JRSSEM 2026, Vol. 5, no. 12, July
E-ISSN: 2807 - 6311
P-ISSN: 2807 - 6494

DeconStructing the IDR 271 Trillion Scandal: Fraud Hexagon's Perspective on the Governance of State-Owned Mining Enterprises

Taofik Muhammad Gumelar*, Rudi Alamsyah
Universitas Nusa Putra, Indonesia
Email: taofik.gumelar@nusaputra.ac.id*

Keywords:
Fraud Hexagon; corruption; corporate governance; collusion; PT Timah Tbk.

Abstract

Corruption remains a fundamental obstacle to economic development and governance across various industrial sectors, including mining. Indonesia continues to be categorized as a country with a high level of corruption, particularly within extractive industries. The corruption scandal involving PT Timah Tbk represents one of the largest cases illustrating the complexity of governance challenges and significant oversight weaknesses, with a 2023 audit by the Supreme Audit Agency (Badan Pemeriksa Keuangan/BPK) reporting state losses amounting to IDR 271 trillion. This study aimed to analyze the application of the Fraud Hexagon model in detecting indications of corruption at PT Timah Tbk, a strategic mining company in Indonesia, by examining six key elements: pressure, opportunity, rationalization, capability, arrogance, and collusion. This study employed a qualitative method with a case study approach, utilizing primary data from interviews and secondary data consisting of financial reports, BPK audit findings, investigative media reports, and Supreme Court rulings. Data analysis was conducted using thematic analysis, content analysis, and the Miles and Huberman data analysis model, with findings validated through data source triangulation. The results indicate that arrogance functions as a primary triggering factor, as individuals in strategic positions may perceive themselves as superior and beyond legal accountability, while collusion reinforces corrupt practices through structured networks involving state-owned enterprise officials, private-sector actors, and government regulators. The implications of this study highlight the need to strengthen technology-based internal control systems and enhance managerial accountability to prevent similar scandals from recurring in Indonesia’s strategic mining sector.

INTRODUCTION

Corruption is a fundamental obstacle to economic development and undermines governance across various industrial sectors, including mining. According to Transparency International (2023), Indonesia remains categorized as a country with a high level of corruption, particularly within the extractive industries, which contribute significantly to national revenue. The vulnerability of the mining sector is driven by the high economic value of resources involved, regulatory complexity, and weaknesses in natural resource governance and oversight.

Within the framework of Good Corporate Governance (GCG), ensuring operational transparency and accountability remains a significant challenge, particularly for State-Owned Enterprises (SOEs), which play a strategic role in the industry (Dechow et al., 2011; Effendi, 2021). The corruption case involving PT Timah Tbk represents one of the largest scandals, reflecting complex governance issues and substantial oversight failures. The scandal involved extensive networks of internal and external actors, including political and bureaucratic connections, which enabled illegal practices to occur on a large scale (Nuraini, 2022).

The magnitude of losses associated with the PT Timah Tbk scandal was substantial, with a 2023 audit by the Supreme Audit Agency (Badan Pemeriksa Keuangan/BPK) reporting state losses of IDR 271 trillion. These resources were expected to support mining expansion (IDR 120 trillion), state revenue contributions through taxes and royalties (IDR 80 trillion), community welfare programs through corporate social responsibility (CSR) initiatives (IDR 40 trillion), and land reclamation and ecosystem restoration efforts (IDR 21 trillion) (Wells, 2017). However, investigations revealed alleged manipulation of mining permits, diversion of funds through fictitious companies, and the preparation of misleading financial statements to present inaccurate financial performance (Harsono et al., 2022; Trimah, 2024; Wijayanti & Rahardjo, 2022).

The impact of this scandal extends beyond national financial losses, causing broader social and environmental consequences (Rahmawati, 2023). From an environmental perspective, a Greenpeace report (2023) noted that more than 20,000 hectares of forest and conservation areas had been degraded due to inadequate oversight of illegal mining activities. Economically, investor confidence in the national mining industry was also negatively affected, as reflected in the decline of PT Timah Tbk's share price by more than 40% over the previous year.

The urgency of this research is heightened by the scale and complexity of fraud within the extractive industry (Anggit & Ratnawati, 2024). Previous studies have examined fraud practices in the mining sector; however, many remain limited to conventional approaches, such as the Fraud Triangle and Fraud Diamond models. The ACFE (2022) indicates that large-scale corruption cases are often influenced by additional factors, including collusion and arrogance, which enable systematic fraudulent practices. Nevertheless, limited research has specifically examined the PT Timah Tbk scandal through the Fraud Hexagon perspective to understand the interactions between internal organizational factors and external networks involved in corruption schemes. The Supreme Court rulings in 2024 and ongoing investigations provide important insights into case developments, making this an appropriate period for comprehensive analysis. Furthermore, regulatory reforms and asset recovery measures announced by President Prabowo in 2025 further emphasize the policy relevance of understanding corruption mechanisms within the mining sector.

This study applied the Fraud Hexagon theory as a comprehensive analytical framework extending beyond conventional fraud models to examine the underlying causes of corruption. The theory explains that fraudulent behavior may arise from the interaction of six key elements: pressure, opportunity, rationalization, capability, arrogance, and collusion. Through this approach, the study seeks to provide a comprehensive understanding of the relationships between internal organizational factors and external networks involved in systematic corruption schemes within the mining sector.

METHOD

This research employed a qualitative approach using a case study design to evaluate the application of the Fraud Hexagon model as a corruption detection framework at PT Timah Tbk (Moleong, 2017). The case study approach was selected to examine complex phenomena, such as large-scale corruption scandals, within their real-world contexts. The research design focused on assessing how the six elements of the Fraud Hexagon model—pressure, opportunity, rationalization, capability, arrogance, and collusion—interact in contributing to systematic corruption.

The study utilized both primary and secondary data sources to support the validity of the analysis. Primary data were collected through unstructured interviews with internal staff at PT Timah Tbk who had direct knowledge of the company's operational conditions. Secondary data were obtained from financial reports, annual reports, audit results from the Supreme Audit Agency (Badan Pemeriksa Keuangan/BPK), investigative media reports, and Supreme Court rulings related to mining sector corruption cases.

Data collection techniques included in-depth interviews, document analysis, and legal analysis. Interviews were conducted to obtain contextual information regarding internal control effectiveness from the perspective of company personnel. Financial statements, annual reports, and audit documents were analyzed to identify potential indications of financial irregularities or misrepresentation. In addition, Supreme Court rulings were examined to analyze the corruption mechanisms based on legally established facts.

Data analysis was conducted using a combination of thematic analysis, content analysis, and the Miles and Huberman model (Miles et al., 2014). The analysis process involved data reduction to identify information relevant to the Fraud Hexagon elements, followed by data presentation in narrative and tabular formats to facilitate interpretation of identified fraud patterns. The final stage involved drawing conclusions and validating findings through data source triangulation to ensure the credibility and reliability of the research results.

RESULTS AND DISCUSSION

General Analysis of Research Findings: An in-depth analysis of the corruption scandal at PT Timah Tbk reveals that this phenomenon is a highly structured form of corporate crime, involving a broad network of internal and external actors. The use of the Fraud Hexagon framework allows for the identification of governance gaps that extend beyond accounting techniques to sociological and psychological aspects of those in power. The research findings indicate that this systemic corruption occurs through the use of authoritative positions reinforced by attitudes of superiority and cross-sector collusion.

Overall, this scandal reflects a complete failure of the internal control system in dealing with the interaction of six elements of fraud operating simultaneously. Data shows that the IDR 271 trillion state loss was not merely a financial figure, but the result of permit manipulation, fabricated production reports, and deliberate disregard for ecological impacts. The following explanation will examine each element of the Hexagon Fraud in detail based on trial facts and company operational data.

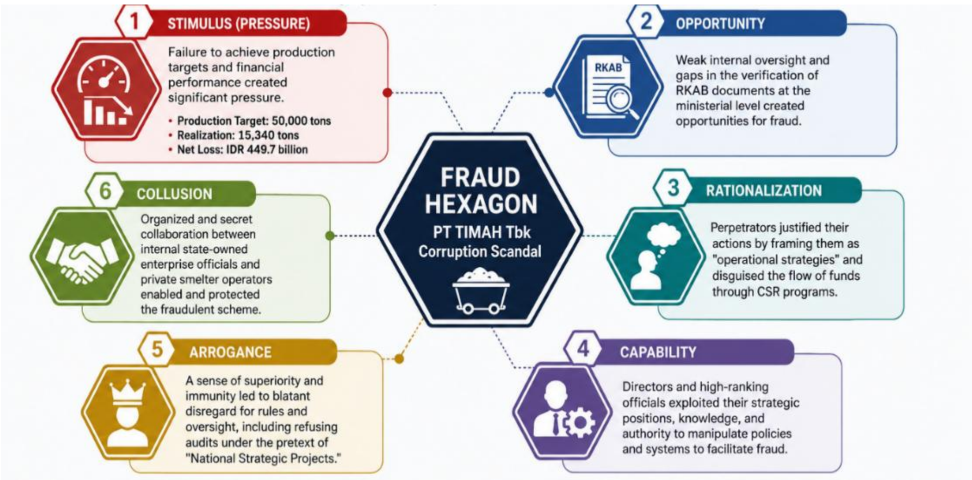

Figure 1. Analysis of Interplay of Six Key Elements in The Occurence of Fraud at PT Timah Tbk
Source: Processed by the author

Element 1: Stimulus (Pressure)

The stimulus or pressure element at PT Timah Tbk is rooted in the sharp gap between corporate performance targets and operational realities on the ground. In 2023, management was under extreme pressure to achieve a production target of 50,000 tons, but in reality, the actual production only reached 15,340 tons. This unrealistic target gap created a psychological and professional burden for management, forcing them to seek non-procedural means to cover up the failure to achieve the target.

This situation was exacerbated by global market dynamics, with the average selling price of tin contracting by 16%, falling from USD 31,474 to USD 26,583 per metric ton. This price decline, triggered by the strengthening dollar and weakening global demand, directly reduced the company's profit margin. As a result, PT Timah Tbk recorded a significant net loss of IDR 449.7 billion at the end of the 2023 financial year.

This financial pressure created a strong incentive for certain management members to legalize the purchase of tin ore from illegal miners through a manipulated partnership scheme. Interviews revealed that internal staff acknowledged that daily work pressures to meet weekly progress often led to the neglect of verification procedures in favor of production figures. This confirms that the pressure of profit and production targets was the primary driver that initiated the entire chain of corruption.

Element 2: Opportunity

The opportunity in this scandal arose from systemic weaknesses in the internal control system (ISC) and cross-institutional oversight. A 2023 BPK audit revealed the shocking fact that 30% of strategic transactions were not supported by valid transaction evidence or showed discrepancies in physical reports. This loophole was exploited by the perpetrators to inject illegal tin ore into the company's official supply chain through fictitious companies.

This weak oversight occurred not only internally at PT Timah Tbk, but also involved control failures at the Ministry of Energy and Mineral Resources and other external supervisory bodies. Errors in the verification process of the Work Plan and Budget (RKAB) documents allowed production quotas to be unilaterally increased without adequate technical review. This demonstrates that opportunities were created not by the absence of regulations, but by deliberate non-compliance or bypassing of these regulations by vested interests.

Furthermore, the utilization of monitoring technology such as the Audit Management System (TIAMS) at PT Timah Tbk has proven to be suboptimal due to limited resources and technical support. Frequently delayed and inflexible audit reporting allows perpetrators to conceal transaction anomalies for extended periods. This situation aligns with the theory that the lack of technology-based early detection mechanisms is a factor that prolongs the perpetuation of fraudulent practices.

Element 3: Rationalization

Corruptors at PT Timah Tbk rationalized their illegal actions by framing them as pragmatic strategies to maintain business amidst a production crisis. The use of fictitious companies or "dummy CVs" (such as PT QSE and CV VIP) was justified as a necessary operational step to ensure tin supply. They believed that as long as production targets were met, their methods—despite violating licensing regulations—could be accepted as a form of "business adaptation."

Collective rationalization is also evident in the way perpetrators conceal the flow of illicit funds through corporate social responsibility (CSR) programs. By channeling corrupt funds into social activities, perpetrators build a positive self-image and feel that their actions are not entirely wrong because "some of the proceeds are given to the community." This psychological process effectively reduces guilt and normalizes the practice of bribery and collusion in the mining industry.

The perpetrators also felt that their actions were within a "safe zone" because they were supported by formal legality they had created themselves, such as the smelter lease contract documents that were deliberately backdated. The existence of these formal documents provided a false sense of legitimacy for them to claim that all procedures were in accordance with regulations. This rationalization was further strengthened when the violating policies were viewed as the result of a strategic consensus among leaders, thus discharging personal responsibility.

Element 4: Capability

The capability element played a crucial role in this scandal because it involved individuals at the highest levels of management who had unfettered access to policy authority. Officials such as the President Director, the Chief Financial Officer, and the Chief Operating Officer had the power to bypass standard control procedures without their subordinates suspecting them. This structural capability allowed them to alter the direction of company policy to further their personal and group interests.

This capability extends to the government bureaucracy, as demonstrated by the former Director General of Mineral and Coal, who unilaterally changed the RKAB quota without a valid technical feasibility study. From his strategic position, he increased the quota from 30,217 to 68,300 metric tons to allow for illegal tin transactions. This demonstrates that without positional capabilities and in-depth knowledge of the system, this massive fraud would have been impossible.

Beyond their positions, the perpetrators' capabilities are reflected in their ability to coordinate collective action across institutions and sectors. They wield influence to mobilize teams, create convincing fictitious reports, and disguise the flow of corrupt funds through complex private business networks. Interviews revealed that internal staff acknowledged that orders from strategic leaders were almost always absolute decisions that were difficult to question, even when there were indications of irregularities.

Element 5: Arrogance

Arrogance at PT Timah Tbk is reflected in the superiority of officials who feel they possess absolute power, thus feeling immune to the law and audits. The perpetrators use the pretext of a "National Strategic Project" as a shield to resist independent audits and strict internal oversight. This attitude demonstrates a belief that their social status and political support are far stronger than existing formal legal regulations.

This pattern of institutional arrogance renders operational procedures and governance merely formalities that can be bypassed at any time for personal or group interests. This sense of superiority leads perpetrators to ignore the long-term consequences for the company or the environment. They believe that their proximity to elite policymakers will provide protection if their practices are discovered by law enforcement.

Arrogance is also evident in the dominance of unilateral decision-making that disregards the values of transparency and accountability (Moses et al., 2024; Roberts, 2018). In this organizational culture, input or warnings from the audit system are often perceived as disruptive to the company's strategic goals. This arrogance causes the early warning system to fail, as perpetrators feel too powerful to be overthrown by the system.

Element 6: Collusion

Collusion is the most prominent element because this scandal is the result of a systematic, secret collaboration between state-owned enterprise officials and private entrepreneurs. This collusive network involves central figures such as HM (a representative of PT RBT) and HL (a manager of PT QSE), who act as facilitators between the illegal mining company and company management. This collaboration allows for the absorption of illegal tin ore through a rigged smelter rental scheme.

This collusive scheme involved manipulating smelter equipment rental contracts and creating fictitious reports to conceal the origin of the tin. The investigation revealed trillions of rupiah in funds flowing from PT Timah to private partner companies without a transparent audit process. This collaboration was interlocking and protective, making it extremely difficult to detect through standard internal control mechanisms without external legal intervention.

This cross-sector collusion proved highly destructive, involving government officials at the Energy and Mineral Resources Agency (ESDM) who facilitated licensing for dummy companies. This created a robust corruption ecosystem in which internal actors (state-owned enterprises), external actors (private sector), and regulators (government) collaborated to secretly divide profits. Without this structured collusive network, it would be impossible for the state to lose a staggering IDR 271 trillion.

Impact and Consequences

The synergy of these six elements of fraud has been devastating for the national mining sector, both economically and ecologically (Setyono et al., 2023). Financially, the loss of IDR 271 trillion includes the loss of potential state revenue from royalties, taxes, and dividends that should have been used for public welfare. This amount is equivalent to the annual education costs of millions of students or social assistance for tens of millions of people.

Environmentally, collusion in illegal mining has caused ecosystem damage covering more than 20,000 hectares in the protected forest area of Bangka Belitung. This damage has resulted in massive land degradation, pollution of water sources, and the loss of livelihoods for local communities dependent on healthy marine and terrestrial ecosystems. The costs of reclamation and environmental restoration are expected to be beyond the scope of the assets seized by the corruptors (KArim et al., 2025).

Socially, this scandal has undermined public and investor confidence in the integrity of state-owned extractive companies. The decline in PT Timah Tbk's share price of more than 40% reflects market distrust in national corporate governance. The public has become skeptical of natural resource management, which ultimately could weaken public participation in overseeing economic development.

CONCLUSION

Based on the research findings using the Fraud Hexagon theoretical framework, it can be concluded that the corruption scandal at PT Timah Tbk resulted from systemic interactions among six mutually reinforcing fraud elements: pressure, opportunity, rationalization, capability, arrogance, and collusion. These six factors contributed to the formation of a highly structured corruption scheme that was difficult to detect through conventional internal oversight mechanisms.

The stimulus (pressure) element was driven by ambitious production targets (50,000 tons, of which only 15,340 tons were achieved), fluctuations in global tin prices, and the company's net loss of IDR 449.7 billion in 2023. The opportunity element emerged from weaknesses in internal control systems, particularly in the approval process for Work Plan and Budget (Rencana Kerja dan Anggaran Biaya/RKAB) documents, which lacked adequate verification, as well as insufficient supervision of mining operations. The perpetrators rationalized their actions by portraying illegal activities as pragmatic strategies to maintain operational continuity and supply stability amid production challenges. The capability element was demonstrated by individuals in strategic positions, including company executives and regulatory officials, who possessed the authority and access required to influence policies, financial reporting, and the tin supply chain over an extended period without detection. The arrogance element was reflected in perceptions of impunity and superiority among certain officials who disregarded anti-corruption regulations, including the Sistem Manajemen Anti Penyuapan (SMAP), and avoided independent oversight by referring to the status of "National Strategic Projects." Collusion emerged as the most dominant element, characterized by coordinated networks involving state-owned enterprise officials, private smelter operators, and government regulators that facilitated the large-scale acquisition and distribution of illegally sourced tin ore.

Overall, this research demonstrates that the Fraud Hexagon model is effective for analyzing complex corporate fraud patterns because it incorporates not only traditional fraud factors but also psychological dimensions of power, organizational behavior, and cross-institutional collusion networks.

REFERENCES

ACFE. (2022). *Report to the Nations on Occupational Fraud and Abuse.*

Anggit, L. Z., & Ratnawati, D. (2024). *Analisis Fraud Hexagon terhadap kecurangan laporan keuangan pada perusahaan pertambangan yang terdaftar di Bursa Efek Indonesia periode 2019–2022*. Universitas UPN "Veteran" Jawa Timur.

Association of Certified Fraud Examiners (ACFE). (2022). *Report to the Nations: Global study on occupational fraud and abuse.*

Badan Pemeriksa Keuangan. (2023). *Laporan hasil pemeriksaan keuangan negara: Kasus PT Timah Tbk.* BPK RI.

Dechow, P. M., Ge, W., Larson, C. R., & Sloan, R. G. (2011). Predicting material accounting misstatements. *Contemporary Accounting Research, 28*(1), 17–82.

Effendi, M. A. (2021). *The power of good corporate governance: Teori dan implementasi*. Salemba Empat.

Greenpeace. (2023). *Laporan kerusakan lingkungan akibat pertambangan ilegal di Bangka Belitung.*

Harsono, B., Elvinis, J. F., Vaustine, K., & Xaviolyn. (2022). Analisis pengaruh fraud triangle pada kecurangan laporan keuangan PT Timah Tbk 2018. *Jurnal Ekonomi dan Keuangan, 14*(1), 25–39.

Karim, H. M. S., Muhadar, M., Rahman, A., & Maratovna, Y. A. (2025). Asset recovery from mining corruption: Rationality, urgency, and challenges for environmental restoration. *Journal of Law, Environmental and Justice, 3*(2), 446–475.

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook*. Sage Publications.

Moleong, L. J. (2017). *Metodologi penelitian kualitatif* (Edisi revisi). Remaja Rosdakarya.

Moses, O., Ehalaiye, D., Sorola, M., & Lassou, P. (2024). Extractive sector governance: Does a nexus of accountability render local extractive industries transparency initiatives ineffective? *Meditari Accountancy Research, 32*(1), 176–206.

Nuraini, S. (2022). *Reformasi kebijakan publik dan pencegahan korupsi di Indonesia: Perspektif Fraud Hexagon.*

Rahmawati, L. (2023). *Korupsi dan dampaknya terhadap lingkungan hidup di sektor pertambangan.*

Roberts, J. (2018). Managing only with transparency: The strategic functions of ignorance. *Critical Perspectives on Accounting, 55*, 53–60.

Setyono, D., Hariyanto, E., Wahyuni, S., & Pratama, B. C. (2023). Penggunaan Fraud Hexagon dalam mendeteksi kecurangan laporan keuangan. *Jurnal Akuntansi dan Bisnis, 18*(3), 90–105.

Transparency International. (2023). *Corruption perceptions index.*

Trimah, S. (2024). *Pengaruh Fraud Hexagon model terhadap fraudulent financial statement pada perusahaan BUMN yang terdaftar di BEI periode 2018–2022*. Universitas Indonesia.

Wells, J. T. (2017). *Corporate fraud handbook: Prevention and detection*. Wiley.

Wijayanti, N., & Rahardjo, S. (2022). Tata kelola perusahaan dan risiko korupsi di BUMN Indonesia. *Jurnal GCG & Etika Bisnis, 10*(1), 88–101.