



Building Fraud Resilience through Adaptive Internal Control in Public Accounting

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Abstract

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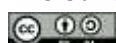
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Fraud is a global phenomenon that threatens the integrity of public accounting and financial management, causing severe impacts on economic stability and public trust. This study analyzes fraud control strategies through four main pillars: prevention, detection, investigation, and monitoring. Using a qualitative approach, this research examines the effectiveness of internal control systems in detecting and preventing fraudulent activities, focusing on the role of organizational culture, human resource competence, and the utilization of digital audit technologies. Literature findings indicate that the success of fraud control is strongly influenced by individual integrity, sound governance structures, and transparent reporting mechanisms. While digitalization and decentralization introduce new challenges in fraud prevention, collaborative inter-agency approaches and data-driven auditing offer significant opportunities to strengthen oversight systems. This study emphasizes that adaptive and risk-based internal controls are essential in building organizational resilience against fraud in the digital era. The findings contribute to a broader understanding of how governance, technology, and ethics intersect in creating effective anti-fraud environments.



1. Introduction

Fraud is one of the most serious threats to the integrity of public financial and accounting systems worldwide. Fraud is defined as an intentional act of deception aimed at gaining unauthorized advantage, which can cause financial losses and reputational damage to an organization (Dorminey et al., 2018). This phenomenon occurs not only in the private sector but also extends to the public sector, where public trust in government institutions is at stake. Therefore, fraud control is a vital component in maintaining the transparency, accountability, and sustainability of modern financial management systems. The importance of fraud control lies in its ability to systematically prevent, detect, and respond to acts of deception. Internal controls function as the primary mechanism for minimizing fraud risks through policies and procedures that ensure the accuracy of financial reporting and the protection of organizational assets (Aziz & Othman, 2021).

In the context of public accounting, this system not only supports the efficiency of financial management but also builds public trust in governance processes. Thus, an effective internal control system is the main foundation for management in creating a work environment with high ethics and integrity. The advancement of information technology presents both opportunities and new challenges in fraud control efforts. On the one hand, technologies such as blockchain, data mining, and machine learning enable early detection of suspicious transactions and complex fraudulent patterns (Rashid, 2022). However, on the other hand, digitalization also expands the scope for cybercrime and difficult-to-trace data manipulation. This shows that fraud control strategies cannot be static but must

continuously evolve according to the dynamics of technology and the complexity of modern financial systems. In public organizations, the role of an anti-fraud culture and professional ethics is also an important factor in building a robust monitoring system.

A study by Kamilah et al. (2018) emphasizes that the success of internal control systems is determined not only by formal mechanisms such as audits or regulations, but also by the moral commitment and behavior of individuals within the organization. Thus, the implementation of codes of ethics, integrity training, and a whistleblowing system are integral components of an effective fraud control strategy. Furthermore, the literature shows that inter-agency coordination, improved auditor competence, and the adoption of risk-based auditing can strengthen the effectiveness of fraud control (Aghili, 2019). Responsive, risk-based internal audits help organizations more quickly identify areas prone to fraud and take corrective action. This approach is increasingly relevant in a decentralized financial environment that demands high transparency and accountability at various levels of government or public institutions.

The context of globalization also complicates the landscape of fraud control. Interactions between countries, cross-border data exchange, and electronic transactions create new challenges in oversight. This necessitates international cooperation and regulatory updates so that control systems can adapt to changes in the global business environment (Sadaf et al., 2018). Thus, fraud control in public accounting and financial management must be viewed as a continuous process involving various actors ranging from government, auditors, to the public. This

research seeks to delve deeper into the role of internal control systems, digital audit technology, and organizational culture in creating anti-fraud mechanisms that are effective and adaptive to the developments of the digital era. The main focus is to understand how the main pillars of control prevention, detection, investigation, and monitoring interact in supporting clean, transparent, and accountable financial governance.

2. Literature Review

2.1. Concepts and Theories of Fraud Control

Fraud can be understood as an act carried out consciously to obtain economic gain illegally through abuse of authority, manipulation of financial reports, and various other forms of deception. Curnow (2021), through the Fraud Triangle Theory, identified three main elements that drive fraud: pressure, opportunity, and rationalization. This theory remains relevant today and is widely applied in explaining the motives behind fraudulent behavior in both the public and private sectors (Kassem, 2022). In the realm of public accounting, acts of fraud not only cause financial losses but also damage public trust in the credibility and integrity of government institutions. Said et al. (2018) assert that fraud prevention efforts require a systemic approach, including structural reform, increased information transparency, and the strengthening of individual integrity values.

This view is aligned with the recommendations of the Association of Certified Fraud Examiners (ACFE), which emphasize that effective prevention must start with strong organizational policies, a consistent ethical culture, and integrity training

programs for all employees. Furthermore, the concept of fraud control is closely related to corporate governance practices. This relationship underscores the importance of the oversight function carried out by the supervisory board, audit committee, and internal reporting systems in ensuring that all financial activities are adequately monitored (Rohmatin et al., 2021). Thus, the literature concludes that fraud is the result of a complex interaction between individual factors, system weaknesses, and weak institutional oversight mechanisms.

2.2. The Role of Internal Control Systems

The internal control system is an organizational mechanism designed to ensure operational effectiveness, reliability of financial reporting, and compliance with regulations. In the context of fraud control, this system aims to prevent and detect irregularities through strict policies and procedures (Aziz & Othman, 2021). According to the COSO Framework, the internal control system consists of five main components: control environment, risk assessment, control activities, information and communication, and monitoring. These five components are interrelated and form the basis for building an effective anti-fraud system. For example, an ethical and transparent control environment can reduce the opportunity for individuals to commit irregularities, while active monitoring allows for early detection of fraud indications (Kamilah et al., 2018).

Research by Handoyo et al. (2021) found that the effectiveness of internal control is directly proportional to the organization's ability to suppress incidents of fraud. Similar results were put forward by Aghili (2019), who asserted that a combination of formal controls (audits, policies) and informal controls (integrity

culture, management example) is the most effective approach. In other words, fraud prevention requires not only administrative tools but also the strengthening of moral and ethical values within the organization. In addition, internal audit plays a key role in assessing the effectiveness of the control system. Internal auditors function as the first line of defense in detecting inconsistencies and anomalies in financial reports (Rashid, 2022). Risk-based auditing, which focuses on areas with high fraud potential, has proven to increase oversight efficiency.

2.3. Utilization of Technology in Fraud Detection and Prevention

The development of information technology has revolutionized how organizations manage risk and detect fraud. Digital audit technologies such as data analytics, machine learning, and forensic accounting tools are becoming important tools in automatically detecting suspicious transaction patterns (Rusdianti et al., 2022). For example, data mining allows auditors to find unusual relationships in financial data that may indicate fraud. According to Rashid (2022), analytics-based technology provides a greater ability to identify fraud in large and complex amounts of data, especially in the public sector, which has many financial management units. Furthermore, blockchain is considered a promising technology due to its ability to create transparency and accountability in accounting systems (Lewis, 2018).

However, this technology also presents new challenges in the form of cyber risks and gaps in human resource competence. Technology implementation will not be effective without strong management support. As stated by Ramamoorti (2018), technology is just a tool; the success of fraud control still depends on the integrity and professionalism of the individuals who manage it. Therefore, the synergy

between technology, internal control systems, and organizational ethics becomes the main pillar in facing the challenge of fraud in the digital era. Thus, the literature review shows that fraud control is a multidimensional process involving human factors, systems, and technology. The success of this strategy is highly dependent on the extent to which the organization is able to integrate all three into a sustainable and adaptive governance framework to environmental changes.

3. Methods

This research uses a descriptive qualitative approach to analyze fraud control strategies in public accounting and financial management. This approach was chosen because it allows researchers to gain an in-depth understanding of complex social and organizational phenomena, including the factors that influence the occurrence of fraud and the effectiveness of internal control systems. This method focuses on interpreting meaning, context, and the dynamics of organizational behavior that cannot be measured only with quantitative data (Valencia, 2020).

Research data sources were obtained through a literature study of various scientific journals, academic books, and research reports relevant to the topic of fraud control, internal control systems, and public financial governance. Secondary data was collected from publications indexed in Google Scholar, Research Gate and other academic databases, specifically from the last five years to ensure the relevance of the findings to current conditions. This literature analysis was carried out to identify patterns, relationships, and trends in fraud control in both the public and private sectors.

The data analysis process was carried out using thematic analysis techniques, where the researcher reviewed each document to find key themes such as prevention, detection, investigation, and monitoring of fraud. These themes were then grouped into major categories that describe the conceptual structure of the research. According to Braun and Clarke (2019), thematic analysis is an effective approach in qualitative research because it is able to reveal deep meaning behind the text through a process of coding and repeated interpretation.

Furthermore, data validity was maintained through source triangulation by comparing results from various previous studies. This was done to ensure that the conclusions produced have a strong empirical basis and are not biased toward a particular view (Mertens, 2019). This research also considered aspects of research ethics, such as recognition of scientific work copyright, accuracy of citations, and objective interpretation of secondary data. All references are cited according to academic standards so that the research results can be scientifically accounted for. Thus, this descriptive qualitative method allows the research to obtain a comprehensive picture of how public organizations and financial institutions develop effective internal control systems in facing the challenges of fraud in the digital era.

4. Results

This research provides a comprehensive overview of the application of fraud control in public accounting and financial management by focusing on four main pillars: prevention, detection, investigation, and monitoring. Based on a review of

literature from various empirical and theoretical studies over the last five years, a number of important findings were obtained regarding the effectiveness of internal control systems, the role of digital audit technology, and the urgency of establishing an organizational ethics culture in creating a work environment oriented towards anti-fraud principles. Fraud prevention is a fundamental aspect of maintaining the integrity of the financial system. Prevention efforts are carried out through the creation of an ethical organizational environment, the implementation of anti-fraud policies, improved human resource competence, and transparency in financial reporting processes.

Said et al. (2018) showed that organizations that routinely carry out ethics training and consistently enforce codes of conduct have a lower risk of fraud compared to organizations that only rely on formal policies without internalizing moral values. This proves that fraud prevention does not only depend on administrative aspects, but also on instilling individual ethical values and a healthy organizational culture. A strong organizational culture plays an important role in building collective awareness of the dangers of fraud. Aghili (2019) emphasized the importance of tone at the top, namely the example of ethical behavior from organizational leaders, in creating an honest, transparent, and accountable work environment. When management demonstrates a commitment to integrity and responsibility, employees tend to follow the same norms so that the opportunity for fraud can be significantly suppressed.

Fraud detection focuses on the organization's ability to recognize indications or symptoms of fraud early on. In the modern context, detection methods have

evolved from manual audits to technology-based systems such as data analytics, machine learning, and automated reporting. Papadakis et al. (2020) found that the use of Computer-Assisted Audit Tools (CAATs) can accelerate the identification of transaction anomalies in large volumes of data. This technology allows auditors to trace unusual patterns, such as repeated expenditures without clear reason or manipulation of double accounts. Furthermore, Rusdianti et al. (2022) explained that organizations that implement predictive analytical systems based on artificial intelligence are able to reduce fraud risk more effectively compared to traditional audit methods. However, the effectiveness of detection technology depends on the technical competence of auditors and public accountants. Therefore, training and increasing digital literacy are strategic needs to support the effectiveness of technology-based surveillance systems.

Apart from the use of technology, the whistleblowing system also proved to be an important instrument in detecting fraud. Kamilah et al. (2018) found that the existence of a safe and anonymous internal reporting system increased the disclosure of fraud cases by up to 25% in public sector organizations. This mechanism shows that employee participation in reporting is a form of social control that complements the organization's formal supervision system. However, the success of this system depends heavily on the level of employee trust in management to follow up reports fairly and free from retaliation.

Fraud investigation is the advanced stage after indications of fraud are found, with the aim of uncovering the perpetrators, modus operandi, and impact of the fraudulent act. Handoyo et al. (2021) asserted that effective investigations must be

carried out independently and based on forensic evidence so that the results are objective and accountable. In practice, many organizations now adopt forensic accounting as part of their investigation strategy. This approach allows auditors to trace transactions in detail to identify manipulation of financial reports. Apart from the forensic approach, cross-agency cooperation is also an important factor in investigating complex fraud cases, especially those involving cross-sector entities. Rohmatin et al. (2021) explained that collaboration between internal, external auditors, and external supervisory institutions such as supreme audit institutions can speed up the investigation process and increase the accuracy of investigation results. Cross-agency coordination also helps close legal loopholes often used by perpetrators to avoid sanctions.

Monitoring and evaluation are important elements to ensure that the fraud control system functions effectively and is updated according to organizational developments. Monitoring is carried out through regular internal audits, risk assessment, and reporting on fraud control performance. Aziz and Othman (2021) found that organizations with continuous monitoring mechanisms had lower rates of financial deviation compared to organizations that only carried out periodic audits. Evaluation also includes reviewing the effectiveness of anti-fraud policies. Kamilah et al. (2018) revealed that periodic evaluation of anti-fraud policies can increase management awareness of high-risk areas and help organizations adjust policies to technological developments and new digital threats. Effective monitoring must be proactive so that potential fraud can be anticipated before causing losses.

These four pillars of fraud control are interrelated and cannot function separately. The success of the anti-fraud system is highly dependent on the integration between prevention, detection, investigation, and monitoring. Curnow (2021) through the Fraud Triangle Theory explained that fraud occurs due to pressure, opportunity, and rationalization. Therefore, an effective control system must be able to suppress these three elements simultaneously. Pressure can be reduced by creating a fair and transparent work environment, opportunity can be minimized through a strong internal control system, and rationalization can be prevented through ethics education and fostering employee integrity.

Technological developments also bring a new dimension to fraud control. Lewis (2018) highlight that the implementation of blockchain has the potential to revolutionize public accounting practices through the creation of an immutable ledger of transactions. This technology guarantees transparency and reduces the opportunity for data manipulation. However, the application of blockchain in the public sector still faces challenges such as high implementation costs, the need for digital infrastructure, and limited technical capacity of human resources. Sadaf et al. (2018) added that globalization and the digitalization of the financial system pose new threats in the form of increasingly complex *cyber fraud*. Therefore, the fraud control system in the modern era needs to be designed adaptively and risk-based, by integrating traditional audits, data analytics, cyber security, and technology-based governance policies.

The results of the literature analysis also show that good governance plays a central role in the effectiveness of fraud control. Rohmatin et al. (2021) asserted that

the principles of transparency, accountability, and social responsibility are the main pillars in strengthening organizational integrity. When these principles are implemented consistently, the opportunity for fraud can be minimized because every financial decision is under public scrutiny. Based on the overall study, the effectiveness of fraud control is influenced by three main factors: the integrity of human resources, the strength of the internal control system, and the utilization of modern surveillance technology. The synergy of these three factors creates a continuous layer of defense against various forms of fraud. In the context of public organizations, this approach not only functions to prevent financial losses but also to maintain public trust in the transparency and accountability of government institutions.

Thus, fraud control efforts are not a temporary activity, but a continuous process that must be adjusted to environmental changes, technological developments, and regulatory dynamics. Through the application of an internal control system that is adaptive, risk-based, and oriented towards integrity values, public organizations can build resilience against the threat of fraud and realize clean, transparent, and high-integrity financial governance.

5. Discussion

The research results show that fraud control in public accounting and financial management is a systemic and multidimensional process. Each element prevention, detection, investigation, and monitoring is closely related in building a transparent and high-integrity organizational environment. These findings support

the Fraud Triangle theory (Curnow, 2021), which asserts that fraud can be minimized by suppressing pressure, closing opportunities, and reducing rationalization. In the modern context, fraud prevention is no longer just related to administrative policies but also includes ethical, technological, and organizational governance dimensions. The application of an internal control system is proven to be the main element in preventing fraud. This finding is in line with research by Putra et al. (2022), which states that the effectiveness of internal control has a positive relationship with the organization's ability to suppress fraud incidents. However, the study results show that internal control alone is not enough if it is not accompanied by a strong organizational culture. Aghili (2019) emphasized the importance of tone at the top, where the moral commitment of leaders plays a major role in creating an effective anti-fraud culture.

From a technology perspective, the development of data analytics, machine learning, and blockchain enriches fraud detection methods that were previously carried out manually. Rusdianti et al. (2022) assert that organizations that integrate digital audit systems have a higher ability to detect financial anomalies and reduce the potential for irregularities. However, the effectiveness of this technology still depends on the ability of human resources to manage it. Thus, developing the technical capacity of auditors and strengthening digital literacy are determining factors for the successful implementation of technology-based surveillance systems.

Apart from the aspects of prevention and detection, the research results highlight the importance of cross-agency collaboration in the process of investigation and law enforcement against fraud cases. Girau et al. (2022)

emphasized that the synergy between internal, external auditors, and supervisory institutions increases transparency and speeds up case resolution. This also encourages the creation of a stronger accountability system.

However, this research also shows significant challenges, especially in facing the digital era and financial decentralization. The complexity of electronic transactions and the risk of cyber fraud require organizations to develop adaptive and risk-based surveillance approaches (Sadaf et al., 2018). Furthermore, the implementation of technologies such as blockchain requires large resources and supportive regulatory policies, which are often not yet available in the public sector. Thus, this discussion asserts that an effective fraud control strategy must be integrative combining internal control, audit technology, good governance, and a strong ethical culture. The synergy between these four elements creates a multi-layered defense system against fraud and increases public trust in the integrity of the financial system.

6. Conclusion

The results of this research confirm that fraud control in public accounting and financial management is a crucial element in maintaining organizational integrity, transparency, and accountability. Through a descriptive qualitative approach, this research finds that the effectiveness of fraud control is highly dependent on the integration between a strong internal control system, an ethical organizational culture, and the utilization of digital audit technology. The four main pillars—

prevention, detection, investigation, and monitoring must work synergistically so that the surveillance system can function optimally.

Effective fraud prevention requires ethical commitment from leaders, consistent implementation of anti-fraud policies, and improved human resource competence. Technology-based detection such as data analytics and machine learning helps speed up the identification of fraud indications, while forensic investigation strengthens the evidence against cases found. Periodic monitoring and evaluation are needed so that control policies remain relevant to technological developments and new risks.

This research also shows that the success of the fraud control system is greatly influenced by external factors, such as good governance and adequate regulatory support. Cross-agency collaboration, data transparency, and the application of public accountability principles are important foundations in building public trust in financial and government institutions. Thus, organizations need to continuously update the fraud control system adaptively and risk-based, in order to create clean, efficient, and high-integrity public financial governance in the digital era.

References

A. Girau, E., Bujang, I., Paulus Jidwin, A., & Said, J. (2022). Corporate governance challenges and opportunities in mitigating corporate fraud in Malaysia. *Journal of Financial Crime*, 29(2), 620-638.

Aghili, S. (2019). *Fraud Auditing Using CAATT: A Manual for Auditors and Forensic Accountants to Detect Organizational Fraud*. Florida: Auerbach Publications.

Aziz, F. L. A., & Othman, I. W. (2021). Internal auditors' perception on the efficacy of fraud prevention and detection in the public sector. *Universal Journal of Accounting and Finance*, 9(4), 764-772.

Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative research in sport, exercise and health*, 11(4), 589-597.

Curnow, D. (2021). *The psychology of Embezzlement: The art of control and intervention*. Heidelberg: Springer Nature.

Handoyo, M., Roemkenya, B., & Bayunitri, B. I. (2021). The influence of internal audit and internal control toward fraud prevention. *International Journal of Financial, Accounting, and Management*, 3(1), 45-64.

Kamaliah, K., Marjuni, N. S., Mohamed, N., Mohd-Sanusi, Z., & Anugerah, R. (2018). Effectiveness of monitoring mechanisms and mitigation of fraud incidents in the public sector. *Administratie Si Management Public*, 30, 82-95.

Kassem, R. (2022). How could external auditors assess the rationalization of fraud?. *Journal of Financial Crime*, 29(4), 1458-1467.

Lewis, A. (2018). *The basics of bitcoins and blockchains: an introduction to cryptocurrencies and the technology that powers them*. Florida: Mango Media Inc..

Mertens, D. M. (2019). *Research and evaluation in education and psychology: Integrating diversity with quantitative, qualitative, and mixed methods*. California: Sage publications.

Papadakis, S., Garefalakis, A., Lemonakis, C., Chimonaki, C., & Zopounidis, C. (Eds.). (2020). *Machine learning applications for accounting disclosure and fraud detection*. Pennsylvania: IGI Global.

Putra, I., Sulistiyo, U., Diah, E., Rahayu, S., & Hidayat, S. (2022). The influence of internal audit, risk management, whistleblowing system and big data analytics on the financial crime behavior prevention. *Cogent economics & finance*, 10(1), 2148363.

Rashid, C. A. (2022). The role of internal control in fraud prevention and detection. *Journal of Global Economics and Business*, 3(8), 43-55.

Rohmatin, B. L., Apriyanto, G., & Zuhroh, D. (2021). The role of good corporate governance to fraud prevention: An analysis based on the fraud pentagon. *Jurnal Keuangan Dan Perbankan*, 25(2), 280-294.

Rusdianti, I. S., Irmadariyani, R., & Kustono, A. S. (2022). E-Finance: Mitigation of Fraud Tendency in Indonesia. *IJEBD (International Journal of Entrepreneurship and Business Development)*, 5(3), 574-582.

Sadaf, R., Oláh, J., Popp, J., & Máté, D. (2018). An investigation of the influence of the worldwide governance and competitiveness on accounting fraud cases: A cross-country perspective. *Sustainability*, 10(3), 588.

Valencia, M. E. (2020). Qualitative inquiry and research design: Choosing among five traditions. *Estudios de la Gestión*, (7), 323-326.