assessing e-government quality is the E-GovQual model, developed by Papadomichelaki and Mentzas (2012). This model extends the principles of traditional service quality frameworks such as SERVQUAL, adapting them to the digital government context. The E-GovQual model assesses several dimensions that influence user satisfaction and trust, including reliability, efficiency, citizen support, privacy, and responsiveness. These dimensions provide a multidimensional understanding of how e-government systems perform in delivering digital public services.

Applying the E-GovQual method in the context of Muara Enim Regency is particularly relevant given the increasing expectations of citizens for seamless, reliable, and user-friendly online services. The Department of Communication and Information serves as the leading institution responsible for managing and maintaining the e-government infrastructure in the region. Evaluating its service quality not only provides insight into system performance but also informs decision-makers about potential improvements in design, content management,

and user engagement. Moreover, understanding public perception is essential for formulating policies that foster greater citizen participation and trust in digital governance initiatives.

Therefore, this study aims to analyze the quality of e-government services at the Department of Communication and Information of Muara Enim Regency using the E-GovQual method. The findings are expected to contribute both theoretically and practically: theoretically, by enriching the literature on e-government service quality evaluation in the Indonesian context; and practically, by offering strategic recommendations to enhance service performance and citizen satisfaction. Ultimately, strengthening e-government service quality is a crucial step toward realizing transparent, accountable, and inclusive governance in the digital era.

Methodology

This study employs the E-GovQual model to evaluate the service quality of e-government platforms from a user's perspective. E-GovQual comprises four primary dimensions efficiency, trust, reliability, and citizen support which collectively consist of 21 measurable attributes representing the essential elements of e-government service quality (Papadomichelaki & Mentzas, 2012).

1. Efficiency – Refers to the usability of the website and the clarity of its information content.
2. Trust – Indicates the degree to which users believe the website is secure and protects personal information.
3. Reliability – Reflects the consistency, accuracy, and timeliness of service delivery.
4. Citizen Support – Represents the extent to which government assistance enables users to access information and resolve service issues.

Data were gathered using a mixed-method approach that included questionnaires, interviews, and direct observations. The survey involved 110 respondents comprising government employees, students, and general users residing in Muara Enim Regency. Both online and offline distribution methods were utilized to reach a broad demographic sample.

Data analysis involved three stages: Validity testing, using correlation analysis to determine the relevance of each item (threshold: R-count > 0.1562). Reliability testing, using Cronbach's alpha to ensure internal consistency. Confirmatory Factor Analysis (CFA), to validate the underlying factor structure of each dimension.

Results and Discussion

Result

The results of the validity and reliability testing confirmed that the measurement instruments used in this study were both statistically sound and conceptually consistent with the objectives of evaluating e-government service quality. The validity test results showed that all questionnaire items achieved R-count values higher than the minimum threshold of 0.1562, indicating that each item effectively measured the intended construct. This finding suggests that respondents' perceptions were accurately captured through the designed indicators for efficiency, trust, reliability, and citizen support. The high item validity strengthens the credibility of subsequent analyses and ensures that the E-GovQual dimensions were appropriately represented in the dataset.

The reliability analysis further supported the robustness of the measurement model. Cronbach's alpha coefficients for all dimensions indicated acceptable internal consistency—efficiency (0.581), trust (0.562), reliability (0.605), and citizen support (1.000). Although some values were slightly above the minimum acceptable limit of 0.5, these coefficients are considered sufficient given the exploratory nature of the study and the contextual diversity of e-government services. The particularly high alpha value for the citizen support dimension (1.000) suggests a strong coherence among the indicators measuring public engagement and feedback responsiveness. Overall, these results imply that the questionnaire items were reliable and capable of producing consistent measurements across different respondents.

To further validate the suitability of the dataset for advanced statistical analysis, the Measure of Sampling Adequacy (MSA) was calculated and found to exceed 0.6 for all variables. This confirms that the data were appropriate for factor analysis. The subsequent Confirmatory Factor Analysis (CFA) provided additional evidence of the model's robustness, as all four latent variables—efficiency, trust, reliability, and citizen support—achieved factor loadings above 0.5. These results collectively validate the structural soundness of the E-GovQual model in the context of e-government service quality evaluation in Muara Enim Regency. Hence, the findings affirm that the model can effectively capture citizens' perceptions of digital public service performance, providing a strong empirical foundation for policy recommendations aimed at improving e-government implementation.

Discussion
Efficiency

The efficiency dimension yielded satisfactory results, demonstrating that users generally find the website easy to navigate and informative. Indicators such as E3 (the site map is well organized, 0.430), E1 (the site structure is easy to navigate, 0.425), and E5 (the information displayed is clear, 0.424) received positive responses. However, E7 (form completion information is adequate, 0.37) scored lowest, suggesting the need for clearer instructions and better user guidance. Enhancing layout design and updating content regularly could further improve user accessibility and engagement.

Trust

The trust dimension received the lowest scores, indicating user concerns regarding data protection and transparency. Indicators such as TR1 (obtaining a username is secure, 2.98), TR2 (only necessary data are requested, 2.98), and TR4 (data usage is clearly explained, 2.50) revealed perceived weaknesses in privacy assurance. Many users access the website primarily for information retrieval rather than transactional activities, which may explain limited awareness of security features. Strengthening communication about data protection policies and improving site encryption protocols could enhance public confidence.

Reliability

Reliability achieved the highest score among all dimensions, reflecting user satisfaction with the website's consistency and performance. Indicators such as RB1 (forms can be downloaded quickly, 3.80), RB2 (e-government services are available and accessible, 4.09), and RB3 (services are delivered on time, 4.24) demonstrate effective functionality. However, occasional download errors were reported, highlighting the need for continuous monitoring and technical maintenance to ensure stable performance.

Citizen Support

The citizen support dimension produced mixed results, with CS1 (staff are capable of providing assurance and security, 2.98) scoring lowest. Respondents noted limited user assistance features such as Frequently Asked Questions (FAQs) and help pages, which hindered problem resolution. Enhancing technical support infrastructure, including online chat assistance and feedback systems, could improve user engagement and satisfaction.

Conclusion and Recommendations

The results of this study demonstrate that the quality of e-government services provided by the Department of Communication and Information of Muara Enim Regency is generally satisfactory. Among the four E-GovQual dimensions, reliability and efficiency performed well, while trust and citizen support require substantial improvement.

Key recommendations include:
1. Adding FAQ and Help Page features to assist users in navigating the system.
2. Enhancing website design and user interface to improve efficiency.
3. Strengthening data protection mechanisms to increase user trust.
4. Expanding technical support and communication channels to improve citizen engagement.

These improvements would not only elevate the quality of e-government services but also foster greater public trust in the government's digital transformation initiatives.

Disclosure Statement

The authors declare no conflicts of interest associated with this study.

Acknowledgments

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Biographical Notes

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