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LEVERAGING DIGITAL INNOVATION FOR SUSTAINABLE PROCUREMENT PERFORMANCE: A CASE STUDY OF SOUTH SUMATRA'S PROCUREMENT OFFICE

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Abstract
This study aims to analyze innovative management practices in digital procurement and evaluate their impact on efficiency and transparency at the South Sumatra Provincial Goods and Services Procurement Office. This study used a qualitative approach with semi-structured interviews with 9 participants consisting of functional officials and procurement staff. Data were analyzed thematically through an interpretative approach. The results showed that innovative management is understood as an effort to simplify the process through system integration (SPSE, e-Catalog, e-Contract), document digitization, and strengthening internal coordination. The implementation of digital procurement is proven to increase time and cost efficiency, and strengthen transparency through public access to procurement information. However, challenges still exist in the form of limited technological infrastructure, human resource readiness, and limited system features. The study concludes that the success of digital procurement depends on adaptive managerial innovation and adequate institutional support. Strategic recommendations include increasing human resource capacity, strengthening digital infrastructure, improving system features, and cross-agency collaboration as an effort to realize efficient, transparent, and sustainable public procurement.

Keywords: Innovative Management, Digital Procurement, Efficiency, Transparency, SPSE

1. Introduction

Digital transformation has become an imperative in modern governance, particularly in public procurement. Driven by rapid technological advancement and mounting demands for transparency and efficiency, the Indonesian government, through the National Public Procurement Agency (LKPP), has championed comprehensive procurement digitization. This initiative is a strategic response to enhance accountability and sustainability within the bureaucratic system (Setiadi & Subowo, 2025), further solidified by the national mandate of Presidential Regulation No. 12 of 2021 on e-Procurement and e-Purchasing.

Despite significant progress, evidenced by the adoption of the Electronic Procurement Service System (SPSE) integrated with e-Catalog by over 700 agencies, critical challenges persist. These include persistent tender manipulation (Astuti & Prabowo, 2023), disparities in human resource capacity and infrastructure, especially outside Java (Pebrianti & Maesaroh, 2025), and low readiness for Green Procurement implementation (Nurhikmahyanti, 2024). The 2024 Audit Board (BPK) Report indicates that digitization has not yet yielded significant budget efficiency in some regions due to parallel manual practices and weak system integration. This finding is corroborated by research suggesting that the success of digital procurement is contingent upon internal

management reform and operational readiness (Suharto & Saefudin, 2025), with many agencies still constrained by limited digital maturity (Maulana, 2025).

This challenge is not unique to Indonesia. International studies confirm that e-Procurement success in developing countries hinges on managerial readiness and inter-unit synergy (Islam et al., 2024). Even in developed contexts, effective performance-based system integration is crucial to prevent distortions (Carrasco & Iannone, 2025), while sustainable e-Procurement requires robust internal governance beyond mere digital tools (Parashar et al., 2024). Therefore, this transformation demands more than technological adoption; it necessitates fundamental managerial innovation encompassing process redesign, organizational culture shift, and data-driven decision-making (Ludin & Wellbrock, 2023; Ahuja & Kaur, 2025).

Within this national and global context, South Sumatra Province serves as a critical case study. While local LPSE and e-Catalog systems have been implemented, technical and institutional barriers continue to hinder optimal performance. A significant gap exists between the *technical implementation* of digital procurement systems and the *managerial innovations* required to leverage them for sustainable efficiency and transparency. There is a need to critically analyze how innovative management practices are enacted within local procurement offices to navigate these barriers and realize the full potential of digitization.

This study aims to analyze innovative management practices in digital procurement at the Public Procurement Office (ULP) of South Sumatra Province and evaluate their contribution to achieving sustainable procurement efficiency and transparency. The findings are expected to provide actionable insights and a potential framework for other regional procurement offices in Indonesia to enhance their digital transformation journey through targeted managerial innovations. The study enriches the discourse on public sector digitalization by empirically examining the interplay between technology adoption and managerial innovation within a specific local government context, bridging the gap between policy intent and ground-level implementation.

2. Theoretical Background

2.1 Innovative Management in the Public Sector

Innovative management in the public sector is a strategic response to external dynamics that demand high efficiency, speed and adaptivity. Hartley (2005) refers to innovation in the public sector as the creation or adoption of new approaches to improve service quality, which includes not only technology, but also structural changes, cross-unit collaboration, and an organizational culture open to learning (Ludin & Wellbrock, 2023). In Indonesia, this concept is reflected in the bureaucratic reform agenda that emphasizes digital and results-oriented work systems. However, according to Pranoto (2024), its implementation is often hampered by internal resistance, lack of leadership support, and unprepared infrastructure. Therefore, the success of innovation is highly dependent on leadership commitment and the development of flexible and adaptive procedures (Suharto & Saefudin, 2025).

2.2 Digitalization in Public Procurement

Digitalization of public procurement is the transformation from a conventional system to an electronic system that is integrated, real-time, and transparent. Nicoletti (2020) calls this process part of Procurement 4.0, which places procurement in an efficient and documented cyber-physical system. Digitalization not only speeds up the process, but

also increases accountability and reduces the risk of irregularities. Kumar (2022) emphasizes that digital systems can improve administrative efficiency, control risks, and build public trust. In Indonesia, systems such as SPSE and LKPP's National e-Catalogue are the main foundations of procurement digitization. However, their successful implementation is strongly influenced by the level of digital maturity and cross-system integration (Maulana, 2025). Tahir & Arham (2025) added that SPSE is not just a technology platform, but a new managerial framework that demands changes in bureaucratic behavior towards more accountable and measurable governance.

2.3 Efficiency in Digital Procurement

Efficiency in digital procurement is defined as the system's ability to save resources-both time, cost, and labor-without reducing the quality of output. Nicoletti (2020) explains that digitization allows the elimination of redundancy, as well as speeding up work stages through the automation process. This not only results in shorter processing times, but also minimizes the risk of administrative errors. A study by Islam et al. (2024) in the context of an information technology-based B2B procurement system showed that automation in the vendor verification and evaluation process can reduce the process duration by 40%. At the local level, Suharto & Saefudin (2025) found that the implementation of e-Procurement in Gorontalo Province contributed to 18% budget savings in the annual routine procurement of goods. This efficiency was achieved through digitization at the planning stage, elimination of manual processes, and improved control over expenditure.

2.4 Transparency and Accountability

Transparency in public procurement reflects open access to procurement information, enabling oversight from various stakeholders. Witjes & Lozano (2023) state that transparency is a crucial component in realizing sustainable governance. In a digital system, the entire procurement process can be documented, traceable and audited systematically, reducing the room for corrupt practices and data manipulation. According to Carrasco & Iannone (2025), transparency depends not only on the availability of open systems, but also on the courage of organizations to responsibly disclose sensitive data in the public interest. In Indonesia, Pranoto (2024) notes that the SPSE and LPSE systems have opened access to tender information, winner determination, and prices of goods/services to the public online. However, a study by Utami & Soedarmanto (2023) shows that the limited digital literacy of the public is still an obstacle in optimizing the use of the system as a public monitoring tool.

2.5 Sustainable Procurement

Sustainable procurement refers to the process of selecting goods and services that consider three main dimensions: economic, environmental, and social (triple bottom line). Parashar et al. (2024) emphasized that today's procurement practices should encourage the use of environmentally friendly products and involve suppliers that comply with Environmental, Social, and Governance (ESG) principles. Witjes & Lozano (2023) also state that sustainable procurement is part of the circular economy agenda and green supply chain management strategies. In Indonesia, LKPP has initiated a green purchasing policy since 2023 through the preparation of a green e-Catalog that accommodates environmentally labeled products. However, the adoption rate of this policy is still low because not all agencies have the understanding and capacity to integrate environmental dimensions into the procurement process. Kumar (2022) states that sustainable

procurement is not just a selection of goods, but a transformative process that steers the procurement system towards ethical values and long-term sustainability.

2.6 Linkages between Innovative Management, Digitalization and Sustainability

The three main concepts in this study-innovative management, digitization of procurement, and sustainability-are not standalone entities, but are interrelated and form an ecosystem of modern procurement governance that is adaptive, efficient, and long-term oriented. Shah et al. (2024) argued that a digital procurement system can only be effective if it is supported by innovative managerial practices and the integration of sustainability values in it. Ahuja & Kaur (2025) further added that innovative management not only creates organizational flexibility in the face of technological change, but is also an important foundation for internalizing sustainability principles into formal procurement procedures. In this case, managerial innovation serves as the link that unites the direction of digitalization with the mission of sustainability, while strengthening the overall quality of public sector governance.

3. Methods

3.1 Type of Research

This research uses a descriptive qualitative approach to deeply understand how innovative management is applied in digital procurement at the Public Procurement Office of South Sumatra Province and its impact on efficiency and transparency on an ongoing basis. The descriptive qualitative approach was chosen because it allows researchers to contextually explore perceptions, practices, and organizational dynamics that cannot be represented quantitatively. According to Daniel & Harland (2021), descriptive qualitative research provides an authentic description of complex social experiences and actions, without the need for statistical data reduction. Furthermore, the case study approach is used to present an in-depth analysis within a specific organizational context. Silverman (2022) emphasized that case studies allow researchers to thoroughly understand phenomena from the perspective of direct actors and pay attention to the complexity of relationships between actors in a digital organizational environment.

3.2 Subjects and Participants

The participants in this study were employees and functional officials at the Public Procurement Office of South Sumatra Province, as well as internal stakeholders who were directly involved in the digital procurement process. The sampling technique used was purposive sampling, which is selecting informants who meet specific characteristics in accordance with the research objectives (Maxwell, 2021). The criteria for participants include:

Having a position or function in the goods and services procurement unit;

1) Actively involved in the implementation of the e-procurement system (SPSE, e-Catalog, e-Contract);
2) Having at least 2 years of work experience in the field of government procurement;
3) Willing to participate and provide data openly.

The number of participants was planned to be 9, until reaching the point of information saturation (data saturation) as described by Namey et al. (2022), where no new themes were found in additional interviews.

3.3 Data Collection Technique

Data collection techniques in this study were conducted through two main methods. First, semi-structured interviews were conducted in person, with a duration of 30-45 minutes and documented with the participants' permission. The interviews focused on four main aspects: understanding of innovative management in public procurement, implementation of digitization and e-procurement, impact on efficiency and process time, and perception of transparency and accountability. Second, a documentation study of documents such as digital procurement SOPs, LPSE performance evaluation reports, e-procurement training minutes, and internal audit results. The combination of these two techniques was used to support data triangulation and ensure the validity of the findings, as suggested by Nowell et al. (2021).

3.4 Data Validity

The validity and reliability of the data in this qualitative research was tested using a trustworthiness approach developed from the Lincoln & Guba model and adapted by Pandey & Patnaik (2023), which includes four main indicators. Credibility was obtained through source triangulation, namely interviews, document observation, and reconfirmation to informants (member check). Transferability is maintained by providing a detailed description of the research context, such as the institutional setting and the role of informants, so that the research results can be applied to similar contexts. Dependability is realized by systematically documenting the entire research process, from design to data analysis, to ensure consistency (Hadi & Closs, 2022). Meanwhile, confirmability was maintained through the inclusion of direct quotes from participants and researcher reflections to ensure the objectivity of the findings.

4. Results and Discussion

This research was conducted through semi-structured interviews with 9 participants, consisting of employees and functional officials at the Public Procurement Office of South Sumatra Province. The interviews focused on five main themes, namely: (1) understanding of innovative management, (2) implementation of digital procurement system, (3) efficiency of procurement process, (4) transparency and accountability, and (5) policy recommendations and future expectations. The data obtained was analyzed thematically with an interpretive approach to capture the participants' experiences and perceptions in depth.

4.1 Understanding of Innovative Management

All participants showed a uniform understanding of the concept of innovative management as an approach that is not limited to the use of technology alone, but includes changes in work patterns, procedural structures, and faster and more flexible decision-making. Innovation is understood as a step to simplify work processes, system integration, and optimize employee performance through targeted digitization. Some forms of innovation mentioned include the integration of e-Planning and e-Contracting systems, the use of monitoring dashboards, and the implementation of an automatic notification system to speed up the evaluation process. In addition, the use of cloud storage to store digital documents is considered a preventive measure against data loss.

One participant stated: "Innovation is not just a new application, but how the process becomes lighter and faster. We simplify the submission process through one digital door." (P3, Head of Subdivision Administration).

This finding supports Ludin & Wellbrock's (2023) opinion that managerial innovation in the public sector is not always high-tech, but can be in the form of organizational changes that support efficiency and flexibility.

4.2 Implementation of Digital Procurement

The majority of participants stated that the implementation of the SPSE and e-Catalog systems has been running thoroughly, including the use of e-Contract features and provider assessment. This transformation brings a significant change from a manual system to a digital one that is more documented, easily traceable, and monitored. Participants considered that all stages of the process are now digitized, from document upload, verification, to provider evaluation. This increases trust in the system as all activities are automatically recorded.

"Now all processes are recorded and can be traced. We can check who uploaded the document, when, and what status it has reached." (P1, Commitment Making Officer)

Figure 1. Interview Documentation

However, participants also identified a number of constraints, such as reliance on unstable internet networks, lack of technical training for new employees, and limited features to assess the quality of provider performance in more depth.

4.3 Efficiency of the Procurement Process

All participants stated that digitization has resulted in real efficiencies in terms of time, cost, and manpower. Procurement processes that previously took three to four weeks can now be completed in seven to ten days. This is made possible by integration between work units and automation in the SPSE system.

"In the past, everything was done through physical documents. Now, all you have to do is input it into the system and the verification process starts immediately." (P6, Verification Staff).

In addition to time efficiency, budget efficiency is also felt, as there is no longer a need for printing large quantities of documents or physical delivery between agencies. The digital system also supports real-time monitoring of tender schedules, which accelerates cross-team and cross-field coordination.

This finding reinforces the results of the study by Islam et al. (2024) that automating procurement systems can reduce process duration by 40% and significantly improve administrative efficiency.

4.4 Transparency and Accountability

Most participants considered that digital procurement systems have promoted transparency and accountability. Through the LPSE portal, the public can access information on contract value, evaluation schedule, winning bidders, and other procurement processes.

"We feel more secure because everything is documented, it cannot be changed secretly." (P2, System Admin)

"The public can also access tender information, so there is no longer a perception of playing behind." (P7, Procurement Evaluation Team)

The e-Contract system is also considered effective in recording procurement activities automatically. However, participants suggested that the system could be equipped with an open performance assessment feature for service providers as part of improving long-term accountability. This finding is in line with the concepts of traceability and auditability proposed by Witjes & Lozano (2023) as important elements of sustainable and transparent procurement.

4.5 Recommendations and Expectations

During the interviews, all participants made a number of strategic recommendations for strengthening digital procurement in the future. First, increasing the capacity of human resources is considered very important, especially through regular training for new staff or employees who are transferred across fields. Second, strengthening digital infrastructure such as internet networks and local servers needs to be prioritized, especially to support system stability.

Third, enhancements to system features, such as automation of supplier performance assessment, sustainability reporting, and integration of monitoring systems, are expected to support long-term procurement effectiveness. Fourth, collaboration with Bappeda and Inspectorate is necessary so that procurement is not only efficient, but also in line with regional development planning and accountable internal control.

"If the system is good but the people are not ready, the results will not be optimal." (P9, Planning Staff).

4.6 Discussion

The results of this study support the findings of Witjes & Lozano (2023) and Kumar (2022) that the success of digital procurement systems is largely determined by managerial readiness and internal organizational innovation. Managerial innovation is proven to act as a bridge between digital transformation and bureaucratic sustainability. This is also in line with good governance principles that emphasize the importance of efficiency, transparency, and accountability in public sector governance. Although digitalization has brought various improvements, the main challenge still lies in the readiness of human resources and infrastructure support. Without a structured capacity building and change management strategy, digitalization will only result in pseudo-efficiency. Therefore, a holistic approach is needed that includes human resource training, digital infrastructure improvement, and the development of a sustainable performance evaluation-based system.

Thus, the integration of reliable digital systems, adaptive managerial innovation, and progressive institutional policies is an absolute requirement to drive the success of public procurement in the digital era

5. Conclusion

This study successfully analyzed the innovative management practices within the digital procurement framework at the Public Procurement Office (ULP) of South Sumatra Province and evaluated their contribution to sustainable efficiency and transparency. The findings confirm that while comprehensive digital systems like SPSE and e-Catalog have been implemented, their optimal impact is contingent upon robust managerial innovation that transcends mere technological adoption.

The research reveals that participants uniformly understand innovative management as a holistic approach encompassing procedural simplification, system integration, and adaptive decision-making, leading to significant gains in process efficiency. Digitization has demonstrably reduced procurement cycle times from weeks to days and minimized administrative costs, aligning with global evidence on automation benefits. Furthermore, the digital architecture has enhanced transparency and accountability by making procurement data traceable and publicly accessible, thereby strengthening institutional trust.

However, the study also identifies persistent barriers, including reliance on unstable digital infrastructure, gaps in human resource capacity, and the need for more advanced system features to assess supplier performance and sustainability metrics. These challenges underscore that digital tools alone are insufficient; their effectiveness is mediated by the organization's managerial agility and commitment to continuous improvement.

In answering the research objectives, this study concludes that innovative management is the critical linchpin connecting digital transformation to sustainable procurement outcomes. For ULP South Sumatra, and by extension other regional agencies, achieving long-term efficiency and transparency requires a synergistic strategy. This strategy must prioritize: (1) continuous capacity building and change management to cultivate digital readiness, (2) investment in resilient technological infrastructure, and (3) the development of integrated, feature-rich systems that support performance monitoring and green procurement principles.

Ultimately, this research contributes to the discourse on public sector digitalization by providing empirical evidence that sustainable procurement is an outcome of the dynamic interplay between technology, managerial innovation, and supportive governance. Future success hinges on viewing digital procurement not as a finite project but as an evolving ecosystem requiring ongoing adaptation and strategic leadership.

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