

APPLICATION OF COSO PRINCIPLES AT PT SREEYA SEWU INDONESIA TBK

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Abstract

This study aims to analyze the implementation of COSO 2013 principles in the internal control system for raw material inventory at PT Sreeya Sewu Indonesia Tbk. The research employs a descriptive qualitative approach, collecting data through interviews, observations, document analysis, and a review of the 2023 annual report. The findings reveal that several COSO components, namely control environment, information and communication, and monitoring, have been consistently applied. However, weaknesses remain in risk assessment and control activities, particularly due to the inconsistent use of technology and limited integration across departments. These gaps reduce the overall effectiveness of the internal control system. The study emphasizes the need for stronger information system integration, standardized documentation of internal controls, and alignment of procedures across units. This research contributes to the literature on internal control in emerging markets, providing practical recommendations for enhancing governance and accountability in manufacturing companies.

Keywords: COSO 2013; Internal Control System; Technology; Integration

Abstrak

Penelitian ini bertujuan untuk menganalisis penerapan prinsip-prinsip COSO 2013 dalam sistem pengendalian internal untuk persediaan bahan baku di PT Sreeya Sewu Indonesia Tbk. Penelitian ini menggunakan pendekatan kualitatif deskriptif, dengan pengumpulan data melalui wawancara, observasi, analisis dokumen, dan tinjauan laporan tahunan 2023. Temuan menunjukkan bahwa beberapa komponen COSO, yaitu lingkungan pengendalian, informasi dan komunikasi, serta pemantauan, telah diterapkan secara konsisten. Namun, kelemahan masih terdapat pada penilaian risiko dan aktivitas pengendalian, terutama akibat penggunaan teknologi yang tidak konsisten dan integrasi yang terbatas antar departemen. Kekurangan ini mengurangi efektivitas keseluruhan sistem pengendalian internal. Penelitian ini menekankan perlunya integrasi sistem informasi yang lebih kuat, dokumentasi standar untuk pengendalian internal, dan penyelarasan prosedur antar unit. Penelitian ini berkontribusi pada literatur tentang pengendalian internal di pasar emerging, memberikan rekomendasi praktis untuk meningkatkan tata kelola dan akuntabilitas di perusahaan manufaktur.

Keywords: COSO 2013; Sistem Pengendalian Internal; Teknologi; Integrasi

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INTRODUCTION

Rapid economic growth, accompanied by technological advancement and globalization, has created new challenges for the business world. According to Mankiw (2021), economic growth reflects a nation's increasing capacity to produce goods and services, as shown by the continuous expansion of economic activities over time. In Indonesia, particularly in the industrial and agribusiness sectors, this dynamic compels companies to swiftly adapt to external environmental changes in order to remain competitive and sustainable. Several studies have emphasized the importance of internal control systems in maintaining operational effectiveness. Setyaningsih & Nengzih (2020) found that weak internal control in the agribusiness industry often results in inaccurate stock recording and poor monitoring of raw material quality, which in turn affects the quality of the final product. Similarly, Habibi et al. (2025) asserted that companies failing to integrate information technology into their internal control systems are more likely to experience reduced operational efficiency and lower transparency.

The advancement of digital technology and the increasing complexity of global supply chains further require companies to realign their business processes and information systems to be more efficient, transparent, and responsive to market needs. Daft (2021) argues that modern organizations must adopt adaptive structures and real-time, information-based strategies to address market uncertainties and operational risks. In this context, internal control systems serve as a fundamental foundation to ensure the reliability of financial information, compliance with regulations, and the overall achievement of organizational objectives (COSO, 2013).

PT Sreeya Sewu Indonesia Tbk is an agribusiness company primarily engaged in poultry farming and the processing of poultry products. As a major player in the industry, the company faces significant challenges in managing its inventory of raw materials, particularly live chickens, animal feed, and processed products, which are the main inputs in production. The complexity of inventory management generates various issues that affect the company's operational performance.

This study identifies several key problems in PT Sreeya Sewu Indonesia Tbk's internal control management. First, frequent errors in recording raw material stock undermine the accuracy of inventory reports and production decisions. Second, product returns due to substandard quality may damage the company's reputation and cause financial losses. Third, reliance on manual recording systems that are not integrated with the company's information systems hinders effective monitoring and control. These conditions indicate fundamental weaknesses in the internal control system, which can potentially disrupt production processes, reduce operational efficiency, and ultimately lead to decreased customer satisfaction a crucial factor in ensuring business continuity in an increasingly competitive market. In the poultry industry, raw material management is a highly complex process. Primary inputs, such as live chickens, are perishable and highly sensitive to handling time and quality. Therefore, effective and efficient inventory management is crucial for maintaining product quality. According to Mulyadi (2016), an internal control system over inventory must ensure the physical security of stock,

maintain the accuracy of inventory records, and provide reliable, timely information to support effective managerial decision-making.

Without a structured, integrated, and adaptive control system, companies risk facing multiple losses. These risks include overstocking, which leads to capital waste and potential spoilage; understocking, which disrupts production processes; and high product return rates due to substandard quality. Furthermore, weak internal controls may lead to inaccurate financial reporting and reduced operational transparency, thereby exposing the company to increased governance and regulatory compliance risks.

To address these challenges, the COSO 2013 framework provides a comprehensive and effective solution for designing, implementing, and evaluating internal control systems that are both integrated and adaptable to dynamic business and external environments. This framework consists of five key components: control environment, risk assessment, control activities, information and communication, and monitoring. Together, these components form a holistic system to ensure that control processes operate effectively and efficiently.

Hermawan & Rahmawati (2018) emphasized that applying COSO principles can help companies improve operational effectiveness by reducing recording errors and strengthening coordination across work units. Consequently, companies can not only safeguard information reliability and regulatory compliance but also foster continuous improvement across all operational aspects, ultimately enhancing competitiveness and long-term business sustainability.

The purpose of this study is to analyze the extent to which PT Sreeya Sewu Indonesia Tbk has implemented the COSO 2013 principles in its internal control system over raw material inventory. Using a descriptive qualitative approach, this research evaluates the effectiveness of the existing system and identifies the challenges encountered in its implementation, particularly regarding technological integration and corrective follow-ups. The findings are expected to provide strategic contributions to enhancing the quality of internal control and supporting the company's long-term business sustainability.

LITERATURE REVIEW AND DEVELOPMENT HYPOTHESIS

Setyaningsih and Nengzih (2020) found that weaknesses in internal control within agribusiness companies often lead to inaccuracies in stock recording, which negatively affect cost efficiency and operational performance. Habibi et al. (2025) showed that integrating information technology into internal control systems in health sector distribution companies improves financial reporting transparency and reduces recording errors. Lahu and Sumarauw (2021) emphasized that effective inventory management in retail companies reduces excess inventory costs and enhances operational efficiency. Overall, previous studies highlight that effective internal control particularly in inventory management plays a crucial role in maintaining efficiency, accuracy, and business sustainability.

Stakeholders' Theory

Stakeholder theory posits that businesses operate optimally when they create value not only for shareholders but also for all parties with a stake in the organization, including employees, suppliers, regulators, customers, and the broader community

(Freeman, Dmytriiev, & Phillips, 2021). Freeman (2021) defined a stakeholder as “any group or individual that can affect or be affected by the achievement of an organization’s objectives.” This theory emphasizes that managerial decision-making must consider the interests of all stakeholders.

In this study, stakeholder theory serves as the foundation for emphasizing the importance of structured and integrated internal control systems, as outlined in the COSO 2013 framework. COSO (2013) defines internal control as a process influenced by the board of directors, management, and employees, designed to provide reasonable assurance in achieving three objectives: operational effectiveness and efficiency, reliability of financial reporting, and compliance with laws and regulations. Applying COSO 2013 principles ensures that raw material management is conducted transparently, accurately, and accountably, thereby fulfilling stakeholder expectations regarding operational reliability and social responsibility. Furthermore, stakeholder theory incorporates both a normative perspective—what management ought to do—and a managerial perspective—how companies practically accommodate stakeholder interests in decision-making and organizational structures (Donaldson & Preston, 2015). Thus, implementing COSO-based internal control goes beyond asset protection and fraud prevention, becoming an integral part of good corporate governance that sustainably addresses stakeholder needs.

Diffusion Innovation Theory

The Diffusion of Innovation theory, introduced by Everett M. Rogers, explains how innovations such as ideas, methods, or systems are disseminated and adopted within a social system (Rogers, 2003). The diffusion process unfolds in five stages: knowledge, persuasion, decision, implementation, and confirmation. Its application has expanded across fields such as public health and education as a modern implementation framework (Dearing & Cox, 2018). Adoption speed and success depend on factors including relative advantage, compatibility, complexity, trialability, and observability.

Within this context, the COSO 2013 framework can be viewed as a managerial innovation adopted by PT Sreeya Sewu Indonesia Tbk to improve internal control over raw material inventory. COSO 2013 offers a relative advantage by providing a systematic approach to managing operational risks, particularly in procurement, storage, and usage processes. Its observability is evident in measurable improvements such as more accurate inventory records, reduced discrepancies between physical stock and system data, and fewer product returns caused by procedural errors.

The framework also demonstrates strong compatibility with the company’s organizational structure and work culture. While relatively complex, covering five components and 17 principles, the company gradually adopted COSO 2013 through training, standard operating procedures (SOPs), and periodic internal audits. This staged implementation reflects trialability, allowing the company to test and refine the system before full adoption. Consequently, the COSO 2013 framework’s diffusion within PT Sreeya Sewu Indonesia Tbk can be considered successful, as it has not only been adopted but also embedded into daily business processes to support more accountable and effective governance.

Accounting Information Systems (AIS)

Accounting Information Systems (AIS) form a critical component of modern organizational infrastructure, enabling the efficient, accurate, and reliable management of financial information. Romney and Steinbart (2021) define AIS as systems that collect,

record, store, and process accounting data to produce decision-relevant information. AIS operates across various departments, including purchasing, sales, and inventory management, thereby providing a comprehensive view of a company's financial position. Similarly, Mulyadi (2016) emphasized that AIS consists of organized forms, records, and reports designed to support company management.

The primary components of AIS comprise system users (both internal and external), operational procedures, accurate transaction data, processing software, and IT infrastructure. Internal controls and data security play a vital role by preventing unauthorized access and ensuring system reliability through encryption, access restrictions, and audit trails. Accordingly, AIS not only produces relevant and reliable financial information but also ensures compliance with regulations and internal policies (Gelinass, Dull & Wheeler, 2018). Within the COSO 2013 framework, AIS contributes strategically to the components of information and communication, control activities, and monitoring. Hall (2016) argued that IT integration into AIS enables faster, more efficient, and cost-effective transaction processing and reporting. Furthermore, a well-structured AIS helps identify weaknesses in internal control while enhancing governance effectiveness, thereby making AIS a key instrument in achieving sustainable organizational goals across operations, reporting, and compliance.

Internal Control

Internal control is essential for achieving organizational objectives in operations, reporting, and compliance. It functions not only as a monitoring mechanism but also as a strategic tool to improve efficiency, safeguard assets, and ensure the reliability of financial information (Hall, 2016; Gelinass, Dull, & Wheeler, 2018). Its success depends heavily on top management's commitment to consistent implementation (Romney & Steinbart, 2021). According to COSO (2013), internal control has four objectives: reliable financial reporting, regulatory compliance, operational effectiveness, and asset protection. These are achieved through five key components: (1) control environment, (2) risk assessment, (3) control activities, (4) information and communication, and (5) ongoing monitoring. However, internal control systems are not without limitations. Factors such as cost-benefit considerations, human error, and external environmental dynamics may reduce their effectiveness (Arens et al., 2016; COSO, 2013). Thus, while internal control cannot guarantee absolute achievement of organizational goals, it remains vital for minimizing risks and supporting informed decision-making.

Raw Materials

Raw materials represent the fundamental components of the production process, transformed into finished goods through various stages. From an internal control perspective, raw materials require close monitoring to ensure efficiency, sufficient availability, and accurate record-keeping. Strong internal control over raw materials prevents waste, loss, or misuse, while ensuring that quality standards are consistently met.

Raw materials are defined as inputs that form the final product. They may be sourced locally, imported, or internally processed by manufacturing companies. According to Mulyadi (2016), raw materials are the primary physical components of finished products. Effective raw material management encompasses purchasing, receiving, storing, and utilization procedures that are aligned with company policies.

In the poultry agribusiness sector, raw material management is particularly complex due to the perishable nature of live chickens and the sensitivity of handling requirements. Proper tracking systems, including batch-level monitoring, are critical for ensuring transparency across the supply chain and facilitating rapid identification in the event of recalls or quality issues (Cleverence, 2023). Thus, effective raw material control contributes significantly to operational efficiency, risk mitigation, and customer satisfaction.

RESEARCH METHOD

This study employs a descriptive method with a qualitative case study approach, aiming to provide an in-depth analysis of the application of COSO 2013 principles in managing internal control over raw material inventories at PT Sreeya Sewu Indonesia Tbk. This approach was chosen because it enables a factual and contextual understanding of practices implemented in the field, particularly in inventory management and the effectiveness of internal controls in mitigating operational risks.

PT Sreeya Sewu Indonesia Tbk is located on Jalan Raya Parung KM 39.33, Pemagarsari, Parung District, Bogor Regency, West Java. The research was conducted over a four-month period, from August 2024 to November 2024. The selection of this location and subject was based on the company's characteristics as an agribusiness entity with complex raw material management systems and high dynamics in inventory control, especially within its poultry slaughterhouse unit (RPA).

The data collected for this study consist of both primary and secondary sources. Primary data were obtained through in-depth interviews with individuals holding authority and direct knowledge of raw material management, such as the Head of Internal Audit and the Internal Audit Manager in the poultry division of PT Sreeya. The interviews were guided by structured questions based on the five core components of the COSO 2013 framework: control environment, risk assessment, control activities, information and communication, and monitoring. In addition, direct observations were conducted on raw material management processes, spanning from the reception of live chickens to slaughtering, packaging, and distribution, to capture firsthand insights into the workflow and control mechanisms implemented in practice.

Secondary data played a crucial role in triangulating findings. The researcher reviewed internal company documents, including Standard Operating Procedures (SOPs) across various stages, such as purchasing SOPs, supplier evaluation SOPs, final production SOPs, and delivery SOPs. Data on product returns for July 2024 were also analyzed, classified into two categories: returns due to quality issues and returns unrelated to quality. These data provide an overview of the effectiveness of controls over product quality as well as potential weaknesses in operations, such as shipment errors or mismatches between orders and deliveries. To strengthen the analysis, PT Sreeya's 2023 Annual Report was also examined as an official source of information regarding organizational structure, business strategy, and audit and risk management reports.

Data analysis was conducted using a descriptive approach, categorizing the results of interviews, observations, and documentation according to the five COSO 2013 components. The analysis examined whether each component had been fully and effectively implemented in the internal control system over raw material inventory. For example, in assessing the control environment, the study evaluated how the company fosters a culture of integrity and accountability; in risk assessment, how risks such as

misrecording or stock discrepancies are identified and addressed; in control activities, the effectiveness of standard procedures and verification mechanisms for stock data; in information and communication, the flow of information among warehouse, production, and finance departments; and in monitoring, the effectiveness of periodic evaluations and internal audit reporting.

Data collection specifically focused on four key Standard Operating Procedures (SOPs) directly related to inventory management: (1) General Purchasing SOP, (2) Live Chicken Supplier Evaluation SOP, (3) Production Process and Final Product Inspection SOP, and (4) Delivery SOP. The analysis results are presented separately for each SOP to illustrate the extent to which COSO principles have been applied and to identify areas for improvement and weaknesses.

Finally, the overall findings are synthesized narratively to provide a comprehensive and in-depth picture of the implementation level of COSO 2013 principles in the company's internal control system. Finally, the overall findings are synthesized narratively to provide a comprehensive and in-depth picture of the implementation level of COSO 2013 principles in the company's internal control system.

RESULTS AND DISCUSSION

PT Sreeya Sewu Indonesia Tbk is one of Indonesia's leading agribusiness companies, specializing in poultry farming and animal feed production. Since its establishment in 1985, the company has grown into a publicly listed company with the stock code SIPD on the Indonesia Stock Exchange. Sreeya is widely recognized for its innovation, particularly through the adoption of modern technologies such as Halal Blockchain and smart farming in its production processes. In 2020, the company rebranded itself to become more customer-oriented, reflecting its commitment to delivering high-quality products that support national food security. The company's vision and mission affirm its ambition to be a leader in the integrated poultry industry with international standards while contributing to community welfare.

One of the company's critical operational aspects is the process of receiving live chickens as the primary raw material. This process involves multiple parties, including purchasing administrators, suppliers, security officers, drivers, unloading teams, and production staff. Each stage is closely monitored through documents such as DPPAH, Delivery Notes, and LPAH, as well as biosecurity procedures to prevent contamination. The quality of live chickens is inspected by dedicated staff, and only those meeting the company's standards proceed to the next stage. This process not only ensures product quality but also demonstrates systematic and accountable logistics management, covering every step from ordering to supplier payments.

PT Sreeya manages its broiler production process in an integrated manner, whereby live chickens are processed into carcasses ready for further processing. Beyond whole carcasses, products are diversified into higher-value items, such as boneless chicken (breast and thigh cuts), which are widely demanded for their convenience and suitability for dishes like fillets or nuggets. Carcasses are also processed into specific parts such as breasts, thighs, wings, and feet allowing customers to purchase only the portions they need. Additionally, the company produces marinated chicken through a soaking process that enhances flavor and provides consumers with ready-to-cook products. This integrated system enables the company to serve both individual consumers and B2B clients effectively.

Raw material consumption is carried out daily, as the poultry industry requires continuous production. The company applies a storage policy known as Residual Storage (SP), which categorizes products based on shelf life: one-day, two-day, and three-day storage. These categories vary depending on the type of product. If raw materials remain unused at the end of the day, they are stored in chillers for the allowable SP period. However, given the perishable nature of poultry products, the company enforces a maximum storage limit of three days to prevent spoilage, while striving to consume raw materials daily to maintain product freshness.

SOP: General Purchasing

In the General Purchasing SOP, the application of COSO 2013 internal control principles is not yet fully optimized, particularly in risk assessment and control activities. A major issue identified is data entry errors during the Purchase Order (PO) creation process, which may result in overstocking or understocking, thereby disrupting production. The current use of Google Spreadsheets without automated validation increases the risk of human error, with discrepancies often not detected until they affect subsequent processes, such as shipping or warehousing.

Manual data reconciliation between stock records and supporting documents further reduces efficiency. The absence of technologies such as barcoding systems or ERP weakens data accuracy and heightens the risk of recording errors, ultimately lowering inventory control effectiveness.

A recommended solution is the implementation of an integrated digital system such as Enterprise Resource Planning (ERP), which can provide automated validation, real-time monitoring, and greater transparency. With ERP, the company can reduce input errors, improve stock accuracy, and facilitate transaction tracking.

Despite these shortcomings, the components of information, communication, and monitoring are relatively well implemented. Regular reporting and effective internal communication channels are in place, and periodic audits are conducted to ensure compliance with procedures. However, further improvements are necessary to fully align the General Purchasing SOP with COSO 2013 principles.

SOP: Chicken Supplier Evaluation

The Chicken Supplier Evaluation SOP also exhibits weaknesses in applying COSO 2013 internal control principles, particularly in risk assessment and control activities. While the company has identified key risks such as supplier data manipulation (e.g., discrepancies in reported chicken weight), the current controls remain largely manual and insufficiently integrated into the company's information systems. The semi-manual HARA system in use increases the likelihood of inconsistencies and control errors.

To strengthen controls, the adoption of automated systems such as ERP is strongly recommended, enabling real-time validation and reducing input errors. Although physical inspections of live chickens are conducted, control activities are not yet standardized within the COSO framework, often relying on individual staff experience, which introduces inconsistency during personnel changes. The company, therefore, needs to establish standardized, COSO-aligned procedures.

On the other hand, the information and communication component is relatively well-developed, with regular reporting and ongoing communication between operational teams, management, and suppliers. However, all supplier evaluation data should be

centralized within an integrated system to improve accessibility and decision-making. Monitoring activities remain largely manual and lack standardized performance indicators. To enhance effectiveness, the company should introduce clear Key Performance Indicators (KPIs) for supplier evaluations and leverage technology-driven reporting systems.

Overall, while some elements of internal control are present, the implementation of COSO 2013 principles within the Supplier Evaluation SOP requires significant improvement, particularly in system integration, procedural standardization, and the use of technology-based controls.

SOP: Production Process and Final Product Inspection

In the Production Process and Final Product Inspection SOP, the application of COSO 2013 principles remains suboptimal, particularly in risk assessment and control activities. While the company has identified risks such as improper storage temperatures that may compromise product quality, reliance on the semi-manual HARA system results in data inconsistencies and complicates ongoing risk evaluation.

A key issue is the absence of technology-based controls for temperature logging and quality tracking. Manual supervision reduces both the speed and accuracy of detecting quality issues. The lack of an integrated ERP further limits transparency and interdepartmental coordination. It is recommended that PT Sreeya implement a digital system, such as ERP, for real-time monitoring and automated validation, along with standardized KPIs to measure control effectiveness. Although reporting and coordination meetings are in place, communication remains largely manual, limiting timely access for decision-makers.

Developing a technology-driven communication system would allow faster responses to inspection results. In summary, while quality control efforts are evident, the implementation of COSO 2013 principles requires significant enhancement, particularly in digitalizing inspection processes, standardizing procedures, and integrating systems to ensure sustainable and effective internal control.

SOP: Delivery

The application of COSO 2013 internal control principles within the Delivery SOP also shows gaps, especially in risk assessment and control activities. Although the company has identified key risks such as packaging damage and temperature deviations, mitigation measures, including plastic thickness checks and vehicle temperature monitoring, remain limited and insufficiently structured within the COSO framework. Risk assessment documentation is not systematically recorded, hindering ongoing evaluation and corrective action.

While the AXAPTA system supports transaction recording, post-delivery controls remain inadequate. The lack of real-time tracking and standardized procedures for handling customer complaints demonstrates an overreliance on manual processes and individual decisions, which may reduce the effectiveness of control. Similarly, while communication among teams regarding delivery status exists, customer complaint reporting remains manual and disconnected from the quality control system, limiting data-driven improvements.

Monitoring is largely reactive, based on incident or complaint reports, and lacks standardized KPIs for measuring the effectiveness of delivery control. To address this,

the company should adopt proactive monitoring through dashboard-based reporting and regular audits.

Overall, the implementation of COSO 2013 principles in the Delivery SOP remains partial. System integration, formal risk documentation, and stronger KPI-based monitoring are necessary to improve operational efficiency and strengthen customer relationships, ultimately enhancing the company's competitiveness in the agribusiness sector.

Discussion

This study analyzed the implementation of COSO 2013 principles in four key SOPs related to inventory management at PT Sreeya Sewu Indonesia Tbk: General Purchasing, Live Chicken Supplier Evaluation, Production Process and Final Product Inspection, and Delivery. Each SOP plays a critical role in ensuring effective internal control, but the implementation of COSO principles reveals shortcomings in several areas.

- **General Purchasing SOP:** Although internal controls are applied, data recording and technology integration remain weak. Similar to Setyaningsih & Nengzih (2020), inaccuracies in inventory recording were found to disrupt operations.
- **Supplier Evaluation SOP:** Risks associated with supplier data manipulation have been identified; however, technology-based verification is lacking. Habibi et al. (2025) highlight the importance of technology in minimizing errors, underscoring the need for greater adoption at Sreeya.
- **Production and Final Product Inspection SOP:** Quality controls, such as temperature and packaging checks, are in place but remain heavily manual, resulting in reduced accuracy and responsiveness. This aligns with Lahu & Sumarauw (2021), who emphasize the necessity of automated monitoring systems to reduce reliance on human factors.
- **Delivery SOP:** While AXAPTA supports documentation, real-time tracking, and standardized post-delivery controls are limited. Setyaningsih & Nengzih (2020) also noted that the absence of integrated tracking complicates problem detection in distribution chains.

In summary, although the four SOPs have adopted basic COSO 2013 principles, their implementation is neither comprehensive nor fully structured. Consistent with Freeman et al. (2021), this study emphasizes the importance of technology-based systems in enhancing documentation, monitoring, and verification, thereby improving the overall effectiveness of internal controls at PT Sreeya Sewu Indonesia Tbk.

CONCLUSION, LIMITATIONS DAN SUGGESTIONS

Conclusion

This study finds that five elements of the Fraud Heptagon pressure, rationalization, capability, ego, and greed have a significant positive effect on financial statement fraud. In contrast, opportunity and ignorance are not proven to have a significant influence. Furthermore, institutional ownership exerts a direct positive effect on fraud, but its role as a moderating variable effectively weakens the influence of pressure, rationalization, capability, and ego on fraud. Interestingly, the interaction of institutional ownership with

opportunity strengthens the potential for fraud, while its interaction with ignorance shows no significant result. These findings emphasize that individual internal factors and managerial motivations play a more dominant role in influencing fraud compared to external opportunities, while the presence of institutional investors can function as a governance mechanism that mitigates fraudulent behavior.

Limitations

This study has several limitations that should be acknowledged. First, the sample is limited to companies in the basic materials sector listed on the IDX, thus restricting the generalizability of the findings to other sectors. Second, the research period only covers three years (2021–2023), which does not fully capture long-term trends. Third, the measurement of capability and ignorance variables relies on a dichotomous (dummy variable) approach, which may introduce subjectivity in the assessment.

Suggestions

Based on these limitations, future research is recommended to expand the sample to include companies from other sectors on the IDX to obtain more representative results. The research period should also be extended to five to ten years to provide a more stable picture and better reflect long-term trends. In addition, the measurement of capability and ignorance variables should adopt quantitative indicators or a triangulation approach, such as financial statement analysis, management's professional track record, or independent audit results. By doing so, future studies are expected to yield more objective and accurate findings, thereby making stronger contributions to the literature on financial statement fraud and corporate governance.

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