Assessing Fraud Pentagon Theory's Impact on Financial Statement Fraud Risk in Indonesian Mining Firms

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ABSTRACT

This study examines the applicability of the Fraud Pentagon Theory in detecting fraudulent financial reporting within the mining sector. The theory comprises five elements—hubris, pressure, opportunity, justification, and capability—which collectively offer a more comprehensive framework for understanding the motivations and conditions that facilitate financial statement fraud. The research population includes all mining companies listed on the Indonesia Stock Exchange from 2016 to 2019. Using purposive sampling, 48 companies were selected for analysis. Logistic regression was employed to evaluate the influence of Fraud Pentagon indicators on the likelihood of fraudulent financial reporting. The findings indicate that variables such as auditor changes, company characteristics, external pressure, financial stability, and the pursuit of financial targets significantly influence the risk of misleading financial disclosures. Meanwhile, factors including the frequency of CEO photographs in annual reports, changes in board directors, weak internal controls, and managerial ownership were found to have a more limited effect. These results highlight the importance of a multidimensional approach in detecting and mitigating financial reporting fraud. Stakeholders such as regulators, auditors, corporate management, and boards of commissioners should consider these indicators when assessing fraud risk to enhance transparency and safeguard the integrity of financial information.

Kata Kunci: Fraud Pentagon Theory; Potensi Kecurangan; Tekanan; Kesempatan; Rasionalisasi; Kemampuan; Arogansi.

Fraud Pentagon Theory terhadap Potensi Kecurangan Laporan Keuangan Perusahaan Pertambangan Bursa Efek Indonesia

ABSTRAK

Tujuan penelitian menguji pengaruh faktor-faktor dalam fraud pentagon theory pada potensi kecurangan laporan keuangan dalam perusahaan pertambangan. Komponen-komponen yang terdapat pada fraud pentagon theory yaitu arogansi, tekanan, kemampuan, rasionalisasi, dan peluang. Pada penelitian ini yang menjadi populasi yaitu semua bisnis pertambangan yang terdaftar dalam Bursa Efek Indonesia tahun 2016-2019. Sampel ditentukan dengan melakukan metode purposive sampling sehingga mendapatkan 48 perusahaan sebagai sampel. Analisis data penelitian menggunakan analisis regresi logistik. Hasil analisis pada penelitian ini menjelaskan bahwa pergantian auditor, sifat industri, tekanan pihak luar, stabilitas keuangan, dan target keuangan memiliki pengaruh pada potensi laporan keuangan yang curang. Di sisi lain, frekuensi gambar CEO dalam laporan tahunan, pergantian direksi, ketidakefektifan pengawasan internal, dan kepemilikan managerial tidak berpengaruh pada potensi tindakan curang dalam laporan keuangan. Terdapat variabel yang mampu memberikan bukti tentang adanya berbagai faktor yang memberikan pengaruh pada potensi tindakan curang dalam laporan keuangan. Pihak regulator, auditor, managemen, dan dewan komisaris sebaiknya waspada berbagai faktor itu guna pencegahan dan meminimalkan adanya peluang tindakan curang pada laporan keuangan.

Keywords: Fraud Pentagon Theory; Potential Fraud; Pressure; Opportunity; Rationalization; Ability; Arrogance.

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INTRODUCTION

The purpose of financial reporting is to provide information on a company's financial position, performance, and changes in financial condition over a specific period, as outlined in Financial Accounting Standard (FAS) No. 1 of 2018. This information is essential for users in making informed economic decisions. To be useful, financial reports must meet key qualitative characteristics, including understandability, reliability, relevance, and comparability (SAK, 2018). Ensuring transparency and accuracy in financial reporting requires adherence to generally accepted accounting principles, which facilitates the fair and complete presentation of financial information and minimizes the risk of fraudulent reporting.

Fraud, as defined by the Association of Certified Fraud Examiners (ACFE), involves intentional deception by individuals or entities for personal or corporate gain, often resulting in harm to others (Ernst & Young, 2012). According to the 2019 Indonesian Fraud Survey conducted by the ACFE Indonesia Chapter, there were 239 reported fraud cases resulting in a total financial loss of IDR 873.43 billion. These included 147 cases of corruption (69.9%), 50 cases of asset misuse (20.9%), and 22 cases of financial statement fraud (9.2%) (ACFE Indonesia Chapter, 2020). Notably, several mining companies in Indonesia have been involved in fraudulent financial reporting. For example, PT Bumi Resources Tbk., a subsidiary of Bumi Plc, was investigated for accounting irregularities, with findings of manipulation in its December 31, 2011 financial statements (Fauzian, 2012). Similarly, PT Garda Tujuh Buana Tbk. was implicated in a questionable agreement with Agrocom involving exclusive coal marketing rights valued at $250 million, which raised concerns over the accuracy of its reported financial information (Nabhani, 2013).

Another prominent case involves PT Timah Tbk., which allegedly concealed poor financial performance during a period of sustained losses. Despite accumulating debt from IDR 263 billion in 2013 to IDR 2.3 trillion in 2015, the company reported favorable performance metrics and strategic success. According to the Chairman of the Timah Employees Association (IKT), the company reported a loss of IDR 59 billion in the first half of 2015, raising further concerns about the authenticity of its financial disclosures (Soda, 2016). These instances illustrate the potential consequences of fraudulent financial reporting in resource-based industries, not only for companies but also for governments and society at large.

Given the implications of fraudulent behavior, early detection is critical to mitigate risks and protect stakeholders. One model widely used for this purpose is the Beneish M-Score model, developed by Professor Messod Daniel Beneish. This model employs eight financial ratios to detect earnings manipulation: Total Accruals to Total Assets (TATA), Sales Growth Index (SGI), Gross Margin Index (GMI), Asset Quality Index (AQI), Days Sales in Receivables Index (DSRI), Depreciation Index (DEPI), Sales, General and Administrative Expenses Index (SGAI), and Leverage Index (LVGI) (Repousis, 2016). These ratios are calculated by comparing financial data across two periods, with an M-Score greater than -2.2 suggesting the likelihood of manipulation.

Several studies have applied the Beneish model to firms listed on the Indonesia Stock Exchange. Rachmi (2020) found that TATA, SGI, GMI, and DSRI were significant in identifying manipulated financial reports, while DEPI, SGAI, LVGI, and AQI were not. In contrast, studies by Suheni (2020) and Hantono (2018) reported that none of the eight Beneish ratios had a significant effect on fraud detection, suggesting mixed results in the model's applicability in different contexts.

Understanding the underlying causes of fraudulent financial reporting is crucial for its prevention. Cressey (1953) proposed the Fraud Triangle, identifying pressure, opportunity, and rationalization as the key conditions for fraud. This theory evolved over time, with Wolfe and Hermanson (2004) introducing the Fraud Diamond, adding capability as a fourth element. In 2011, Crowe further developed this framework into the Fraud Pentagon by incorporating arrogance as a fifth factor, acknowledging that personal traits can also contribute to fraudulent behavior.

The recurring cases of financial reporting fraud in Indonesia, along with the substantial financial losses reported by the ACFE, underscore the urgency of further investigation. Although the Fraud Pentagon Theory has been widely examined, the findings across studies remain inconsistent. For instance, Felicia and Umar (2022) found that external pressure, company characteristics, auditor changes, and the presence of CEO photographs in annual reports did not significantly influence fraudulent reporting. Similarly, Murtado et al. (2022) reported that factors such as financial stability, financial targets, ineffective monitoring, auditor quality, changes in auditors, capabilities, and arrogance had no measurable effect. These inconsistencies highlight the need for additional research to clarify the influence of specific fraud risk factors.

Accordingly, this study seeks to reassess the relationship between Fraud Pentagon Theory and fraudulent financial reporting, with a particular focus on the pressure and opportunity elements—using proxies that have been underexplored in previous research. The study aims to contribute new insights by examining the extent to which financial targets, as a form of managerial pressure, drive fraudulent behavior in financial reporting.

Financial targets refer to performance benchmarks set by management, often related to profitability, and serve as a basis for evaluating organizational success. When such targets are unmet, management may resort to manipulative practices to portray favorable outcomes (Sari, 2020). The Fraud Triangle Theory provides a useful framework for understanding how financial pressure can lead to misconduct. According to Utama et al. (2018), pressure, opportunity, and rationalization are the three primary motivators for fraudulent behavior. Supporting this view, studies by Siddiq (2019) and Aprilia (2017) found a significant positive relationship between financial targets and fraudulent reporting. Conversely, research by Alfina (2020) and Damayani (2017) concluded that financial targets did not significantly influence the likelihood of fraud. Based on these conflicting findings, this study proposes the following hypothesis:

H_1: Financial targets have a significant positive effect on the potential for fraud in financial reporting.

A company's financial stability reflects its ability to maintain consistent performance and a sound financial condition over time. Previous research has shown that broader economic conditions significantly influence financial stability;

in periods of economic instability, companies are more likely to experience declining performance and a reduction in total assets (Aprilia, 2017). Such financial stress can place pressure on management, increasing the risk of fraudulent financial reporting as a means of masking underperformance. Agency Theory highlights the potential for conflicts of interest between managers and shareholders, particularly in situations of financial instability. Managers, seeking to preserve their positions or secure performance-based bonuses, may manipulate financial reports at the expense of shareholder interests (Pratolo & Irmawati, 2020). While some studies, such as those by Alfina (2020) and Faradiza (2017), suggest a positive relationship between financial instability and the likelihood of fraud, others, including Sari (2020) and Jaya (2019), found no significant effect.

H_2: Financial stability has a significant positive effect on the potential for financial statement fraud.

Managerial ownership refers to the proportion of company shares held by members of management. Tiffani and Marfuah (2015) argued that when managers possess ownership stakes, they may perceive greater entitlement to the company's earnings and resources, which could influence their reporting behavior. In situations where company performance does not meet expectations, higher levels of managerial ownership may correlate with a greater propensity for fraudulent activity. Conversely, Stewardship Theory posits that managers are inherently motivated to act in the best interests of the organization rather than for personal gain. From this perspective, increased managerial ownership could foster a stronger sense of accountability and alignment with shareholder objectives (Triyuwono, 2018). The empirical evidence on this matter is mixed: while Alfina (2020) and Siddiq (2019) found no significant relationship, Sari (2020) reported that managerial ownership does significantly affect the likelihood of financial statement fraud.

H_3: Managerial ownership has a positive and significant effect on the potential for fraudulent financial reporting.

External pressure arises when a company faces substantial demands from outside parties, such as creditors, investors, or regulatory bodies, often due to debt obligations or financial performance expectations. Companies with high levels of leverage are particularly vulnerable to such pressure. Underperformance relative to these expectations may lead management to manipulate financial statements to present a more favorable image. Institutional Theory explains how external pressures, including coercive isomorphism, can shape organizational behavior, sometimes fostering environments conducive to unethical practices. Effective governance structures, strong internal controls, and an organizational culture grounded in ethics and transparency are essential to mitigating such risks (Utama et al., 2018). Empirical findings on the relationship between external pressure and fraudulent reporting are varied: Alfina (2020) and Tessa (2016) reported a significant positive effect, while Siddiq (2019) and Damayani (2017) found no such influence.

H_4: External pressure has a positive and significant effect on the potential for fraudulent financial reporting.

The nature of a company refers to its operational characteristics, including business model, revenue structure, and industry-specific factors, all of which influence financial reporting practices. SAS No. 99, as cited in Skousen et al. (2009), suggests that subjective judgments in estimating revenue, expenses, liabilities, or asset valuations create opportunities for manipulation, particularly in companies with complex operations or significant intangible assets. According to Competitive Intensity Theory, firms operating in highly competitive environments may face stronger incentives to misstate financial performance in order to appear more profitable and attractive to investors (Onditi, 2022). For instance, technology companies with rapid innovation cycles and short product lifespans often experience such pressures. Empirical studies have explored this dynamic through changes in accounts receivable, a common proxy for company nature. Research by Sari (2020), Siddiq (2019), and Damayani (2017) indicated a significant relationship between accounts receivable growth and financial statement fraud. However, Alfina (2020) and Tiffani & Marfuah (2015) found no significant effect.

H_5: The nature of the company has a positive and significant effect on the potential for fraud in financial statements.

Control theory underscores the critical role of internal oversight in deterring undesirable behavior, including financial statement fraud. Effective internal supervision increases the perceived risk of detection, thereby discouraging fraudulent activity. Mechanisms such as independent internal audits, whistleblowing systems, and periodic job rotations are essential tools in fraud prevention and detection (Triyuwono, 2018). Conversely, ineffective internal control—stemming from a lack of oversight or weak supervisory structures—creates an environment in which fraudulent behavior may go undetected. This weakness enables individuals within the organization to pursue personal gain at the expense of corporate integrity. The absence of strong internal governance often necessitates oversight from external parties, such as independent boards of commissioners, to safeguard against misconduct (Andriani, 2018). Alfina (2020) found that ineffective supervision significantly contributes to the risk of fraudulent financial reporting, though this finding contrasts with those of Jaya (2019) and Tessa (2016), who reported no such influence.

H_6: Ineffective internal supervision has a positive and significant effect on the potential for fraudulent financial reporting.

Auditor change refers to the replacement of an external auditor or public accounting firm responsible for auditing a company's financial statements. In certain instances, companies may switch auditors to obscure prior irregularities, particularly when a new audit engagement partner (AP) from a different firm lacks familiarity with the company's operations. If the switch involves only changing the AP within the same firm (KAP), fraud may still be detectable due to information continuity. According to audit risk theory, auditors face the risk of failing to detect material misstatements due to error or fraud. A new auditor may not fully grasp the complexities of the business, thereby increasing audit risk and inadvertently allowing manipulation to persist. Management may exploit this transitional period to conceal past misconduct, especially if the prior auditor lacked diligence or expertise (Arzhenovskiy et al., 2019). Research by Qurainy and Rahmawati (2018) and Siddiq et al. (2017) supports the notion that auditor changes influence the potential for financial statement fraud, while Alfina (2020) and Faradiza (2019) found no significant relationship.

H_7: Auditor changes have a positive and significant effect on the potential for financial statement fraud.

Upper Echelon Theory posits that an organization's strategic decisions and performance are significantly shaped by the characteristics, values, and experiences of its top management team and board of directors. Changes in the board of directors can lead to shifts in corporate strategy, culture, and governance oversight. These transitions may elevate the risk of fraud, particularly when new directors exhibit weak ethical standards, limited governance experience, or a narrow focus on short-term outcomes (Triyuwono, 2018). In some cases, director turnover may be a deliberate attempt to remove individuals who have identified or resisted fraudulent activities. Such changes can create a period of instability in leadership and oversight—referred to as a "stress period"—which may be exploited by opportunistic management to execute fraud. Prolonged instability caused by frequent board changes can exacerbate this risk and complicate future detection efforts (Hafizi, 2019).

H_8: Changes in directors have a positive and significant effect on the potential for financial statement fraud.

Impression management theory suggests that individuals and organizations actively manage the perceptions others form of them. In the corporate context, CEOs who frequently display their images in annual reports may be attempting to cultivate a favorable personal or organizational image. Such behavior can serve as a distraction from poor performance or conceal deeper issues, including fraudulent activity (Mlawu, Matenda, & Sibanda, 2023). Excessive self-promotion through visual representation may reflect an underlying sense of arrogance or self-importance, suggesting that a CEO is more concerned with personal recognition than organizational transparency. This desire for admiration and control may increase the likelihood of engaging in fraudulent financial reporting to maintain or enhance personal prestige.

H_9: The frequency of CEO images in the annual report has a positive and significant effect on the potential for financial statement fraud.

Based on the theoretical framework and hypotheses presented, the conceptual model of this study is developed to examine the influence of fraud pentagon elements and firm-specific characteristics on the likelihood of financial statement fraud.

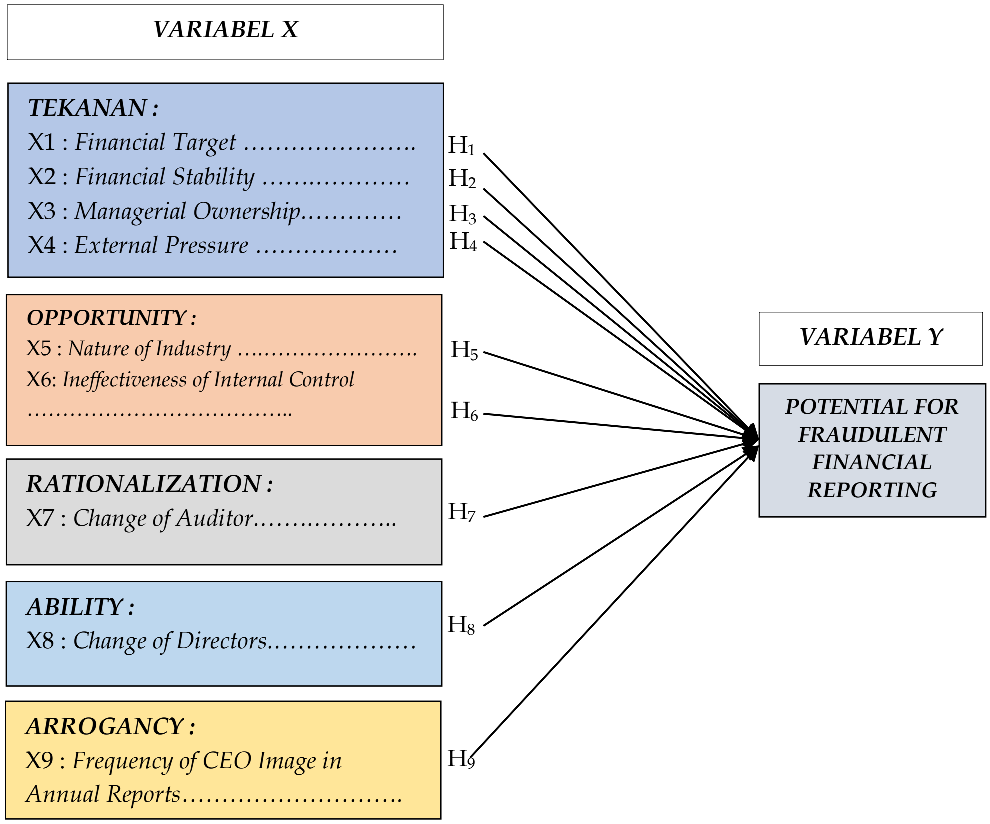

Figure 1. Study Model

Source: Researcher, 2021

STUDY METHOD

This study employed a quantitative research method, utilizing financial data from publicly listed companies. The research population consisted of all mining companies listed on the Indonesia Stock Exchange (IDX) during the 2016–2019 period. The unit of analysis comprised annual reports and financial statements of these companies within the specified timeframe.

A purposive sampling technique was applied to select companies that met predefined criteria. These criteria required that companies had published complete annual and financial reports for each year from 2016 to 2019, had not been delisted or suspended during that period, and had disclosed all relevant data necessary for the study. Based on these parameters, a total of 48 mining companies were selected as the research sample.

The study relied on secondary data, obtained from annual and financial reports available on the official IDX website (www.idx.com) and the respective websites of the sampled companies. Data analysis was conducted using logistic regression, facilitated by SPSS version 21. As noted by Ghozali (2016), logistic regression is appropriate for modeling the probability that one or more independent variables can predict the occurrence of a binary dependent variable, such as the likelihood of financial statement fraud.

M-Score = α + β1 ROA + β2 ACHANGE + β3 OSHIP + β4 LEVERAGE + β5 RECEIVABLE + β6 BDOUT + β7 AUDCHANGE + β8 DIRCHANGE + β9 CEOPIC + ε ……………………………………………………………………………………(1)

Where:

M-Score	= potential for financial reporting fraud
α	= constant
β	= regression slope
ROA	= proxy for net income per total assets
ACHANGE	= proxy for changes in total assets
OSHIP	= proxy for managerial share ownership
LEVERAGE	= proxy for total liabilities per total assets
RECEIVABLE	= proxy for changes in accounts receivable
BDOUT	= proxy for independent board of commissioners
AUDCHANGE	= change of public accounting company
DIRCHANGE	= change of directors
CEOPIC	= number of CEO images in annual reports
ε	= error/residual error

RESULTS AND DISCUSSION

Hypothesis testing in the logistic regression analysis was conducted using the values presented in the regression coefficient table. The statistical significance of each independent variable was assessed by examining the corresponding probability (significance) values. At a 5% significance level (α = 0.05), a variable was considered to have a statistically significant effect if its p-value was less than 0.05. In such cases, the alternative hypothesis (Ha) was accepted, and the null hypothesis (Ho) was rejected. A significant regression coefficient indicated that the independent variable had a meaningful influence on the likelihood of the dependent variable occurring. The results of the logistic regression analysis are presented in Table 1.

Table 1. Variable in the Equation Wald Test

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	ROA	6.699	3.342	4.018	1	0.045	811.280
	ACHANGE	4.889	1.795	7.416	1	0.006	132.809
	OSHIP	0.506	0.921	0.302	1	0.583	1.659
	LEVERAGE	2.725	1.297	4.413	1	0.036	15.261
	RECEIVABLE	7.475	2.668	7.852	1	0.005	1,763.181
	BDOUT	-1.411	1.719	0.674	1	0.412	0.244
	DIRCHANGE	0.030	0.545	0.003	1	0.956	1.031
	CEOPICT	-0.142	0.094	2.286	1	0.131	0.868
	AUDCHANGE	1.271	0.598	4.527	1	0.033	3.566
	Constant	-1.597	0.840	3.612	1	0.057	0.202

Source: Data processed, 2020

Based on the result in the table, the regression equation obtained is as follows:

Ln PKLK/1-PKLK = -1,597 + 6,699ROA + 4,889 ACHANGE + 0,506 OSHIP + 2,725 LEVERAGE + 7,475 RECEIVABLE + (-1,411) BDOUT + 0,030 DIRCHANGE + (-0,142) CEOPICT + 1,271 AUDCHANGE

The analysis revealed that financial targets have a significant and positive effect on the likelihood of financial statement fraud. Hypothesis testing indicated a positive correlation between the achievement of financial targets and the tendency to manipulate financial reports. This finding supports the notion that management may engage in earnings manipulation to meet analyst expectations or previous profit benchmarks, as suggested by Skousen et al. (2009). In this study, return on assets (ROA) was used as a proxy for financial targets, reflecting the efficiency with which management utilizes assets to generate profits. A higher ROA signals more effective asset use and improved profitability (Sihombing & Raharjo, 2014). The results are consistent with those of Siddiq (2019), Aprilia (2017), and Rahayu, Hariyanto, & Almanfaluti (2023), all of whom found that ROA can serve as a reliable indicator of potential fraudulent financial reporting.

Financial stability, measured using the ACHANGE variable, was also found to have a positive and significant effect on the potential for fraud in financial reporting. The analysis supports the view that unstable economic conditions can negatively impact a company's financial stability (Aprilia, 2017). Declining performance and a reduction in total assets may signal weak financial stability, which in turn may place pressure on managers to engage in fraudulent reporting to meet stakeholder expectations. Diminished investor confidence, shrinking returns, and concerns from creditors can further compound this pressure. These findings align with those of Alfina (2020), Faradiza (2019), and Mulyandani, Nugraha, & Kusumastuti (2023), who similarly concluded that weakened financial stability increases the risk of financial statement fraud.

Regarding managerial ownership, the results indicated a positive but statistically insignificant effect on the potential for financial reporting fraud. This suggests that the proportion of shares owned by management does not necessarily increase the likelihood of fraudulent behavior. One explanation may be that substantial managerial ownership aligns the interests of managers and shareholders, incentivizing the former to enhance firm performance rather than engage in manipulation. Additionally, the obligation to maintain dividend distributions may motivate managers to ensure financial soundness rather than commit fraud. These findings are in line with those reported by Alfina (2020) and Siddiq (2019), who also found no significant relationship between managerial ownership and fraudulent reporting.

External pressure was found to have a positive and significant influence on the likelihood of financial reporting fraud. This result indicates that companies experiencing high levels of external pressure—particularly in the form of debt obligations—are more likely to manipulate financial statements. When performance falls short of external expectations, managers may take aggressive measures to present favorable results. High leverage, in particular, increases the company's risk profile, reducing its attractiveness to creditors and prompting a greater incentive for misrepresentation (Tessa, 2016). These findings are consistent with the results of Alvina (2020) and Tessa (2016), both of whom observed a significant relationship between external pressure and the risk of fraud.

The nature of the company, as assessed through the proportion of accounts receivable, was also found to exert a positive and significant influence on the potential for fraudulent financial reporting. According to SAS No. 99 (Skousen et al., 2009), companies operating in environments characterized by subjective estimation—such as the assessment of liabilities, income recognition, or asset valuation—are particularly vulnerable to manipulation. A notable increase in accounts receivable may reduce available operating cash and raise concerns over the quality of earnings. This, in turn, may prompt managers to manipulate estimates of bad debts to present a more favorable financial position. These findings are consistent with prior studies by Sari (2020), Damayani (2017), and Siddiq (2019), all of which found a positive relationship between accounts receivable growth and fraudulent reporting.

In contrast, the analysis found that ineffective internal supervision did not have a significant influence on the potential for financial statement fraud. While weak oversight is theoretically associated with a higher risk of manipulation, the measurement approach in this study—based solely on proportion—may not have fully captured the complexities of internal control effectiveness. These findings are consistent with those of Jaya (2019) and Tessa (2016), who also concluded that internal supervision alone is not a sufficient predictor of financial reporting fraud.

Auditor change, measured by the AUDCHANGE variable, was shown to have a positive and significant effect on the potential for fraudulent financial reporting. The findings suggest that changing public accounting firms (KAPs) may be a strategic move by management to obscure prior misconduct. Replacing only the audit partner (AP) within the same KAP is less likely to prevent fraud detection due to information sharing between auditors. However, changing the audit firm entirely may reduce continuity and audit quality, increasing the risk of fraud going undetected (Tessa, 2016). Furthermore, as noted by Rizani & Respati (2018), an unqualified audit opinion may be used by management to justify or legitimize fraudulent actions. These findings are supported by Qurainy & Rahmawati (2018), Siddiq et al. (2017), and Hamadi, Stephanus, & Wijayanti (2022), all of whom reported a significant association between auditor changes and financial reporting fraud.

The analysis also indicated that changes in directors had a positive but statistically insignificant effect on the likelihood of financial statement fraud. Although leadership changes can result in organizational instability or be used to remove individuals aware of fraudulent activities, this study found no evidence to support the hypothesis that such changes significantly increase fraud risk. In some cases, director changes may reflect efforts by stakeholders to improve corporate governance or bring in more qualified individuals. These findings are in line with those of Sari (2020), Jaya (2019), and Basmar & Sulfati (2022), who similarly reported no significant relationship between board changes and fraud risk.

Lastly, the frequency of CEO images in annual reports was found to have no significant effect on the potential for fraudulent financial reporting. While impression management theory suggests that frequent CEO appearances may signal self-promotion or arrogance, this indicator lacks consistency across companies. As Alfina (2020) noted, CEO photos are often included simply for informational or branding purposes and may not reflect personal traits or behavioral tendencies. The variability in reporting practices further limits the reliability of this proxy as an indicator of fraud. These findings are supported by Alfina (2020), Jaya (2019), and Felicia & Umar (2022), all of whom concluded that the frequency of CEO images does not influence the risk of financial statement fraud.

CONCLUSION

In conclusion, this study found that the potential for financial statement fraud is significantly influenced by financial targets and financial stability. These factors suggest that pressure to meet performance benchmarks and maintain a stable financial position can drive management to engage in fraudulent reporting. Conversely, managerial ownership did not demonstrate a significant effect, indicating that shareholding by management alone does not necessarily increase or decrease the likelihood of fraud.

The findings also revealed that external pressure and the nature of the company significantly influence the risk of financial statement fraud. High external obligations and operational characteristics that involve subjective estimates or complex transactions create opportunities for manipulation. Additionally, changes in external auditors were shown to significantly affect the likelihood of fraud, underscoring the importance of audit continuity and quality. However, changes in directors and the frequency of CEO image appearances in annual reports were not found to have a significant impact on fraudulent reporting.

Future research is encouraged to expand the analysis by incorporating alternative detection tools such as the Fraud Score Model, earnings management metrics, and the Beneish M-Score, particularly when exploring different industry sectors. Further studies should also consider additional independent variables beyond those examined in this model. For instance, the ineffectiveness of internal control could be assessed through proxies such as the educational background of oversight personnel, with a focus on accounting or management expertise, as these qualifications may enhance the quality of financial supervision.

Moreover, the arrogance component of fraud theory may be better proxied by identifying CEOs with political affiliations, which can reflect elevated power dynamics and influence within the organization. Future models might also incorporate emerging fraud risk dimensions, such as collusion, which could be measured through proxies like involvement in government contracts. These expansions would contribute to a more comprehensive understanding of the factors driving financial statement fraud across various corporate environments.

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