

Evaluating Internal Control Effectiveness at PT Ultimo Clinic: A COSO-Based Case Study

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ABSTRACT

This study assesses the implementation and effectiveness of internal control systems within PT Ultimo Clinic's operational processes, using the COSO Internal Control Framework as an analytical lens. Employing a qualitative case study design, data were collected between January and March 2025 through semi-structured interviews with eight key personnel, direct observation of routine procedures, and document analysis. Thematic analysis revealed four principal weaknesses: reliance on manual and spreadsheet-based records; inadequate segregation of duties and authorisation procedures; limited data security and backup practices; and inconsistent receivables management. These deficiencies compromise information reliability, weaken monitoring capacity, and elevate exposure to fraud risks by creating opportunities and pressures conducive to misconduct. The paper proposes targeted improvements, including system integration, formalised authorisation workflows, standardised credit policies, periodic internal audits, and automated backup protocols. By combining process mapping with control evaluation, the study contributes to AIS and internal control literature in developing-country contexts. It offers actionable recommendations for managerial practice in medium-scale healthcare providers.

Keywords: Internal Control; COSO Framework; Fraud Risk; Accounting Information Systems.

INTRODUCTION

In the contemporary business environment, the effectiveness of internal control systems has become a crucial determinant of organisational reliability and accountability. Internal control is not merely a set of administrative routines but a structured mechanism that ensures the accuracy of financial reporting, operational efficiency, and compliance with regulations. Within the healthcare service industry—particularly in private clinics—the need for robust internal controls is increasingly urgent due to the complexity of transactions, the sensitivity of client information, and the risk of fraud in cash handling, procurement, and medical service billing. Effective control mechanisms not only safeguard organisational assets but also strengthen trust among patients, regulators, and investors. (Jannah et al., 2024)

In Indonesia, many medium-scale private healthcare providers still face challenges in implementing comprehensive internal control systems that align with international standards such as the COSO (Committee of Sponsoring Organisations of the Treadway Commission) Internal Control Framework. (Sari & Setiawan, 2023) The COSO framework emphasises five interrelated components—control environment, risk assessment, control activities, information and communication, and monitoring—which together provide a foundation for effective governance and fraud prevention. However, in practice, many clinics rely heavily on manual administrative processes, fragmented record-keeping, and informal authorisation procedures, which limit the reliability and traceability of financial and operational data (Alshaiti, 2023).

Previous studies have extensively discussed internal control systems within banking, manufacturing, and public-sector organisations (Romney & Steinbart, 2021; Hall, 2016; Al-Baidhani, 2019), yet there remains limited research focusing on the healthcare sector, particularly private clinics in developing economies (Zohry & Al-Dhubaibi, 2024). Existing research tends to generalise control implementation without considering the unique operational characteristics of healthcare services—such as confidentiality of patient data, multi-stage billing processes, and dual cash-credit payment systems. Consequently, the application of the COSO framework in the clinical setting remains underexplored, and empirical evidence from emerging contexts such as Indonesia is scarce (Jarah, 2023)

This study addresses that research gap by evaluating the implementation of internal control systems at PT Ultimo Clinic, a medium-scale private healthcare provider operating in Indonesia. The research aims to analyse how the clinic's current control mechanisms align with the COSO framework and to identify key weaknesses that may increase operational or fraud-related risks. Specifically, the study seeks to answer the following research questions:

- 1) To what extent do existing internal controls at PT Ultimo Clinic comply with the COSO Internal Control Framework?
- 2) Which deficiencies in the current system create potential vulnerabilities to fraud or inefficiency?

By applying a qualitative case study approach, this research contributes to understanding the implementation of internal control in healthcare service organisations. It provides practical recommendations for improving control design and fraud prevention. The findings are expected to benefit both scholars—by enriching the

empirical application of the COSO model in a developing-country context—and practitioners—by offering guidance on enhancing operational reliability and governance in clinical institutions.

METHOD

This study employed a qualitative case study approach to examine the implementation and effectiveness of internal control systems at PT Ultimo Clinic, a medium-scale private healthcare provider in Indonesia. The case study design enabled an in-depth understanding of internal control practices within their real organisational context, particularly in relation to the five components of the COSO Internal Control Framework. (Tesema, 2021)

Data were collected between January and March 2025 through semi-structured interviews, direct observations, and document analysis to ensure triangulation. Eight key informants were purposively selected based on their roles in financial, administrative, and operational functions, including managers and staff from finance, human resources, and medical services. Each interview lasted 45–60 minutes and followed a protocol derived from the COSO framework. Observations focused on cash handling, authorisation, billing, and record-keeping processes, while internal documents such as SOPs, payroll lists, and invoices were reviewed to verify procedural consistency.

Data were analysed using thematic analysis following Braun and Clarke (2021) six-step model. Coding was conducted independently by two researchers and refined into themes representing control strengths and weaknesses across COSO components. The findings were then interpreted in light of the Fraud Triangle Theory to highlight potential risk factors. To enhance trustworthiness, triangulation, member checking, and peer debriefing were employed, and an audit trail was maintained throughout the analysis.

RESULTS AND DISCUSSION

Overview of Findings

Data from interviews, observations, and document analysis show that PT Ultimo Clinic has made initial efforts to establish internal control systems; however, their implementation remains inconsistent, fragmented, and largely manual. While the clinic's management is aware of the need for control, formal documentation and integrated monitoring mechanisms remain limited. The analysis identified five major themes, structured around the components of the COSO Internal Control Framework: (1) control environment, (2) risk assessment, (3) control activities, (4) information and communication, and (5) monitoring. These findings were further interpreted through the lens of the Fraud Triangle Theory to identify potential vulnerabilities and behavioural risks associated with control weaknesses (Amelia, 2021).

Control Environment

The control environment at PT Ultimo Clinic reflects a combination of ethical awareness and structural limitations. Interviews with managerial staff indicated that management values integrity and customer satisfaction, creating a generally positive organisational culture. However, this culture has not been formalised into written codes of conduct or detailed job descriptions. Several employees perform overlapping duties, particularly in administrative and financial areas, without clear segregation of responsibilities. For instance, one employee is responsible for both recording transactions and handling cash, which violates the principle of separation of duties.

This situation reduces accountability and increases the potential for intentional or unintentional errors (Odek & Okoth, 2019). As highlighted by the COSO framework, a strong control environment requires not only ethical leadership but also clear authority lines and performance evaluation mechanisms. The absence of written policies and structured supervision weakens management oversight, allowing procedural irregularities to go unnoticed (Maruta, 2016). From a behavioural perspective, this condition aligns with the "opportunity" element of the Fraud Triangle, where individuals gain access to resources or records without sufficient checks and balances. In small and medium enterprises such as PT Ultimo Clinic, such opportunities are often rationalised as operational flexibility, yet they pose significant risks to data integrity and fraud prevention.

Risk Assessment

The clinic's risk assessment process is informal and primarily reactive. Interviews revealed that risks are identified only after incidents occur, such as discrepancies in financial records or delays in supplier payments. There is no structured mechanism to evaluate internal and external risks periodically. Employees and management rely on experience-based judgment rather than systematic analysis.

This finding contradicts COSO's second component, which emphasises the proactive identification, analysis, and prioritisation of risks that could impede the achievement of organisational objectives (Hidayat & Dwiasnati, 2022). The absence of risk registers, periodic evaluations, or key risk indicators indicates that risk assessment remains underdeveloped.

The Fraud Triangle Theory also suggests that financial pressure, such as delayed payments from patients or suppliers, may increase employees' motivation to manipulate records to maintain an appearance of financial stability. Therefore, a systematic risk assessment process is essential not only for operational control but also for mitigating behavioural risks associated with financial stress (Saputra & Novita, 2023).

Control Activities

Control activities at PT Ultimo Clinic are partially implemented, with varying degrees of effectiveness across departments. Basic authorisation and approval procedures exist for transactions such as payroll and procurement. However, these procedures are manual, paper-based, and lack digital integration. The clinic utilises the Lokadok application to manage patient data, but this system is not connected to financial or administrative databases, leading to data redundancy and reconciliation challenges (Otoo et al., 2023).

Observations showed that approval processes are often bypassed during high-workload periods, and that dual authorisation is rarely enforced. For example, salary disbursement is verified by a single finance officer rather than cross-checked by management. This practice directly conflicts with COSO's principle of segregated responsibilities and formal authorisation protocols.

Furthermore, the absence of automatic audit trails and real-time validation limits the clinic's ability to detect irregular transactions. From a fraud perspective, these weaknesses create both opportunity and rationalisation, as employees may perceive bypassing procedures as necessary for operational efficiency. The lack of enforced discipline further normalises non-compliance, thereby increasing systemic vulnerability.

Information and Communication

Effective internal control relies heavily on accurate, timely, and transparent information flow. At PT Ultimo Clinic, communication among departments is mainly informal, relying on verbal instructions or ad hoc email exchanges. There are no standardised reporting templates or documented communication protocols. Financial data are stored in individual departmental spreadsheets, which complicates consolidation and increases the risk of inconsistencies.

This fragmented information system violates the COSO requirement that internal communication should ensure relevant and quality information is captured and disseminated throughout the organisation. The lack of system integration leads to data duplication, delayed reporting, and reduced management visibility into key operational metrics.

Informants also reported that error corrections are often performed retrospectively, with little documentation of the root cause or responsible parties. This undermines organisational learning and continuous improvement. The Fraud Triangle's rationalisation element becomes relevant here, as informal communication and weak documentation allow employees to justify deviations from procedures as practical or harmless.

Monitoring

Monitoring mechanisms at PT Ultimo Clinic are the weakest component of the current control system. The clinic lacks a formal internal audit unit, and monitoring activities are performed sporadically by senior management, primarily in response to specific incidents. While the clinic owner occasionally reviews financial statements, such reviews are not supported by documented audit procedures or independent verification.

This ad hoc approach results in delayed error detection and reduces the reliability of corrective actions. According to COSO, effective monitoring requires continuous evaluation, documentation of control performance, and timely remediation. Silva, Andrade, and Benevides (2021) explain that internal auditing is an important element in monitoring and improving the quality of management systems, where structured internal auditing can help detect system weaknesses early and strengthen control mechanisms. Therefore, without regular monitoring, even well-designed controls can deteriorate over time.

In the context of fraud risk, the absence of monitoring eliminates deterrence mechanisms. Employees may perceive that management oversight is minimal, thereby reducing the perceived likelihood of detection—a factor that increases the likelihood of fraudulent behaviour. Implementing periodic internal audits or appointing an external consultant could substantially improve transparency and accountability.

Integrated Discussion

The overall findings reveal that PT Ultimo Clinic's internal control system is partially aligned with COSO principles but lacks procedural formalisation, integration, and continuous oversight. The strengths lie in management awareness and basic control structures, while the main weaknesses include insufficient risk assessment, lack of segregation of duties, informal communication, and weak monitoring. When examined through the Fraud Triangle Theory, these weaknesses collectively form an environment conducive to fraud:

- 1) Pressure: cash flow fluctuations and operational workload;
- 2) Opportunity: absence of explicit authorisation and digital traceability;
- 3) Rationalisation: cultural acceptance of procedural shortcuts in the name of efficiency.

Thus, the interaction between structural deficiencies and behavioural risks explains the limited effectiveness of current controls. Research conducted by Herliana (2023) shows that continuous internal monitoring significantly affects internal control performance. To mitigate these risks, the clinic should implement three strategic actions:

- 1) Digital integration – adopting a unified accounting information system linking operational, financial, and administrative functions to reduce redundancy and enable real-time oversight.
- 2) Policy formalisation – developing written SOPs and enforcing dual authorisation to strengthen accountability.

- 3) Institutionalised monitoring – establishing periodic internal audits and management reviews with documented outcomes.

Such reforms would align the clinic's control system with COSO's five components, thereby improving the effectiveness of the internal control system and strengthening organisational integrity. (Braim & Mohammed, 2023).

CONCLUSION

This study evaluated the implementation and effectiveness of internal control systems at PT Ultimo Clinic, employing the COSO Internal Control Framework as the analytical foundation and the Fraud Triangle Theory as an interpretive lens. The findings revealed that the clinic has adopted several control mechanisms, yet their application remains inconsistent and largely manual, reflecting a partial alignment with COSO principles. The components of the control environment and control activities demonstrate basic structural awareness, but risk assessment, information and communication, and monitoring are underdeveloped and insufficiently documented.

The absence of formal job descriptions, written policies, and systematic risk assessments has weakened the clinic's ability to ensure segregation of duties and detect procedural irregularities. Similarly, limited communication channels and the lack of integrated information systems have led to fragmented data processing and reporting. Monitoring—the most underdeveloped component—is performed irregularly without formal audit documentation, thereby reducing the overall reliability of control processes. These weaknesses collectively expose the organisation to potential fraud risks by creating opportunities, pressures, and rationalisations that align with the dynamics described in the Fraud Triangle Theory.

Overall, the study concludes that while PT Ultimo Clinic demonstrates managerial awareness and ethical intent, its internal control framework remains reactive rather than preventive. The organisation's reliance on manual documentation, informal communication, and personal trust in employees must evolve into a system-based governance structure that ensures transparency, accountability, and real-time oversight. Strengthening these elements is essential not only for safeguarding organisational assets but also for sustaining operational credibility and stakeholder confidence in a competitive healthcare environment.

Theoretically, this study enriches the literature on internal control and Accounting Information Systems (AIS) by contextualising the COSO Internal Control Framework within a healthcare setting in a developing economy. By integrating COSO principles with the Fraud Triangle Theory, the research demonstrates that control weaknesses are not only structural deficiencies but also behavioural risks that create opportunities and rationalisations for fraud. This highlights internal control as both a technical and cultural mechanism essential to ethical governance.

Practically, the findings emphasise the need for PT Ultimo Clinic and similar organisations to modernise their control systems through digital integration and procedural formalisation. Establishing an integrated AIS, developing written Standard Operating Procedures (SOPs), enforcing dual authorisation, and conducting regular internal audits would significantly enhance accountability and data reliability. Strengthening employee competence and ethical awareness further supports sustainable governance and fraud prevention across healthcare operations.

REFERENCES

- Alshaiti, H. (2023). Influences of internal control on enterprise performance: Does an information system make a difference? *Journal of Risk and Financial Management*, 16(12), 518. <https://doi.org/10.3390/jrfm16120518>
- Amelia. (2021). Peran pengendalian internal terhadap fraud triangle. *Jurnal Akuntansi, Audit & Aset*, 4(10), 23–33.
- Braun, V., & Clarke, V. (2021). *Thematic analysis: A practical guide*. SAGE Publications. <https://uk.sagepub.com/en-gb/eur/thematic-analysis/book248481>
- Dwiasnati, S., & Hidayat, R. R. (2022). Penerapan manajemen risiko menggunakan COSO: Enterprise risk management framework integrated pada PT ALPHANET: Risiko; manajemen risiko; COSO enterprise risk management; kebijakan; PT Alphanet. *Jurnal Tata Kelola dan Kerangka Kerja Teknologi Informasi*, 8(2), 66–72.
- Hall, J. A. (2016). *Accounting information systems (9th ed.)*. Boston, MA: Cengage Learning.
- Herliana, E., & Kuntadi, C. (2023). Influence of internal audit, information & communication, and monitoring of internal control performance. *Dinasti International Journal of Education Management and Social Science*, 4(3). <https://doi.org/10.31933/dijemss.v4i3.1676>
- Jannah, M., Hazmi, Y., Fitri, N. J., & Ashar, M. H. (2024). Internal controls in the system accounting information. *West Science Accounting and Finance*, 2(02), 163–173. <https://doi.org/10.58812/wsaf.v2i02.1064>
- Jarah, B. A. F. (2023). The mediating effect of the internal control system on the relationship between accounting information systems and firm performance. *Economies*, 11(3), 77. <https://doi.org/10.3390/economies11030077>

- Maruta, H. (2016). Pengendalian internal dalam sistem informasi akuntansi. *IQTISHADUNA: Jurnal Ilmiah Ekonomi Kita*, 5(1), 16–28.
- Odek, R., & Okoth, E. (2019). Effect of internal control systems on financial performance of distribution companies in Kenya. *Research Journal of Finance and Accounting*, 10(20).
- Otoo, F. N. K., Kaur, M., & Rather, N. A. (2023). Evaluating the impact of internal control systems on organizational effectiveness. *LBS Journal of Management & Research*, 21(1), 135-154. <https://doi.org/10.1108/LBSJMR-11-2022-0078>
- Romney, M. B., & Steinbart, P. J. (2021). *Accounting information systems (15th ed.)*. Pearson.
- Saputra, M. A., & Novita, N. (2023). Sistem pengendalian internal berdasarkan COSO framework pada perusahaan konstruksi. *Jurnal Riset Akuntansi Politala*, 6(1), 197–210.
- Sari, M. P., & Setiawan, D. (2023). Challenges in implementing internal controls in medium-scale healthcare providers in Indonesia. *Journal of Indonesian Economy and Business*, 38(2), 156–172.
- Silva, A. S. L. da, Andrade, J. C. de, & Benevides, C. M. de J. (2021). The internal audit of the quality management system in a medical devices distributor: A case study. *Research, Society and Development*, 10(16), e177101623999. <https://doi.org/10.33448/rsd-v10i16.23999>
- Tessema, A. W. (2021). A case study of internal control system in the public sector: The case of the Oromia Public Servants' Bureau. *Cogent Business & Management*, 8(1).
- Zohry, A. F., & Al-Dhubaibi, A. A. S. (2024). Optimizing business performance through effective accounting information systems: The role of system competence and information quality. *Journal of Risk and Financial Management*, 17(11), 515. <https://doi.org/10.3390/jrfm17110515>