

Village Management Information System as a Means of Improving Public Services and Village Government Transparency

Oktavia Pasi¹, Febyola Crisanta Situmeang², Galih Supraja^{3*}

Accounting Study Program, Panca Budi Development University, Medan

Corresponding Author: Galih Supraja galih@dosen.pancabudi.ac.id

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ABSTRACT

The Village Management Information System (VMIS) is an application of information technology aimed at improving the quality of public services and the effectiveness of village governance. This study aims to analyze the role of VMIS in supporting administrative services, population data management, and increasing transparency and accountability in village government. The method used was a literature review through the study of various journals, books, and related regulations. The results show that VMIS can accelerate administrative processes, improve data accuracy and security, simplify reporting, and support more effective decision-making. Furthermore, VMIS increases the transparency of village financial management. However, its implementation still faces obstacles such as limited human resources, technological infrastructure, and community digital literacy. Therefore, increasing the capacity of village officials and government support is needed to optimize the implementation of VMIS

INTRODUCTION

The development of information and communication technology has brought significant changes to various aspects of life, including the government sector. The digital transformation that has occurred over the past few decades has encouraged government institutions to adopt technology-based systems to improve efficiency, effectiveness, and the quality of public services. Government digitalization is not only implemented at the central and regional levels but has also expanded to the village level, which is the closest unit of government to the community. The utilization of information technology in village governance has become a strategic step in supporting administrative management, public services, and sustainable village development (Sutabri, 2019).

Villages play a crucial role in Indonesia's governmental structure as they serve as the frontline of public service delivery and development implementation. Based on Law Number 6 of 2014 concerning Villages, villages are granted broader authority to regulate and manage community interests based on community initiatives, traditional rights, and local customs recognized within the national governance system. This authority requires village governments to effectively manage various resources and information to achieve village development goals optimally (Republic of Indonesia, 2014).

The expansion of village authority has also increased the need for accurate data and information management. Village governments must be capable of managing various types of data, including population data, development data, socio-economic data, village asset data, and village financial data. Data management that is still conducted manually often results in various problems, such as data duplication, document loss, service delays, and low information accuracy. These conditions can hinder decision-making processes and reduce the quality of public services provided to the community (Nugroho, 2020).

To address these challenges, village governments have begun implementing the Village Management Information System (VMIS). The Village Management Information System is designed to assist village governments in collecting, processing, storing, and presenting information needed for village governance. Through this system, data that were previously managed manually can be integrated into a single database, facilitating management and utilization for administrative and development purposes (Widodo, 2022).

The Village Management Information System has become an essential instrument in realizing effective and modern village governance. The existence of this system enables village officials to obtain information quickly and accurately, thereby supporting the planning, implementation, monitoring, and evaluation of village development programs. In addition, information systems can help improve transparency and accountability in village financial management, which has become a major demand in contemporary governance practices (Indrajit, 2018).

Public service delivery is one of the aspects most significantly influenced by the implementation of the Village Management Information System. Rural communities require various administrative services, such as domicile certificates, business certificates, introduction letters, and other administrative

documents. Through an integrated information system, service processes can be conducted more quickly, easily, and accurately than through manual methods. This improvement positively affects community satisfaction with services provided by the village government (Hardiansyah, 2018).

In addition to improving public service quality, the implementation of the Village Management Information System also supports government transparency. Transparency is one of the main principles of good governance, emphasizing the importance of information openness to the public. Through information systems, citizens can access information regarding village government activities, budget utilization, development programs, and policies being implemented. Such openness can enhance community participation in village development while strengthening public trust in village government institutions (Mardiasmo, 2018).

In the context of village financial management, the Village Management Information System plays a highly important role. Since the implementation of the village fund policy by the central government, each village has received substantial budget allocations to support development and community empowerment. The large amount of funds managed requires a transparent and accountable management system. Information systems assist village officials in recording, reporting, and monitoring financial activities systematically, thereby minimizing the risks of irregularities and administrative errors (Bastian, 2019).

Despite its various benefits, the implementation of the Village Management Information System in Indonesia still faces numerous challenges. One of the primary obstacles is the limited availability of human resources with competencies in information technology. Not all village officials possess adequate skills to operate information systems, causing implementation processes to encounter difficulties. Insufficient training and assistance also influence the success of information system implementation at the village level (Prasojo & Kurniawan, 2020).

Besides human resource limitations, inadequate technological infrastructure remains a significant challenge. Many villages, particularly those in remote areas, still have limited or insufficient internet access. Most modern information systems require stable internet connectivity to function optimally. Consequently, the utilization of information systems has not yet been maximized across all villages in Indonesia (Ministry of Communication and Information Technology, 2023).

Another challenge is the low level of digital literacy among rural communities. Although information technology continues to develop rapidly, many villagers are still unfamiliar with digital-based services. This condition causes electronic services provided by village governments to be underutilized. Therefore, educational programs and socialization efforts are needed to improve public understanding of the benefits of information technology in everyday life (Setiawan, 2021).

On the other hand, digital technology development offers substantial opportunities for village governments to improve service quality and governance management. Various digital applications and platforms can now be utilized to

support administrative management, public services, financial reporting, and village development data management. When utilized optimally, these technologies can help create service systems that are more effective, efficient, and responsive to community needs (Laudon & Laudon, 2020).

The implementation of the Village Management Information System also supports the realization of electronic government (e-government). The concept of e-government emphasizes the use of information technology to improve relationships between government institutions, citizens, businesses, and other organizations. In the context of village governance, e-government can be realized through online administrative services, digital publication of village information, and electronic data and document management. The implementation of this concept is believed to improve the overall quality of village governance (Heeks, 2018).

The success of implementing the Village Management Information System depends not only on the technology employed but also on the commitment of village governments in managing organizational change. Village officials must recognize the importance of information technology as a tool to support work processes and public service delivery. Furthermore, support from regional and central governments in the form of policies, training, assistance, and adequate infrastructure is necessary to ensure sustainable system implementation (Turban et al., 2021).

From the perspective of village development, the Village Management Information System can serve as a tool to support more targeted development planning. Data stored within the system can be used to identify community needs, determine development priorities, and evaluate the outcomes of implemented programs. Consequently, village development can be carried out more effectively and based on valid data (Arsyad, 2019).

Based on the discussion above, it can be understood that the Village Management Information System plays a highly strategic role in supporting modern, transparent, and accountable village governance. Its existence provides benefits not only in administrative and public service aspects but also in improving governance quality and promoting sustainable village development. Nevertheless, the challenges that remain must receive serious attention to ensure optimal system implementation.

Therefore, this study is conducted to examine more deeply the role of the Village Management Information System in improving the quality of public services and village governance. The study is expected to provide both academic and practical contributions to the development of village information systems and serve as a consideration for village governments and other stakeholders in optimizing the utilization of information technology to support sustainable village development.

LITERATURE REVIEW

Management Information System

A Management Information System (MIS) is a system designed to collect, process, store, and present information to support decision-making processes within an organization. This system utilizes information technology to generate accurate, relevant, and timely information that can be used by management for planning, controlling, and evaluating organizational activities. According to Laudon and Laudon (2020), a Management Information System serves as a tool that integrates various data sources into useful information to improve organizational effectiveness and efficiency. In the context of government administration, management information systems have become essential tools in supporting public service delivery and modern administrative management.

The development of information technology has encouraged the implementation of Management Information Systems in various sectors, including the government sector. The use of information systems enables automated data processing, thereby reducing errors commonly found in manual systems. Furthermore, information systems facilitate the storage, retrieval, and distribution of information to relevant stakeholders. Therefore, the implementation of Management Information Systems has become a crucial factor in supporting organizational success in achieving predetermined goals (Turban et al., 2021).

Village Management Information System

The Village Management Information System (VMIS) is an adaptation of the Management Information System concept applied within the village government environment. This system is used to manage various data and information related to village governance, including population data, public service administration, village asset management, development planning, and village financial management. The existence of VMIS aims to improve the effectiveness of village officials' work while providing better services to the community. According to Widodo (2022), the Village Management Information System is an instrument capable of supporting the digitalization of village governance through integrated and easily accessible data management.

The implementation of the Village Management Information System has become increasingly important since the enactment of Law Number 6 of 2014 concerning Villages, which grants greater authority to villages in regulating and managing governmental and development affairs. With this increased authority, villages are required to possess information management systems capable of supporting various governmental activities effectively and accountably. An integrated information system enables village governments to obtain accurate data as a basis for decision-making and the formulation of village development policies (Republic of Indonesia, 2014).

Public Service

Public service refers to all activities carried out by the government to fulfill community needs for goods, services, and administrative assistance. The quality of public service is one of the indicators of successful governance because it is directly related to public satisfaction. According to Hardiansyah (2018), quality public service must adhere to the principles of effectiveness, efficiency, transparency, accountability, and accessibility for the community.

The implementation of information technology in public services provides various benefits, including accelerating service processes, improving data accuracy, reducing bureaucratic complexity, and facilitating public access to required services. In the context of village governance, the use of the Village Management Information System enables administrative services to be delivered more quickly and systematically. Consequently, communities can receive better services while increasing their trust in the village government as a public service provider.

Village Governance

Village governance refers to the process of administering government affairs based on the principles of good governance, namely transparency, accountability, participation, effectiveness, and efficiency. The implementation of good governance is essential to ensure that all village government programs and activities are conducted according to established objectives. According to Mardiasmo (2018), good governance improves the quality of public services and strengthens public trust in government institutions.

In village administration, good governance requires support from information systems capable of providing accurate and transparent data and information. The Village Management Information System plays a role in supporting administrative management, activity reporting, and monitoring the utilization of village resources. Through this system, communities can gain broader access to governmental information, thereby encouraging the realization of a more open and responsible village government.

Transparency and Accountability in Village Governance

Transparency refers to the openness of government institutions in providing information related to policies, programs, and budget utilization to the public. Accountability, on the other hand, refers to the obligation of government institutions to justify all actions and decisions made to the public as the holders of sovereignty. Both principles are essential elements in creating a clean government free from the abuse of authority (Mardiasmo, 2018).

The Village Management Information System can serve as an effective tool for enhancing transparency and accountability in village governance. Through this system, information regarding the utilization of village funds, the implementation of development programs, and various governmental activities can be disseminated more easily and rapidly to the public. With adequate access to information, communities can monitor the performance of village

governments, thereby fostering a stronger relationship between the government and the community

METHODOLOGY

This study employs a qualitative research method using a literature review (library research) approach. This method is conducted by collecting and analyzing various relevant literature sources, including scientific journals, books, academic articles, laws and regulations, and official documents related to the Village Management Information System (VMIS). The literature review approach was selected because it provides a comprehensive understanding of the concepts, benefits, implementation, and challenges associated with the application of the Village Management Information System in village governance.

The data analysis technique used in this study is descriptive qualitative analysis, which involves identifying, classifying, and interpreting information obtained from various literature sources. The collected data are then analyzed to explain the role of the Village Management Information System in improving the quality of public services, transparency, and accountability in village governance. The findings are presented systematically to provide a clear understanding of the importance of implementing the Village Management Information System in supporting effective and efficient village governance.

RESEARCH RESULT

The Role of the Village Management Information System in Public Service Delivery

The findings indicate that the Village Management Information System (VMIS) plays an important role in improving the quality of public services at the village level. Through the utilization of information technology, various administrative processes that were previously conducted manually can now be performed more quickly, accurately, and efficiently. Administrative services such as the issuance of domicile certificates, business certificates, introduction letters, and various other official documents can be processed within a shorter period.

The findings also show that VMIS helps reduce data recording errors commonly found in manual systems, thereby improving the quality and reliability of public services provided to the community. Furthermore, the implementation of VMIS facilitates village officials in managing population data and governmental administration through an integrated database system. This enables easier data searching, updating, and processing, allowing village governments to provide more responsive services that align with community needs.

Village Management Information System and Government Transparency

The results reveal that the implementation of VMIS contributes to greater transparency in village governance. Information regarding development programs, village budget utilization, and governmental activities can be managed and disseminated more openly to the public through the integrated system. The findings further indicate that improved information accessibility enables citizens to obtain information more easily regarding village programs and policies.

Challenges in the Implementation of the Village Management Information System

The findings identify several challenges in the implementation of VMIS. One major obstacle is the limited availability of human resources with adequate skills in operating information technology. In addition, technological infrastructure remains inadequate in some villages, particularly regarding internet connectivity, computer facilities, and communication networks. These limitations affect the effectiveness of data management and technology-based service delivery.

DISCUSSION

The findings demonstrate that the Village Management Information System significantly enhances the efficiency and effectiveness of public service delivery at the village level. Faster administrative processing and improved data accuracy indicate that digital transformation can support better governance practices. These findings are consistent with the broader view that information systems contribute to improved organizational performance and service quality in public institutions.

The study also highlights the important role of VMIS in promoting government transparency and accountability. By providing easier access to information on village programs, budgets, and activities, the system encourages openness and strengthens public trust in village governance. Moreover, increased access to information can stimulate greater community participation in development processes, allowing citizens to monitor and provide feedback on government activities.

Despite these benefits, the implementation challenges identified in this study suggest that the success of VMIS depends not only on the availability of the system itself but also on supporting factors such as human resource capacity and technological infrastructure. Limited digital literacy among village officials may reduce the effectiveness of system utilization, while inadequate internet access and hardware facilities can hinder system performance.

Therefore, continuous training programs and technical assistance are necessary to enhance the competencies of village officials in information technology. Support from regional and central governments is also crucial in providing capacity-building initiatives and professional facilitators. In addition, investments in internet connectivity, computer equipment, and data security systems are essential to ensure the sustainable and optimal implementation of VMIS. With adequate human resources and infrastructure, the full potential of

the Village Management Information System can be realized in improving public services and strengthening village governance.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the study, it can be concluded that the Village Management Information System (VMIS) plays a very important role in supporting effective, efficient, transparent, and accountable village governance. The implementation of VMIS is capable of improving the quality of public services through faster administrative processes, enhanced data accuracy, and easier access to information for the community. Furthermore, the system assists village governments in managing population data, governmental administration, and village financial management in a more structured and integrated manner.

The implementation of the Village Management Information System also contributes to improving transparency and accountability in village governance. Through more open information management, communities can gain access to various types of information related to development programs and the utilization of village budgets, thereby increasing public participation in the development process. Nevertheless, the implementation of VMIS still faces several challenges, including limited human resources, inadequate technological infrastructure, and low levels of digital literacy in some rural areas.

Therefore, continuous efforts are required to improve the competencies of village officials through information technology training, strengthen digital infrastructure, and enhance support from regional and central governments. Through synergy among various stakeholders, the Village Management Information System can be utilized optimally to achieve better village governance and improve community welfare in a sustainable manner.

ADVANCED RESEARCH

This study provides a comprehensive understanding of the role of the Village Management Information System (VMIS) in improving public service delivery and enhancing transparency in village governance. However, since this research employed a literature review approach, future studies are recommended to conduct empirical investigations to obtain more comprehensive evidence regarding the effectiveness of VMIS implementation in different village contexts.

Future research may focus on measuring the direct impact of VMIS on public service quality, community satisfaction, administrative efficiency, and village governance performance through quantitative methods such as surveys and statistical analysis. Comparative studies between villages that have successfully implemented VMIS and those that still rely on conventional administrative systems could also provide valuable insights into the effectiveness of digital governance at the village level.

Furthermore, future studies may examine the relationship between digital literacy, technological infrastructure, and the successful adoption of VMIS. Understanding these factors is essential for identifying the key determinants of sustainable digital transformation in rural governance. Researchers may also

explore the role of community participation in supporting the utilization of village information systems and promoting transparency and accountability.

Another important area for future investigation is the integration of emerging technologies, such as cloud computing, artificial intelligence, big data analytics, and mobile-based applications, into village management systems. These technologies have the potential to improve data accuracy, decision-making processes, and citizen engagement in village development programs.

Finally, longitudinal studies are recommended to evaluate the long-term impact of VMIS implementation on village development outcomes, governance quality, and community welfare. Such studies would contribute significantly to the development of policies and strategies aimed at strengthening digital governance and sustainable rural development in Indonesia.

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REFERENCES

- Arsyad, L. (2019). *Development Economics*. Yogyakarta: UPP STIM YKPN.
- Bastian, I. (2019). *Public Sector Accounting in Indonesia*. Yogyakarta: BPFE.
- Hardiansyah. (2018). *Public Service Quality*. Yogyakarta: Gava Media.
- Heeks, R. (2018). *Information and Communication Technology for Development*. New York: Routledge.
- Indrajit, R. E. (2018). *Electronic Government: Development Strategies and the Advancement of Digital Technology-Based Public Service Systems*. Yogyakarta: Andi.
- Ministry of Communication and Information Technology of the Republic of Indonesia. (2023). *Indonesia Digital Transformation Report*. Jakarta: Ministry of Communication and Information Technology.
- Laudon, K. C., & Laudon, J. P. (2020). *Management Information Systems: Managing the Digital Firm* (16th ed.). New York: Pearson.
- Mardiasmo. (2018). *Public Sector Accounting*. Yogyakarta: Andi.
- Nugroho, A. (2020). Implementation of Village Information Systems in Improving Public Services. *Journal of Public Administration*, 8(2), 45–56.
- Prasojo, E., & Kurniawan, T. (2020). Digital Transformation in Village Governance in Indonesia. *Journal of Public Policy and Administration*, 24(1), 67–80.
- Republik Indonesia. (2014). *Undang-Undang Republik Indonesia Nomor 6 Tahun 2014 tentang Desa*. Jakarta: Sekretariat Negara.
- Setiawan, D. (2021). Literasi Digital Masyarakat Desa dalam Menghadapi Era Transformasi Digital. *Jurnal Teknologi Informasi dan Komunikasi*, 12(1), 23–35.
- Sutabri, T. (2019). *Konsep Sistem Informasi*. Yogyakarta: Andi.
- Turban, E., Pollard, C., & Wood, G. (2021). *Information Technology for Management* (12th ed.). Hoboken: Wiley.

Widodo, J. (2022). *Digitalisasi Pemerintahan Desa dan Pelayanan Masyarakat*. Jurnal Teknologi Informasi, 10(1), 15–25 <https://doi.org/10.46576/jbn.v7i2.4850>