



Optimizing SIMBG to Strengthen Licensing Governance in Sinjai Regency

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Abstract

This research is driven by empirical evidence showing inconsistent utilization and declining effectiveness of SIMBG at the DPMPTSP of Sinjai Regency, as reflected in fluctuating application trends and persistent institutional, technical, and public literacy constraints despite ongoing digitalization initiatives. This study aims to analyze the effectiveness of the implementation of the Building Management Information System (SIMBG) at the Department of Investment and One-Stop Integrated Services (DPMPTSP) of Sinjai Regency, with the central research problem stated explicitly as follows: Why has the implementation of SIMBG not yet achieved the expected level of effectiveness despite ongoing digitalization efforts? Using a qualitative approach, data were collected through interviews, observations, and document analysis. The findings indicate that SIMBG implementation has progressed from 2022 to 2024 but remains suboptimal, as reflected in fluctuating application numbers and an increase in 2023 followed by a substantial decline in 2024. Five core factors influence its effectiveness: institutional capacity, human resource competence, digital infrastructure availability, interagency communication patterns, and public literacy and compliance. Several obstacles were identified, including unharmonized SOPs across institutions, limited operator skills, unstable internet connectivity, and low public understanding of PBG requirements. The study recommends strengthening institutional frameworks, improving human resource capacities, optimizing interagency coordination, implementing data-driven public education, and enforcing continuous monitoring and evaluation. Overall, the study contributes to advancing the discourse on digital licensing governance at the regional level, particularly in areas with infrastructural and administrative constraints.

Keywords: SIMBG, building permits, e-government, public service, DPMPTSP, policy implementation.

INTRODUCTION

Digital transformation in public service delivery has become a central agenda in Indonesia's governance reforms, particularly through the adoption of integrated electronic licensing systems (Alvarenga et al., 2020). The Building Management Information System (SIMBG) represents one of the national initiatives aimed at standardizing, digitizing, and improving the accountability of building permit services across regions (Curran, 2024; Vatlina, 2021). Despite these efforts, recent studies show that many local governments still face substantial challenges in adopting and operationalizing SIMBG effectively, particularly in regions with limited digital infrastructure, uneven bureaucratic capacity, and low digital literacy (Arifin et al., 2023; Muhamad et al., 2024). These challenges indicate that the success of digital licensing is not solely determined by system availability but also by the readiness of



institutions, human resources, and communities to adopt digital governance models (Hidayat & Pamungkas, 2019).

In the context of Sinjai Regency, the implementation of SIMBG at the DPMPSTP has shown progress but remains inconsistent, as reflected in fluctuating application trends and persistent administrative and technical obstacles. Issues such as fragmented institutional coordination, limited operator competence, unstable internet connectivity, and the low regulatory awareness of citizens continue to hinder service effectiveness. These dynamics highlight a critical empirical gap in understanding how SIMBG operates in under-resourced local context an aspect that remains understudied in existing e-government literature.

The novelty of this study lies in its focus on analyzing the implementation of SIMBG within a regional setting characterized by infrastructural limitations and varying bureaucratic capacity, a context that has received limited academic attention. Unlike previous studies that focus primarily on national-level policy or technical system design, this research provides a comprehensive examination of institutional, human resource, technological, and social factors that shape SIMBG performance at the local level.

The main purpose of this study is to evaluate the effectiveness of SIMBG implementation in Sinjai Regency and to identify the key factors that influence its performance, while also formulating practical strategies to optimize digital building permit governance at the local level. Through this purpose, the study seeks to generate evidence-based insights that can guide policy improvements and strengthen digital governance in regional licensing services.

LITERATURE REVIEW

A. E-Government and the Digitalization of Public Services

E-government constitutes a strategic instrument in modern bureaucratic reform, utilizing information and communication technology (ICT) to enhance the quality of public governance. Beyond merely representing a technological innovation, e-government serves as a vehicle for bureaucratic transformation toward governance that is transparent, accountable, efficient, and responsive to public needs. Studies by (Manoharan & Ingrams, 2018) demonstrate that e-government has the capacity to shift bureaucratic work patterns away from rigid traditional administrative models toward more networked and collaborative service arrangements, thereby fostering closer engagement with citizens (Dener et al., 2021; Milićević et al., 2023).

Digitalizing public services through e-government enables administrative efficiency, information transparency, and enhanced accountability. (Sukarno &



Nurmandi, 2023) emphasize that the development index of e-government is directly associated with the strengthening of global governance indicators, such as public participation and regulatory quality. This implies that the higher the level of governmental digital maturity, the stronger the legitimacy of the state in the eyes of its citizens (Garayová, 2021; Wang & Ma, 2022). In the context of public service delivery, digitalization can streamline lengthy bureaucratic procedures, reduce the potential for maladministration, and provide greater legal certainty for the public (Kirana & Majid, 2022; Kumar & Van Dissel, 1996).

Nevertheless, the success of e-government is highly dependent on the readiness of digital infrastructure, the capacity of administrative personnel, and the strength of regulatory support. (Chohan et al., 2020) emphasize that the failure to establish a solid institutional foundation for digital governance can create a paradox in which digitalization instead complicates service delivery and generates public dissatisfaction. This phenomenon is evident in the implementation of the Building Management Information System (SIMBG) in several regions. (Arifin et al., 2023) reveal that the primary challenges associated with SIMBG include limited human resource capacity, low levels of digital literacy among citizens, and uneven internet infrastructure. These conditions result in licensing processes that remain slow despite the availability of digital systems.

Beyond technical factors, the social and cultural dimensions of bureaucracy also play a critical role in determining the success of digital public service initiatives. (Dobrolyubova et al., 2019) found that public trust in government significantly influences the effectiveness of digital technology implementation. When bureaucratic culture remains resistant to change, technology tends to function merely as an administrative supplement, without producing meaningful improvements in service delivery. This is consistent with the findings of (Muhamad et al., 2024), which indicate that the implementation of SIMBG in several regions has, in practice, increased administrative burdens for citizens due to weak interagency coordination and insufficient technical support.

However, positive practices have also emerged from regions that demonstrate strong commitment to bureaucratic reform in their implementation of SIMBG. For instance, the IMB 3.0 service innovation in Jakarta has been shown to significantly reduce licensing processing time, enhance transparency, and strengthen public trust in local government. (Mukarromah et al., 2024) emphasize that e-government initiatives that are grounded in community needs and supported by adequate digital literacy can improve accountability and foster better relationships between government and citizens. Thus, experiences with SIMBG implementation across



various regions illustrate that digitalization of public services holds considerable potential for strengthening governance; yet, its success is highly contingent upon technical readiness, regulatory support, and organizational culture.

The novelty of this study lies in its analytical focus on the implementation of SIMBG within regional contexts characterized by limited digital infrastructure and constrained bureaucratic capacity. Unlike previous research, which predominantly emphasizes technical aspects or national-level policies, this study seeks to identify both the inhibiting and enabling factors influencing SIMBG implementation at the local level, while also formulating optimization strategies that are aligned with regional characteristics. This approach is essential for generating policy recommendations that are not merely normative, but also practical, contextually grounded, and responsive to community needs as well as the realities of local bureaucratic conditions.

Accordingly, this study is expected to contribute scientifically to the existing body of literature on e-government, particularly in the domain of digital licensing services at the regional level. In addition, the study carries practical value as a source of input for local governments in formulating policies to strengthen SIMBG in a manner that is more adaptive and inclusive. The novelty offered by this research lies not only in its empirical focus on SIMBG implementation in Sinjai Regency, but also in its analytical approach, which integrates technical, social, and institutional dimensions to develop comprehensive strategies for optimizing the digitalization of public services.

RESEARCH METHOD

This study employs a qualitative research method with a case study approach conducted at the Investment and One-Stop Integrated Services Office (DPMPTSP) of Sinjai Regency. Qualitative research emphasizes the exploration of meanings, contextual understanding, and the interpretation of social realities (Creswell, 2010). In this approach, the researcher serves as the primary instrument, engaging directly with informants through interviews, observations, and document reviews. (Lexy J. Moleong, 2019) asserts that qualitative inquiry enables researchers to capture subjective experiences and social dynamics that cannot be revealed through quantitative approaches.

The case study approach is considered appropriate, as it allows the researcher to explore complex phenomena within their real-life context, thereby uncovering inhibiting and enabling factors as well as relevant strategies for strengthening digital-based licensing governance ((Yin, 2018). Informants were selected purposively and



consisted of seven individuals, including key officials from DPMPTSP, the Public Works and Spatial Planning Office (PUPR), the Building Expert Team (TABG), as well as community members applying for building permits. Data collection techniques included in-depth interviews, field observations, and document analysis. The data were analyzed using thematic analysis (Braun & Clarke, 2022), which involves transcription, coding, theme categorization, and interpretation. Data validity was ensured through source triangulation, member checking, and peer debriefing, with all procedures conducted in adherence to research ethics principles.

Accordingly, the selected method and approach are well-suited to examine how SIMBG is implemented within DPMPTSP Sinjai Regency, the challenges encountered, and the optimization strategies that can be applied.

RESULTS AND DISCUSSION

Implementation of SIMBG at the Investment and One-Stop Integrated Services Office (DPMPTSP) of Sinjai Regency

The implementation of the Building Management Information System (SIMBG) at the Investment and One-Stop Integrated Services Office (DPMPTSP) of Sinjai Regency demonstrates a gradual development in the administration of digital-based building licensing services. Since its expanded utilization, SIMBG has been used by the public to submit applications for the Persetujuan Bangunan Gedung (PBG), building certification, and other technical services. Application data from 2022 to 2024 illustrate how the use of SIMBG has evolved, reflecting the system's implementation effectiveness, institutional readiness, and community responsiveness toward digitally transformed public services. Table 1 below presents the recapitulation of SIMBG service applications over the past three years:

Table 1. Recapitulation of SIMBG Service Applications in Sinjai Regency, 2021–2024

No	Year	Total Applications Submitted	Residential Buildings	Shop Houses (Ruko)	Office Buildings	Other Structures
1	2022	180	120 (67%)	30 (17%)	20 (11%)	10 (5%)
2	2023	220	150 (68%)	35 (16%)	25 (11%)	10 (5%)
3	2024	150	95 (63%)	25 (63%)	20 (13%)	10 (7%)

Source: DPMPTSP Sinjai Regency, 2025

The data presented in Table 1 indicate that the utilization of SIMBG increased significantly from 2022 to 2023, rising from 180 to 220 applications (increase \pm 22%). This upward trend reflects the growing public adaptation to digital service platforms



as well as the increased effectiveness of socialization efforts undertaken by the local government. The dominance of residential building applications ($\pm 63\text{--}68\%$ every years) demonstrates that SIMBG is predominantly used by private homeowners seeking to obtain Persetujuan Bangunan Gedung (PBG) for legal compliance and structural safety requirements. This pattern also suggests that the demand for formal licensing of commercial buildings such as shop houses and office structures remains relatively low compared to the residential sector.

However, in 2024 there was a notable decline to 150 applications (down $\pm 31.8\%$ from the previous year). This downturn can be attributed to several factors. First, technical disruptions in the national SIMBG system caused delays in document input and verification, leading some applicants to postpone their submissions. Second, interviews reveal that several subdistricts experienced prolonged internet connectivity issues during this period, which significantly hindered public access to digital services. Third, interagency coordination particularly between the Public Works and Spatial Planning Office (PUPR) and the Building Expert Team (TABG) slowed due to changes in the composition of the technical team, resulting in longer verification processes.

Despite these fluctuations, the distribution across building categories shows a relatively consistent pattern. Applications for shop houses, office buildings, and other structures did not exhibit significant variation, indicating that licensing demand for non-residential buildings remains stable yet comparatively low. Furthermore, the continued dominance of residential building applications suggests that SIMBG is utilized more extensively by the general public than by business actors. This may indicate that digitalization has begun to reach the household level, although it has not yet fully encouraged compliance among businesses and institutions regarding building permit requirements.

Overall, the dynamics of SIMBG application data demonstrate that the system's implementation is progressing, yet remains influenced by external variables such as the quality of digital infrastructure, the readiness of human resources, and the effectiveness of interagency coordination. The increase in applications in 2023 reflects the success of socialization efforts and institutional strengthening, whereas the decline in 2024 indicates that the system has not yet achieved full stability or adaptability in response to external disruptions. Therefore, these findings provide an essential foundation for identifying inhibiting factors and formulating strategies to reinforce SIMBG so as to deliver building licensing services that are fast, effective, and sustainable in Sinjai Regency.

Factors Influencing the Effectiveness of SIMBG Implementation in Sinjai Regency



a. Institutional Capacity

Institutional capacity serves as the fundamental pillar in the implementation of SIMBG, as it determines the extent to which an organization is able to operate, supervise, and evaluate digital service delivery. In Sinjai Regency, the organizational structure of DPMPTSP has accommodated digital service functions, yet it has not fully adapted to system-based operational mechanisms. This is evident from the incomplete integration of standard operating procedures (SOP's) across agencies, particularly between DPMPTSP, the Public Works and Spatial Planning Office (PUPR), and the Building Expert Team (TABG). The lack of synchronized technical workflows results in prolonged processes for drawing verification, document clarification, and technical validation. Such conditions directly affect the effectiveness of service delivery and the consistency of SIMBG performance outcomes over time.

Institutional capacity also encompasses the organization's ability to manage change. The implementation of SIMBG requires organizational flexibility, adaptive capabilities, and more collaborative work patterns. However, the prevailing bureaucratic culture characterized by hierarchical and rigid structures often necessitates lengthy administrative procedures before technical decisions can be executed. This misalignment results in disproportionate workload distribution and ultimately contributes to delays in service delivery. Frequent changes in national policies related to SIMBG further demand that local institutions respond swiftly, which remains a significant challenge.

Institutional capacity is also shaped by leadership support and the direction of regional policy. Structural commitment from agency leaders is a critical factor in ensuring that SIMBG implementation is not merely an administrative formality but an integral component of public service reform. Without strong leadership and effective internal oversight mechanisms, SIMBG tends to be implemented only at an operational level rather than being embedded strategically. Consequently, the implementation of SIMBG in Sinjai demonstrates gradual progress yet remains suboptimal in expanding service reach to the broader community.

b. Human Resource Competence

HR competence is a critical factor in determining the effectiveness of SIMBG implementation, as every stage of service delivery from data input, verification, and technical clarification to document issuance depends on the capability of system operators. In Sinjai Regency, the ability of personnel to operate digital systems remains varied. While some staff members have received adequate training, others still lack sufficient technical capacity. This disparity creates dependency on a limited number



of proficient employees, causing service disruptions whenever those individuals are absent.

In addition to technical skills, conceptual competence particularly the understanding of building regulations also poses a challenge for personnel. Many service delays occur not due to system-related issues, but because of inadequate comprehension of PBG regulations, spatial planning requirements, and building technical standards. Limited regulatory understanding restricts the ability of staff to provide accurate guidance to the public, resulting in citizens' confusion about service requirements and procedures, which ultimately discourages them from completing or even initiating the application process. This condition helps explain why some community members choose to postpone or abandon their applications.

HR competence is further associated with the ability to respond quickly to technical problems. In the digital era, operators are expected to possess basic troubleshooting skills in order to address system disruptions without relying solely on external technical support. However, the lack of such skills has led to prolonged system failures, subsequently diminishing the quality of public service delivery. Thus, HR competence serves not only as an operational backbone for SIMBG but also as a key determinant of the overall success of digital licensing service transformation.

c. Availability of Digital Infrastructure

Digital infrastructure constitutes a crucial technical prerequisite that strongly determines the effectiveness of SIMBG implementation. In Sinjai Regency, infrastructure conditions remain uneven, particularly in rural subdistricts such as West Sinjai, Sinjai Borong, and Tellulimpoe, which continue to experience network blank spots. Limited connectivity prevents residents from accessing SIMBG easily, thereby reducing the number of online applications submitted. Within the context of digital public services, infrastructural limitations are not merely technical obstacles but represent major barriers to equitable access to government services.

Beyond connectivity issues among service users, the internal digital infrastructure of local government offices also requires strengthening. Several computers used by service officers still rely on low-specification hardware, which slows document uploads and data synchronization processes. Internet bandwidth at service counters is also not consistently adequate, especially during peak periods of application submissions. Such disruptions result in service delays that directly affect user experience and shape public perceptions of service professionalism.

Digital infrastructure encompasses not only connectivity but also data security and system storage capacity. Without reliable security measures and server stability, the risks of data loss, system delays, or technical errors may hinder the delivery of



services. Although SIMBG, as a national system, provides core infrastructure, the readiness of local governments to ensure stable local network performance remains a crucial factor. Consequently, the effectiveness of SIMBG implementation depends substantially on the strengthening of digital infrastructure at both the governmental and user levels.

d. Interagency Communication Patterns

Interagency communication patterns constitute a determining factor in ensuring the smooth delivery of SIMBG services. As a system that involves multiple actors DPMPTSP, the Public Works and Spatial Planning Office (PUPR), and the Building Expert Team (TABG) effective communication is essential to guarantee that each stage of the service process is carried out simultaneously and efficiently. However, in Sinjai Regency, communication between institutions remains ad hoc and unstructured, resulting in delays in technical verification and data clarification processes. Although informal communication channels may accelerate certain tasks, they cannot replace formal and well-documented coordination mechanisms.

The limited use of integrated digital communication platforms has led to inconsistencies in information exchange between agencies. For example, notifications regarding revisions to technical drawings or the completeness of application documents are often delivered through personal messages rather than official systems. This practice leads to poor documentation and increases the potential for misunderstandings among stakeholders. Such irregular communication patterns contribute to service delays, which subsequently influence public perceptions of the timeliness and reliability of SIMBG services.

Interagency communication encompasses not only the transmission of technical information but also the coordination of policies and synchronization of institutional roles. When communication structures are weak, each institution tends to operate separately rather than collaboratively. This undermines the overall effectiveness of SIMBG implementation, as digital systems require integrated and interconnected workflows, not siloed organizational practices. Therefore, strengthening formal communication mechanisms is a strategic necessity for enhancing the effectiveness and coherence of SIMBG service delivery.

e. Public Literacy and Regulatory Compliance

The level of digital literacy among the public significantly influences the utilization of SIMBG. Many community members particularly those residing in rural areas are not familiar with online-based applications, making it difficult for them to access the system, upload documents, and follow submission procedures. This limited



technical understanding leads individuals to rely on manual assistance or, in some cases, to postpone the licensing process altogether. Low digital literacy ultimately results in suboptimal use of the digital services that have been provided.

In addition to digital literacy, compliance with building regulations among the public also remains low. A portion of the community still perceives building permit processing as a non-essential requirement, especially for small-scale constructions such as residential houses. This perception causes many buildings to be constructed without legal authorization, meaning that PBG applications do not accurately reflect the actual number of buildings constructed. Low regulatory compliance thus contributes to the stagnant growth of SIMBG applications over the years.

The combination of limited digital literacy and weak regulatory compliance creates a gap between the potential number of applications and the actual submissions received. This situation illustrates that SIMBG implementation is confronted not only with technical and institutional barriers but also with social barriers. Therefore, efforts to enhance the effectiveness of SIMBG must incorporate strategies focused on public education and behavioral change, rather than merely improving technical systems and institutional arrangements.

Strategies for Optimizing and Strengthening SIMBG-Based Licensing Services

a. Institutional Strengthening and SOP Harmonization

Institutional strengthening serves as a primary strategy to ensure the long-term success of SIMBG implementation. Local governments need to develop an integrated set of Standard Operating Procedures (SOP's) that align the roles and responsibilities of all relevant agencies, including DPMPTSP, the Public Works and Spatial Planning Office (PUPR), and the Building Expert Team (TABG). These SOP's must clearly outline detailed service workflows and specify processing time limits for each type of service. Harmonizing SOP's is essential to eliminate overlaps, reduce procedural inconsistencies, and ensure that every unit operates within a unified framework.

The development of integrated SOPs must be accompanied by a continuous performance evaluation mechanism. Without clear oversight, SOP's risk becoming merely administrative documents without producing tangible improvements. Through measurable SOP's, the government can identify bottlenecks within the service process and assess the effectiveness of system implementation. Institutional strengthening must also include the provision of adequate supporting resources such as budget allocations, technical personnel, and digital equipment.

Institutional strengthening further requires transformational leadership, especially in promoting changes in organizational culture toward more responsive



and digitally oriented service delivery. Strong and adaptive leadership is crucial in fostering collective commitment and ensuring that each agency fulfills its role effectively. In the context of SIMBG services, adaptive leadership is particularly important to enable institutions to respond quickly to national system updates and evolving community needs.

b. Enhancing Human Resource (HR) Competence

Enhancing HR competence must be carried out through continuous technical training. Such training should encompass mastery of the SIMBG system, troubleshooting skills, and a thorough understanding of building licensing regulations. Training programs also need to be designed to reduce reliance on specific individuals by promoting equitable competency distribution across all service units.

Beyond technical training, HR development must also incorporate the strengthening of soft skills, including communication abilities, customer service orientation, and time management. This is essential because licensing services involve not only technical processes but also administrative and social interactions. By improving these soft skills, personnel can deliver services more effectively and respond more adequately to community needs.

HR development strategies should also include a performance evaluation scheme based on measurable indicators. Regular evaluations will help local governments determine the extent to which improvements in employee competencies have contributed to service quality. This is particularly important to ensure that investments in HR development generate tangible benefits for the effectiveness of SIMBG implementation.

c. Optimizing Interagency Communication

Optimizing interagency communication is essential for accelerating the SIMBG service process. Local governments need to develop a formal communication platform that integrates all relevant units into a single system. Regular coordination forums and the use of shared monitoring dashboards can expedite the resolution of technical issues in real time.

Interagency communication must also be multidirectional. Data synchronization, technical information exchange, and clarification processes should occur quickly and be properly documented. With a structured communication system in place, the likelihood of miscommunication or delayed information transmission can be minimized.

The optimization of communication further requires cultivating a collaborative culture among local government agencies. Each institution must recognize that building permit services are not solely the responsibility of DPMPSTP but are a



collective responsibility shared across agencies. Building such a collaborative culture will enhance service integration and ensure that SIMBG implementation proceeds more effectively.

d. Data-Driven Public Education and Outreach

Public education efforts must be guided by applicant data mapping that identifies areas with low participation levels. Outreach activities should be conducted intensively among community groups that are less familiar with digital systems. A data-driven approach ensures that socialization initiatives are more targeted, efficient, and effective.

In addition to outreach, local governments need to provide digital assistance services at the village and subdistrict levels. Such assistance will help residents access SIMBG and understand the administrative requirements involved. This support is particularly important in areas with low levels of digital literacy. Public education must also emphasize the importance of regulatory compliance and the long-term benefits of building legality. As public awareness increases, the utilization of SIMBG is expected to rise significantly, resulting in more orderly, transparent, and higher-quality public services.

e. Performance Monitoring and Continuous Evaluation

Regular performance monitoring is essential for enabling local governments to identify barriers and assess the effectiveness of SIMBG implementation. Evaluations must be conducted using both quantitative and qualitative indicators in order to provide a comprehensive overview of service quality. Performance evaluation should also be directed toward assessing interagency integration and ensuring that the harmonized SOPs function effectively. Such evaluations will assist the government in making necessary policy adjustments and improving coordination across institutions.

Continuous monitoring and evaluation will ensure that SIMBG implementation remains adaptive to technological developments and the evolving needs of the community. In doing so, the building permitting system can be continually refined and enhanced to deliver services that are more effective, efficient, and accountable.

CONCLUSION

The findings of this study affirm that the implementation of the Building Management Information System (SIMBG) at the Investment and One-Stop Integrated Services Office (DPMPTSP) of Sinjai Regency has been operational, yet it has not reached the expected level of effectiveness. The analysis of application trends over the past three years indicates that the utilization of SIMBG has fluctuated due to varying degrees of institutional readiness, staff competence, availability of digital



infrastructure, interagency communication patterns, and public literacy and compliance. These findings directly address the first research question regarding the nature of SIMBG implementation and the key challenges encountered in the process. The increase in applications in 2023 reflects progress in digital service adoption, whereas the substantial decline in 2024 reveals the system's continued vulnerability to structural and technical disruptions at both local and national levels.

The study further identifies several substantive factors influencing the effectiveness of SIMBG implementation. Institutional capacity gaps, unequal competencies among human resources, and uneven digital infrastructure constitute internal barriers that impede service efficiency. Meanwhile, unstructured interagency communication and low digital literacy among the public represent external constraints requiring strategic intervention. These findings underscore that the success of digital building permit services is not solely determined by the availability of the system itself but by the synergy between organizational readiness, staff quality, technological support, and community responsiveness. Thus, the study successfully fulfills its second objective by providing comprehensive, empirically grounded identification of the determinants affecting SIMBG implementation.

Drawing from these findings, the study formulates practical and contextually relevant strategies for optimizing SIMBG services. Institutional strengthening through SOP harmonization, sustained enhancement of staff competencies, optimization of interagency communication, and data-driven public education serve as key recommendations for improving the effectiveness of SIMBG. Additionally, the need for continuous monitoring and evaluation highlights that digital licensing implementation must be managed as an adaptive and ongoing process rather than a one-time policy initiative. These strategies collectively address the third research question concerning the efforts that local governments can undertake to optimize SIMBG services in a more effective, efficient, and accountable manner.

In conclusion, this study offers significant contributions both theoretically and practically. Scientifically, it enriches the literature on e-government implementation in regions with limited infrastructure an understudied context in existing scholarship. Practically, its findings provide a foundation for policy reform by the Sinjai Regency Government in strengthening digital governance for building permits. Future research is recommended to explore user behavior, cross-platform system integration, and comparative analyses across regions to generate policy recommendations that are increasingly adaptive to the evolving dynamics of public service digitalization in Indonesia.



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