

HU MODEL OPTIMIZATION TO DETECT FRAUD IN FINANCIAL REPORTS THAT AFFECT GREEN VALUE WITH LITIGATION RISK IN ASEAN

OTIMIZAÇÃO DO MODELO HU PARA DETECTAR FRAUDES EM RELATÓRIOS FINANCEIROS QUE AFETAM O VALOR VERDE COM RISCO DE LITÍGIO NA ASEAN

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Abstract

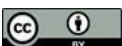
Fraud in financial reporting is a serious issue that undermines investor trust and reduces a firm's market value, particularly in the mining sector with its high risks and complex supervision. This study examines factors influencing financial reporting fraud and its impact on mining companies in Indonesia and Malaysia. The population consists of all mining firms listed on the Indonesia Stock Exchange (IDX) and Bursa Malaysia from 2018 to 2023. Data were collected through documentation and analyzed using panel data regression with STATA software. The findings show that financial stability (stimulus), industry complexity (opportunity), and auditor change (rationalization) significantly increase the likelihood of fraudulent reporting, while management integrity reduces such practices. However, the proportion of independent commissioners (capability) has no significant effect, and litigation risk does not moderate the relationship between fraud and firm market value, indicating weak enforcement and supervision in both countries. The study contributes to strengthening internal controls, oversight mechanisms, and policy formulation to prevent fraud in the mining industry.

Keywords: ASEAN. HU Model. Fraud. Green Value. Litigation.

Resumo

A fraude em relatórios financeiros é um problema sério que mina a confiança dos investidores e reduz o valor de mercado de uma empresa, particularmente no setor de mineração, com seus altos riscos e supervisão complexa. Este estudo examina os fatores que influenciam a fraude em relatórios financeiros e seu impacto em empresas de mineração na Indonésia e na Malásia. A população consiste em todas as empresas de mineração listadas na Bolsa de Valores da Indonésia (IDX) e na Bolsa de Valores da Malásia (Bursa Malaysia) de 2018 a 2023. Os dados foram coletados por meio de documentação e analisados por meio de regressão de dados em painel com o software STATA. Os resultados mostram que a estabilidade financeira (estímulo), a complexidade do setor (oportunidade) e a mudança de auditor (racionalização) aumentam significativamente a probabilidade de relatórios fraudulentos, enquanto a integridade da gestão reduz tais práticas. No entanto, a proporção de comissários independentes (capacidade) não tem efeito significativo, e o risco de litígio não modera a relação entre fraude e valor de mercado da empresa, indicando fraca fiscalização e supervisão em ambos os países. O estudo contribui para o fortalecimento dos controles internos, mecanismos de supervisão e formulação de políticas para prevenir fraudes no setor de mineração.

Palavras-chave: ASEAN. Modelo HU. Fraude. Valor Verde. Contencioso.

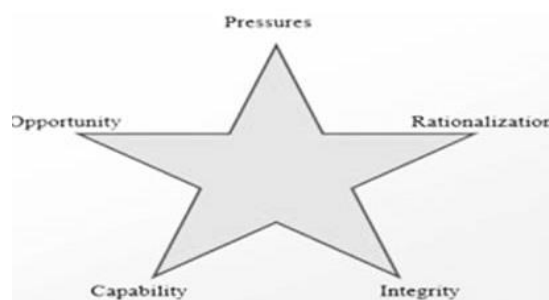


1 INTRODUCTION

Financial reports play a crucial role in reflecting a company's financial condition. The information presented serves as the basis for decision-making for various parties, including management, investors, creditors, and regulators. However, fraudulent practices often occur in the preparation of financial reports, which can be detrimental to both internal and external stakeholders. This fraud often occurs due to pressure, opportunity, rationalization, and the capability of individuals involved in the financial reporting process. These four elements are known as the Fraud Diamond Theory, a development of the Fraud Triangle Theory. In practice, pressure can stem from high-performance targets, opportunities arise from weak internal controls, and rationalization allows perpetrators to morally justify their actions. Meanwhile, capability is a determining factor in whether an individual possesses the expertise and strategic position to commit fraud (Luckman Ibrahim, 2022). Therefore, a model that can identify these factors is crucial in detecting and preventing fraud, thereby maintaining the integrity of financial reports and maintaining stakeholder trust.

The importance of fraud prevention and detection in financial reporting drives the need for more sophisticated technology and data analysis in accounting systems. One rapidly evolving approach is the use of data mining and machine learning to identify unusual patterns in financial reports. This method enables early detection of potential fraud by analyzing large amounts of historical data and variables related to fraudulent behavior. Furthermore, the oversight role of internal and external auditors is crucial in assessing a company's compliance with generally accepted accounting principles. Education and raising ethical awareness among all parties involved in financial reporting are equally important preventative strategies. Therefore, fraud prevention efforts must be comprehensive, including strengthening internal control systems, utilizing technology, and establishing a culture of integrity within the organization.

The developed HU model Umar et al., (2024) focuses on five main elements in detecting and identifying potential fraud in financial reports.

Figure 1*HU Model*

(Umar et al., 2024)

- Pressure: The pressure felt by individuals or organizations to achieve certain goals, such as profit targets or financial performance.
- Opportunity: The opportunity that exists for individuals to commit fraud, for example, due to weak internal controls or supervision.
- Rationalization: The reasons or justifications used by individuals to rationalize their fraudulent actions.
- Capability: The ability or resources that an individual or group has to commit fraud without being detected.
- Integrity: a quality that includes honesty, consistency, and actions that are in accordance with moral values, both in front of others and when unsupervised. In an organization, integrity means acting according to sound principles, transparency, and fairness.

In a broader context, sustainability and environmental values (*green values*) are increasingly being considered by companies in ASEAN. This relates to corporate social responsibility (CSR) practices and their impact on a company's reputation and financial performance. However, there is a risk that reports related to these *green values* could also be manipulated to create a more positive image than reality (He et al., 2016a; Jaya, 2020; Sahla & Ardianto, 2023).

Litigation risk, or the possibility of a company being involved in a legal dispute, also influences a company's decision to prepare transparent and accurate financial reports (Liu & Sun, 2022; Meisy & Astuti, 2023; Tang et al., 2017; Waheed et al., 2024). In ASEAN, the diversity of legal regulations and legal uncertainty can increase litigation risk, which in turn can affect how companies report their performance, particularly regarding *green values* and sustainability.

Previous research using the HU model, only 1 study, namely Lastanti et al., (2022) that Opportunity, Rationalization, and Lack of Integrity have a significant positive effect on financial statement fraud, while Pressure and Ability, and Internal Audit do not have a significant positive effect on FSS. In general, many studies have been conducted using the Triangle, Diamond, Pentagon, and Hexagon models (Aulia Haqq & Budiwitjaksono, 2020; Miftahul Jannah & Rasuli, 2021; Surjaatmaja, 2018; Utami et al., 2019; Villaescusa & Amat, 2022; Yunisari et al., 2024), even though the research results are still inconsistent. Given the complexity of these factors, optimizing the HU Model in detecting fraud in financial statements in ASEAN is very relevant. By utilizing this approach, companies can more easily identify potential fraud that occurs related to financial statements, especially those that include claims of sustainability or *green value*. In addition, the influence of litigation risk as a moderating variable is important to consider because it can influence a company's behavior in its financial statements.

2 LITERATURE REVIEW

2.1 Agency theory

Agency theory explains the contractual relationship between the principal (owner or shareholder) and the agent (management), who often have conflicting interests (Jensen & Meckling, 1976). In the context of financial statement fraud detection in the ASEAN region, this theory is relevant because it shows that management can be motivated to commit fraud to achieve certain targets or maintain the company's image in the eyes of investors, especially when faced with pressure to show good financial performance. An optimized HU model in detecting fraud can function as a tool to mitigate this conflict of interest by providing early warnings against manipulative practices (Wibawa et al., 2024). This is important because undetected fraud can reduce company value, including green value, and increase the risk of litigation due to non-compliance with environmental reporting standards and regulations.

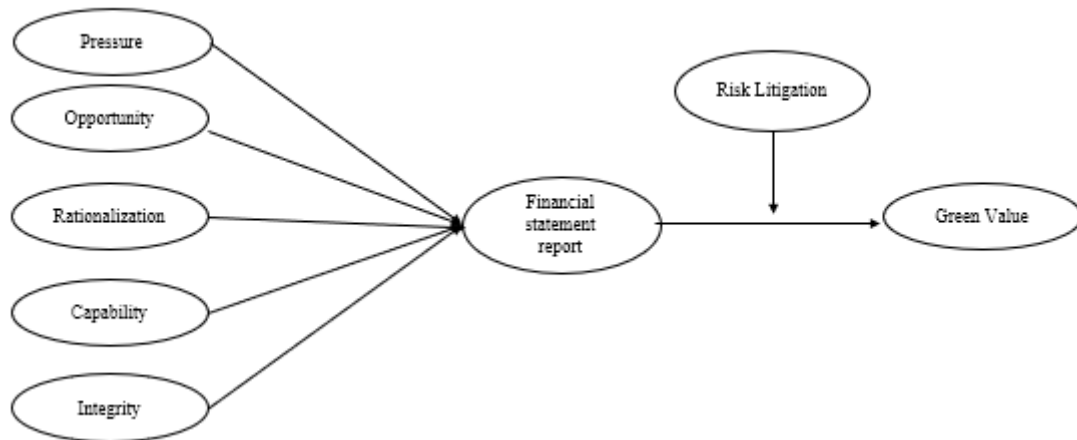
2.2 Fraud Diamond Theory

Fraud Diamond Theory is a development of the Fraud Triangle, which adds a fourth element, namely, Capability. (Street & Hermanson, 2019). This theory emphasizes that, in addition to pressure, opportunity, and rationalization, individuals must also possess the capacity or power to commit fraud. In the ASEAN business environment, particularly those related to green values, individuals with access to financial information systems and sustainability reports have a greater potential for manipulation if not properly monitored. An optimized HU model can help identify suspicious behavioral patterns from individuals who possess a combination of these four factors. element This (Wibawa et al., 2024). The application of the Fraud Diamond theory in this context supports litigation risk mitigation efforts, as it detects not only the perpetrator's motivation but also the potential and technical opportunities to commit fraud.

2.3 The legitimacy theory

The Legitimacy Theory developed by Dowlin & Prefer in 1975, starts from the assumption that companies operate in a social system and require legitimacy from society to continue operating. in a way, sustainable (Purwanto et al., 2021). Within this research framework, legitimacy theory explains how companies in ASEAN are encouraged to present transparent financial reports and information related to green values to gain support from the public, government, and investors. When companies commit fraud, including in reporting related to environmental performance, this legitimacy can be threatened, ultimately triggering the risk of litigation and damage. reputation (Supriatiningsih & Darwis, 2023). Therefore, optimizing the HU model in detecting fraud is not only technically functional but also a crucial instrument in maintaining a company's legitimacy in the eyes of stakeholders, especially in an era of increasing attention to sustainability practices in the ASEAN region.

Research model concept

Figure 2*Research model concept*

Source: processed data writer

2.4 Research hypothesis

2.4.1 The influence of pressure on financial reporting fraud

The inventory/sales ratio is used to measure the efficiency of inventory turnover relative to sales. A high ratio indicates difficult-to-sell items, overstocking, or declining market demand. This condition reflects financial instability and pressure on a company's cash flow, which can encourage management to manipulate financial statements, such as by increasing fictitious revenue or delaying the recording of inventory losses. In the context of agency theory, this pressure can trigger managers to act opportunistically to protect their interests, especially if oversight is weak. Meanwhile, based on the Fraud Triangle, pressure is a major factor in fraud, so a high inventory/sales ratio can be an early indicator of an increased risk of financial statement fraud. This hypothesis is supported by (Abbas,2017). The hypothesis is formulated as follows:

H1 = Pressure has a positive effect on financial report fraud

2.4.2 The influence of opportunity on financial reporting fraud

Opportunity refers to conditions that allow management to manipulate financial statements without detection or with low risk, especially when internal control systems are weak, oversight by the board of commissioners is ineffective, or external audits are

not independent. In agency theory, such opportunities arise from conflicts of interest between managers and owners, where managers who have more information and are less supervised tend to act opportunistically for personal gain. Meanwhile, according to the Fraud Triangle, opportunity is one of the main elements that encourages fraud and is a factor that can be directly controlled by the organization through strengthening controls, audits, and transparency. If opportunities are left open, the risk of fraud will increase. This hypothesis is supported by (Budiyono & Arum, 2020; Syahria, 2019)the following:

H2 = Opportunity has a positive effect on financial report fraud

2.4.3 *The influence of rationalization on financial reporting fraud*

Rationalization is a moral justification process used by fraud perpetrators, such as management, to legitimize fraudulent acts in financial statements. When these acts occur in an industry context with specific characteristics such as high competition, reliance on accounting estimates, and high complexity and difficult-to-verify transactions, the opportunity for fraud increases. These characteristics are known as *the nature of the industry*, which creates wider loopholes or opportunities for management to manipulate financial statements with a low risk of detection. From an agency theory perspective, this condition exacerbates the conflict between management as agents and owners as principals, due to increased information asymmetry. This is in line with fraud theory, which places rationalization as one of the two main factors causing fraud. Thus, the nature of the industry not only provides opportunities for manipulation but also strengthens management's moral justification (rationalization) for committing financial statement fraud. This hypothesis is supported by the results of the study. study from Supriatiningsih et al., 2024).So the hypothesis is formulated as follows:

H3 = Rationalization has a positive effect on financial report fraud

2.4.4 *The influence of capability on financial report fraud*

In the fraud Diamond Theory, *capability* is a crucial element that describes an individual's ability, such as power, intelligence, strategic position, and charisma, to commit fraud effectively and with difficulty being detected. Management with high capability, such as a CEO who controls the financial system and wields significant

dominance, has a greater potential to manipulate financial statements. On the other hand, the presence of independent commissioners in a company's supervisory structure is expected to mitigate this risk through objective oversight free from conflicts of interest. However, if the proportion of independent commissioners is low, the supervisory function becomes weak, creating a gap (opportunity) that further amplifies the influence of capability on fraud. In the context of agency theory, weak oversight exacerbates the conflict between agent and principal, while in the Fraud Diamond, the combination of high capability and substantial opportunity makes financial statement fraud more likely. This hypothesis is supported by the results. study (Hariri et al., 2020.; Ridwan Basalamah, 2019). Then the hypothesis is formulated as follows:

H4 = Capability has a positive effect on financial reporting fraud

2.4.5 The influence of integrity on financial reporting fraud

Integrity reflects management's moral values, honesty, and ethical commitment to preparing fair financial reports. Management with high integrity tends to avoid manipulative practices, while low integrity opens up opportunities for fraud due to a weak commitment to honest reporting. One reflection of this integrity can be seen in the level of accounting conservatism applied. Conservatism, which emphasizes early recognition of losses and careful recognition of gains, reflects a cautious and low-bias attitude in financial reporting. Management that upholds integrity tends to apply conservatism as a form of moral responsibility, while low conservatism can reflect an overly aggressive or opportunistic management orientation. When integrity and conservatism are both low, the opportunity for financial statement fraud becomes increasingly open, as there are no ethical constraints or accounting prudence to restrain such manipulative actions. This hypothesis is supported by the results. study (Wibawa et al., 2014). Then the hypothesis is formulated as follows:

H5 = Integrity hurts financial report fraud

2.4.6 The impact of fraud reporting on finance is positively influential against green value, moderated by litigation risk

Fraud report finance is an action, manipulation, or presentation of information in a way not reasonable for a certain profitable party, which can shake investor and stakeholder confidence interests, as well as damage image company in a comprehensive way, including perception of commitment to the environment. Green value reflects a company's reputation and values related to sustainability and social responsibility, which will decline when fraud is uncovered because it conflicts with ESG principles. In this context, litigation risk, the possibility of a company facing legal action due to reporting violations, amplifies the negative impact of fraud on green value, especially in industries prone to lawsuits. Based on fraud theory and legitimacy theory, fraudulent acts not only damage trust but also diminish a company's social legitimacy, especially when litigation risk increases the legal and reputational pressures faced. Therefore, the following hypothesis is formulated:

H6 = Litigation research moderates the effect of financial reporting fraud on green value.

3 RESEARCH METHODOLOGY

This research is a quantitative study with a causal-comparative approach that aims to examine the influence of factors in the HU model on financial statement fraud and its impact on green value and litigation risk in mining companies listed on the Indonesia Stock Exchange and Bursa Malaysia during the period 2018–2023. The sample was selected purposively based on certain criteria, namely companies that are consecutively listed, publish complete financial reports, and have variable data available during the observation period. Secondary data obtained from the finance annual reports, independent auditor reports, and notes on the financial report. The variables used include pressure (financial stability), capability (proportion commissioner independent), opportunity (complexity industry), rationalization (change of auditor), integrity (lack of integrity), fraud (F-Score), value company (PBV), and risk litigation as variables for moderation. Data analysis was carried out using panel data regression with the help of STATA

applications, including classical assumption tests, the Hausman test, and the moderation test to evaluate the influence of risk litigation.

Table 1

Company Criteria

No	Company name	Amount
1	Companies listed on the Jakarta Stock Exchange and Bursa Malaysia from 2018-2023	84
2	The company did not report financial statements for 2018-2023	(19)
3	Companies that match the research variables	65
4	Total data 65 x 6	390

Source: Indonesia Stock Exchange and Malaysia Stock Exchange

Table 2

Measurement of operational variables

No	Variables	Description	Measurement	Scale
1	Pressure – Financial stability	Pressure that arises when a stable financial company is disturbed, for example, moment asset or profit. This situation encourages management to take the risk of manipulating financial reports to maintain their image and stakeholder (L Ibrahim, et al., 2022).	Inv /Sales	Ratio
2	Opportunity – Proportion independent (Darwis & Rini, 2024) commissioner	show opportunity fraud occurs when supervision is weak, consequences are low Proportion of commissioner independent. The more tall proportion commissioner independent, increasingly strong function control, so that the opportunity for fraud can be reduced (Darwis & Rini, 2024).	Amount independent commissioner /total commissioner	Ratio
3	Rationalization – Nature of industry	justification fraud that emerged because of characteristics industry, such as height, complexity of transactions, or size estimation in accounting. Conditions. This gives room for management to rationalize practice manipulation, report finance (Ibrahim et al., 2024a).	$REV = \frac{Receivable - Receivable_{t-1}}{Sales_{t-1}}$	Ratio

4	Capability – Change of Audit	Ability management does fraud moment happen Auditor changes. Auditor changes can be exploited to weaken the effectiveness of oversight and conceal manipulative practices (Demetriades & Owusu-Agyei, 2022).	Change of Auditor	Nominal
5	Integrity – Lack of integrity	The difference between profit net and operating cash flow. The big difference between them, increasingly tall height indicates a low integrity report in finance (Lastanti et al., 2022).	$CONNACC_{it} = NI_{it} - CFO_{it}$	Ratio
6	Fraud report finance	A predictive model that combines several financial indicators (such as accrual quality, financial performance, and operational efficiency). The higher the F-Score, the greater the likelihood that a company is manipulating or fraudulent in its financial statements (Darwis & Rini, 2024; Ibrahim et al., 2024a).	F-Score	Ratio
7	Litigation Risk	The possibility company being caught demands law consequences for violating regulations or reporting misleading finances. Increasingly tall risk litigation, increasingly big pressure management for guard compliance or hide fraud (Darwis & Saleh, 2024.; Eisenhuth & Marshall, 2022).	$RL = UP + (UTL/TA) + (UL/AL)$	Ratio
8	Green value	Compare stock market prices with market book equity, the higher PBV indicates perception positive investor perception of performance and sustainability company (He et al., 2016b) .	PBV	Ratio

Source: processed data writer

4 RESULTS AND DISCUSSION

4.1 Result

Table 3

Results of descriptive statistical tests

Variable	Obs	Mean	Std Dev	Min	Max
Pressure	390	.1828085	.42619	0	3.3114
Capability	390	.4155152	.1180127	0	0
Opportunity	390	.1071223	1.155646	-9,328	5.0538
Rationalization	390	3.079545	.6735908	1	5
Integrity	390	-756.5741	2030.838	-8814.204	9674.72

Source: results Stata 2025 processing

Statistical test results, descriptive in Table 3, provide a general description data distribution from the variables research. Variable *pressure* has a low average with moderate variation, whereas *capability* shows a lack of data diversity due to the same minimum and maximum values. Variable *opportunity* shows the presence of outliers with extreme distribution values, while *rationalization* is relatively stable with a narrow range of values. Variable *integrity* shows a negative average with very high variability, reflecting extreme data distribution. Findings: This indicates the need for normality tests and outlier identification before continuing to stage analysis, panel data regression

Because the results of the model selection test show that the Random Effect Model (REM) is the most appropriate, the study this not conduct assumption tests. This is based on nature REM estimation using the Generalized Least Squares (GLS) method, where the resulting estimate fulfills BLUE (Best Linear Unbiased Estimator) properties (Gujarati, 2009). Thus, the REM model is considered efficient, unbiased, and consistent, so that testing assumptions classic like multicollinearity, heteroscedasticity, and autocorrelation is not required again

Table 4

Results of the Chow Test and the Hausman Test

	Chow Test	Hausman test	Decision
Model 1: Pressure, capability, opportunity, rationalization, integrity against fraud	0.000	0.9212	REM
Model 2, Fraud against PBV	0.000	0.5889	REM

Model 3, Fraud on PBV with litigation risk moderation	0.00	0.8457	REM
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Source: Stata 2025 processing results

Table 5

Hypothesis Test Results (REM)

	Coefficient t	Std error	z	P> z	R Square	Prob
Model 1						
Constant	.0171556	.6378808	0.03	0.979		
Pressure	.3260896	.1558725	2.09	0.036		
Capability	-.212343	.7956531	-0.27	0.790	0.0972	0.000
Opportunity	.2959428	.070083	4.22	0.000		
Rationalization	.3800098	.1792656	2.12	0.034		
Integrity	-.0000933	.0000452	-2.06	0.039		
Model 2						
Constant	1.237445	.2232595	5.54	0.000	0.0052	0.0524
Fraud against PBV	.1216241	.0627076	1.94	0.052		
Model 3						
Constant	1.287862	.2273996	5.66	0.000	0.0085	0.0592
Fraud against PBV is moderated by litigation risk	-.2224774	.1626744	-1.37	0.171		

Source: Stata 2025 processing results

Results

1. The pressure has a positive coefficient of 0.326 and is statistically significant at the 5% level ($p = 0.036$). This indicates that the higher the pressure or incentive (stimulus), the greater the likelihood of fraud or its impact on PBV.
2. Capability has a negative coefficient of -0.212 but is not significant ($p = 0.790$). This indicates that an individual's ability to commit fraud does not significantly influence the dependent variable in this model.
3. Opportunity has a positive and highly significant effect ($p = 0.000$) with a coefficient of 0.296. This means that the greater the opportunity or chance to commit fraud, the greater the potential for fraud to occur or its impact on PBV.
4. Rationalization showed a significant positive effect with a coefficient of 0.380 ($p = 0.034$). This means that individuals who are able to justify their actions morally are more likely to engage in fraud.
5. Integrity has a very small negative coefficient (-0.0000933) but is statistically significant ($p = 0.039$). This indicates that the higher an individual's integrity, the lower the likelihood of fraud, although the effect is relatively small.

6. Model 3 is testing the moderating role of litigation risk in the relationship between fraud and PBV. This model has an R-squared of 0.0085, meaning that only 0.85% of the variation in PBV can be explained by fraud, which is moderated by litigation risk. The model's probability value of 0.0592 also indicates that this model is not significant overall.

4.2 Discussion

Stimulus has a positive influence on financial reporting fraud

The stimulus variable, proxied by *financial stability*, shows a positive and significant influence on financial statement fraud. This means that the worse or more unstable a company's financial condition, the greater the pressure felt by management to maintain its image and stakeholder trust. This pressure creates a strong incentive for management to manipulate financial statements to maintain the appearance of financial health. Within the framework of **agency theory**, financial pressure exacerbates the conflict between managers (agents) and owners (principals), as managers tend to act opportunistically to maintain their positions, bonuses, or reputations. **Fraud theory** explains that pressure is a primary trigger for fraud, while **legitimacy theory** suggests that companies are motivated to maintain their image and public trust, even if it means deviating from honest reporting.

This situation is particularly relevant in the context of mining companies in Indonesia and Malaysia, which operate in high-risk industries and are highly dependent on fluctuations in global commodity prices. When commodity prices decline, revenue and profitability decline dramatically, placing pressure on management to maintain the company's attractiveness to investors and regulators. Meanwhile, demands for transparency, legal compliance, and social legitimacy in the extractive industry push companies to maintain the appearance of stability and responsibility. Consequently, in a shaky financial environment, mining companies are at higher risk of financial reporting fraud to maintain legitimacy and operational sustainability. The results of this study are in line with (Abbas, 2017; Ibrahim et al, 2022). Those stating that stimulus does influence financial report fraud.

Research is supported by the results study

With a proxy, the proportion of independent commissioners does not influence financial report fraud.

The results of the study indicate that the *capability variable*, proxied by the proportion of independent commissioners, has no significant effect on financial statement fraud. This indicates that the structural presence of independent commissioners is not necessarily effective in preventing fraudulent practices. Weak oversight functions, independence that is merely a formality, and limited authority and competence can make the presence of independent commissioners powerless in dealing with management that has the potential to commit fraud. Within the framework of agency theory, this type of external oversight mechanism should reduce conflicts of interest between agents and principals, but in reality, it often does not work substantively, especially in environments influenced by political relations and business interests.

From the perspective of the fraud diamond theory, capability should reflect the ability of the perpetrator to carry out fraud, such as the CEO or CFO, not the commissioners tasked with oversight. Therefore, using the proportion of independent commissioners as a proxy for capability is not entirely appropriate, as it does not reflect the operational capabilities of the fraud perpetrator. Furthermore, according to legitimacy theory, companies may use the presence of independent commissioners as a symbol of good governance to meet regulatory demands and maintain their public image, without effectively carrying out their oversight function. In the context of mining companies in Indonesia and Malaysia, whose operations are complex and often face political pressure and local interests, independent commissioners often lack a substantive role, thus having no real impact on fraud prevention. The results of this study are in line with Ibrahim et al. (2024); Supriatiningsih, et al. (2024), who state that capability does not influence financial report fraud.

The opportunity with the proxy nature of the industry has a positive influence on financial reporting fraud.

The results of the study indicate that the opportunity variable, proxied by the nature of the industry, has a positive and significant effect on financial statement fraud. This means that the industry's complex characteristics, difficulty in monitoring, and weaknesses in internal control systems create opportunities for management to commit fraud. In the context of mining companies in Indonesia and Malaysia, this is particularly

relevant because these industries have long production chains, operational locations spread across remote areas, and dependency on reserve estimates and fluctuating global commodity prices. These conditions create a gray area that management can exploit to manipulate operational data and financial reports without direct detection.

Agency theory perspective, this situation exacerbates the information asymmetry between agents (management) and principals (shareholders), with agents possessing more information and access to complex operational processes. This creates opportunities for managers to act opportunistically. According to fraud theory, opportunity is a crucial element that allows fraud to occur, even when pressure and rationalization exist. Legitimacy theory suggests that companies in complex sectors such as mining can use technical narratives and industry complexity to justify inconsistencies in reporting, thus disguising fraud as “technical adjustments.” Thus, the characteristics of the mining industry not only create opportunities for fraud but also complicate its effective detection and oversight. This study's results are supported by Shahzadi et al., (2024); Utami et al., (2019) finding that opportunity has a positive effect on financial reporting fraud. This study, however, contradicts (Budiyono & Arum, 2020), who stated that opportunity does not affect financial reporting fraud.

Rationalization by proxy change of the auditee has a positive influence on financial report fraud.

The results of the study indicate that the rationalization variable, proxied by the change of external auditor, has a positive and significant influence on financial statement fraud. Auditor changes can be an indication that a company is seeking a more "lenient" or more easily controlled auditor in the audit process. In this context, management can use the reason for changing auditors as a form of rationalization for its actions, for example, by claiming that the previous auditor did not understand the company's business or was too rigid in its assessment. In the mining industries in Indonesia and Malaysia, which are rife with technical estimates and asset value uncertainty, management has the opportunity to manipulate financial statements and seek auditors willing to provide a qualified opinion on the manipulated reports.

From an agency theory perspective, auditor switching reinforces the power imbalance between agents and principals, as management (agents) can choose auditors that better align with their own interests, rather than for the sake of transparency to shareholders (principals). In fraud theory, rationalization is an internal justification

process that allows perpetrators to feel that their actions are reasonable or acceptable; auditor switching can be used as a tool to justify or cover up previous mistakes. Meanwhile, in legitimacy theory, mining companies facing reputational and regulatory pressures may change auditors to maintain their image in the eyes of the public and stakeholders, even though the goal is not to increase transparency, but rather to maintain legitimacy symbolically. Therefore, auditor switching in this industry can be a signal that management is constructing a narrative to justify irregularities in financial reporting. The results of this study align with Shahzadi et al. (2024), Normasari & Mayangsari, (2022), who stated that rationalization has a positive effect on financial reporting fraud.

Integrity by proxy, lack of integrity has a negative influence on financial report fraud.

The results of the study indicate that the integrity variable, proxied by lack of integrity, has a negative influence on financial reporting fraud. This means that the higher the level of management and employee integrity, the lower the likelihood of fraud in financial reporting. In the context of mining companies in Indonesia and Malaysia, where operational and economic pressures are quite high, strong integrity is an important buffer to resist the temptation to manipulate reports for personal or group gain. Good integrity ensures that management carries out its responsibilities honestly and transparently, thereby reducing the risk of fraud even in a challenging industrial environment.

Agency theory perspective, high integrity on the part of agents (management) minimizes conflicts of interest with principals (shareholders), because managers are more likely to act in the overall interests of the company and not exploit their positions for personal gain. Within the framework of fraud theory, integrity serves as an important moral barrier, where individuals with strong integrity will refuse to commit fraud despite pressure and opportunity. Meanwhile, according to legitimacy theory, mining companies with a high level of integrity are able to maintain the trust of the public, regulators, and stakeholders, thereby maintaining the reputation and sustainability of the business. Therefore, integrity is a key factor in minimizing financial reporting fraud in the mining industry in Indonesia and Malaysia. Research results, this is in line with Novita Wulandari et al., (2018); Wibawa et al., (2024) which states that integrity has an effect against fraudulent financial reports in finance.

Financial reporting fraud does not harm firm value, moderated by litigation risk.

The results show that the effect of fraud on firm value, moderated by litigation risk, is insignificant. This indicates that although litigation risks, such as the possibility of lawsuits or legal sanctions for fraudulent acts, exist, they are not effective enough to reduce or moderate fraudulent practices in the financial reporting of mining companies in Indonesia and Malaysia. In this context, management may still take the risk of manipulating financial statements because they assess the potential for short-term profits as greater than the risk of punishment, especially if legal and regulatory enforcement is perceived as weak or inconsistent.

From an agency theory perspective, litigation risk should be an external control mechanism that pressures agents (management) to act in the principal's best interests and avoid opportunistic behavior. However, if law enforcement is less than firm, litigation risk becomes a non-real threat and thus fails to deter fraud. Within the framework of fraud theory, litigation risk is a barrier to fraud, but if the risk is low or not perceived as serious, fraud still has the potential to occur. Meanwhile, in legitimacy theory, mining companies operating in environments with lax regulatory pressures may still commit fraud to maintain short-term economic and social legitimacy, even though they formally face litigation risk. This situation emphasizes that litigation risk alone is insufficient to control fraud without the support of a monitoring and enforcement system. effective law. Until moment, no yet has been found from previous study previously discussed the connection between variables.

5 CONCLUSION

5.1 Conclusion

Research on mining companies in Indonesia and Malaysia shows that financial stability (stimulus), industry complexity (opportunity), and auditor turnover (rationalization) significantly increase the risk of financial statement fraud. Conversely, high management integrity can suppress fraud, while the proportion of independent commissioners (capability) has not proven effective in preventing it. Furthermore, litigation risk fails to moderate the impact of fraud on company value, reflecting weak law enforcement and oversight in the mining sector.

5.2 Limitations

Limitations of this study include the use of proxy variables that may not fully reflect the actual situation. For example, using the proportion of independent commissioners as a proxy for capability does not reflect the role of key executives, who are more influential in fraud practices. Furthermore, the data used only covers mining companies in Indonesia and Malaysia, so the results cannot necessarily be generalized to other industries or regions with different characteristics and regulations. This study is also quantitative and does not explore qualitative aspects such as managerial motivation or internal company dynamics that could enrich our understanding of fraud. Other limitations include the potential bias of secondary data and the lack of information regarding the actual effectiveness of law enforcement in fraud cases.

5.3 Suggestion

Based on the identified limitations, it is recommended that future research use more representative proxy variables, such as those involving key executive characteristics (CEOs or CFOs), to more accurately measure capability. Furthermore, the scope of the research could be expanded to other industries or countries with different levels of regulation and law enforcement to increase the generalizability of the findings. Qualitative approaches, such as in-depth interviews or case studies, could also be used to understand the motivations and internal dynamics that drive fraud. Researchers should also consider using primary data and further evaluate the effectiveness of applicable legal and regulatory systems to provide a more comprehensive picture of the factors influencing financial statement fraud.

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