



Review Article

Analysis of Fraud Potential in Village Fund Management in the Digital Era

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Abstract: Digital transformation in the public sector has significantly driven service innovations, particularly in pension administration for Civil Servants (ASN). This study aims to analyze the development of digital-based public service innovations in pension administration while identifying the benefits and challenges associated with their implementation. The research employs a Systematic Literature Review (SLR) method by examining relevant scholarly articles from national journals focusing on the digitalization of public services and pension systems. The literature selection process was conducted systematically to identify, evaluate, and synthesize key findings related to digital pension service innovations. The results indicate that digitalization through applications and electronic platforms enhances administrative efficiency, accelerates data verification, and improves the speed of pension fund disbursement. It also strengthens transparency and accountability while simplifying bureaucratic procedures and expanding service accessibility for retirees. However, several challenges remain, including low digital literacy among retirees, limited access to technological devices, and insufficient public awareness regarding digital service usage. The findings suggest that the success of digital-based public service innovations depends not only on technological availability but also on human resource readiness, institutional capacity, and the level of public acceptance. Therefore, a comprehensive strategy is required, including improving digital literacy, strengthening information technology infrastructure, and optimizing communication efforts to ensure effective adoption.

Keywords: E-Government; Pension Administration; Public Service; Public Service Innovation; Service Digitalization.

1. Introduction

Village development is one of the top priorities of the Indonesian government in its efforts to improve community welfare and reduce development disparities across regions. Since the implementation of the village fund policy through Law Number 6 of 2014 on Villages, the central government has consistently allocated substantial funds to villages to support development, community empowerment, and the improvement of public service quality at the village level. The village fund program is expected to accelerate local economic development, strengthen village self-reliance, and enhance the quality of life of rural communities.

However, the large allocation of village funds also carries consequences in the form of increased potential for misappropriation and fraudulent activities in their management. Village fund management, which involves various stages such as planning, implementation, administration, reporting, and accountability, creates opportunities for abuse of authority if

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not accompanied by adequate internal control and supervision systems. In recent years, numerous cases of corruption and misuse of village funds have drawn public and regulatory attention, highlighting ongoing challenges in village financial governance.

Village financial management is critical for the development and welfare of villages, yet it remains vulnerable to fraud. The village head is responsible for managing village finances, including all assets and funds related to the implementation of rights and obligations in the village (Atmadja & Saputra, 2017). The purpose of village financial management is to achieve advanced and leading villages and to improve the quality of village development planning and budgeting toward a just and prosperous society (Rahayu et al., 2017). Village financial management must comply with Law Number 6 of 2014 on Villages, which outlines accountability principles, stating that every person, action, and outcome must be accountable according to applicable regulations. Village governments must be able to account to village communities (Pardana & Daholu, 2023).

Misuse of village funds can cause public concern and undermine government credibility. On the other hand, the government has established regulations on village financial management aimed at preventing suspicion and abuse (Ismail & Ika, 2019). Fraud in Indonesia is commonly referred to as corruption. According to Law Number 20 of 2001, corruption is behavior or actions that benefit oneself or a group while harming the public (Rahayu et al., 2017). Both external factors and internal characteristics of perpetrators can influence or trigger accounting fraud (Muliana & Suarantalla, 2022). Fraud refers to intentional behavior by individuals or groups to gain personal advantage while harming others (Suharman et al., 2021).

Research by Indonesia Corruption Watch (ICW) shows that corruption at the village level ranked among the most frequent sectors acted upon by authorities between 2015 and 2021. Over these seven years, state losses reached IDR 433.8 billion across 597 cases of village-level corruption (Ni'am, 2023). This indicates that village fund management remains vulnerable to corruption and misappropriation, potentially harming state finances and impeding village development goals.

Previous studies have identified various factors influencing fraud in village fund management. Strong internal controls play a significant role in curbing fraudulent behavior (Nindita et al., 2023; Murtanto et al., 2022). Additionally, the competence of officials is a critical factor. Studies show that the skills and knowledge of village officials positively impact fraud prevention efforts (Muslim et al., 2025; Hati et al., 2025). Factors such as individual morality and organizational culture also play a moderating role in fraud prevention. Some research indicates that while morality can enhance internal control effectiveness, it does not uniformly affect all aspects of fraud prevention (Fitri et al., 2025; Hati et al., 2025). The effectiveness of whistleblowing systems remains debated, with some studies showing limited impact on fraud prevention (Muslim et al., 2025; Fitri et al., 2025). Effective village fund oversight depends on systematic risk identification and prioritization, alignment of audit planning with high-risk areas, and integration of internal control and risk management processes into audit assurance (Mirino et al., 2025).

In addition to institutional factors, individual behavior plays a role in triggering fraud. Fraud theories such as the Fraud Triangle, Fraud Diamond, and Fraud Hexagon explain that pressure, opportunity, rationalization, capability, and collusion can lead to fraudulent activities in public financial management. Empirical studies show that opportunities and individual characteristics, such as materialism or "love of money," can increase the potential for fraud in village fund management (Suryandari & Valentin, 2021).

On the other hand, information technology developments have driven the transformation of village financial management toward digital systems. The government has developed various technology-based applications, such as the Village Financial System (SISKEUDES), to enhance transparency, accountability, and efficiency in managing village funds. The implementation of these digital systems is expected to strengthen village governance and minimize potential misappropriation of funds.

Although the digitalization of village financial management offers opportunities to improve transparency and accountability, the use of information technology also presents new challenges in fraud supervision and control. Digital transformation can create new forms of misappropriation, such as manipulation of digital financial data, misuse of information system access, and falsification of electronic financial reports. Therefore, a comprehensive understanding of the potential for fraud in village fund management in the digital era is critical for the government, oversight agencies, and other stakeholders.

Digital finance policies are strategic measures adopted by the government and financial institutions to integrate digital technology into financial systems. Through digitalization, planning, recording, reporting, and monitoring of funds are conducted electronically using integrated applications and information systems. These policies aim to enhance transparency, accountability, and efficiency in fund management while facilitating early detection of potential fraud. In Indonesia, such policies are reflected in initiatives like the 2020–2025 Indonesian Banking Development Roadmap, which emphasizes exploring digital banking transformation, strengthening technological infrastructure, improving human resource quality, and fostering stakeholder synergy (Abubakar & Handayani, 2022).

Village fund management in the digital era is transitioning to cashless systems and applications (SISKEUDES), which significantly reduce conventional corruption risks but create new fraud potentials. Main schemes include system input manipulation, transferring village funds to personal accounts, falsifying digital reports, and the use of technology for online gambling by village officials. Several studies have examined factors influencing fraud in village fund management from governance, internal control systems, and individual behavior perspectives. However, these studies remain partial and scattered across different methodological approaches. Therefore, a comprehensive study is needed to systematically map research developments related to the potential for fraud in village fund management, particularly in the context of digitalizing village governance.

Based on the above, this study aims to conduct a systematic literature review on the potential for fraud in village fund management in the digital era. The research is expected to contribute to academic knowledge on public sector fraud and provide policy recommendations to the government for strengthening supervision and fraud prevention systems in village fund management.

2. Literature Review

2.1 Concept of Fraud

Fraud is one of the common forms of irregularities in the management of organizational finances, both in the private and public sectors. Fraud can be defined as a deliberate act of deception aimed at obtaining personal or group benefits by violating laws or applicable regulations. According to the Association of Certified Fraud Examiners (ACFE), fraud is an unlawful act intentionally committed by an individual or group to gain advantages through deception or misuse of organizational assets. Fraud typically involves financial statement manipulation, asset misappropriation, and corrupt practices that harm organizations or the state (ACFE, 2022).

Meanwhile, Albrecht et al. (2012) define fraud as a deliberate act of deception to obtain illicit gains through abuse of trust, manipulation of information, or embezzlement of organizational assets. According to Singleton and Singleton (2010), fraud is an act of deception intended to achieve financial gain through manipulation of information or abuse of authority by the perpetrator.

According to the Association of Certified Fraud Examiners (ACFE, 2022), fraud can generally be classified into three main categories, known as the Fraud Tree:

- 1) Asset Misappropriation

Asset misappropriation is the most common type of fraud in organizations. This type involves the theft or misuse of organizational assets by individuals who have access to them. Examples include embezzlement of organizational funds, misuse of cash, theft of organizational assets, and falsification of payment documents.

- 2) Corruption

Corruption is a type of fraud involving abuse of power to obtain personal or group benefits. Forms of corruption include bribery, gratuities, conflicts of interest, and economic extortion. In the context of village fund management, corruption often occurs in the form of inflated project budgets, manipulation of village fund usage reports, and non-transparent procurement of goods and services.

- 3) Financial Statement Fraud

This type of fraud occurs when an organization's financial statements are manipulated to present a misleading picture of its actual condition. Examples include manipulation of financial reports, falsification of accounting data, and omission of certain transactions from financial statements.

The Fraud Triangle Theory was first introduced by Cressey (1953). This theory explains that fraud occurs due to three main factors:

- a. Pressure
Pressure refers to the motivation that drives someone to commit fraud. Pressure can arise from personal financial problems, lifestyle demands, or work-related expectations.
- b. Opportunity
Opportunity arises when an organization's internal control system is weak, allowing an individual to commit fraud without being detected.
- c. Rationalization
Rationalization is the process by which fraud perpetrators justify their actions to convince themselves that their behavior is acceptable or not wrong.

The Fraud Triangle Theory, developed by Donald R. Cressey, explains the factors that lead to fraud. According to this theory, trusted individuals may commit fraud when they experience financial pressures they cannot resolve honestly. They are aware that their actions violate policies or rules, but they rationalize their behavior, convincing themselves that the act is a loan rather than theft. Cressey identified three components of fraud: Opportunity, Pressure, and Rationalization (Naufal et al., 2022). Pressure refers to factors causing unethical behavior, opportunity arises from ineffective governance systems, and rationalization involves mentally justifying unethical actions before committing them (Utama & Wulandari, 2020).

The Fraud Diamond Theory, developed by Wolfe and Hermanson (2004), expands on the Fraud Triangle by adding a fourth element: Capability. The four elements of the Fraud Diamond are: Pressure, Opportunity, Rationalization, and Capability. Capability refers to an individual's ability to exploit opportunities to commit fraud, including skills, job position, and knowledge of organizational systems.

The Fraud Hexagon Theory, developed by Vousinas (2019), further expands the Fraud Diamond by adding two additional factors: Ego (Arrogance) and Collusion. The six elements of the Fraud Hexagon are: Pressure, Opportunity, Rationalization, Capability, Ego/Arrogance, and Collusion. In public organizations, such as village governments, collusion is often a primary cause of fraud because it involves cooperation among multiple parties to manipulate financial management.

2.2 Fraud Prevention

Fraud Prevention is a proactive effort carried out by internal audit to identify and reduce the risk of accounting fraud through the implementation of strict internal controls, staff education and training, and regular monitoring of financial activities. Indicators of fraud prevention include strong internal controls, training and education, competent internal auditors, secure reporting systems, and clear policies and procedures. Fraud should be prevented by establishing a sound internal control structure, optimizing control activities, improving organizational culture, and enhancing the effectiveness of the internal audit function. From this statement, it can be concluded that management must make specific decisions or policies to prevent fraud within an organization (Fahmi, 2019).

Fraud Detection refers to actions taken to determine that fraud has occurred, identify the perpetrators, the systems or individuals affected, and the causes. The key to fraud detection is identifying irregularities or errors. Fraud is inherently hidden, and perpetrators generally conceal their tracks in an organized manner. Therefore, fraud cannot be detected simply by observing traces left behind. Fraud detection involves identifying signs or symptoms of fraudulent activity. Every fraud occurrence is accompanied by indicators or warning signs. By recognizing these signs, it is possible to detect signals or indications of fraudulent activity. Fraud detection is an investigative process carried out by internal audit to identify fraudulent or irregular actions in financial reporting, including through transaction analysis, document testing, and the use of audit technology. Indicators of fraud detection include data anomalies, unusual transaction activity, suspicious documents, changes in employee lifestyle, reports, and investigations (Anto et al., 2025).

According to the Financial and Development Supervisory Agency (BPKP) (2008), fraud prevention is an integrated approach that can reduce the triggering factors of fraud or the Fraud Triangle (Roza and Muhammad, 2020). Fraud triggers involve motive, rationalization, and opportunity. Motive and rationalization are closely related to the personal characteristics of the fraud perpetrator and serve as internal drivers. Meanwhile, opportunity is an internal factor within the organization. Indirectly, fraud can be prevented through internal

organizational factors such as organizational culture and internal control systems, both in the public and non-public sectors. A strong organizational culture and effective internal control systems can mitigate or prevent the factors that trigger fraud.

2.3 Digital transformation of regional finance

Digitalization of Regional Finance is an important component of the broader digital transformation efforts in Indonesia's public sector. The implementation of e-government systems has enabled more efficient communication and data management between government institutions and the public. However, the existing legal framework in Indonesia has not yet adequately regulated personal data protection, which is a crucial aspect in maintaining public trust in e-government services (Iswandari, 2021).

Digital transformation of regional finance is a key element in realizing agile government within the bureaucratic reform of local governments. Agile government refers to the ability of the government to quickly adapt to changing environments and public needs, which is critical in the context of today's social and economic dynamics. Digitalization in the regional financial sector not only improves operational efficiency but also strengthens transparency and accountability, which are the foundations of good governance (Sudrajat, 2021).

An important aspect of digital financial transformation is its ability to enhance access to financial information and services. According to Sudrajat, the application of information technology in public services can create a more efficient, effective, and transparent government (Sudrajat, 2021). By leveraging digital platforms, local governments can provide services that are more responsive and aligned with public needs. This aligns with the principle that an agile approach helps governments respond to challenges more quickly and effectively (Mergel et al., 2020).

Moreover, digital finance also strengthens the capacity of local governments to make data-driven decisions. Digital transformation improves the government's ability to analyze data and information, which in turn supports faster and better decision-making (Li et al., 2022). With accurate and up-to-date data, local governments can respond more precisely to community needs, thereby delivering higher-quality public services.

Some challenges in regional digital finance include the lack of adequate technological infrastructure, as local governments often face difficulties in adopting new technologies due to limited resources and existing infrastructure (Kurnia et al., 2022). Other fundamental challenges include limited accessibility to digital technology, regional disparities in technology infrastructure, and low digital literacy among certain segments of the population. These factors constitute major obstacles to the successful implementation of digital-based public services (Lukman & Sakir, 2024).

3. Materials and Method

This study employs a qualitative method using a Qualitative Secondary Analysis (QSA) approach, which involves analyzing qualitative data through the use and re-analysis of existing secondary data (Greenwood, 2020). Data were collected from various sources, including previous research studies, working papers, conference proceedings, mass media, and other documents relevant to the research topic. The data collection process was conducted systematically, using clear selection criteria such as relevance to the research questions, source credibility, and completeness of the information presented.

The data analysis process was carried out in three main stages according to a descriptive approach: data reduction, data display, and drawing conclusions (Miles and Huberman, 2009). In the data reduction stage, information from various documents was filtered and selected according to the research focus, eliminating irrelevant or low-quality data. The reduced data were then presented in thematic narratives or visualizations, such as tables or diagrams, to support analysis. The final stage involved drawing conclusions, where the synthesized findings were used to answer the research questions in an integrated manner.

To ensure data validity, source triangulation was conducted. Triangulation involved comparing information from different documents originating from various sources to identify consistency, gaps, or discrepancies in the data. This step aimed to reduce bias, enhance the reliability of the findings, and strengthen the analytical foundation. By applying a Qualitative Secondary Analysis approach focused on in-depth evaluation of secondary data, the study ensures a comprehensive and rigorous analysis.

4. Results and Discussion

The potential for fraud in the process of development and financial reporting may include falsification, data manipulation, or altering supporting documents when preparing financial statements. In managing finances, village officials are required to produce reports that must be submitted according to deadlines. The consequences of not managing village finances according to procedures include problems such as delays in preparing the following year's Village Budget. The potential for fraud is directly related to the three factors in the Fraud Triangle Theory pressure, opportunity, and rationalization. These three factors create an environment conducive to fraudulent behavior. Therefore, organizations need to identify and manage these factors by providing support to reduce financial pressure, strengthening control and supervision systems, and fostering a strong ethical culture to minimize the potential for fraud.

a. Digitalization of Regional Financial Management enhances the transparency and accountability of village finances

Digitalization of regional financial management in Indonesia is a strategic step aimed at improving efficiency, transparency, and accountability in public financial management. This process not only involves the implementation of information technology but also requires changes in organizational culture and human resource capacity. In this context, digital financial transformation can contribute to bureaucratic reform and the development of agile government in local governments.

Digitalization of regional financial management is believed to enhance transparency and accountability, which are fundamental principles of agile government. By using digital-based financial management information systems, local governments can produce more accurate and timely financial reports. This aligns with the idea that digitalization in financial management can reduce the potential for corruption and increase public trust in government (Tian et al., 2022; Jiaxuan, 2023). Moreover, when citizens have better access to financial information, they can participate more actively in decision-making processes, which is a key aspect of agile government.

Digitalization also enables local governments to respond more effectively to public needs. By leveraging digital technology, governments can collect data and feedback from citizens in real-time, allowing for faster and more precise decision-making. The use of digital platforms in financial management can enhance interactions between the government and the community and accelerate the decision-making process (Urbinati et al., 2018; Koskelainen et al., 2023). This creates a more adaptive and responsive environment.

Digitalization of regional financial management is one of the public administration reform strategies aimed at improving the quality of good governance. In the context of village administration, digitalization plays a crucial role in strengthening transparency and accountability in managing village funds. The use of information technology in financial management allows the planning, implementation, administration, reporting, and accountability of village finances to be carried out in a more systematic, integrated, and easily monitored manner by multiple stakeholders.

One example of digitalization in village financial management in Indonesia is the Village Financial System (Siskeudes), an application developed by the Financial and Development Supervisory Agency to assist village governments in managing finances transparently, accountably, and in accordance with regulations. This system enables financial transaction recording electronically, producing financial reports that are more accurate, structured, and easily traceable.

From a governance perspective, transparency is an essential principle that emphasizes open access to information regarding decision-making processes and the use of public resources. According to Klitgaard (1998), transparency can reduce the potential for corruption by minimizing information asymmetry between the government and the public. With digital systems in village financial management, information on budgets, spending realization, and financial reports can be accessed more openly by the public and oversight institutions. This allows communities to exercise social control over village fund usage, thereby enhancing public trust in village governance.

In addition to increasing transparency, digitalization also strengthens accountability in village fund management. Accountability in the public sector refers to the government's obligation to justify the management of public resources to the citizens, who hold sovereignty. Bovens (2007) defines accountability as the relationship between actors and forums, where

actors are obliged to explain and justify their actions, and the forum has the right to evaluate and provide consequences for those actions.

The implementation of digital systems in village financial management enhances accountability through several mechanisms. First, digital systems provide an audit trail, allowing every financial transaction to be automatically recorded, facilitating oversight by institutions such as the Audit Board of Indonesia or local inspectorates. Second, digital systems help standardize financial report formats, minimizing recording errors and improving report quality. Third, digitalization enables local governments to monitor and evaluate village fund management more effectively and efficiently.

Moreover, digitalization can serve as a fraud prevention mechanism. According to Donald R. Cressey's Fraud Triangle Theory (1953), fraud occurs due to three primary factors: pressure, opportunity, and rationalization. Digital financial systems reduce the opportunity factor because every financial transaction is recorded transparently and can be traced by auditors or oversight institutions. As a result, the room for village officials to manipulate data or misuse budgets is increasingly limited.

However, the implementation of digital village financial management still faces several challenges. A major constraint is the limited capacity of village officials to operate information technology systems. Additionally, technological infrastructure such as internet networks in some rural areas remains inadequate, hindering the optimal use of digital systems. Therefore, efforts are needed to enhance the capacity of village officials through training and technical assistance, as well as to strengthen IT infrastructure in rural areas.

In conclusion, digitalization of regional financial management can be an important instrument for enhancing transparency and accountability in village fund management. By utilizing village financial information systems, the government can strengthen oversight mechanisms, improve the quality of financial reporting, and encourage public participation in monitoring village fund usage. If supported by adequate human resource capacity and technological infrastructure, digitalization has the potential to be an effective solution for achieving transparent, accountable, and fraud-free village financial governance.

b. Digitalization of Regional Financial Management creates opportunities for new forms of fraud (digital fraud)

Digitalization in regional financial management is part of governance reform aimed at improving efficiency, transparency, and accountability in public financial management. The use of financial information systems, such as the Village Financial System (Siskeudes), allows village governments to record, budget, and report finances in a more structured and integrated manner. This system was developed by the Financial and Development Supervisory Agency to help improve the quality of village fund management and minimize administrative errors.

Digitalization of village financial management through financial information systems contributes significantly to increasing transparency in village financial governance. The implementation of the Siskeudes application enables the entire village financial management process—from budget planning, activity implementation, administration, reporting, to accountability—to be carried out in an integrated digital system.

However, the application of digital technology in public financial management also brings consequences in the form of new risks, namely technology-based or digital fraud. In the public sector context, digital fraud refers to acts of manipulation, misuse of information systems, or embezzlement conducted through the use of information technology. This aligns with the Fraud Triangle Theory, which explains that fraud occurs when there is pressure, opportunity, and rationalization. Digital transformation can create new forms of opportunity, especially if internal control systems and IT security are inadequate.

Although digitalization provides multiple benefits in enhancing transparency and accountability, digital transformation also opens up the potential for new forms of fraud, known as digital fraud. In the public sector, digital fraud refers to various forms of misuse of information technology systems with the intent to gain illegal personal benefits.

Advances in digital technology can create new fraud patterns that exploit weaknesses in information systems or insufficient internal controls in digital financial management (Nur et al., 2024). Some potential forms of digital fraud in village financial management include:

- a. Data manipulation within the village financial system
Officials with system access can modify or delete transaction data to cover up budget misuse.

- b. Misuse of system access
Unauthorized use of accounts and passwords can create opportunities for illegal transactions within the village financial system.
- c. Electronic transaction manipulation
In digital systems, financial transactions can be manipulated through fictitious entries or the diversion of funds to specific accounts.
- d. Cyberattacks on village government financial systems
Government information systems connected to the internet are vulnerable to cyberattacks, such as hacking or malware.

c. Effectiveness of Digitalization in Regional Financial Management for Fraud Prevention

Digitalization has proven to be one of the most effective strategies for increasing efficiency and accountability in managing education funds. A successful example from Singapore demonstrates that by using an e-budgeting system, every financial transaction can be tracked in real time. Accessible periodic reporting allows for real-time monitoring of fund usage, thereby reducing opportunities for data manipulation (Sabeni et al., 2025).

Fraud detection technology leverages anomaly detection algorithms to automatically identify unusual or suspicious transactions. Data analytics is used to uncover red flags, which serve as early indicators of potential fraud (Purwatmiasih, 2021). The use of machine learning allows the recognition of complex fraud patterns and adapts to new schemes, enabling the system to learn and improve detection accuracy. Risk scoring and early warning systems provide alerts to managers and auditors, allowing preventive action before fraud escalates. The implementation of this technology has been proven to enhance oversight effectiveness and significantly reduce the risk of misuse of education funds (BOS). However, despite the promise of AI/ML technologies, their implementation requires high-quality, representative datasets. Bias in algorithms and overreliance on technology without human oversight can create new blind spots in fraud detection.

Digitalization in the public sector refers to the use of information technology to enhance efficiency, transparency, and accountability in government administration. In the context of regional financial management, digitalization is implemented through regional financial information systems, e-budgeting, e-procurement, and other electronic budget management applications. Digitalization enables local governments to manage planning, budgeting, execution, and financial reporting processes in a more integrated and transparent manner. Regional financial information systems can improve the quality of financial reports, increase budget management efficiency, and facilitate oversight by audit institutions and the public (Maulidi et al., 2025). Furthermore, digitalization strengthens control mechanisms because all financial transactions are electronically recorded and traceable via an audit trail, helping reduce administrative errors and enhance accountability in public financial management (Maulina et al., 2025).

Digitalization of regional financial management can serve as a crucial instrument in fraud prevention because it strengthens internal control systems and increases financial transparency. First, digitalization reduces the opportunity for fraud through automated and well-documented transaction recording. All financial transactions recorded in the digital system can be traced, making it more difficult for perpetrators to manipulate data. Second, digitalization increases transparency in budget management. Local government financial information can be accessed by various stakeholders, including the central government, auditors, and the public. This transparency serves as a social control mechanism that can curb potential budget misuse. Third, digital systems allow for technology-based monitoring, such as real-time oversight, financial data analysis, and early warning systems for suspicious transactions. This enables governments to detect potential fraud more quickly than with manual systems.

With digital systems, opportunities to manipulate financial reports are minimized because recording and reporting are integrated within the government's financial information system. Digitalization of regional financial management is part of governance transformation aimed at improving transparency, accountability, and efficiency in budget management. From the perspective of fraud theory, digitalization plays a key role in reducing the opportunity factor, which is one of the main causes of fraud in public financial management. Through regional financial information systems, all financial transactions are electronically recorded and traceable, facilitating oversight and auditing. Additionally, digitalization enhances

financial information openness, enabling the public to participate in monitoring government budget usage.

5. Conclusion

Based on the results of the analysis, it can be concluded that digitalization of village financial management plays a crucial role in enhancing transparency and accountability in public financial governance at the village level. The utilization of village financial information systems enables financial recording, reporting, and oversight to be conducted in a more systematic, integrated, and electronically documented manner. This condition can reduce opportunities for financial statement manipulation and improve the quality of village financial reporting.

In addition, digitalization contributes to strengthening oversight mechanisms through the availability of traceable financial data that can be more easily audited. The transparency of financial information generated by digital systems also encourages community participation in monitoring the use of village funds, thereby increasing accountability in village governance.

However, digital transformation in village financial management does not entirely eliminate the potential for fraud. On the contrary, digitalization can give rise to new forms of fraud known as digital fraud, which involves the misuse of information technology systems to gain illegal personal benefits. Such fraud can take the form of data manipulation within the system, unauthorized access, or engineered digital transactions.

From the perspective of fraud theory, digitalization plays a role in reducing the opportunity factor, one of the main causes of fraud. Integrated financial information systems strengthen internal controls and narrow the space for manipulation of financial reports. Nevertheless, the effectiveness of digitalization is highly influenced by human resource capacity, IT system security, and the availability of adequate digital infrastructure.

This study contributes to the development of research in public administration, public sector accounting, and digital governance. It reinforces the relevance of fraud theory, particularly the Fraud Triangle concept, which states that fraud is influenced by three main factors: pressure, opportunity, and rationalization. The findings indicate that digitalization of village financial systems can reduce the opportunity factor through electronic recording mechanisms, information transparency, and ease of audit processes. The study provides an understanding that digitalization is not only a tool for increasing administrative efficiency but also serves as a fraud prevention instrument by strengthening IT-based internal control systems. Thus, this research expands the theoretical perspective on the relationship between digital governance and fraud prevention in the public sector.

Practically, the study offers several recommendations for local governments and village authorities to optimize digitalization in village financial management. Governments need to strengthen the implementation of village financial information systems by ensuring that all financial management processes are conducted through integrated and well-documented digital systems. This aims to enhance transparency and minimize the potential for financial statement manipulation.

Improving the capacity of village human resources is a key factor in the success of digitalization. Village officials need training and guidance related to managing financial information systems and understanding the risks of digital fraud. Governments must also strengthen internal controls and IT security, including user access management, audit trail systems, and technology-based monitoring mechanisms.

This study has several limitations that should be considered when interpreting the findings. The research used a qualitative approach based on literature review or secondary data, so the findings are largely conceptual and do not fully represent empirical conditions across all villages in Indonesia. The study has not conducted direct empirical testing of digital system implementation in village fund management, so the effectiveness of digitalization in preventing fraud still requires further research using quantitative or field case study approaches. Therefore, future research is recommended to conduct empirical studies at the village level, examining the relationship between village financial digitalization, internal control systems, and potential fraud using quantitative or mixed-method approaches.

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