

Risk Mitigation in Village Financial and Asset Management: Evidence from Boyolali Regency

*Risk Mitigation in
Village Financial and
Asset Management*

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ABSTRACT

The increasing allocation of village funds in Indonesia has raised concerns about the integrity and accountability of financial reporting at the village level. This study analyzed potential fraud risks in village financial reporting in Boyolali Regency using the fraud diamond framework, which includes pressure, opportunity, rationalization, and capability. A descriptive qualitative method was employed through content analysis of 115 villages in 10 districts based on document reviews, structured interviews, and expert evaluations. The study develops a semi-quantitative risk matrix to classify and map risks according to the frequency and impact of internal control weaknesses. The findings reveal systemic vulnerabilities throughout all stages of village financial management, from planning and implementation to reporting and asset accountability. Opportunity-related factors, such as lack of document verification, low transparency, and weak internal controls, are the main drivers of fraud risk. The dominance of village heads in decision-making and the limited technical capacity of village officials further increase fraud potential. This study proposes a comprehensive risk mapping model and practical recommendations, including strengthened verification mechanisms, enhanced human resource capacity, risk-based internal controls, digitalized reporting systems, and community oversight to promote preventive and accountable public financial governance at the village level.

Keywords: *Fraud Diamond, Fraud Risk, Reporting, Risk Matrix, Village Financial.*

INTRODUCTION

Within the framework of strengthening village-based development, the Government of Indonesia continues to promote accountable and transparent management of Village Funds as part of its national strategy to eradicate corruption and achieve good governance. Following the enactment of Law Number 6 of 2014 on Villages, the average allocation of Village Funds per village increased significantly, from approximately IDR 280 million in 2015 to around IDR 943 million in 2024. Despite this progress, the Corruption Eradication Commission (*Komisi Pemberantasan Korupsi/KPK*) recorded 601 cases of village fund misuse between 2012 and 2022, indicating persistent fraud risks in village financial management (Satrio, 2022).

Villages are strategic in public financial management as the frontline of development and service delivery, especially with increasing Village Fund Allocations (*Alokasi Dana Desa/ADD*) that demand accountability, transparency, and participation. Yet, Indonesian village financial management faces integrity and oversight challenges, making it prone to irregularities and fraud, as gaps in decentralized governance often lead to fund misuse, while transparency helps reduce corruption (Chen & Ganapati, 2023; Ridhawati, 2024). Ethical leadership, institutional integrity, and auditing are crucial for public accountability (Yeboah et al., 2023; Ellapan et al., 2025). This study draws on Cressey's (1953) Fraud Triangle pressure, opportunity, rationalization, expanded into the Fraud

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Diamond with capability, widely used in fraud research (Wolfe & Hermanson, 2004; Rasheed et al., 2023). Prior studies emphasize village officials' competence, internal controls, and morality in preventing fund fraud, with whistleblowing systems also playing a key role (Jayanti & Suardana, 2019; Rakanti & Ratnadi, 2024).

However, most prior research has emphasized quantitative relationships between variables and has not sufficiently addressed spatial variations and differences in fraud risk intensity among villages. Akhyaar et al. (2022), for example, examined reporting systems and internal controls but did not develop risk mapping based on village location and institutional characteristics. Moreover, many studies remain limited to the Fraud Triangle, while the capability component of the Fraud Diamond has rarely been applied in village governance. Yet, the ability of village leaders and staff to exploit system weaknesses is a key driver of fraud, particularly in environments with weak oversight and digital controls (Murphy & Dacin, 2011; Free & Murphy, 2015; Sarmigi et al., 2023).

To address these gaps, this study conducts a comprehensive mapping of potential fraud risks in village financial reporting using the Fraud Diamond framework. The research not only analyzes the causal elements of fraud but also classifies and maps risk levels across villages, an area that has received limited attention in existing literature. Financial reporting fraud occurs not only in the private sector but also in public institutions, including village governments, and often involves material misstatements intended to conceal actual financial conditions (Njonjie et al., 2019). Understanding fraud risk factors such as human resource competence, morality, and internal control systems is therefore essential. Public sector audits and oversight mechanisms play a critical role in maintaining fiscal integrity (Middin et al., 2024).

The relevance of this research is further strengthened by the increasing number and scale of village financial irregularities (Saptohutomo, 2024). Audit findings indicate that many villages lack adequate internal control systems, have limited human resource capacity, and exhibit low financial literacy among officials (Jayanti & Suardana, 2019; Laksmi & Sujana, 2019). Inadequate financial reporting also weakens transparency and accountability (Novita, 2024). Similar challenges have been observed in other developing countries where decentralization is not supported by strong internal controls (Farzad & Roshdieh, 2024).

In Boyolali Regency, findings from several subdistricts, including Ampel, Gladagsari, and Klego, reveal weaknesses in budget documentation, cash planning, asset reporting, and administrative controls over village bank accounts (Dewi & Dewi, 2021). These conditions reflect weak financial governance and increased risk of fraud, potentially undermining the quality of village financial reports. This study aims to identify and map potential fraud risks in village financial reporting in Boyolali Regency using the Fraud Diamond framework. Examining these risks in village financial reports is crucial for enhancing accountability in village financial governance. The analysis focuses on the four elements of the Fraud Diamond: pressure, opportunity, rationalization, and capability. Accordingly, this study contributes both academically and practically by providing fraud risk mapping, supporting stronger oversight policies, and offering mitigation strategies to enhance accountable and transparent village financial management.

LITERATURE REVIEW

The Concept of Fraud and Fraud Risk in Public Financial Management

Fraud in the public sector refers to manipulative acts committed to obtain personal gain in violation of public accountability principles (Kingsley, 2015). The Association of Certified Fraud Examiners (ACFE) defines fraud as a deliberate act undertaken to secure unlawful benefits through the manipulation of financial statements, misappropriation of assets, or other corrupt practices (ACFE, 2025). In the context of the public sector, fraud may occur in various forms, including embezzlement of funds, manipulation of budget documents, and misuse of state or regional assets. According to Wolfe and Hermanson (2004), the occurrence of fraud can be explained through the Fraud Diamond, which comprises four elements: pressure, opportunity, rationalization, and capability. In village

financial management, fraud is highly likely to occur due to weak internal oversight, limited financial literacy among village officials, and low community participation in budget transparency processes. Fraud risk in the public sector is often exacerbated by limited digital infrastructure and unclear accountability mechanisms (World Bank, 2020). Dellaportas (2013) also demonstrated that rationalization and social justification are recurring themes among offenders in public administration.

The study conducted by Mursyida and Maulina (2023) emphasizes that the effectiveness of the internal audit function and the robustness of the internal control system are critical determinants in maintaining the quality of financial reporting and preventing fraud in the public sector. The optimal implementation of internal audit enables the identification and mitigation of potential irregularities from the planning stage through to financial reporting. Empirical evidence also suggests that internal audit independence and management support significantly enhance fraud prevention effectiveness (Lenz & Hahn, 2015).

Fraud Risk Identification Models

Systematic fraud risk assessment serves as an essential instrument for detecting and preventing potential irregularities. According to the Committee of Sponsoring Organizations (COSO), risk management should be conducted in a structured manner through the identification of risk events, assessment of probability and impact, and the development of mitigation plans. COSO (2017) highlights that enterprise risk management must integrate fraud assessment within the organization's strategic objectives to ensure continuity and accountability. Similarly, Ziorklui et al. (2024) argue that risk-based monitoring allows early detection of internal control failures before they escalate into fraud incidents. In the context of village finance, areas such as the preparation and verification of budget documents (DPA/DPPA), cash management, asset reporting, and submission of accountability reports are particularly vulnerable to fraud if not properly monitored. Research by Sarmigi et al. (2023) suggests that weaknesses in internal control systems are the primary factor contributing to an increased risk of fraudulent financial reporting in small-scale public institutions, such as villages. Free and Murphy (2015) also found that social ties within small organizations increase collusion potential and weaken the deterrent effect of internal controls.

A consistent finding was reported by Br Siringorongo et al. (2025), who revealed that auditors' capacity to identify red flags is significantly influenced by their level of experience and professional training. This competence serves as a key element in an effective risk mitigation strategy within the context of public financial management. Recent developments in fraud detection research incorporate behavioral and data-driven indicators to complement traditional auditing procedures (Rosnidah et al., 2022).

Fraud Risk Framework in Village Financial Reporting

Numerous studies indicate that fraud in village financial management is primarily driven by weak integrity among village officials and limited awareness of accountable reporting practices. Empirical evidence shows that the competence of village officials, individual morality, and the effectiveness of internal control systems significantly contribute to fraud prevention in village fund management (Rakanti & Ratnadi, 2024). These findings are consistent with Detert et al. (2008), who explain that moral disengagement mechanisms such as justification and diffusion of responsibility encourage unethical decision-making in the public sector. Although transparency and accountability have been formally implemented in village financial management in accordance with the Minister of Home Affairs Regulation Number 20 of 2018, their contribution to effectiveness remains limited (Novita, 2024). Persistent weaknesses in openness and procedural accountability indicate that effective public fund management depends not only on administrative systems but also on institutional integrity and professionalism, as emphasized by Ellapan et al. (2025).

Recent studies indicate that fraud control systems are more effective when supported by digital technology, community participation, and independent reporting mechanisms (Wuryandini et al., 2023). Digital governance and open data further strengthen public accountability and reduce corruption risks, as emphasized by Detert et al. (2008) and Seiam and Salman (2024). Auditor quality, professional ethics, and internal auditor independence also play a crucial role in improving fraud detection effectiveness (Nautani, 2024; Nadirsyah et al., 2024). Conceptually, the role of Counter Fraud Specialists proposed by Button et al. (2007) aligns with the New Public Governance perspective, which emphasizes collaboration and shared accountability (Krogh & Triantafillou, 2024). Additionally, compliance with financial reporting standards and the implementation of whistleblowing systems significantly contribute to fraud prevention, particularly in small communities (Jayanti & Suardana, 2019; Akhyaar et al., 2022; Periansya et al., 2023). Digitalized reporting systems such as e-procurement and Siskeudes further reduce opportunities for financial manipulation, although their effectiveness remains constrained by limited human resource capacity at the village level (Bolívar & Meijer, 2016; Rasji et al., 2025).

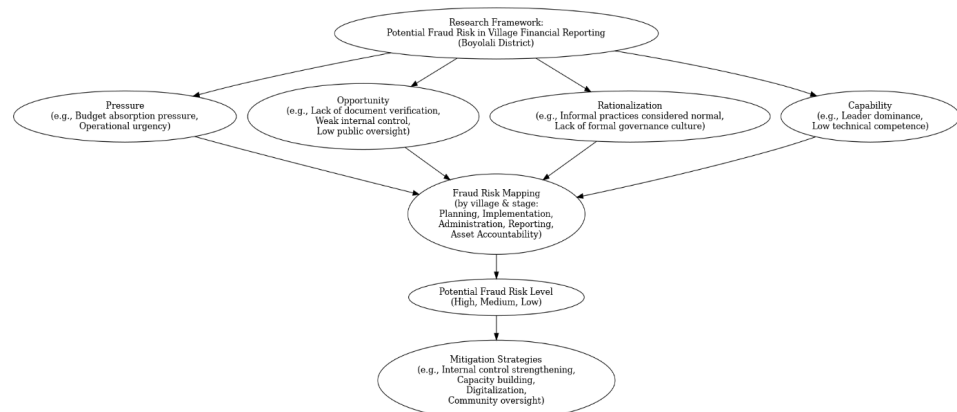


Figure 1. The Research Framework

Figure 1 presents a risk assessment framework for village financial reporting in Boyolali Regency using the fraud diamond approach. Potential incidents are analyzed through four main factors: pressure, opportunity, rationalization, and capability. These factors reflect conditions such as budget pressure, weak internal controls, informal practices considered normal, and the dominant discretion and limited competence of village officials. The factors are mapped across villages and all financial management stages, planning, implementation, administration, reporting, and asset accountability, to classify risk levels as high, medium, or low. Based on this classification, mitigation strategies are formulated, including strengthening internal controls, enhancing official capacity, digitizing the financial system, and bolstering community oversight to prevent and minimize potential damage in village financial management.

RESEARCH METHODS

This study employs a qualitative descriptive approach with an exploratory design to identify and analyze potential fraud risks in village financial management in 2023. Data were collected through documentation techniques, administrative observation, and structured interviews with several village heads and auditors from the Boyolali Regency Inspectorate. This approach was chosen as it is well-suited for exploring complex and context-specific social phenomena at the village government level.

The research was conducted in 115 villages spread across 10 districts in Boyolali Regency, namely Ampel, Gladagsari, Klego, Andong, Cepogo, Banyudono, Kemusu, Karanggede, Juwangi, and Boyolali. The research subjects consisted of village officials involved in financial management (Village Head, Village Secretary, Village Treasurer,

Activity Implementation Team, and Village Asset Manager), as well as village financial reporting documents for the most recent fiscal year. Villages were selected purposively, considering the distribution across districts and variations in village financial administration characteristics.

The primary data consisted of documents resulting from fraud risk identification (including administrative and technical evaluation checklists for village financial reports) collected by the research team in collaboration with the Boyolali Regency Inspectorate. Secondary data were obtained from literature, regulations related to village financial management (Minister of Home Affairs Regulation Number 20 of 2018, Ministry of Villages regulations, and guidelines from the Financial and Development Supervisory Agency (*Badan Pengawasan Keuangan dan Pembangunan/BPKP*), and previous research findings. Data collection techniques included documentation to review village financial report, Budget Implementation Documents (*Dokumen Pelaksanaan Anggaran/DPA*), Revised Budget Implementation Documents (*Dokumen Pelaksanaan Perubahan Anggaran/DPPA*), Activity Budget Plans (*Rencana Anggaran Kegiatan/RAK*), asset reports, and accountability reports. In addition, an administrative observation was conducted to assess the completeness and consistency of documents. Finally, content analysis was applied to examine the format and substance of reporting that serve as indicators of fraud risk.

Data analysis followed a three-stage process. First, risk events were identified by evaluating indicators of internal control weaknesses, such as the absence of DPA verification, incomplete cash reporting, and inadequate asset documentation. Second, these identified risks were classified and mapped using both the fraud triangle and fraud diamond frameworks to assess the elements of pressure, opportunity, rationalization, and capability. Using document checklist reviews, risks were categorized into four levels: very good, low, medium, and high. A semi-quantitative approach was applied by scoring the likelihood and impact of each indicator on a 1–5 scale and plotting the results on a risk matrix. The final stage involved mitigation analysis, evaluating existing controls and formulating practical preventive recommendations. The study utilized two main analytical tools: qualitative content analysis to examine documents, interviews, and observations for fraud indicators, and a semi-quantitative risk matrix to classify and map risks based on their likelihood and impact. Data coding, tabulation, and mapping were conducted using Microsoft Excel to ensure consistency and transparency throughout the analysis.

RESULTS

Initial Risk Identification

The following presents the results of the identification of potential fraud risk events based on indicators of control weaknesses found in village documents in Boyolali Regency. This identification was conducted with reference to the five stages of village financial management, which include planning, implementation, administration, reporting, and accountability. Present all relevant findings, including those that contradict the proposed hypothesis. Present the research results concisely, but each finding must be accompanied by sufficient detail to support the conclusions drawn. This way, readers can clearly understand the data analysis process and the rationale behind the conclusions.

Table 1 shows that potential fraud risks occur across all stages of village financial management in Boyolali Regency, mainly due to weaknesses in planning, implementation, administration, reporting, and asset accountability. At the planning stage, risks arise from incomplete or unverified planning documents and expenditures made before budget approval, indicating weak procedural compliance. During implementation, the absence of contract documents, progress reports, and proper fund disbursement procedures reflects weak oversight of village activities. Administrative risks are evident from the lack of cash budget plans and valid transaction evidence, which increases the possibility of unrecorded or improper spending. In the reporting stage, delayed or missing realization and semester reports demonstrate low accountability and

transparency. Asset accountability risks are the most prominent, as many villages lack complete asset documentation, reporting, and formal asset security policies, increasing the potential for asset misuse and loss.

Table 1. Potential Risk

Potential Risk	Weakness Indicator	Example of Risk Event	Data Source
Planning Stage	DPA not prepared	Section heads/staff did not prepare the DPA according to their duties	Ampel, Klego
	DPA not verified by the village secretary	No verification marks on the DPA/DPPA	Andong, Cepogo
	Village Medium-Term Development Plan and Village Government Work Plan were not approved by the Village Consultative Body	Planning was not conducted through a formal village deliberation	Andong
Implementation Stage	Expenditures made before APBDes approval	Spending occurred without a legally authorized budget	Cepogo, Banyudono
	The Activity Implementation Team did not prepare contract documents or progress reports	No written record of physical progress for village development activities	Ampel, Gladagsari
	Activity implementers did not submit fund disbursement requests in accordance with procedures	Funds were used without the village head's approval	Gladagsari, Klego
Administration Stage	Cash Budget Plan not prepared	No monthly cash plan as a basis for fund disbursement	Ampel, Cepogo
	Transaction evidence not available (receipts)	Expenditures not accompanied by valid proof	Kemus
Reporting Stage	The activity realization report was not prepared	Section heads/staff fail to submit reports to the village head	Cepogo, Kemusu
	Semester reports not prepared or submitted	Semester financial reports not submitted to the subdistrict head or regent	Gladagsari, Kemusu
Asset Accountability Stage	Assets not supported by valid documentation / incomplete inventory	No ownership certificates or adequate asset lists	Klego, Karanggede, Banyudono
	No village asset report or only partial reporting	The status of use and condition of village assets is unknown	Kemus, Andong, Karanggede
	No asset security policy has been established by the Village Head	No official regulations regarding asset safeguarding and maintenance	Boyolali, Gladagsari

Risk Classification and Mapping

The following is the classification and mapping of fraud risks in village financial management in Boyolali Regency, based on the attached data, using the Fraud Diamond approach (Wolfe & Hermanson, 2004). This model explains that fraud results from a combination of four elements: pressure, opportunity, rationalization, and capability.

Table 2. Fraud Risk Classification

Fraud Element	Identified Factor	Example of Incident	Area
Pressure	Pressure to realize the budget despite the absence of a formal legal basis	Expenditures made before the Village Budget and Expenditure (<i>Anggaran Pendapatan dan Belanja Desa/APBDes</i>) is ratified	Cepogo, Banyudono
	The need to absorb funds to avoid returning them	Preparation of fictitious or unverified Revised Village Budget (DPPA)	Klego, Gladagsari
Opportunity	Absence of verification for budget documents (DPA/DPPA/RAK)	DPA and DPPA not verified by the village secretary	Andong, Karanggede

Fraud Element	Identified Factor	Example of Incident	Area
	Lack of bookkeeping and cash reporting	Cash Budget Plan not prepared, General Cash Book bookkeeping not maintained	Kemusu, Gladagsari
	Unrecorded assets and the absence of formal asset managers	No asset report or only partial reporting; incomplete documentation	Klego, Andong, Karanggede
	No public complaint mechanism (low public access)	No complaint address found on the village media	Banyudono, Kemusu
Rationalization	Considering informal practices as normal due to limited HR capacity and training	Treasurer's duties taken over by other staff without a formal appointment	Kemusu
	The habit of not preparing formal documents is considered more efficient	Handover of procurement results without a formal minute's document (<i>Berita Acara Serah Terima</i> /BAST)	Gladagsari
Capability	Village Head controls the process without layered oversight	Village Head's dominance in decision-making without supervision from the secretary and the Village Consultative Body (<i>Badan Permusyawaratan Desa</i> /BPD)	Boyolali, Cepogo
	Staff lacking technical competence in preparing financial or asset reports	Semester report not prepared; asset report inadequate	Gladagsari, Karanggede

Table 2 shows that the risk of fraud in village financial management arises from a combination of pressure, opportunity, rationalization, and capability. Pressure primarily stems from demands for budget absorption despite the lack of adequate legal support. Opportunities for fraud arise due to weak control systems, such as the absence of document verification, irregular financial recording, unclear asset management, and a lack of public complaints mechanisms. Rationalization occurs when informal practices and the disregard of formal documents are considered acceptable due to limited human resource capacity. Meanwhile, the capacity for fraud is reinforced by the dominance of village heads in decision-making and the low technical competence of village officials in preparing reports, thereby increasing the potential for fraud at the village level.

Table 3. Fraud Risk Mapping by District

District	Risk Level	Fraud Opportunity	Special Notes
Ampel	High	DPA not prepared, RAK not prepared, no procurement report	Predominant weaknesses at the initial budgeting stage
Andong	High	DPA not verified, assets unrecorded	Very weak asset verification and documentation
Cepogo	High	Expenditures made before APBDes approval, no activity and asset reports	Procedural violations and weak administrative accountability
Gladagsari	High	RAK not prepared, assets without BAST, no semester report	Comprehensive risks from documentation to reporting
Boyolali	Medium-High	Village Head dominance, no asset security policy established	Loose oversight structure
Karanggede	Medium-High	Assets not supported by legal documents, incomplete asset reports	Low HR capacity in asset management
Klego	High	DPA not prepared, incomplete asset reports, no RAK	Very high document-related fraud potential
Kemusu	High	No manual bookkeeping, asset reports are invalid	Significant gaps in documentation and reporting
Banyudono	Medium-High	Expenditures without APBDes basis, no asset report	Administrative and asset inventory risks

Table 3 shows that fraud risks in village financial management in Boyolali Regency are analyzed using the Fraud Diamond model, highlighting pressure, opportunity, and rationalization as the main contributing factors. Pressure arises from the demand to realize the budget and to avoid returning unspent funds, which can lead to unauthorized expenditures or the preparation of fictitious budget documents. Opportunity is the most dominant factor, driven by weak controls, including the absence of verification of key documents, inadequate financial documentation systems, and limited public oversight. Rationalization develops from an informal working culture in which incomplete documentation is considered acceptable due to limited human resource capacity and weak governance norms. Based on this risk mapping, preventive recommendations focus on strengthening document verification by the Village Secretary, applying risk-based internal controls, improving the capacity of village officials through technical training, and enhancing public information disclosure to support accountability and social oversight.

Risk Mitigation for Potential Fraud

The mitigation of potential fraud in village financial management requires addressing both procedural and oversight weaknesses. Common issues include limited understanding of financial procedures, lack of internal controls, insufficient reporting, and minimal supervision. Implementing strategies such as formal appointments, standardized documentation, training, and strengthened monitoring can reduce opportunities for misappropriation and enhance the integrity and accountability of village financial governance.

Table 4. Fraud Risk Mitigation

District	Dominant Risk Type	Root Cause	Recommended Mitigation Strategies
Ampel	Failure to prepare/verify DPA and RAK	Limited understanding of procedures and weak oversight	Technical training on preparing DPA/DPPA/RAK; development of internal SOPs and standardized verification forms
Andong	Incomplete asset documents & activity reports	No active asset manager; minimal reporting to superiors	Official appointment of asset manager through a formal decree (SK); digitization of asset inventory
Cepogo	Expenditures without a legal budget basis	Urgent operational needs & low budget discipline	Administrative sanctions for unauthorized spending; monitoring of budget realization vs. legal authorization by the Village Consultative Body (BPD)
Gladagsari	Absence of bookkeeping and semiannual reports	Untrained treasurer; low control by the village secretary	Assistance in using Siskeudes and manual BKU training; supervision by subdistrict authorities
Boyolali	Centralized authority & weak asset control	No clear division of roles	Revision of task structure and delegation of authority; periodic internal audits by the regional inspectorate
Karanggede	Incomplete and invalid asset reports	No standard for asset documentation & minimal validation	Creation of standardized asset report templates; asset audits & cross-verification between village officials
Klego	RAK is not prepared and fictitious activity reports	Unbalanced workload among village officials; lack of coaching	Additional village financial staff (if necessary via PPPK); scheduled periodic supervision by the subdistrict head
Kemusu	No bookkeeping and absence of STS/receipts	Village officials do not understand the function of financial documentation	Basic training in village cash accounting; procurement of a simple digital system based on Excel/Siskeudes
Banyudono	Spending before budget approval & weak asset reporting	Pressure to absorb budget funds & delay in APBDes approval	Enforcement of spending discipline based on budget stages; acceleration of the APBDes validation process by the BPD

Table 4 presents the mitigation efforts for potential fraud risks in village financial management in Boyolali Regency, which require a comprehensive and integrated approach, considering the specific weaknesses identified in each village. The proposed mitigation strategies include strengthening internal verification functions by empowering the role of the Village Secretary as the primary controller of financial administration. In addition, the implementation of risk-based internal control systems should be tailored to the risk profile of each village.

Furthermore, it is necessary to enhance the technical capacity of village officials through regular training, financial management certification, and mentoring by subdistrict authorities, as well as the regional inspectorate. Village asset management should also be improved through the official appointment of asset managers, digitization of asset inventories, and standardization of reporting formats.

The implementation of the Village Financial System (*Sistem Keuangan Desa/Siskeudes*) should be expanded and optimized, especially in villages with limited documentation and manual record-keeping. On the other hand, community involvement in the oversight process must be strengthened by providing public complaint channels and disseminating budget and realization information through official village media. This approach aims not only to close loopholes that could be exploited for fraudulent practices but also to foster a culture of transparent, accountable, and participatory governance at the village level.

DISCUSSION

This section discusses the research findings by emphasizing their broader implications and linking them to previous studies. The conclusions are logically derived from the empirical evidence, providing a clearer understanding of fraud risks in village financial management. The findings reveal systemic vulnerabilities in village financial management in Boyolali Regency across all stages of the financial cycle, including planning, implementation, administration, reporting, and asset accountability. Using the Fraud Diamond framework by Wolfe and Hermanson (2004), the study confirms that opportunity is the most dominant factor driving fraud risk, mainly due to weak document verification, inadequate internal control mechanisms, and limited public oversight. This result is consistent with Sarmigi et al. (2023), who argue that weak internal controls significantly increase fraud risks in small public institutions such as villages.

Pressure is also identified as a key driver of risky behavior, particularly related to the urgency of budget absorption before the fiscal year ends and efforts to avoid returning unspent funds. These conditions often encourage unauthorized expenditures or manipulation of budget documents. This finding aligns with Rakanti and Ratnadi (2024), who highlight budget absorption pressure as a recurring source of non-compliance in village financial practices. Dobroszek and Wnuk (2022) further explain that performance-based budgeting systems tend to create pressure that encourages opportunistic reporting and creative accounting.

Rationalization appears through the normalization of informal practices, such as ignoring formal documentation requirements and viewing non-compliance as an efficient approach. This pattern reflects the organizational culture described by Jayanti and Suardana (2019), who emphasize that moral attitudes and organizational values play a crucial role in either enabling or preventing fraud. In Boyolali, such rationalization indicates that improving compliance requires not only technical solutions but also ethical and behavioral change. Ellapan et al. (2025) support this view by demonstrating that ethical leadership and integrity-based cultures can reduce rationalization in public organizations.

Capability further increases fraud risk, particularly through the concentration of decision-making power in village heads and the limited technical competence of financial personnel. This supports the argument of Wolfe and Hermanson (2004) that capability enables individuals to exploit weaknesses in governance systems. The lack of effective oversight from village secretaries and village councils reflects the concerns raised by Button et al. (2007), who stress that fraud prevention depends on strong structural controls

and professional oversight. From a spatial perspective, risk mapping shows that most villages fall into the high-risk category, especially in Ampel, Gladagsari, Klego, and Kemusu. These areas share similar weaknesses, such as incomplete budget documents, the absence of cash planning, and poor asset inventories. This finding is consistent with Akhyaar et al. (2022), who note that differences in administrative capacity influence the spatial distribution of fraud risk. OECD (2022) also highlights that regional risk mapping supports more effective allocation of oversight resources.

The broader implications indicate that fraud risk in village financial management is not merely the result of individual misconduct but a systemic governance issue. Addressing these weaknesses requires multi-layered interventions, including strengthening internal controls, implementing risk-based oversight, and digitalizing financial reporting systems. Tarjo and Herawati (2021) and Hidayat (2025) show that digital governance and the Siskeudes system can enhance transparency and reduce fraud exposure when properly implemented. These findings are reinforced by Bolívar and Meijer (2016) and Supriyanto (2025), who emphasize the role of technology and public participation in improving accountability. Thus, the study concludes that mitigating fraud in village financial management requires a holistic approach that simultaneously addresses opportunity, pressure, rationalization, and capability. This integrated strategy aligns with the COSO (2017) framework and OECD (2022) guidelines and is essential for strengthening public trust and ensuring the effective use of village funds.

CONCLUSION

This study reveals that fraud risks in village financial management remain high, with systemic vulnerabilities observed across all stages of the financial cycle, including planning, implementation, administration, reporting, and asset accountability. The analysis using the Fraud Diamond framework indicates that opportunity is the most dominant factor driving fraud, primarily due to weak document verification, inadequate internal controls, incomplete asset management, and limited public oversight. Pressure, arising from budget absorption requirements and efforts to avoid returning unspent funds, also contributes significantly to potential fraudulent behavior. Furthermore, rationalization and capability factors, such as the normalization of informal practices and the concentration of decision-making authority in village heads, exacerbate the risk. Spatial mapping highlights that certain villages consistently exhibit higher fraud potential due to recurring weaknesses in planning, reporting, and asset management.

The findings have important implications for policy and practice. Mitigation strategies should prioritize strengthening internal verification mechanisms, enhancing the technical capacity of village officials, implementing risk-based controls, and expanding digitalized financial systems such as Siskeudes. Moreover, fostering community participation and transparency is critical for reducing opportunities for fraud and promoting accountable governance. Ethical leadership and adherence to professional standards are essential to address rationalization behaviors. This study is limited to one regency, which may reduce generalizability, and relies on documents and interviews that may not capture all informal or unreported fraud. Future research should examine multiple regions, evaluate digital governance and community oversight, and investigate behavioral and cultural factors affecting compliance. A comprehensive approach integrating technical, organizational, and social interventions is needed to enhance accountability and public trust in village fund management.

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