THE INFLUENCE OF PENTAGON FRAUD ON FINANCIAL REPORTING FRAUD

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Abstract

Financial statement fraud refers to the deliberate manipulation of financial records by management or affiliated parties with the intention of misrepresenting the company's actual financial condition, thereby misleading stakeholders for personal or organizational benefit. This study examines the collective and individual effects of financial stability, external pressure, financial targets, opportunity, auditor and director turnover, as well as the visibility of the CEO's photograph, on the likelihood of financial statement fraud among infrastructure firms listed on the Indonesia Stock Exchange during the 2019–2023 period. A purposive sampling method yielded 145 company-year observations, which were analyzed using descriptive statistics and logistic regression with SPSS version 27. The findings reveal that the combined influence of all examined variables is significantly associated with the occurrence of financial statement fraud. At the individual level, opportunity and auditor turnover show a positive and significant impact on fraudulent practices. Conversely, financial stability, external pressure, financial targets, and CEO photo disclosure used as a behavioral proxy for managerial arrogance following the Fraud Pentagon framework do not exhibit a significant relationship with fraud probability. Although the inclusion of CEO photo disclosure introduces a novel perspective, future research should reinforce such proxies with broader theoretical and empirical support, while also considering alternative measures such as audit opinions or accrual-based indicators to more comprehensively capture the dimensions of the Fraud Pentagon in financial misreporting contexts.

Keywords: Fraud Pentagon, Financial Statement Fraud

INTRODUCTION

The Indonesia Stock Exchange (IDX) functions as a central platform that facilitates the trading of financial instruments, thereby supporting capital access and market liquidity. Among the sectors listed on IDX, the infrastructure sector holds strategic importance, encompassing transportation, construction, telecommunications, and utilities. As of 2023, 65 infrastructure firms were listed, with state-owned construction companies such as PT Wijaya Karya (WIKA), PT Waskita Karya (WSKT), and PT Adhi Karya (ADHI) representing major players. This sector is not only central to Indonesia's economic growth but also prone to financial reporting risks due to its reliance on government projects, complex contractual arrangements, and vulnerability to mismanagement and fraud. These characteristics make infrastructure firms a compelling context for examining financial statement fraud through the lens of the Fraud Pentagon theory.

Financial statements serve as the primary medium for communicating a company's financial health and must comply with standardized principles such as PSAK to ensure reliability and comparability (Kieso et al., 2019; Dewi et al., 2023). However, intentional manipulation of these statements financial statement fraud remains a persistent issue that undermines stakeholder trust and corporate governance (Treadway Commission, 1987 in Pratiwi, 2022). The Fraud Pentagon Theory identifies five drivers of such unethical behavior: pressure, opportunity, rationalization, competence, and arrogance (Crowe). Prior research highlights varying effects of these elements across industries. For instance, pressure was significant in transportation (Kurniawati & Sarwono, 2024) but not in construction (Wulandari & Sari, 2024), while opportunity influenced fraud in manufacturing (Solikhin & Parasetya, 2023) but not in public institutions. These inconsistencies suggest that fraud determinants are highly context-dependent and may differ in infrastructure firms, which remain underexplored in prior literature.

High-profile Indonesian cases, including those of WIKA, WSKT, and PT Nusa Konstruksi Enjiniring Tbk (DGIK), demonstrate fraud schemes such as asset mark-ups, hidden liabilities, and delayed cost recognition. These practices align with elements of the Fraud Pentagon particularly pressure and opportunity while capability, rationalization, and arrogance further explain how managerial authority, ethical justifications, and excessive confidence enable fraudulent reporting (Apriyani & Ritonga, 2019; Anwar, 2021; Cahyaningsih & Lestari, 2022). Yet, empirical findings remain mixed, partly due to differences in measurement proxies and industry-specific dynamics.

These gaps underscore the importance of analyzing financial statement fraud in the infrastructure sector, where high investment value, public accountability, and government involvement intensify both the incentives and risks of manipulation. By applying the Fraud Pentagon framework, this study seeks to provide a more nuanced understanding of how contextual and organizational factors shape fraud risk in infrastructure firms, thereby contributing to both academic discourse and practical fraud prevention strategies.

REVIEW OF LITERATURE

Agency Theory

Jensen and Meckling (1976) introduced agency theory to explain the divergence of interests that often arises between owners (principals) and managers (agents), particularly

when managerial actions serve personal gains rather than the organization's objectives. To mitigate this misalignment, the implementation of robust governance mechanisms, incentive systems, and internal control frameworks becomes critical. Expanding on the traditional Fraud Triangle, the Fraud Pentagon incorporates two additional dimensions competence and arrogance alongside pressure, opportunity, and rationalization, offering a more comprehensive explanation of how insufficient oversight can facilitate fraudulent behavior. When agents face high pressure, possess authority and knowledge, and justify unethical actions, the risk of financial misstatement rises. Integrating agency theory and the Fraud Pentagon offers a clearer framework to prevent fraud by strengthening supervision, aligning incentives, and promoting transparency to protect stakeholder interests

Fraud

To complement the agency perspective, the Fraud Pentagon framework expands upon the traditional Fraud Triangle by incorporating two additional dimensions competence and arrogance alongside pressure, opportunity, and rationalization. These five elements offer a more nuanced explanation of fraudulent behavior in organizational settings. When agents encounter high financial pressure, identify weaknesses in internal controls, rationalize misconduct as necessary for corporate survival, possess the competence to exploit accounting systems, and develop arrogance that fosters disregard for oversight, the probability of fraud escalates significantly.

The integration of Agency Theory and the Fraud Pentagon creates a comprehensive framework for analyzing financial statement fraud. Agency Theory highlights the root problem of misaligned incentives and information asymmetry between managers and shareholders, while the Fraud Pentagon explains the psychological, structural, and behavioral factors that drive fraudulent acts. Together, these frameworks underscore the importance of robust governance mechanisms, incentive alignment, and strict oversight in minimizing fraud risk, thereby protecting stakeholder interests and ensuring financial reporting integrity.

Hypothesis Development

The occurrence of financial statement fraud is driven by five core elements identified in the Fraud Pentagon framework: pressure, opportunity, rationalization, capability, and arrogance. Pressure refers to the motivation or compulsion to meet financial targets, which can drive individuals or management to commit fraud; Farmashinta and Yudowati (2019) found that high pressure significantly increases this risk. Supporting this, According to Adepurwanty and Nurbaiti (2019), of all the components within the Fraud Pentagon, only pressure was found to have a significant individual influence on financial statement fraud. Harisman (2021) noted that opportunity emerges in situations where inadequate internal controls or insufficient oversight provide conditions that enable fraud to occur unnoticed. Rationalization involves justifying fraudulent actions as necessary or acceptable, with perpetrators often believing their actions are for the company's survival (Farmashinta & Yudowati, 2019). Capability highlights the role of individuals, especially those in high-ranking positions, who have the authority and skills to exploit weaknesses and conceal fraud (Harisman, 2021). Lastly, arrogance reflects a sense of superiority and invulnerability to rules, which can lead to the disregard of procedures and a higher risk of fraud (Harisman, 2021).

The Effect of Pressure on Financial Reporting Fraud

Pressure is a fundamental element in the fraud triangle framework, frequently serving as the driving force that compels individuals or executives to commit financial statement fraud. This form of pressure may originate from numerous circumstances, including economic downturns, ambitious performance expectations, or personal financial strain. A study conducted by Natasya (2023) found that financial instability, serving as an indicator of pressure, is significantly associated with financial statement fraud, indicating that firms experiencing economic difficulties are more likely to engage in report manipulation. Likewise, Kurniawati and Sarwono (2024) identified leverage as a proxy for pressure and discovered its positive association with fraudulent behavior, implying that a higher debt burden increases the propensity for misstatement. These studies collectively underline how financial strain, whether due to deteriorating financial health or excessive debt levels, can intensify the risk of fraud. Therefore, it is essential for stakeholders to keep a close watch on financial pressure indicators as part of comprehensive fraud risk management strategies.

H1: Pressure (X1) has a positive effect on Financial Report Fraud (Y).

The Influence of Opportunity on Financial Reporting Fraud

In the context of the fraud triangle theory, opportunity plays a pivotal role in facilitating financial statement fraud. This element emerges when internal control systems are either inadequate or compromised, thereby enabling individuals to perpetrate fraud with minimal risk of exposure. According to Kurniawati and Sarwono (2024), a positive correlation exists between opportunity and fraudulent financial reporting, suggesting that increased opportunities within an organization elevate the risk of such unethical practices occurring. Contributing factors include weak supervision, complex transactions, and lack of task segregation. Similarly, Alfina and Amrizal (2023) confirmed that opportunity measured through industry characteristics and the effectiveness of oversight significantly impacts financial statement fraud. Industries that provide managerial discretion in reporting and exhibit ineffective monitoring create greater chances for fraud. Therefore, to mitigate financial statement fraud, companies must strengthen internal controls, enhance oversight mechanisms, and ensure adequate segregation of duties to reduce opportunities for fraud and promote financial reporting integrity.

H2: Opportunity (X2) has a positive effect on Financial Report Fraud (Y).

The Influence of Capabilities on Financial Reporting Fraud

Under Agency Theory, the relationship between shareholders (principals) and company executives (agents) often features an imbalance in the availability of information. Managers, who are directly involved in preparing financial reports, typically have more comprehensive knowledge of the company's internal operations than the owners. When these managers possess advanced competencies such as strong accounting acumen, deep understanding of regulatory frameworks, or skills in manipulating financial disclosures they may leverage this imbalance for personal gain at the expense of the principals. According to the Fraud Diamond model, "capability" is a key determinant that heightens the risk of fraudulent financial reporting. Individuals who hold authoritative positions and possess specialized skills tend to have a higher likelihood of perpetrating fraud without detection. A study by Solikhin and Parasetya (2023), which focused on manufacturing firms listed on the Indonesia Stock Exchange between 2016 and 2020, investigated the impact of pressure, opportunity, rationalization, and capability on financial statement fraud.. Although the

capability factor proxied through turnover in directorship showed a positive relationship, the effect was statistically insignificant. This suggests that leadership transitions may imply potential for fraud due to the presence of capable individuals, yet such capability alone does not conclusively trigger fraudulent actions. Nonetheless, capability remains a critical consideration in fraud prevention, as individuals with authority, expertise, and high organizational positions can exploit weaknesses in internal control systems. Therefore, companies must ensure that key personnel uphold strong ethical standards and implement effective oversight mechanisms to reduce the risk of fraud.

H4: Competence (X4) has a positive effect on Financial Report Fraud (Y).

The Effect of Rationalization on Financial Reporting Fraud

Rationalization refers to the cognitive process individuals use to legitimize unethical or unlawful behavior, often to resolve moral dilemmas or preserve a favorable self-perception. Within the realm of financial statement fraud, this mechanism enables offenders to frame their misconduct as justifiable. The study conducted by Suryani and Fauzan (2023) explored various rationalization-related determinants such as changes in external auditors, audit opinions, the absence of financial expertise among board members, This study explored the extent of total accruals and the classification of firms by industry to analyze their impact on fraudulent financial reporting among manufacturing companies listed on the Indonesia Stock Exchange from 2017 to 2021. Their findings revealed that auditor switching and total accruals positively influence fraudulent reporting, while audit opinion, non-financial board expertise, and industry type showed no significant effect. Conversely, Kurniawati and Sarwono (2024) found a negative relationship between rationalization and financial fraud in transportation sub-sector companies, suggesting that higher levels of rationalization awareness may reduce fraud risk. These studies highlight that certain rationalization indicators, such as auditor changes and accrual levels, can elevate fraud risk, emphasizing the need for companies to strengthen internal controls and promote professional ethics to mitigate such behavior.

H3: Rationalization (X3) has a positive effect on Financial Report Fraud (Y).

The Influence of Arrogance on Financial Report Fraud

Within the fraud pentagon framework, arrogance reflects an exaggerated sense of self-importance and entitlement, especially among senior executives. This attitude can result in the disregard of ethical norms and formal regulations, thereby heightening the likelihood of manipulating financial statements (Majidah, 2022). Silaban and Zainal (2021) examined the relationship between audit committee characteristics, CEO tenure, and managerial arrogance on financial reporting fraud among consumer goods companies listed on the Indonesia Stock Exchange during 2017–2019. Their findings revealed that while these factors collectively influenced fraudulent reporting, arrogance alone did not show a significant direct effect, suggesting that its influence may be indirect or shaped by other surrounding elements. On the other hand, a study by Jannah and Meini (2022), which focused on listed firms from 2016 to 2020, found a negative association between arrogance and financial statement fraud. This unexpected result could stem from variations in how arrogance was conceptualized or from differing industry dynamics across the sampled firms. These conflicting results highlight the need for further investigation, as factors such as measurement approaches, industry characteristics, and organizational culture may shape the relationship between arrogance and financial fraud.

H5: Arrogance (X5) has a positive effect on Financial Report Fraud (Y).

RESEARCH METHOD

This study employs a descriptive quantitative approach to examine the influence of the Fraud Pentagon elements pressure, opportunity, rationalization, competence, and arrogance on financial statement fraud among infrastructure companies listed on the Indonesia Stock Exchange (IDX) during the 2019–2023 period. The research utilizes panel data derived from secondary sources, specifically the annual reports of 29 purposively selected firms, resulting in 145 firm-year observations.

The dependent variable, financial statement fraud, is measured using the Beneish M-Score, where scores above -2.22 indicate a potential for earnings manipulation. The independent variables are operationalized as follows: pressure is proxied by financial stability (ACHANGE), leverage, and ROA; opportunity by the accounts receivable to sales ratio; rationalization through auditor switching; competence by changes in company leadership (directors and CEOs); and arrogance through a narcissism index based on the proportion of CEO photographs.

Data analysis includes descriptive statistics, binary logistic regression, and hypothesis testing via t-tests and F-tests, processed using IBM SPSS version 27. Model validity is assessed through the -2 Log Likelihood, Hosmer-Lemeshow Goodness-of-Fit test, and Nagelkerke R Square, while statistical significance is measured using the Omnibus Test of Model Coefficients and the Wald Test at a 5% significance level.

This methodological framework ensures rigorous testing of the hypothesized relationships and provides empirical insights into the determinants of financial statement fraud within the infrastructure sector, with practical implications for regulators, corporate executives, and investors.

RESULTS AND DISCUSSION

This study explores the impact of various factors, including Financial Stability (ACHANGE), External Pressure (LEVERAGE), Financial Target (ROA), and Opportunity (RECEIVABLE), Auditor Turnover (AUDCHANGE), Alterations in board membership (ΔDIRECTOR) and the frequency of CEO images (CEOPICT) are examined in relation to the probability of financial statement fraud. This study utilizes secondary data sourced from the annual reports of 29 infrastructure companies listed on the Indonesia Stock Exchange between 2019 and 2023, yielding a total of 145 firm-year observations. The study utilizes descriptive statistics and employs logistic regression to assess relationships. Fraud is operationalized using the Beneish M-Score, where companies with a score greater than –2.22 are classified as “1” (potential fraud), and those scoring below –2.22 are marked as “0” (no indication of fraud).

Descriptive Statistical Analysis

Descriptive analysis serves to illustrate the characteristics of the dataset utilized in this research. Its primary aim is to enhance comprehension by presenting essential aspects of the data in a concise and accessible manner. Within the context of this study, descriptive statistics are employed to outline the attributes of the observed sample, detailing elements

such as the total number of observations (N), average (mean), lowest and highest recorded values (minimum and maximum), along with the standard deviation for each variable. This study investigates eight variables in total, comprising one dependent variable financial statement fraud and seven independent variables: financial stability (ACHANGE), external pressure (LEVERAGE), financial targets (ROA), opportunity (RECEIVABLE), auditor turnover (AUDCHANGE), changes in the board of directors (ΔDIRECTOR), and the frequency of CEO photo appearances (CEOPICT).

Table 1.
Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Std. Deviation
ACHANGE	145	-.9990	1015.6290	7.103028	84.3378631
LEVERAGE	145	.0030	3461.9780	37.313386	300.7316617
ROA	145	-33.1100	.4640	-.374890	2.9162567
RECEIVABLE	145	-105.5450	48.7570	-.491883	10.6049914
AUDCHANGE	145	.00	1.00	.1931	.39610
ΔDIRECTOR	145	.00	1.00	.5103	.50163
CEOPICT	145	.00	1.00	.9862	.11704
FARUD	145	.00	1.00	.1310	.33861
Valid N (listwise)	145				

Source: Processed data (2025)

This study analyzed 145 financial report samples from IDX-listed infrastructure companies (2019–2023). The *Financial Statement Fraud* variable (dummy) had a mean of 0.1310, indicating low incidence. *Financial Stability* averaged 7.103 with high variation (SD = 84.337), reflecting generally positive financial conditions. *External Pressure* showed a high mean of 37.313 (SD = 300.731), suggesting substantial pressure. *Financial Target* had limited variation (mean = -0.374; SD = 2.91), with extremes from PT Bakrie Telecom Tbk. *Opportunity* varied widely (mean = -0.491; SD = 10.604), with extreme values from PBSA and MPOW. Most firms did not change auditors (mean = 0.1931), but director changes were more frequent (mean = 0.5103). CEO photos appeared in nearly all reports (mean = 0.9862), reflecting strong leadership visibility.

Descriptive statistical analysis of 145 companies from 2019 to 2023 reveals that 19.3% conducted auditor changes, 51% changed directors, 98.6% disclosed CEO photos, and 13.1% were involved in financial statement fraud. Fraud incidence rose from 6.9% in 2019 to 20.7% in 2021 before declining to 10.4% in 2023. Financial stability, proxied by asset changes, exhibited extreme variability with standard deviations exceeding means, notably due to outliers like PT Surya Semesta Internusa Tbk in 2021. External pressure, measured by leverage, also showed high dispersion, with PT Bakrie Telecom Tbk consistently displaying the highest levels, indicating heavy debt reliance. Financial target pressure, proxied by ROA, was predominantly negative, suggesting chronic underperformance. The Opportunity element of the Fraud Pentagon, reflecting internal control weaknesses, was similarly erratic,

marked by wide standard deviations and outliers such as MPOW (-105.545) and OASA (33.357). These results highlight unstable financial conditions, lack of data clustering, and heightened fraud risk driven by internal and external pressures.

Logistic Regression Analysis

Goodness of Fit Testing of Regression Model

Table 2.
Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	3.042	8	.932

Source: IBM SPSS Statistics 27

As shown in Table 2, the model yields a Chi-square value of 3.042 with a p-value of 0.932. Since this value surpasses the 0.05 criterion, it confirms that the model fits the data well and is appropriately specified to predict the outcomes.

Overall Model Assessment (Overall Model Fit)

Table 3.
Initial -2LL Values of Iteration History [a,b,c]

Iteration		-2 Log likelihood	Coefficients
			Constant
Step 0	1	115.782	-1.476
	2	112.667	-1.839
	3	112.621	-1.891
	4	112.621	-1.892

Source: IBM SPSS Statistics 27

Table 4.
Final -2LL Values of Iteration History[a,b,c,d]

Iteration		-2 Log likelihood	Coefficients							
			Constant	X1	X2	X3	X4	X5	X6	X7
Step 1	1	100.511	-2.698	.000	.001	-.061	.022	1.050	-.163	1.089
	2	88.722	-3.699	-.001	.001	-.101	.078	1.529	-.215	1.487
	3	85.125	-4.973	-.001	.001	-.118	.151	1.822	-.345	2.536
	4	83.336	-6.148	-.002	.001	-.124	.250	1.875	-.400	3.661
	5	80.266	-7.300	-.002	.001	-.130	.581	1.698	-.311	4.778
	6	77.921	-8.777	-.003	.001	-.132	1.101	1.675	-.248	6.195
	7	75.220	-11.200	-.002	.001	-.140	2.436	1.829	-.063	8.393
	8	75.083	-12.571	-.002	.001	-.145	2.746	1.905	.045	9.600

Iteration	-2 Log likelihood	Coefficients							
		Constant	X1	X2	X3	X4	X5	X6	X7
9	75.082	-13.590	-.002	.001	-.146	2.760	1.911	.053	10.607
10	75.082	-14.591	-.002	.001	-.146	2.760	1.911	.053	11.607
11	75.082	-15.591	-.002	.001	-.146	2.760	1.911	.053	12.607
12	75.082	-16.591	-.002	.001	-.146	2.760	1.911	.053	13.607
13	75.082	-17.591	-.002	.001	-.146	2.760	1.911	.053	14.607
14	75.082	-18.591	-.002	.001	-.146	2.760	1.911	.053	15.607
15	75.082	-19.591	-.002	.001	-.146	2.760	1.911	.053	16.607
16	75.082	-20.591	-.002	.001	-.146	2.760	1.911	.053	17.607
17	75.082	-21.591	-.002	.001	-.146	2.760	1.911	.053	18.607
18	75.082	-22.591	-.002	.001	-.146	2.760	1.911	.053	19.607
19	75.082	-23.591	-.002	.001	-.146	2.760	1.911	.053	20.607
20	75.082	-24.591	-.002	.001	-.146	2.760	1.911	.053	21.607

Source: IBM SPSS Statistics 27

Based on Table 4, the final -2 Log Likelihood (-2LL) value is 75.082, showing a decrease from the initial value to 74.394. This reduction in -2LL indicates an improvement in model fit, suggesting that the hypothesized regression model aligns well with the observed data.

Determination Coefficient Research

Table 5.
Negelkerke R Square Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	75.082a	.228	.422

Source: IBM SPSS Statistics 27

Logistic regression analysis results are illustrated in Table 5, where the Nagelkerke R Square value reaches 0.422. This implies that 42.2% of the variability in financial statement fraud can be explained by the independent variables, which include financial stability, external pressure, financial targets, opportunities, rationalization, competence, and arrogance. The remaining 57.8% of the variation is likely driven by other determinants outside the scope of this model. Thus, the combined influence of these seven factors demonstrates a moderate level of explanatory power in relation to fraudulent financial reporting.

Classification of Logistic Models

Table 6.
Classification Table

Observed			Predicted Y .00	Predicted Y 1.00	Percentage Correct
Step 1	Y	.00	125	1	99.2
		1.00	12	7	36.8
	Overall Percentage				91.0

Source: IBM SPSS Statistics 27

Based on Table 6, out of 145 observations, 126 were initially classified as having low financial statement fraud. After applying logistic regression analysis, only one of these was misclassified as high fraud, indicating a prediction accuracy of 99.2% for the low-fraud group. Meanwhile, among the 19 observations initially identified as high fraud, 12 were incorrectly predicted as low fraud, reflecting a 36.8% misclassification rate for the high-fraud group. Overall, the model demonstrates a reliable predictive capability, accurately classifying 91% of the total observations.

Simultaneous Test

Table 7.
Results of Omnibus Tests of Model Coefficients Hypothesis Tests

		Chi-square	df	Sig.
Step 1	Step	37.539	7	.000
	Block	37.539	7	.000
	Model	37.539	7	.000

Source: IBM SPSS Statistics 27

A chi-square test yielded a probability value of 0.000, which falls below the 0.05 significance threshold, indicating that Financial Stability, External Pressure, Financial Targets, Opportunity, Rationalization, Competence, and Arrogance collectively exert a significant influence on Financial Statement Fraud. Consequently, the research hypothesis is supported.

Partial Test

Table 8.
Results of the Logistic Regression Coefficient Test Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1a	X1	-.002	.012	.034	1	.854	.998
	X2	.001	.003	.251	1	.616	1.001
	X3	-.146	.224	.426	1	.514	.864
	X4	2.760	1.005	7.550	1	.006	15.803

X5	1.911	.673	8.060	1	.005	6.758
X6	.053	.676	.006	1	.938	1.054
X7	21.607	22723.662	.000	1	.999	2420418796.221
Constant	-24.591	22723.662	.000	1	.999	.000

Source: IBM SPSS Statistics 27

Referring to Table 8, the analysis generated the following regression model:
Y= -24,591 – 0,002 X1 + 0,001 X2 – 0,146 X2 + 2,760 X4 + 1,911 X5 + 0,053 X6 + 21,607 X7

According to the regression results, hypothesis testing indicates that Financial Stability, External Pressure, Financial Target, Competence, and Arrogance do not have a significant impact on financial statement fraud. This is supported by their respective p-values of 0.854, 0.616, 0.514, 0.938, and 0.999, all of which exceed the 5% significance level. Although the regression coefficients reflected both upward and downward trends, the corresponding variables failed to demonstrate statistically meaningful associations. Conversely, the factors of Opportunity and Rationalization exhibited a significant and positive impact on financial statement fraud, as evidenced by regression coefficients of 2.760 and p-values of 0.006 and 0.005, respectively. These outcomes imply that greater access to opportunities and a heightened inclination toward rationalization are strongly linked to an increased risk of fraudulent reporting in financial statements.

The Influence of Financial Stability on Financial Statement Fraud

Referring to the t-test results shown in Table 8, the analysis indicates that Financial Stability does not have a significant effect on financial statement fraud. This is demonstrated by a negative regression coefficient of -0.002 and a p-value of 0.854, which exceeds the conventional 0.05 significance threshold. The negative coefficient suggests that as the independent variable (ACHANGE) increases, the likelihood of fraud decreases—although this relationship lacks statistical significance. Consequently, the null hypothesis (H01) cannot be rejected, indicating that variations in total assets do not play a meaningful role in predicting fraudulent financial reporting. Nonetheless, erratic or unexplained changes in total assets, especially under conditions of weakened financial stability, may still trigger concerns regarding possible financial misstatements. These results align with the research by Khoirunnisa et al. (2020), which also found that financial stability does not have a significant relationship with financial statement fraud.

The Influence of External Pressure on Financial Statement Fraud

Based on the results of the t-test shown in Table 8, external pressure does not have a statistically significant impact on financial statement fraud. This is indicated by a regression coefficient of 0.001 and a p-value of 0.616, which is higher than the standard significance level of 0.05. Although the coefficient is positive suggesting a direct correlation between leverage (as a proxy for external pressure) and fraudulent reporting the lack of statistical significance supports the acceptance of the null hypothesis (H02). This implies that external financial obligations may not substantially drive fraudulent behavior in financial disclosures. A plausible explanation could be that firms manage their debt effectively and maintain access to varied and stable sources of financing, thereby mitigating financial strain. These results align with the previous study carried out by Sasongko and Wijayantika (2019), which

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similarly reported no meaningful association between external pressure and fraudulent financial reporting.

The Effect of Financial Targets on Financial Statement Fraud

The regression results indicate that financial targets have a negative but not statistically significant impact on financial statement fraud, demonstrated by a coefficient of -0.146 and a p-value of 0.514, which is above the 0.05 significance level. This suggests that a decrease in profitability, measured by Return on Assets (ROA), generally reduces the motivation or pressure on management to manipulate earnings. A reduced drive to meet aggressive financial goals alleviates managerial stress, thereby lowering the potential for fraudulent activity. As a result, the third hypothesis (H03) is supported, confirming that financial targets do not significantly impact fraudulent financial reporting.

The Effect of Opportunity on Financial Statement Fraud

The opportunity variable shows a meaningful impact on financial statement fraud, demonstrated by a regression coefficient of 2.760 and a p-value of 0.006, which falls under the 0.05 significance level. This positive coefficient suggests that companies having a larger ratio of receivables to sales tend to be more vulnerable to fraudulent financial reporting due to the ease of manipulating receivables. Therefore, the null hypothesis (H04) is rejected. These results are consistent with the study by Mertha Jaya and Poerwono (2019), who also found a positive correlation between opportunity and the occurrence of financial statement fraud.

The Effect of Auditor Changes on Financial Statement Fraud

Auditor change has a significant positive impact on financial statement fraud, evidenced by a coefficient of 1.911 and a significance level of 0.005 (less than 0.05). This suggests a direct relationship between frequent auditor rotation and an increased risk of fraud. The rejection of hypothesis (H05) indicates that such changes may be used to obscure fraudulent activities detected by previous auditors. According to Khairumnisa (2021), switching auditors can be a strategy to conceal past fraud, highlighting the importance of robust internal controls during transitions

Effect of Board of Directors Turnover on Financial Statement Fraud

Referring to the t-test outcomes in Table 8, The results indicate that alterations in the board of directors have no meaningful impact on financial statement fraud. This is evidenced by a regression coefficient of 0.053 and a p-value of 0.938, which is substantially higher than the standard 0.05 threshold. Although the coefficient is positive, although a direct relationship between board turnover (ΔDIRECTOR) and financial statement fraud is suggested, the high p-value shows there is not enough evidence to reject the null hypothesis (H06). The insignificance suggests that director changes are typically due to retirements or efforts to appoint more competent executives to enhance corporate performance. These findings align with Rahayuningsih & Sukirman (2021), who also found no significant link between director turnover and financial reporting fraud.

Effect of CEO Photograph on Financial Statement Fraud

Based on the t-test results shown in Table 8, the presence frequency of CEO images in annual reports does not have a statistically significant effect on financial statement fraud. This is demonstrated by a regression coefficient of 21.607 and a p-value of 0.999, which is well above the 0.05 threshold, indicating that the relationship between the CEOPICT variable and the dependent variable is a non-significant positive correlation. These findings support

the acceptance of hypothesis H07. Although the frequent appearance of CEO photos may aim to establish trust and transparency with stakeholders, it could also reflect managerial arrogance. While the relationship is statistically insignificant, the direction of the coefficient suggests that increased CEO photo exposure may be associated with a higher tendency toward fraudulent reporting. This supports the findings of Sasongko & Fitriana (2019), who argue that such visibility, as a proxy for corporate arrogance, has the potential to elevate the risk of management altering financial reports.

CONCLUSION

This study examined seven fraud risk factors in infrastructure companies listed on the IDX (2019–2023) and found that although the variables collectively influenced financial statement fraud, only Opportunity and Auditor Turnover had significant individual effects, highlighting the importance of organizational control gaps and auditor independence over financial or leadership pressures. These findings suggest that companies should prioritize reducing opportunity structures and maintaining auditor objectivity, while investors may benefit more from evaluating governance and audit practices than relying solely on financial ratios. Given the limited sectoral scope, short observation period, and potential proxy weaknesses, future studies are encouraged to adopt broader samples, alternative fraud indicators, and complementary qualitative approaches within the Fraud Pentagon framework to deepen understanding of fraud dynamics.

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