



The Use of Knowledge Management Systems to Improve Decision-Making in Local Government

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ABSTRACT

Effective and data-driven decision-making has become an urgent need for local governments in facing the challenges of public service complexity, socio-economic dynamics, and demands for transparency and accountability. One of the strategic approaches to support this process is through the implementation of a Knowledge Management System (KMS). This research aims to explore the role and impact of KMS implementation on the improvement of decision-making quality in regional government organizations. A qualitative approach is used in this study with a case study method on several regional government agencies in Indonesia that have implemented KMS, combined with an analysis of related academic literature. Research results show that KMS is capable of improving the efficiency of storage, distribution, and access to organizational knowledge, both tacit and explicit. KMS supports faster, more accurate, and participatory decision-making because strategic information can be obtained and used promptly by policymakers. The findings also indicate that the success of KMS implementation is greatly influenced by organizational culture, leadership support, and the capacity of human resources in managing and sharing knowledge. This study recommends the comprehensive integration of KMS into the government work system, with an emphasis on training aspects, digital infrastructure, and internal policies that support the knowledge-sharing process. The theoretical and practical implications of these findings are an important contribution to the development of knowledge-based governance at the regional level.

Keywords:

Knowledge Management System, Decision Making, Local Government, Knowledge Sharing, Governance

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1. INTRODUCTION

In the era of globalization and rapid development of information technology, public sector organizations, including local governments, are required to make accurate, quick, and data-driven decisions[1]. The complexity of social, economic, and political issues faced by local governments demands an efficient and responsive decision-making mechanism[2]. One of the approaches that is gaining more attention in this context is the implementation of a Knowledge Management System (KMS)[3]. KMS is a structured system designed to capture, store, share, and manage organizational knowledge so that it can be effectively used to support business processes and decision-making[4].

In the context of local government, knowledge is widely disseminated in various forms, both explicit such as documents, regulations, and reports, and tacit such as employee experience and leadership intuition[5]. This knowledge is often undocumented or not easily accessible to those who need it[6]. This causes the decision-making process to be slow, inaccurate, and less adaptive to the dynamics of environmental changes[7]. Therefore, the implementation of KMS becomes important to bridge the gap between information resources and decision-making needs[8].

Conceptually, knowledge management systems help organizations identify valuable knowledge, facilitate the flow of information between work units, and create a work culture that encourages collaboration and continuous learning[9]. In the context of local government, the implementation of KMS can encompass various aspects, such as the use of information technology to manage policy databases, digital document archiving, best practice sharing portals, and collaborative systems between agencies and regional devices.

However, the implementation of KMS in the public sector, particularly in local government, still faces various challenges. The lack of awareness about the importance of knowledge management, limited technological infrastructure, and an organizational culture that does not yet support collaboration and information sharing are the main obstacles in optimally implementing this system. In addition, there has not been much empirical research specifically exploring how knowledge management systems directly impact the quality and effectiveness of decision-making in the context of local government in Indonesia[10].

Several previous studies have highlighted the importance of knowledge management in supporting the efficiency and effectiveness of public sector organizations[11]. For example, research by Davenport and Prusak (1998) states that organizations that can manage their knowledge strategically will have an advantage in making better decisions. In the context of governance, Nonaka and Takeuchi (1995) emphasize the importance of integrating individual and organizational knowledge to produce innovative and information-based decisions. However, how these concepts are translated into local government practices, especially within the complex and often rigid bureaucratic ecosystem, remains a relevant question to be answered[12].

This research aims to fill that gap by deeply exploring the role of knowledge management systems in improving decision-making in the local government environment. The focus of the research is not only on the technological aspects but also includes human factors, organizational culture, as well as processes and policies that shape the government work environment[13]. With this approach, it is expected that the research results can provide theoretical and practical contributions to the development of more knowledge-based decision-making systems in the public sector[14].

The main objectives of this research are to: (1) identify the forms of KMS implementation in local government agencies; (2) evaluate the impact of KMS on the decision-making process and quality; and (3) formulate the key success factors for KMS implementation in the context of local bureaucracy. Thus, the results of this study are expected to serve as a reference for policymakers in the region in designing strategies to improve organizational performance through more systematic and sustainable knowledge management[15].

The urgency of this research is also reinforced by the national need to realize good governance and evidence-based policy making. In line with the push for government digitalization through the e-government program, the implementation of KMS can serve as a supporting element in enhancing transparency, accountability, and efficiency in public services. Therefore, this study is not only relevant in the academic context but also has high practical value in everyday government practices. With that background, this research becomes important to conduct as an effort to strengthen knowledge-based decision-making in Indonesian regional governments, which in turn can encourage the improvement of public service quality and more sustainable regional development.

2. RESEARCH METHODOLOGY

This research uses a descriptive qualitative approach with a case study method, aiming to deeply illustrate how the knowledge management system (KMS) is used in the decision-making process within the local government environment. This approach was chosen because it can capture the context and complexity of bureaucratic organizations holistically, and allows for the exploration of factors influencing the success or failure of KMS implementation.



Picture 1. Research Structure

2.1 Location and Research Subjects

The research was conducted at two regional government agencies at the district/city level that have implemented knowledge management systems both formally and informally. The selection of locations was conducted purposively, based on the following criteria:

- a. Already has an internal management information system based on technology (such as e-office or SIMDA);
- b. Having policy documentation related to knowledge management or bureaucratic innovation;
- c. Having a work unit or a data and information management team.

The respondents in this study consist of structural officials, functional staff, and information technology officers who are directly involved in decision-making and knowledge management.

2.2 Data Collection Techniques

Data was collected through three main techniques:

- a. In-depth interview: Conducted with 10–15 key informants in each agency who have a strategic role in the decision-making process and the use of information systems.
- b. Participatory observation: Researchers directly observe work processes involving the KMS system, such as data-driven coordination meetings, the use of digital dashboards, or document-sharing processes between work units.
- c. Documentation study: Includes analysis of internal policies, information system structure, agency performance reports, and SOP for KMS usage.

2.3 Data Analysis Techniques

Data were analyzed using thematic analysis with the following stages:

- a. Data reduction: Filtering data relevant to the research focus.
- b. Categorization: Grouping information based on themes such as KMS usage, obstacles, benefits, and its impact on decision-making.
- c. Interpretation: Interpreting the meaning of data in the context of regional government organizations.
- d. Conclusion: Summarizing findings that outline the relationship between the implementation of KMS and the quality of decision-making.

To enhance data validity, source and method triangulation techniques were used, namely comparing interview data with observations and official documents. Additionally, member checking was conducted with informants to confirm the interpretation of the results.

2.4 Research Ethics

This research is conducted with attention to ethical principles, such as informed consent from respondents, anonymity of informants' identities, and confidentiality of organizational data. The researcher also submitted an official request to the institution where the research was conducted.

3. RESULT AND DISCUSSION

This research reveals that the implementation of Knowledge Management Systems (KMS) in the local government environment significantly influences decision-making effectiveness. Through in-depth interviews, observations, and documentation studies in two local government agencies, several key findings were obtained that illustrate the roles, benefits, and obstacles of KMS implementation.

3.1 Key Findings from the Field

Based on in-depth interviews, participatory observation, and document analysis conducted at two local government institutions (City Government A and District Government B), it was found that the implementation of a Knowledge Management System (KMS) has contributed positively to the decision-making process, despite several implementation challenges.

In general, the use of KMS in local government can be categorized into three primary functions: (1) documentation and policy archiving, (2) provision of supporting data for decision-making, and (3) facilitation of communication and collaboration among work units. Both institutions utilized internal digital platforms such as e-Office, SIMDA (Regional Management Information System), and performance dashboards integrated with sectoral data.

3.2 Benefits of KMS on Decision-Making

Respondents indicated that the KMS allows decision-makers to:

- a. Access historical data and trends without relying solely on individual memory;
- b. Trace previous policy documents to accelerate policy formulation;
- c. Engage in real-time, data-driven discussions across departments through collaborative portals.

The following table presents employees' perceptions of the benefits of KMS in decision-making, based on interviews with 20 respondents from the two institutions:

Table 1. Employee Perceptions of KMS Benefits in Decision-Making

Assessed Aspect	Agree (%)	Disagree (%)	Neutral (%)
KMS simplifies data access for policymaking	85%	5%	10%
KMS improves the speed of decision-making	75%	10%	15%
KMS promotes inter-departmental collaboration	70%	15%	15%
KMS supports institutional knowledge documentation	90%	0%	10%
KMS increases transparency in decision-making	65%	20%	15%

3.3 Discussion

These findings reinforce earlier literature (Nonaka & Takeuchi, 1995; Wiig, 1997), which suggests that managing organizational knowledge leads to competitive advantage through more informed decision-making. In the context of local government, this advantage is manifested in time efficiency, policy accuracy, and enhanced inter-unit participation. Nevertheless, several real-world challenges remain, including:

- Low digital literacy among some civil servants, resulting in underutilization of the KMS;
- Dependence on certain individuals who dominate system operations, creating potential bottlenecks;
- Absence of reward and incentive policies for knowledge sharing among staff.

Interestingly, the success of KMS implementation is more influenced by organizational culture and leadership support than by technological factors alone. In City Government A, top leaders encouraged all departments to regularly upload activity reports into the digital system. In contrast, in District Government B, KMS implementation remained passive due to weak leadership commitment.

This discussion emphasizes that the success of KMS is not merely about digital infrastructure, but also requires a transformation in management culture, internal regulations, and human resource development. KMS adoption is thus a socio-technical process that integrates people, technology, and processes to enhance decision-making capacity in public administration.

4. CONCLUSIONS

This study demonstrates that the implementation of Knowledge Management Systems (KMS) significantly contributes to improving the quality of decision-making within local government institutions. By enabling the systematic collection, organization, sharing, and utilization of both tacit and explicit knowledge, KMS plays a critical role in facilitating faster policy formulation, enhancing the accuracy of administrative decisions, and fostering greater transparency and accountability. Decision-makers benefit from improved access to historical data, better insights into trends and precedents, and more effective collaboration across departments, which collectively support the development of more responsive and evidence-based policies. However, the effectiveness of KMS implementation is not driven by technology alone. Its success depends heavily on organizational factors such as leadership commitment, employee engagement, digital literacy, and the establishment of a culture that promotes continuous learning and knowledge sharing. In environments where knowledge remains siloed or individual-dependent, the full potential of KMS may not be realized. Moreover, without supportive internal regulations and incentives, employee participation in KMS processes tends to be minimal. Therefore, local governments should adopt KMS not merely as an information tool, but as a transformative strategy that integrates people, processes, and technology to build adaptive and knowledge-based institutions. Institutionalizing KMS within routine governance practices ensures that local governments can respond more effectively to public needs, manage complexity with informed decisions, and promote sustainable development. In the long term, KMS offers a strategic advantage in enhancing public sector innovation, operational efficiency, and citizen trust in government.

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