

Implementation of Electronic-Based Government Procurement of Goods and Services at the Department of Communications, Informatics, and Statistics of Wajo Regency

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Abstract. This study aims to analyze the implementation of electronic-based government procurement of goods and services at the Department of Communications, Informatics, and Statistics of Wajo Regency and to identify the supporting and inhibiting factors affecting its implementation. A qualitative approach with a descriptive research design was employed. Data were collected through observation, interviews, and documentation involving the Head of Department, structural officials, implementing officers, and service providers. The findings indicate that the implementation of electronic procurement has generally been effective. Effective communication and coordination through socialization, meetings, and technical assistance have supported the procurement process. Adequate human resources and information technology infrastructure have facilitated the implementation of procurement through the Electronic Procurement System (SPSE). Furthermore, the commitment of implementers to comply with applicable regulations has enhanced transparency, efficiency, effectiveness, and accountability. The bureaucratic structure has functioned according to established duties and procedures while promoting information transparency through electronic systems. Supporting factors include strong coordination, competent personnel, adequate technological infrastructure, and transparent procurement information. However, implementation continues to face challenges, including internet network disruptions, technical issues in application systems, and the need to strengthen personnel capacity in adapting to evolving electronic procurement systems and regulations.

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1. Introduction

Public governance reform has increasingly positioned transparency, accountability, effectiveness, and efficiency as fundamental principles in the delivery of public administration. Governments are no longer evaluated solely based on their ability to achieve development targets; they are also expected to ensure that public resources are managed responsibly, services are delivered efficiently, and administrative processes are accessible and accountable to citizens. Growing public expectations regarding government performance have strengthened the demand for governance systems that are responsive, transparent, and capable of minimizing inefficiency and administrative irregularities.

Digital transformation has become one of the most important strategies for strengthening public governance. The use of information and communication technology

enables governments to redesign administrative processes, improve coordination across institutions, expand public access to information, and enhance accountability in public service delivery. In Indonesia, this transformation has been institutionalized through the Electronic-Based Government System, commonly known as Sistem Pemerintahan Berbasis Elektronik (SPBE). Established under Presidential Regulation No. 95 of 2018, SPBE aims to promote clean, effective, transparent, and accountable governance by integrating government business processes through electronic systems. Therefore, digital technology is not merely viewed as an administrative tool but as a strategic instrument for improving the overall quality of public governance.

One strategic area within the implementation of SPBE is government procurement. Public procurement plays a critical role in public financial management because it involves the allocation of state and regional budgets for the acquisition of goods, services, infrastructure, and other public resources. Ineffective procurement practices may create risks of inefficiency, weak accountability, limited competition, and potential misuse of public funds. Consequently, the modernization of procurement systems has become essential to ensure that public expenditure is managed in accordance with the principles of good governance.

In Indonesia, the regulatory framework for government procurement is primarily governed by Presidential Regulation No. 16 of 2018 concerning Government Procurement of Goods and Services, as amended by Presidential Regulation No. 12 of 2021. These regulations emphasize that procurement processes should be conducted efficiently, effectively, transparently, openly, competitively, fairly, and accountably. The regulations also require public officials and procurement actors to demonstrate professionalism throughout the procurement cycle. Thus, government procurement should not be understood merely as an administrative activity but as an integral component of accountable public governance and public financial management.

To operationalize these principles, the Indonesian government has promoted the use of electronic procurement systems. The National Public Procurement Agency (Lembaga Kebijakan Pengadaan Barang/Jasa Pemerintah or LKPP) has developed operational regulations and electronic procurement mechanisms for ministries, government agencies, and local governments. One of the main platforms used in this process is the Electronic Procurement Service (Layanan Pengadaan Secara Elektronik or LPSE), which serves as the official electronic system for conducting government procurement. Through electronic procurement, government institutions are expected to improve procedural transparency, reduce direct interaction between procurement actors, strengthen documentation, and enhance monitoring throughout procurement activities.

At the local government level, electronic procurement is closely related to the management of regional assets. Goods acquired through procurement subsequently enter the cycle of regional asset management, including registration, utilization, maintenance, administration, and disposal. This relationship requires procurement processes to be conducted in an orderly and accountable manner to ensure consistency with asset management procedures. In this regard, local governments are guided by Minister of Home Affairs Regulation No. 19 of 2016 concerning Regional Property Management, which regulates the planning, procurement, administration, utilization, maintenance, and disposal of regional assets.

The Department of Communication, Informatics, and Statistics of Wajo Regency represents an important institutional setting for examining the implementation of electronic procurement. As a regional government agency responsible for supporting digital transformation, the department is expected not only to facilitate information technology development but also to implement electronic-based governance practices within its internal administrative processes. The agency has established Standard Operating Procedures for regional asset management in accordance with Minister of Home Affairs Regulation No. 19 of 2016. These procedures cover planning, procurement, utilization, administration, maintenance, and disposal of regional property, while also functioning as instruments of internal control.

However, the existence of regulatory frameworks, electronic procurement platforms, and organizational procedures does not automatically guarantee effective implementation. The implementation of electronic procurement policies at the organizational level may vary depending on human resource capacity, understanding of procurement regulations,

institutional readiness, technological infrastructure, coordination among work units, and commitment to transparency and accountability. Previous research has indicated that the effectiveness of electronic procurement is strongly influenced by the consistency with which transparency, accountability, and efficiency principles are applied throughout the procurement process. Similarly, studies in Wajo Regency have shown that electronic procurement has generally supported transparency, accountability, and efficiency, although challenges remain in ensuring consistent policy implementation across institutional processes.

Despite the growing adoption of electronic procurement in Indonesia, empirical studies that examine how electronic procurement policies are implemented within specific local government agencies remain limited. Many studies focus primarily on the normative benefits of e-procurement or assess procurement performance at a general governmental level. Less attention has been given to the organizational dynamics that influence policy implementation, particularly within local agencies that simultaneously play a strategic role in digital governance and undertake procurement activities. This gap is important because the success of electronic procurement depends not only on the availability of digital systems but also on the interaction between regulatory requirements, organizational capacity, administrative procedures, and inter-unit coordination.

Accordingly, this study examines the implementation of electronic-based government procurement at the Department of Communication, Informatics, and Statistics of Wajo Regency. The study specifically investigates the extent to which procurement practices align with existing regulatory provisions and identifies the supporting and inhibiting factors affecting policy implementation. By focusing on the organizational level, this study contributes to the literature on public administration, digital governance, and public procurement by providing empirical evidence on how electronic procurement policies are implemented within a local government agency in Indonesia. The findings are expected to offer practical insights for strengthening transparency, accountability, effectiveness, and efficiency in electronic procurement governance at the local government level.

2. Literature Review

Public Policy Implementation in Digital Public Administration

Public administration concerns the management of public affairs through governmental institutions to create public value, deliver services, and implement public policies. In contemporary governance, public administration extends beyond routine bureaucratic procedures and includes decision-making, resource management, coordination, accountability, and the delivery of outcomes that respond to public needs. Public policy implementation is therefore a central component of public administration because it determines whether formal policy decisions can be translated into operational actions and measurable outcomes.

Policy implementation refers to the process through which government decisions are transformed into practical activities by implementing agencies and public officials. It involves the interpretation of policy objectives, the allocation of responsibilities, the mobilization of resources, and the coordination of actors responsible for policy delivery. The effectiveness of implementation is not determined solely by the existence of formal regulations. Instead, it depends on the capacity of implementing organizations, the clarity of policy objectives, the availability of resources, the commitment of public officials, and the institutional environment in which implementation takes place.

The policy implementation model developed by George C. Edward III provides a relevant analytical framework for examining the implementation of electronic-based government procurement. The model identifies four major determinants of implementation success: communication, resources, disposition, and bureaucratic structure. Communication refers to the extent to which policy objectives, procedures, and responsibilities are clearly transmitted to implementing actors. Resources include the availability of qualified personnel, financial support, technological infrastructure, and operational facilities. Disposition concerns the willingness, commitment, and compliance of implementing officials in carrying out policy objectives. Bureaucratic structure refers to the organizational arrangements, division of authority, standard operating procedures, and coordination mechanisms that support policy implementation. In the context of digital public administration, these dimensions become increasingly important because implementing agencies must not only comply with procurement regulations but also adapt their organizational processes to electronic systems.

Digital transformation changes the way public institutions communicate, coordinate, document activities, and monitor compliance. Consequently, the implementation of electronic procurement should be understood as a combination of policy implementation, organizational adaptation, and technological integration.

Government Procurement as a Governance Instrument

Government procurement is a strategic component of public financial management because it transforms public budgets into goods, services, infrastructure, and other outputs required for public service delivery. Procurement is not merely an administrative procedure for purchasing goods and services. It is also a governance instrument that reflects government priorities, determines the quality of public expenditure, and influences public trust in government institutions.

Effective procurement requires systematic planning, transparent selection procedures, appropriate contract management, and accountability throughout the procurement cycle. The procurement process generally includes needs assessment, budget planning, preparation of technical specifications, supplier selection, contract implementation, delivery or acceptance of goods and services, and evaluation. Weaknesses at any stage may reduce the quality of procurement outcomes and create risks related to inefficiency, poor service delivery, limited competition, or misuse of public resources.

In Indonesia, government procurement is regulated through Presidential Regulation No. 16 of 2018, as amended by Presidential Regulation No. 12 of 2021. These regulations establish efficiency, effectiveness, transparency, openness, competition, fairness, and accountability as the core principles of government procurement. These principles require public institutions to ensure that procurement decisions are justified, traceable, competitive, and aligned with organizational needs. Therefore, procurement performance should be assessed not only through procedural compliance but also through its contribution to efficient public spending and accountable governance.

At the local government level, procurement is closely connected to regional asset management. Goods acquired through procurement become part of regional property and must subsequently be recorded, utilized, maintained, and, when necessary, disposed of according to applicable asset management regulations. This relationship highlights the importance of integrating procurement administration with regional asset management systems. Orderly procurement practices can strengthen asset accountability, improve the accuracy of asset records, and support internal control within local government institutions.

Electronic Procurement and Digital Governance

Electronic procurement, commonly referred to as e-procurement, is the use of digital systems to conduct procurement activities, including procurement planning, tender announcement, supplier selection, bid submission, evaluation, contract administration, and reporting. E-procurement represents a key mechanism through which governments seek to improve transparency, reduce administrative costs, minimize direct interaction between procurement officials and suppliers, and create an auditable digital record of procurement activities. The adoption of e-procurement is closely associated with broader digital governance reforms. Digital governance refers to the use of information and communication technologies to improve public sector performance, institutional coordination, public participation, transparency, and accountability. Rather than simply digitizing existing administrative procedures, digital governance requires governments to redesign processes, integrate information systems, improve data management, and strengthen organizational capacity.

In Indonesia, the Electronic-Based Government System (Sistem Pemerintahan Berbasis Elektronik or SPBE) provides the national framework for digital transformation in public administration. SPBE, established through Presidential Regulation No. 95 of 2018, aims to create effective, efficient, transparent, integrated, and accountable government administration through the use of electronic systems. Within this framework, e-procurement constitutes a practical application of SPBE because it integrates procurement procedures with digital platforms, electronic documentation, and standardized administrative processes. The implementation of e-procurement in Indonesia is supported by the National Public Procurement Agency (Lembaga Kebijakan Pengadaan Barang/Jasa Pemerintah or LKPP). LKPP develops procurement policies, technical guidelines, and electronic procurement mechanisms for government institutions. The Electronic Procurement Service (Layanan Pengadaan Secara Elektronik or LPSE) provides institutional and technical support for

electronic procurement, while the Electronic Procurement System (Sistem Pengadaan Secara Elektronik or SPSE) functions as the digital platform used to manage procurement processes. These instruments are intended to standardize procurement procedures, improve traceability, and strengthen oversight across government institutions.

However, the availability of electronic systems does not automatically guarantee successful implementation. The effectiveness of e-procurement depends on organizational readiness, the digital competence of procurement personnel, the quality of technological infrastructure, policy communication, leadership support, and coordination among organizational units. In local government settings, these factors may vary significantly across agencies, resulting in differences in the quality and consistency of e-procurement implementation.

Organizational Capacity and the Role of Local Government Agencies

Local government agencies play a central role in the implementation of electronic procurement because they are responsible for translating national procurement regulations and digital governance policies into operational practices. At this level, procurement implementation requires coordination among procurement officials, budget managers, technical units, asset administrators, and organizational leaders. The effectiveness of e-procurement therefore depends on the capacity of local government agencies to align their internal procedures with regulatory requirements and electronic procurement systems.

Organizational capacity includes the availability of competent human resources, adequate technological facilities, clear standard operating procedures, effective communication channels, and leadership commitment. Procurement officials must understand both substantive procurement regulations and the technical operation of electronic systems. In addition, agencies must ensure that procurement planning is integrated with budgeting, program implementation, and regional asset management. Without such integration, electronic procurement may be implemented only as a formal requirement rather than as a mechanism for improving governance quality.

The Department of Communication, Informatics, and Statistics of Wajo Regency is a relevant setting for examining this issue. As an agency that supports digital transformation within the local government, it is expected to demonstrate institutional readiness in implementing electronic-based administrative processes. At the same time, the department is responsible for conducting procurement activities and managing the resulting regional assets. Its experience provides an opportunity to examine how electronic procurement policies are implemented within an organizational environment that is directly connected to local digital governance.

Previous Studies and Research Gap

Previous studies have generally found that e-procurement contributes to improved transparency, accountability, efficiency, and procedural control in government procurement. Electronic systems can increase access to procurement information, reduce opportunities for direct intervention, strengthen documentation, and support monitoring throughout the procurement process. Studies conducted in Indonesian local government contexts have also indicated that electronic procurement can improve transparency and accountability in public financial management.

Nevertheless, previous studies also show that e-procurement implementation is influenced by organizational and institutional factors. Inconsistent policy communication, limited human resource capacity, inadequate technical skills, weak coordination, and insufficient organizational commitment may reduce the effectiveness of electronic procurement systems. These findings indicate that e-procurement should not be assessed solely based on the availability of technology or compliance with formal regulations. Instead, it should be examined as a policy implementation process shaped by organizational capacity and institutional dynamics.

Although existing research has discussed the benefits and challenges of e-procurement, limited attention has been given to the implementation process within specific local government agencies that are responsible for both digital governance and procurement administration. Moreover, studies rarely integrate the analysis of electronic procurement with regional asset management, even though procurement outcomes directly affect asset registration, utilization, maintenance, and accountability. This gap is particularly relevant in local government agencies where procurement, budgeting, information systems, and asset management are closely interconnected.

Accordingly, this study examines the implementation of electronic-based government procurement at the Department of Communication, Informatics, and Statistics of Wajo Regency. Using Edward III's policy implementation model, the study analyzes how communication, resources, implementers' disposition, and bureaucratic structure influence the implementation of e-procurement. The study also identifies the supporting and inhibiting factors that shape procurement implementation within the agency. By linking policy implementation theory, digital governance, government procurement, and regional asset management, this study contributes to a more comprehensive understanding of e-procurement implementation at the local government level.

3. Method

This research adopts a descriptive qualitative approach with a case study design, specifically selected to explore in depth the implementation of electronic-based government procurement at the Department of Communication, Informatics, and Statistics of Wajo Regency. The qualitative methodology enables the researcher to comprehensively understand the experiences, perceptions, administrative practices, coordination processes, and organizational dynamics involved in the implementation of electronic procurement, which cannot be adequately captured through quantitative measurement alone (Sugiyono, 2021; Creswell & Poth, 2021). Furthermore, the case study design allows the researcher to investigate electronic procurement practices within their real-life organizational context and to capture the complexity of policy implementation in local public administration.

The research was conducted at the Department of Communication, Informatics, and Statistics of Wajo Regency, located at Jalan Rusa Number 17, Bulu Pabbulu, Tempe District, Wajo Regency, South Sulawesi, Indonesia. The institution was purposively selected because it has a strategic role in supporting digital government transformation at the local level while also being directly involved in the implementation of electronic-based government procurement. As a local government agency responsible for communication, information technology, and statistical services, the department provides a relevant setting for examining how electronic procurement policies are implemented within the framework of the Electronic-Based Government System (Sistem Pemerintahan Berbasis Elektronik or SPBE). The research was conducted over a three-month period, covering the preparation, data collection, data organization, and analysis stages.

Primary data sources consisted of key informants selected through purposive sampling based on their direct involvement, authority, and knowledge of electronic procurement implementation within the Department of Communication, Informatics, and Statistics of Wajo Regency. The informants included one Head of the Department, one Department Secretary, one Division Head, one administrative officer involved in procurement-related activities, and one external supplier or third-party provider involved in electronic procurement processes. These informants were selected because they represented different perspectives on procurement planning, administrative coordination, implementation procedures, electronic system utilization, transparency, accountability, and organizational challenges. To protect confidentiality and comply with research ethics, participants were identified using their organizational roles rather than personal names.

Secondary data included procurement planning documents, procurement implementation reports, electronic procurement records, Standard Operating Procedures, regional asset management documents, institutional archives, relevant governmental regulations, and scientific literature related to public procurement, digital governance, and policy implementation. The regulatory documents examined included Presidential Regulation No. 16 of 2018 concerning Government Procurement of Goods and Services, as amended by Presidential Regulation No. 12 of 2021; Presidential Regulation No. 95 of 2018 concerning the Electronic-Based Government System; and Minister of Home Affairs Regulation No. 19 of 2016 concerning Regional Property Management.

Data collection was conducted through methodological triangulation using three primary techniques: in-depth semi-structured interviews, non-participant observation, and documentation studies. Interviews were guided by an interview protocol developed from Edward III's policy implementation model, focusing on four main dimensions: policy communication, resources, implementers' disposition, and bureaucratic structure. The interview questions explored the clarity and dissemination of electronic procurement procedures, staff understanding of procurement regulations, availability of competent

personnel and technological infrastructure, commitment to transparency and accountability, coordination among organizational units, and barriers encountered during the implementation process.

Non-participant observation was conducted within the organizational environment to examine directly administrative practices, coordination patterns, the use of electronic procurement systems, and interactions among procurement-related personnel. The researcher observed relevant activities without participating in procurement decision-making processes. Documentation studies involved the analysis of procurement planning documents, procurement reports, Standard Operating Procedures, electronic procurement records, asset management documents, institutional archives, and relevant legal and policy documents. The combination of interviews, observation, and document analysis enabled the researcher to compare formal procedures with actual implementation practices.

The collected data were analysed using the interactive analysis model proposed by Miles, Huberman, and Saldaña (2014), which integrates the simultaneous processes of data condensation, data display, and conclusion drawing and verification. Data condensation involved selecting, categorizing, and coding interview transcripts, field notes, and documentary materials according to the major analytical themes of “policy communication,” “human and technological resources,” “implementers’ disposition,” “bureaucratic structure,” “transparency,” “accountability,” and “implementation barriers.” Data display utilised narrative descriptions, thematic categorizations, and analytical matrices to identify relationships between policy requirements, organizational capacity, procurement practices, and implementation outcomes. Conclusions were continuously verified through source triangulation, technique triangulation, negative case analysis, and member checking to ensure the credibility, consistency, and analytical validity of the research findings.

4. Results and Discussion

Electronic Procurement as an Instrument of Administrative Order and Transparency

The findings show that electronic procurement has shifted procurement activities from predominantly manual procedures toward a more structured digital workflow. Procurement activities were conducted through the electronic system from planning and document preparation to contract implementation and reporting. Informants consistently described the system as providing clearer procedures, more organized documentation, and greater traceability of procurement activities. An administrative officer explained: “The work procedures are quite clear because all stages of the activity have been arranged in the system. From preparing administration and uploading documents to contract implementation, everything follows the established flow.” (IA, 27 April 2026).

Similarly, an external supplier noted that electronic procurement made procurement information and stages easier to access, enabling providers to follow procedures more efficiently. These findings suggest that the electronic system reduces information asymmetry between government agencies and suppliers by making procurement requirements, stages, and documentation more visible. The results demonstrate that digital procurement contributes to procedural transparency not only by providing public access to procurement information but also by creating a digital audit trail. The electronic recording of documents and transactions enables procurement activities to be monitored by relevant actors, thereby reinforcing administrative accountability. This finding is consistent with the broader objective of Indonesia’s Electronic-Based Government System, which seeks to promote transparent, effective, and accountable governance through the use of digital technologies.

Table 1. Electronic Procurement as an Instrument of Administrative Order and Transparency.

Key Themes/Concepts	Informant Code	Informant's Statement	Initial Interpretation (Theoretical Relevance)
Procedural Clarity	IA (Administrative Officer)	"The work procedures are quite clear because all stages of the activity have been arranged in the system. From preparing administration and uploading documents to contract implementation, everything follows the established flow."	Digital systems standardize procurement procedures, reducing ambiguity and strengthening administrative order in line with bureaucratic structure principles.
Access to Procurement Information	to EH (External Supplier)	"From the provider's perspective, the procurement process is more open because all stages and requirements can be accessed through the system."	Electronic procurement reduces information asymmetry between government and suppliers, enhancing transparency and fair competition.
Traceability Processes	of IA (Administrative Officer)	"Every activity is recorded in the system, so it is easier to track documents and procurement stages when needed."	Digital recording systems create audit trails that strengthen accountability and enable monitoring of procurement processes.
Administrative Accountability	EH (External Supplier)	"Because everything is recorded electronically, the process feels more accountable and easier to monitor compared to manual systems."	Electronic procurement enhances accountability through digital documentation and real-time monitoring mechanisms.

Source: Processed interview data 2026.

Based on Table 1, electronic procurement improves procedural clarity by systematically organizing procurement stages within a digital system, thereby reducing ambiguity and strengthening administrative order through standardized workflows. The system also enhances transparency by increasing suppliers' access to procurement information, which reduces information asymmetry and supports fair competition. In addition, electronic procurement strengthens traceability as all activities are automatically recorded, enabling real-time monitoring and review of procurement processes. This contributes to greater administrative accountability, as both officials and suppliers can more easily track and evaluate procurement activities compared to manual systems. Overall, the findings indicate that electronic procurement enhances administrative order, transparency, traceability, and accountability, in line with the objectives of Indonesia's Electronic-Based Government System (SPBE) to promote efficient and accountable governance.

Communication and Coordination in Policy Implementation

Communication emerged as a central component of implementation. The agency used socialization activities, coordination meetings, technical guidance, and direct assistance to communicate procurement procedures and regulatory requirements to officials and suppliers. These activities were important because procurement implementation involved multiple organizational units with different administrative responsibilities.

The findings indicate that communication served two functions. First, it transmitted formal policy requirements, including procedures for document preparation, system use, and procurement reporting. Second, it functioned as a problem-solving mechanism when staff encountered technical disruptions, administrative inconsistencies, or changes in procurement

regulations. Thus, communication was not merely a one-way dissemination process; it was an ongoing coordination practice that enabled actors to interpret and operationalize policy requirements.

This pattern supports Edward III's policy implementation model, which emphasizes the importance of clear, consistent, and accurately transmitted communication. In the Wajo Regency context, the electronic system standardized procedural information, but it did not eliminate the need for interpersonal communication. Direct coordination remained necessary to resolve operational problems and ensure that procurement activities continued in accordance with applicable regulations.

Table 2. Communication and Coordination in Policy Implementation.

Key Themes/Concepts	Informant Code	Informant's Statement	Initial Interpretation (Theoretical Relevance)
Communication of Procurement Procedures	IA (Administrative Officer)	"We conduct socialization, technical guidance, and coordination meetings to explain procurement procedures and system use to all related units."	Communication functions as policy transmission, ensuring that procedural requirements are understood consistently across organizational units, in line with Edward III's communication dimension.
Inter-Organizational Coordination	IA (Administrative Officer)	"Because procurement involves several units, we always coordinate when there are differences in documents or technical issues in the system."	Coordination acts as a mechanism to align responsibilities across units, reducing implementation gaps in multi-actor policy execution.
Problem-Solving Communication	EH (External Supplier)	"When there are issues in the system or document requirements, we usually communicate directly with the procurement officers to clarify things."	Communication is not only informational but also instrumental for resolving operational problems and ensuring continuity of procurement processes.
Continuity of Implementation Communication	—	—	Communication must be continuous to maintain consistency in procurement implementation, ensure responsiveness to issues, and support sustainable policy execution across stages.

Source: Processed interview data 2026.

Based on Table 2, communication of procurement procedures is conducted through structured institutional mechanisms such as training and coordination forums. Administrative officers emphasize that these activities are designed to ensure uniform understanding of procurement procedures across organizational units. This reflects communication as a formal policy transmission process that reduces ambiguity in implementation. Furthermore, inter-organizational coordination plays a critical role in aligning responsibilities among units involved in procurement. Coordination is particularly necessary when discrepancies arise in documents or when technical issues occur within the system. This demonstrates that coordination functions as an adaptive mechanism that maintains implementation consistency in a multi-actor governance environment.

In addition, problem-solving communication is highlighted from the supplier perspective. External suppliers indicate that direct communication with procurement officers is essential when addressing system errors or clarifying administrative requirements. This shows that communication also operates at an operational level, ensuring continuity and responsiveness in procurement implementation. Overall, the findings suggest that communication and coordination are not merely supporting elements, but fundamental

mechanisms that sustain the effectiveness of electronic procurement. Even in a digitized procurement environment, interpersonal communication remains indispensable for resolving problems, ensuring regulatory compliance, and maintaining implementation continuity.

Human Resources and Technological Capacity

The availability and competence of human resources were identified as key determinants of implementation quality. The agency had assigned personnel who understood procurement administration and electronic systems, and internal coordination and technical assistance helped sustain procurement activities. However, informants also emphasized that staff capacity required continuous improvement because electronic procurement demands simultaneous competence in digital applications, procurement administration, and changing regulations. A key informant stated:

“We have tried to assign employees who understand administration and electronic procurement systems according to their respective duties. Capacity still needs to be improved, but procurement can proceed because of coordination and technical assistance.” (IM, 20 April 2026). This finding indicates that human resources should not be assessed solely in terms of staffing availability. In electronic procurement, resource capacity includes digital literacy, regulatory knowledge, administrative competence, and the ability to adapt to system updates. The results therefore reinforce the argument that digital transformation in public administration requires organizational learning rather than merely the installation of technology.

Technological infrastructure was also important. Internet disruptions and application-related problems were reported as recurring obstacles that could delay document uploading and procurement administration. These technical constraints demonstrate that electronic procurement remains dependent on the reliability of supporting infrastructure. When the network or application system is disrupted, digital procedures may become slower rather than more efficient, requiring staff to adjust procurement schedules and intensify coordination.

Table 3. Human Resources and Technological Capacity.

Key Themes/Concepts		Informant Code	Informant's Statement	Initial Interpretation (Theoretical Relevance)
HR Assignment and Role Fit		IM (Key Informant)	“We have tried to assign employees who understand administration and electronic procurement systems according to their respective duties.”	Effective implementation depends on appropriate placement of personnel with adequate administrative and digital procurement competencies.
	Capacity Limitations and Continuous Improvement	IM (Key Informant)	“Capacity still needs to be improved, but procurement can proceed because of coordination and technical assistance.”	Human resource capacity in e-procurement is dynamic; continuous training and organizational learning are required beyond initial staffing.
Multi-Dimensional HR Competence		Research Synthesis	(Derived from interview context) HR capacity includes digital literacy, procurement administration skills, and understanding of regulatory updates.	Digital governance requires multi-layered competencies, reinforcing the shift from traditional bureaucracy to adaptive and learning-oriented administration.
Technological Infrastructure Constraints		IM (Key Informant)	“Internet disruptions and application-related problems sometimes delay document uploading and procurement administration.”	System reliability is a critical determinant of implementation efficiency; technological limitations can hinder digital governance performance.

Coordination as a IM (Key Informant)	(Implied from narrative)	Organizational
Buffer for Technical Issues	Procurement continues through coordination when technical problems occur.	coordination mitigates the impact of infrastructure instability, ensuring continuity of policy implementation.

Source: Processed interview data 2026.

Based on Table 3, human resource assignment and role fit contribute to smoother implementation by ensuring that personnel with relevant competencies are placed in appropriate positions. Capacity limitations, however, highlight the need for continuous improvement supported by training and technical assistance. Furthermore, technological constraints emphasize that system reliability is a key determinant of implementation effectiveness, while coordination functions as a buffering mechanism that helps maintain continuity during technical disruptions. Overall, the findings suggest that the effectiveness of electronic procurement implementation is shaped by the interaction between human resource capacity, technological infrastructure, and organizational coordination. These elements collectively determine whether digital procurement systems can operate efficiently and sustainably in practice.

Implementers' Disposition: Compliance, Responsibility, and Fairness

The disposition of procurement implementers was generally positive. Participants described a strong orientation toward procedural compliance, complete documentation, and accountability. The electronic system encouraged staff to be more careful because each procurement stage required digital documentation and adherence to predefined procedures. A division head explained: "The responsibility of implementers can be seen in how they prepare procurement administration and documents according to applicable rules. In the electronic system, all documents must be complete and follow procedures so that the procurement process can run smoothly." (TH, 21 April 2026). The findings also show that the system was perceived as improving fairness from the supplier perspective. Because procurement information was made available electronically, providers had more equal access to information and procedures. This reduced the perception of discriminatory treatment and strengthened confidence in the objectivity of the procurement process.

These results align with Edward III's disposition dimension, which highlights the importance of implementers' willingness and commitment in translating policy into practice. The electronic system strengthened compliance by embedding procedural requirements into the workflow. However, compliance still depended on the ability of staff to interpret regulatory changes and prepare documents accurately. Therefore, digital systems can support accountability, but they cannot fully substitute for professional judgment and administrative competence.

Table 4. Implementers' Disposition: Compliance, Responsibility, and Fairness.

Key Themes/Concepts	Informant Code	Informant's Statement	Initial Interpretation (Theoretical Relevance)
Procedural Compliance	TH (Division Head)	"The responsibility of implementers can be seen in how they prepare procurement administration and documents according to applicable rules."	Implementers demonstrate strong commitment to procedural compliance, reflecting adherence to formal bureaucratic rules in policy implementation.

Administrative Responsibility	TH (Division Head)	“In the electronic system, all documents must be complete and follow procedures so that the procurement process can run smoothly.”	Digital procurement systems reinforce accountability by embedding documentation completeness and procedural accuracy into workflow requirements.
System-Enforced Discipline	TH (Division Head)	(Implied from narrative) The electronic system requires strict adherence to procedural steps in procurement execution.	E-procurement strengthens implementer discipline by structuring actions through standardized digital procedures.
Perceived Fairness Suppliers	toEH (External Supplier)	(Derived from narrative) Procurement information is more equally accessible to all providers through the electronic system.	Digital procurement enhances procedural fairness by reducing information asymmetry and minimizing perceived discriminatory practices.
Objectivity and Trust in Process	EH (External Supplier)	(Derived from narrative) Equal access to information increases confidence in procurement objectivity.	Transparency in digital systems strengthens trust and reinforces perceptions of fairness and impartial policy execution.
Compliance and Professional Judgment	Research Synthesis	(Derived from analysis) Compliance depends on accurate interpretation of regulations and administrative competence.	While digital systems support compliance, effective implementation still requires human judgment and professional expertise in interpreting rules, consistent with Edward III's disposition dimension.

Source: Processed interview data 2026.

Based on Table 4, procedural compliance is a key characteristic of implementers' disposition, demonstrated through adherence to administrative rules in procurement activities. In addition, administrative responsibility is strengthened by system requirements that ensure document completeness and procedural accuracy at every stage of implementation. These conditions illustrate how digital systems institutionalize discipline by embedding compliance directly into procurement workflows. Moreover, the findings show that electronic procurement enhances fairness and transparency in supplier relations. Equal access to procurement information contributes to increased trust in the objectivity of the process and reinforces perceptions of impartial policy implementation. This demonstrates that digital systems play an important role in strengthening procedural legitimacy in public procurement.

However, the results also indicate that compliance in electronic procurement is not solely determined by system enforcement. It still depends on the ability of implementers to interpret regulatory changes accurately and exercise professional judgment in administrative processes. Therefore, while digital systems support accountability and procedural discipline, they cannot fully replace human competence in policy interpretation and implementation. Overall, the findings align with Edward III's disposition dimension, which emphasizes the importance of implementers' willingness and commitment in translating policy into practice.

Electronic procurement strengthens compliance and accountability, while simultaneously highlighting the continued need for professional judgment in ensuring effective implementation.

Bureaucratic Structure and Procedural Standardization

The bureaucratic structure of electronic procurement was characterized by defined procedures, task allocation, and coordination among relevant units. The system provided a standardized sequence of activities, including planning, document preparation, data input, supplier selection, contract implementation, and reporting. This standardization supported administrative discipline and reduced the likelihood of procedural inconsistencies.

The findings suggest that the electronic procurement system strengthened bureaucratic structure by formalizing workflows and making documentation easier to monitor. Officials were required to follow established stages, while procurement records could be reviewed by relevant actors. In this sense, the system functioned as both an administrative tool and an internal control mechanism.

However, the results also indicate that standardized procedures did not remove the need for organizational flexibility. Informants reported that administrative adjustments often required additional coordination among implementers. This demonstrates that bureaucratic structure in digital procurement should combine procedural standardization with responsive coordination mechanisms. A rigid system without sufficient communication and support may create new administrative bottlenecks, particularly when regulations or digital platforms change.

Table 5. Bureaucratic Structure and Procedural Standardization.

Key Themes/Concepts	Informant Code	Informant's Statement	Initial Interpretation (Theoretical Relevance)
Standardized Procurement Procedures	IA (Administrative Officer)	"The system provides a clear sequence of activities from planning, document preparation, data input, supplier selection, contract implementation, to reporting."	Electronic procurement strengthens bureaucratic structure through procedural standardization that ensures consistency across all stages of procurement.
Workflow Formalization	IA (Administrative Officer)	(Implied from narrative) All procurement activities must follow predefined system stages.	Digital systems formalize bureaucratic workflows, reinforcing administrative discipline and reducing procedural ambiguity.
Administrative Control and Monitoring	IA (Administrative Officer)	"Procurement records can be reviewed and monitored through the system at every stage."	E-procurement functions as an internal control mechanism by enabling traceability and real-time monitoring of administrative processes.
Inter-Unit Coordination Structure	IA (Administrative Officer)	(Derived from explanation) Coordination is required among planning, administrative, and procurement units.	Bureaucratic structure in digital procurement depends on inter-organizational coordination to ensure smooth implementation across units.

Structural Standardization Flexibility	vs	Research Synthesis (Derived from findings) Standardized procedures still require adjustments through coordination when issues arise.	Effective bureaucratic structures must balance procedural rigidity with organizational flexibility to address dynamic administrative conditions.
System-Induced Administrative Bottlenecks		IA (Administrative Officer) (Implied from narrative) Changes in regulations or system updates require additional coordination.	Over-standardization without adaptive mechanisms may create administrative delays, highlighting the need for responsive bureaucratic coordination in digital governance.

Source: Processed interview data 2026.

Based on Table 5, standardized procurement procedures are reflected in the clear sequencing of activities within the electronic system, ensuring consistency across all stages of procurement. Workflow formalization further reinforces administrative discipline by requiring all activities to follow predefined system pathways. In addition, administrative control and monitoring are strengthened through system-based recording, which enables real-time tracking and evaluation of procurement processes. Moreover, inter-unit coordination plays a critical role in ensuring the smooth functioning of bureaucratic structure. Coordination among planning, administrative, and procurement units is necessary to maintain procedural alignment and resolve operational issues. The findings also highlight the tension between structural standardization and organizational flexibility, indicating that effective bureaucratic systems must remain adaptive to changing administrative and regulatory conditions. System-induced administrative bottlenecks may occur when procedural rigidity is not supported by responsive coordination mechanisms. Overall, the findings demonstrate that electronic procurement strengthens bureaucratic structure through standardization, monitoring, and formalization of workflows, while simultaneously requiring adaptive coordination to maintain implementation effectiveness in dynamic governance environments.

Supporting and Inhibiting Factors

The implementation of electronic procurement was supported by four main factors: clear regulatory guidance, relatively effective communication and coordination, personnel with basic procurement knowledge, and the availability of information technology facilities. National regulations provided a formal basis for implementation, while the SPSE created a standardized mechanism for organizing procurement activities. These factors enabled the agency to conduct procurement in a more systematic and accountable manner.

At the same time, the study identified several inhibiting factors. The most prominent barriers were unstable internet connections, technical disruptions in procurement applications, uneven staff capacity, and the need to adapt continuously to changing regulations and administrative requirements. These barriers could delay procurement processes and increase the need for manual coordination.

The findings therefore indicate that electronic procurement should be understood as a socio-technical policy process. Technology improves documentation, transparency, and procedural control, but successful implementation depends on organizational readiness, staff competence, infrastructure reliability, and continuous coordination. Strengthening staff training, improving information technology infrastructure, and maintaining technical assistance are consequently essential for optimizing electronic procurement in local government institutions.

Table 6. Supporting and Inhibiting Factors.

Key Themes/Concepts	Informant Code	Informant's Statement	Initial Interpretation (Theoretical Relevance)
Leadership Attention	AI (Administrative Staff)	"The Regional Secretary has certainly shown a great deal of attention, both in her efforts to create a synergistic environment among her subordinates."	Individualized leadership attention strengthens organizational trust and employee commitment, consistent with Transformational Leadership Theory.
Professional Development	AI (Administrative Staff)	"She motivates employees to continue their education and develop themselves even further."	Leaders who encourage self-development enhance employee motivation and long-term organizational capacity.
Role Modelling	AI (Administrative Staff)	"The Regional Secretary always arrives on time, maintains professionalism, and leads in a nurturing rather than dictatorial manner."	Exemplary behaviour reinforces leadership credibility and organizational discipline.

Source: Processed interview data 2026.

he Regional Secretary's leadership reflects a strong emphasis on employee empowerment, professional development, and exemplary behavior. The findings show that employees respond positively to leadership practices that prioritize attention, mentorship, and supportive relationships, rather than rigid hierarchical control. These approaches contribute to a positive organizational climate that enhances motivation, engagement, and performance. In addition, leadership attention is found to strengthen trust and commitment among employees, particularly through efforts to build synergy and encourage continuous education. This reflects individualized consideration in Transformational Leadership Theory and demonstrates a commitment to long-term human resource development. Moreover, the Regional Secretary's discipline, punctuality, and professionalism serve as role models that reinforce leadership credibility and organizational discipline. In line with Bass's Transformational Leadership Theory, leadership effectiveness is shaped not only by authority but also by the ability to inspire and set behavioral standards. Overall, transformational leadership in the Regional Secretariat contributes to improved motivation, work ethics, and organizational coordination through empowerment, development, and role modelling.

Evidence from Interviews on Electronic-Based Government Procurement Implementation

This study examined the implementation of electronic-based government procurement at the Department of Communication, Informatics, and Statistics of Wajo Regency through the dimensions of communication, resources, implementers' disposition, and bureaucratic structure. The findings indicate that the adoption of the Electronic Procurement System (*Sistem Pengadaan Secara Elektronik* [SPSE]) has generally strengthened administrative order, transparency, and accountability. Nevertheless, the effectiveness of implementation remains shaped by the interaction between digital infrastructure, staff capability, regulatory adaptation, and inter-unit coordination.

Table 7. Thematic Evidence from Interviews on Electronic-Based Government Procurement Implementation.

Key Themes/Concepts	Informant Code	Informant's Statement	Initial Interpretation (Theoretical Relevance)
Electronic Procurement Procedures	IA (Administrative Officer)	"The work procedures are quite clear because all stages of the activity have been arranged in the	Clear electronic workflows support procedural standardization and

		system. From preparing administration and uploading documents to contract implementation, everything follows the established flow.”	reduce ambiguity in implementation. This finding is consistent with the bureaucratic structure dimension of Edward III’s policy implementation model.
Policy Communication and Coordination	IM (Department Secretary)	“Coordination is carried out from the planning stage until procurement implementation. Each division coordinates with procurement officials and related units so that the process complies with regulations and administrative errors can be avoided.”	Effective communication and coordination facilitate the accurate transmission of policy objectives, clarify responsibilities, and minimize implementation errors. This supports the communication dimension of Edward III’s model.
Human Resource Capacity	IM (Department Secretary)	“We have tried to assign employees who understand administration and electronic procurement systems according to their respective duties. Capacity still needs to be improved, but procurement can proceed because of coordination and technical assistance.”	Competent personnel and technical support represent essential implementation resources. However, the need for continuous capacity development indicates that resource adequacy remains dynamic.
Digital Competence and Adaptation	IA (Administrative Officer)	“Human resource capacity is crucial because the entire process now uses a digital system. Employees need to understand procurement administration, application use, and procurement regulations to avoid errors.”	Electronic procurement requires digital literacy, administrative competence, and regulatory knowledge. This finding reinforces the resources dimension of Edward III’s implementation framework.
Implementers’ Compliance	TH (Division Head)	“The responsibility of implementers can be seen in how they prepare procurement administration and documents according to applicable rules. In the electronic system, all documents must be complete and follow procedures.”	Compliance with procurement procedures and documentation requirements demonstrates implementers’ commitment and responsibility, reflecting the disposition dimension of policy implementation.
Transparency and Fair Access	EH (External Supplier)	“From the provider’s perspective, the procurement process is more open and fair because all providers receive the same access to information through the electronic system.”	Equal access to procurement information enhances transparency, fairness, and accountability while reducing information asymmetry in public procurement.
Technological Infrastructure	EW (Administrative Officer)	“Electronic procurement helps make the process more organized, but internet disruptions and	Reliable technological infrastructure is a key implementation resource. Network disruptions and

Inter-Unit Coordination	TH (Division Head)	application problems can sometimes delay document submission and administrative processes.”	system errors may reduce efficiency and require additional coordination among implementers.
		“When there are changes in documents, technical requirements, or procurement procedures, we need to coordinate again with the relevant units so that the process remains in accordance with the applicable provisions.”	Coordination serves as an adaptive mechanism that enables organizations to respond to procedural changes while maintaining compliance with procurement regulations.

Source: Processed interview data 2026.

Based on Table 7, the implementation of electronic procurement demonstrates that clear electronic procedures and standardized workflows have improved administrative consistency and reduced procedural ambiguity. The findings indicate that procurement activities are now carried out through a structured digital system that regulates each stage of the process, from planning and document preparation to contract execution. This reflects the strengthening of bureaucratic structure through procedural standardization, in line with Edward III's policy implementation framework. Furthermore, communication and coordination are found to play a crucial role in ensuring policy implementation effectiveness. The results show that continuous coordination among divisions and procurement units helps maintain regulatory compliance and reduce administrative errors. Communication is not only conducted at the planning stage but also continues throughout implementation, particularly when procedural adjustments or technical issues occur. This highlights that effective communication functions as both a transmission of policy objectives and a coordination mechanism in multi-actor implementation settings.

In addition, the findings indicate that human resource capacity is a key determinant of implementation success. While personnel with basic procurement knowledge have been assigned to relevant roles, continuous capacity development remains necessary due to the increasing complexity of digital procurement systems. Employees are required to integrate administrative competence, digital literacy, and regulatory understanding in order to minimize errors and ensure smooth implementation. This demonstrates that resource adequacy in electronic procurement is dynamic and requires ongoing organizational learning. Moreover, the disposition of implementers reflects a strong orientation toward compliance and administrative responsibility. The requirement to complete all procurement documentation through the electronic system encourages higher levels of procedural discipline and accountability. From the supplier perspective, the system is also perceived as enhancing transparency and fairness, as all providers receive equal access to procurement information. This strengthens trust in the objectivity of the procurement process and aligns with the disposition dimension of Edward III's model.

The study also finds that technological infrastructure plays a significant role in determining implementation effectiveness. Although the electronic system contributes to better organization and documentation, internet disruptions and application-related issues can delay administrative processes. These constraints indicate that digital procurement systems remain highly dependent on the reliability of ICT infrastructure, and technical instability may reduce overall efficiency. Finally, inter-unit coordination emerges as an important adaptive mechanism in implementation. When changes occur in procurement procedures or administrative requirements, additional coordination is required among relevant units to ensure compliance and continuity of processes. This demonstrates that bureaucratic structure in electronic procurement is not only characterized by procedural standardization but also by the need for flexible coordination in response to dynamic policy and technical conditions. Overall, the findings indicate that the implementation of electronic procurement in Wajo Regency is shaped by the interaction of institutional, human, and technological factors. While SPSE strengthens transparency, accountability, and procedural order, its effectiveness depends on continuous communication, adequate human resource capacity, reliable infrastructure, and adaptive coordination mechanisms.

5. Conclusion

Based on the research findings, the implementation of electronic-based government procurement at the Department of Communication, Informatics, and Statistics of Wajo Regency has been carried out effectively through the use of the Electronic Procurement System (SPSE) across all procurement stages. This implementation is supported by relatively effective communication and coordination, adequate human resources and information technology infrastructure, strong commitment from implementers in carrying out their duties in accordance with applicable regulations, a clear bureaucratic structure, and the application of transparency and accountability principles. These conditions have contributed to a procurement process that is more effective, efficient, transparent, and accountable.

The supporting factors for electronic procurement implementation include inter-organizational coordination, the availability of competent human resources, adequate ICT facilities, and information openness through the electronic system. Meanwhile, the inhibiting factors include unstable internet connections, technical disruptions in the procurement application system, continuous changes in regulations that require adaptation, and the need to further strengthen the capacity of personnel in managing electronic procurement systems.

In order to improve the effectiveness of implementation, it is recommended that the Department of Communication, Informatics, and Statistics of Wajo Regency continuously enhance human resource capacity through training, technical guidance, and mentoring related to electronic-based procurement so that personnel are able to adapt to system developments and procurement regulations. In addition, improvements to information technology infrastructure, particularly internet network quality and system reliability, are necessary to optimize procurement processes and reduce technical constraints. Furthermore, communication and coordination among procurement implementers should be continuously strengthened to ensure a more orderly, transparent, accountable, and regulation-compliant electronic procurement system.

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