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The Effect of the Fraud Hexagon Model on Fraudulent Financial Reporting in State-Owned Enterprises

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Abstract: Fraud cases in Indonesia are largely "dominated by state-owned enterprises (SOEs), ironically, these state-owned enterprises are agents of development and drivers of national economic growth (Sari et al., 2023). The purpose of this study is to analyze the influence of the hexagon theory on detecting fraud in the financial reporting of SOEs listed on the Indonesia Stock Exchange (IDX) between 2020 and 2024. The research methodology used was a quantitative method with multiple linear regression analysis. The results of this study indicate that pressure, rationalization, and collusion have a positive effect on the risk of fraudulent financial reporting. Meanwhile, opportunity, capability and ego factors do not have a positive effect on fraudulent financial reporting. It is recommended that future research combine quantitative and qualitative methods to obtain a comprehensive picture of the measurement of the six hexagon elements that are risk factors for fraudulent financial reporting. Future research can also analyze the measurement of independent variables in more depth. Furthermore, it is recommended to find other measurements for variables that, based on the results of this study, do not have an influence on fraudulent financial reporting. The contribution of this research to companies is that companies can map the risk factors for fraudulent financial reporting so that they can take preventive measures by implementing a code of conduct. Furthermore, stakeholders should be more discerning in their response to audit opinions received by companies.

Keywords: Fraudulent Financial Reporting, Hexagon Theory, State-Owned Enterprises.

INTRODUCTION

Corporate management communicates its performance to stakeholders through financial statements. However, the imperative to present favorable financial performance often incentivizes manipulation by involved parties, thereby rendering the information contained in such reports misleading to users (Naldo & Widuri, 2023). Organizations and corporations incur substantial financial losses due to fraudulent activities. In 2024, a study conducted by the Association of Certified Fraud Examiners across 138 countries and territories revealed that

financial statement fraud generated the highest median loss for organizations, amounting to $766,000. This figure significantly exceeds losses attributed to corruption ($200,000) and asset misappropriation ($120,000) (Examiners, 2024).

A 2019 survey by the Association of Certified Fraud Examiners Indonesia involving 239 respondents indicated that 48.5% identified government institutions as the most affected by fraud. State-owned enterprises (SOEs) ranked second at 31.8%, followed by private companies at 15.1%, non-profit organizations at 2.9%, and other organizations at 1.7% (Association of Certified Fraud Examiners Indonesia, 2019). Furthermore, Indonesia Corruption Watch reported that between 2016 and 2021, law enforcement actions against corruption cases within SOEs reached 119 cases, resulting in state losses of at least IDR 47 trillion. This figure underscores the magnitude of financial damage caused by fraudulent practices in SOEs (Indonesia Corruption Watch, 2022).

SOEs represent one of the sectors most susceptible to fraud in Indonesia. Paradoxically, these entities function as agents of development and key drivers of national economic growth. Several prominent fraud cases in Indonesia that have attracted public attention include those involving Bank Perkreditan Rakyat, PT Garuda Indonesia Tbk, Asuransi Jiwasraya, PT Asabri (Persero), PLN, PT Waskita Karya Tbk, Pelabuhan Indonesia, Angkasa Pura II, Kimia Farma, and Krakatau Steel (Rahmatika, 2020). Additional cases related to alleged financial statement fraud include indications of window dressing in the financial reports of SOE pharmaceutical companies PT Indofarma Tbk and PT Kimia Farma Tbk, particularly its subsidiary PT Kimia Farma Apotek (ekonomi.bisnis.com, 2021). Other cases involve alleged financial statement manipulation at PT Wijaya Karya Tbk and PT Waskita Karya Tbk (Tempo.com, 2023), fictitious investment schemes at PT Taspen (Persero) (Kompas.com, 2025), and more recently, suspected financial statement manipulation at PT Pupuk Indonesia, identified through an independent audit conducted by KAP PWC Tanudiredja, Wibisana, Rintis & Rekan on the 2023 financial statements (Suaranasional.com, 2025).

A substantial body of literature has examined financial statement fraud using the Fraud Hexagon Theory as an analytical framework. This theory extends earlier models, including the Fraud Triangle Theory, Fraud Diamond Theory, and Fraud Pentagon Theory, all of which have been widely applied in fraud-related research (Budiandru & Safuan, 2022). From the perspective of the fraud hexagon, fraudulent behavior does not arise from a single cause but rather from the interaction of six determinants: pressure, opportunity, rationalization, capability, ego (arrogance), and collusion (Vousinas, 2019).

Empirical studies across sectors and regions suggest that pressure is not consistently the primary determinant of financial statement fraud. An analysis of mining companies in Indonesia by Sari et al., (2022) found no significant relationship between pressure conditions and financial statement manipulation. A similar pattern was observed among large-cap companies included in the Kompas 100 Index, as reported by Handoko & Salim, (2022), where pressure was not found to have a significant effect. This finding is further supported by Naldo and Widuri (2023), whose study on infrastructure firms across ASEAN countries also concluded that pressure does not serve as a triggering factor for financial statement fraud.

Nevertheless, empirical findings regarding the determinants of financial statement fraud remain inconclusive. Several studies indicate that pressure particularly as reflected in financial stability and external demands can contribute to fraudulent financial reporting, as demonstrated (Achmad, Ghozali, et al., 2022; Aviantara, 2021; Sukmadilaga et al., 2022). In addition to pressure, factors such as opportunity, arrogance, and collusion have also been identified as significant drivers of fraudulent practices (Preicilia et al., 2022; Sukmadilaga et al., 2022). Conversely, other studies report contradictory findings, indicating that these variables do not exhibit a significant relationship with financial statement fraud. Such conclusions are presented in studies (Achmad et al., 2023; Achmad, Ghozali, et al., 2022; Achmad, Hapsari, et al., 2022;

Aviantara, 2021; Handoko & Salim, 2022; Naldo & Widuri, 2023; Sari et al., 2022) and several other studies that similarly found no significant influence of pressure, opportunity, arrogance, or collusion.

Furthermore, rationalization and capability have been identified as influential factors in financial reporting fraud (Aviantara, 2021; Syah et al., 2023). However, opposing evidence is presented (Achmad et al., 2023; Achmad, Ghozali, et al., 2022; Achmad, Hapsari, et al., 2022; Ariyanto et al., 2023; Ratmono et al., 2020), who found no significant effect of these variables. In 2019, the Indonesian government initiated a comprehensive reform of SOEs, including restructuring measures, the establishment of special task forces, dismissal of problematic directors, and debt restructuring (Kumparanbisnis.com, 2019). This study is therefore motivated to examine the influence of the fraud hexagon framework in detecting financial statement fraud among SOEs listed on the Indonesia Stock Exchange in the post-reform period, specifically from 2020 to 2024.

METHODS

The fraud hexagon hypothesis is employed to deconstruct the phenomenon of fraudulent financial reporting into six principal dimensions: opportunity, pressure, rationalization, capability, arrogance, and collusion. Each of these dimensions is empirically examined to assess its contribution to the occurrence of fraud. The identification of fraudulent financial reporting is conducted using the Beneish M-Score Model, whereby firms are classified as having indications of fraud when the score exceeds a threshold value of 1, while scores below this threshold indicate no suspected fraud.

To capture the level of pressure faced by firms, this study employs changes in the proportion of total assets over a two-year period as a proxy for financial stability. This measure is calculated based on the percentage change in total assets between periods, as formulated below:

$$\text{PeChange in Total Assets} = \frac{\text{Total Assets (t)} - \text{Total Assets (t} - 1)}{\text{Total Assets (t} - 1)}$$

Opportunity is proxied by the proportion of independent commissioners relative to the total number of commissioners. Rationalization is measured using a dummy variable, where a value of 1 is assigned if the firm receives an unqualified audit opinion, and 0 otherwise. CEO capability is proxied using a dummy variable that assigns a value of 1 if the CEO holds a master's or doctoral degree, and 0 otherwise. CEO arrogance is operationalized through the frequency of the CEO's photographs presented in the financial statements, reflecting a proxy for executive narcissism. Meanwhile, collusion is indicated by the presence of board members holding multiple concurrent positions.

This study focuses on state-owned enterprises (SOEs) listed on the Indonesia Stock Exchange during the 2020–2024 period. The sample selection is based on purposive sampling with the following criteria: (1) SOEs consistently listed on the exchange throughout 2020–2024, and (2) SOEs that published financial reports consecutively during the same period. Based on these criteria, 37 SOEs were initially identified, of which 4 were excluded due to being listed after 2021, resulting in a final sample of 33 firms. Accordingly, the total number of observations over the five-year period amounts to 165 firm-year data points.

This study adopts a quantitative approach utilizing secondary data derived from financial statements and official corporate publications obtained from the Indonesia Stock Exchange. Data analysis is conducted using the SPSS to ensure robust and measurable results. To

empirically assess the direction and magnitude of relationships among variables, multiple linear regression analysis is applied. The research model comprises one dependent variable and six independent variables, following the methodological framework proposed by Uma Sekaran and Roger Bougie (2016).
The regression model is specified as follows:

$$Y = a + \beta X1 + \beta X2 + \beta X3 + \beta X4 + \beta X5 + \beta X6$$

Where:
Y= fraudulent financial reporting
a= constant (value of $Y$when all Xvariables equal zero)
β= regression coefficient (indicating the direction and magnitude of influence)
X_1= pressure
X_2= opportunity
X_3= rationalization
X_4= capability
X_5= arrogance
X_6= collusion

The initial stage of analysis focuses on evaluating model adequacy through a series of classical assumption tests, including tests of normality, heteroskedasticity, autocorrelation, and multicollinearity. Upon satisfying these assumptions, the analysis proceeds to hypothesis testing. The individual effects of independent variables on the dependent variable are assessed using the t-test to determine the statistical significance of the relationships.

RESULTS AND DISCUSSION

Result

This study adopts a quantitative approach aimed at examining the determinants of fraudulent financial reporting based on the Fraud Hexagon Theory framework. The analytical procedures were conducted systematically using descriptive statistics and multiple linear regression. The unit of analysis comprises 33 state-owned enterprises (SOEs) listed on the Indonesia Stock Exchange over the observation period from 2020 to 2024. Within this time horizon, 165 initial observations were obtained and subsequently refined through a data cleaning procedure.

Descriptive Statistical Analysis

Preliminary testing indicates that the data distribution did not initially satisfy the normality assumption due to the presence of outliers. Accordingly, a *casewise diagnostics* approach was employed by identifying studentized residual values exceeding an absolute threshold of 2. This procedure resulted in the exclusion of 18 observations, yielding a final sample size of 147 observations.

The research variables were classified according to their measurement scales. Ratio-scale variables (pressure, opportunity, arrogance, and collusion) were analyzed using measures of central tendency and dispersion, whereas nominal variables (rationalization, capability, and fraud) were presented in the form of frequency distributions.

Table 1. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Pressure (X1)	147	-0,40	0,53	0,0247	0,12417
Opportunity (X2)	147	0,20	0,80	0,4804	0,12393
Arrogance (X4)	147	2,00	7,00	2,9728	0,78466

Collusion (X6)	147	0,00	1,33	0,7296	0,28785
M-Score (Beneish M-Score)	147	-6,04	-1,67	-2,9922	0,59025
Valid N (listwise)	147				

Source. SPSS Version 26.0 output, 2025

Table 2. Descriptive Statistics

Variable	Frequency	Percentage
Rationalization (X3)		
Unqualified Opinion (WTP)	146	99,32%
Other than Unqualified Opinion	1	0,68%
Capability (X5)		
Postgraduate Education (Master's/Doctoral Degree)	110	74,8%
Non-Postgraduate Education (Below Master's/Doctoral Degree)	37	25,2%
M-Score Category (Beneish M-Score)		
Indicated Fraud	11	7,5%
Not Indicated Fraud	136	92,5%

In general, the pressure variable exhibits a relatively low mean value (0.0247), indicating a moderately stable financial condition across most firms. However, the standard deviation of 0.124 suggests considerable heterogeneity in financial pressure among companies. The opportunity variable shows a mean of 0.4804, implying that the proportion of independent commissioners is relatively adequate, although variability across firms remains evident.

The arrogance variable, proxied by the frequency of CEO appearances in annual reports, has a mean value of 2.9728, reflecting a moderate level of managerial narcissism. Meanwhile, the collusion variable records a mean of 0.7296, indicating a tendency toward dual-role practices within the board of commissioners.

For nominal variables, the majority of firms received an unqualified audit opinion (99.32%), suggesting a relatively high level of rationalization in terms of financial reporting legitimacy. In terms of capability, 74.8% of CEOs possess postgraduate degrees, indicating a dominance of highly educated individuals in corporate leadership.

Fraud indications, measured using the Beneish M-Score, reveal that most firms (92.5%) are not indicated to have engaged in fraudulent financial reporting, with an average M-Score of −2.9922 (below the threshold of −2.22). This finding suggests that, at an aggregate level, earnings manipulation practices are relatively low within the sample.

Verification Analysis

Classical Assumption Tests

Classical assumption testing was conducted to ensure the validity of the regression model. The Kolmogorov–Smirnov normality test indicates that, following the removal of outliers, the significance value increased to 0.200 (> 0.05), confirming that the normality assumption is satisfied.

The multicollinearity test shows that all variables have Variance Inflation Factor (VIF) values below 10 and tolerance values above 0.1, indicating the absence of strong linear relationships among independent variables. Furthermore, heteroscedasticity testing using scatterplot analysis demonstrates that residuals are randomly distributed around the zero line, confirming the assumption of homoscedasticity. The autocorrelation test, based on the Durbin–

Watson statistic, yields a value of 1.930, which falls between the upper bound (dU) and (4 − dU), indicating that the model is free from autocorrelation.

Multiple Linear Regression Analysis

The regression model estimated in this study is formulated as follows:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + e$$

The estimation results indicate that pressure, rationalization, and collusion exert positive effects on fraudulent financial reporting. Pressure emerges as the dominant variable, with a coefficient of 0.846, suggesting that increased financial pressure significantly elevates the likelihood of earnings manipulation. Rationalization exhibits the largest coefficient (2.533), underscoring the critical role of cognitive justification in facilitating fraudulent behavior. This finding reinforces behavioral perspectives in fraud theory, whereby individuals construct justifications to legitimize deviant actions. Conversely, arrogance and capability display very small negative coefficients and are statistically insignificant, indicating that these variables do not provide substantial explanatory power in predicting fraud variation.

Hypothesis Testing

The partial test (*t-test*) results indicate that three variables have statistically significant effects:

Table 3. Summary of Hypothesis Testing Results

Variable	Regression Coefficient	t-statistic (t-table = 1.977)	Significance (Sig < 0.05)	Conclusion
Pressure	0.846	2.520	0.013	Hypothesis Accepted
Opportunity	0.626	1.931	0.056	Hypothesis Rejected
Rationalization	2.533	7.140	0.000	Hypothesis Accepted
Arrogance	-0.001	-0.014	0.989	Hypothesis Rejected
Capability	-0.008	-0.080	0.937	Hypothesis Rejected
Collusion	0.435	3.115	0.002	Hypothesis Accepted

Meanwhile, opportunity, arrogance, and capability do not exhibit statistical significance ($p > 0.05$). These findings suggest that not all dimensions within the fraud hexagon framework possess equal explanatory power in the context of SOEs.

Coefficient of Determination

Table 4. Coefficient of Determination

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,597[a]	0,356	0,329	0,48437

The coefficient of determination (R^2) is 0.356, indicating that the model explains 35.6% of the variation in fraudulent financial reporting. The Adjusted R^2 value of 0.329 suggests a slight reduction in explanatory power when the model is generalized to a broader population.

Thus, approximately 64.4% of the variation in fraud is explained by factors beyond the scope of this model, highlighting opportunities for incorporating additional variables in future research.

Simultaneous Test (F-Test)

Table 5. Simultaneous Test

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	18,122	6	3,020	12,924	0,000[b]
	Residual	32,743	140	0,234		
	Total	51,865	146			

a. Dependent Variable: M-Score

b. Predictors: (Constant), Kolusi, Rasionalisasi, Arogansi, Peluang, Kapabilitas, Tekanan

The simultaneous test results show an F-value of 12.924 with a significance level of 0.000 (< 0.05), confirming that all independent variables collectively exert a significant effect on fraudulent financial reporting. Overall, the findings demonstrate that pressure, rationalization, and collusion constitute the primary determinants of fraudulent financial reporting within SOEs. These results reinforce the argument that fraud is not solely driven by structural opportunities but is also significantly shaped by psychological and relational dynamics within organizational settings.

Discussion

The statistical test results indicate that, out of the six proposed hypotheses, three namely the first, third, and sixth hypothesesare supported. First, the findings suggest a positive relationship between pressure and fraudulent financial reporting. Managerial pressure, as proxied by changes in total assets, incentivizes the manipulation of financial statements. Within the framework of Agency Theory, this behavior arises due to information asymmetry between management and shareholders, enabling opportunistic actions. The dynamics of asset growth constitute a central indicator in assessing corporate financial performance. Although asset expansion is often perceived as a reflection of successful investment strategies, it becomes problematic when not accompanied by proportional revenue growth. Such discrepancies signal inefficiencies in asset utilization and potential managerial failure in converting investments into optimal financial outcomes (Widjaya & Sidianto, 2025). Consequently, management faces significant pressure to maintain or enhance asset value, as it represents a primary concern for shareholders. At the same time, employee welfare is indirectly dependent on firm performance, creating additional incentives for management to manipulate financial figures to present a stable and favorable corporate condition. These findings are consistent with prior studies (Nugroho & Diyanty, 2022; Sudrajat et al., 2023).

Second, the empirical results indicate that opportunity does not significantly influence fraudulent financial reporting. This finding aligns with studies by Sari et al. (2022), Naldo and Widuri (2023), and Achmad et al. (2023). Despite the presence of supervisory mechanisms, such as the board of commissioners, fraudulent practices persist. From an agency perspective, opportunities for fraud typically increase when internal control systems are weak. However, this study does not find evidence supporting a relationship between inadequate internal controls and financial statement fraud. This may be attributed to the regulatory environment governing state-owned enterprises, which are subject to stringent government oversight. Regulatory frameworks aimed at enforcing Good Corporate Governance (GCG) principles appear to mitigate opportunistic behavior. Empirical evidence by Nurhidayanti et al., (2023) suggests

that robust governance practices foster collaboration between management and stakeholders, thereby enhancing organizational efficiency and productivity.

Opportunity in this study is proxied by the proportion of independent commissioners within the board. In accordance with Indonesian SOE regulation PER-2/MBU/03/2023, at least 20% of board members must be independent commissioners. Descriptive statistical analysis reveals an average proportion of 48.2%, indicating that most sampled SOEs comply with regulatory requirements. Independent commissioners are expected to provide objective and critical oversight of management (Achmad, Ghozali, & Pamungkas, 2022). Nevertheless, their limited familiarity with the firm's operational complexities may reduce the effectiveness of monitoring, particularly in detecting fraudulent financial reporting (Fouziah et al., 2022).

Third, the analysis demonstrates that rationalization exerts a positive influence on fraudulent financial reporting. This implies that higher levels of rationalization increase the likelihood of fraud occurrence. This finding is consistent with prior research by Handoko and Salim (2022), Naldo and Widuri (2023), Achmad et al. (2023), Sari et al. (2022), and Ratmono et al. (2020). Rationalization enables individuals to construct justifications for unethical behavior, including the manipulation of financial statements, often supported by audit opinions. According to Law No. 15 of 2004 on State Financial Management and Accountability, audit opinions reflect the auditor's assessment based on compliance with accounting standards, effectiveness of internal controls, legal compliance, and adequacy of disclosure. While an unqualified opinion is commonly interpreted as an indication of sound financial management, empirical evidence suggests that such opinions do not necessarily preclude the existence of fraud (Sukmadilaga et al., 2022).

Fourth, the results indicate that arrogance does not have a significant effect on fraudulent financial reporting. The statistical analysis shows no meaningful relationship at a significance level below 0.05, leading to the rejection of the alternative hypothesis. These findings are consistent with studies by Handoko and Salim (2022), Aviantara (2021), Achmad, Hapsari, et al. (2022), and Achmad, Ghozali, et al. (2022). The inclusion of CEO photographs in financial reports used as a proxy for arrogance does not appear to influence fraudulent behavior. Instead, such representations are primarily intended to enhance corporate image and communicate leadership structure to stakeholders.

Fifth, CEO educational attainment is used as a proxy for capability. In the context of corporate governance, the board of directors holds full responsibility for managing the company. Regulatory frameworks, such as those issued by the Otoritas Jasa Keuangan, require directors to possess relevant competencies, uphold ethical standards, and comply with applicable laws. The findings indicate that most SOEs in the sample are led by CEOs holding master's or doctoral degrees, reflecting the implementation of GCG principles through highly qualified leadership.

Hypothesis testing results for capability reveal a negative relationship with fraudulent financial reporting, indicating that higher managerial competence reduces the likelihood of fraud. This finding supports prior studies by Achmad, Hapsari, et al. (2022), Achmad, Ghozali, et al. (2022), Achmad et al. (2023), Ariyanto et al. (2023), Ratmono et al. (2020), and Preicilia et al. (2022). From an agency theory perspective, shareholders tend to appoint competent managers to ensure effective corporate performance. Higher educational attainment is associated with improved managerial capability, thereby reducing the propensity for fraudulent actions.

Finally, the results demonstrate a positive relationship between collusion and fraudulent financial reporting. Descriptive analysis shows a relatively high level of board interlocking positions within the sampled SOEs. Collusion is measured by the proportion of commissioners holding multiple positions relative to the total board size. This condition creates opportunities for coordinated actions that may facilitate fraudulent practices. Consistent with prior studies

(Handoko & Salim, 2022; Aviantara, 2021; Sukmadilaga et al., 2022), the findings confirm that collusion significantly increases the likelihood of financial statement fraud. From the agency theory perspective, multiple directorships may give rise to conflicts of interest, leading to decisions that favor management at the expense of shareholders.

Limitations

This quantitative analysis employs a dependent variable grounded in the six-component Fraud Hexagon Theory to identify potential fraud risk factors. Prior empirical studies serve as the basis for operationalizing and measuring these six components. The study specifically focuses on state-owned enterprises listed on the Indonesia Stock Exchange, with an observation period restricted to the most recent five years (2020–2024). This temporal limitation may constrain the generalizability of the findings and potentially influence the robustness of the results.

Suggestions for Future Research

In light of the study's limitations, future research is recommended to integrate both quantitative and qualitative approaches in order to achieve a more comprehensive understanding of how the six dimensions of the fraud hexagon contribute to fraudulent financial reporting. This recommendation is grounded in the premise that in-depth interviews with diverse corporate stakeholders are essential for capturing the underlying theoretical constructs, particularly those associated with human behavior. Furthermore, the measurement of independent variables should be explored more rigorously in subsequent studies. Future research may also consider adopting context-specific metrics aligned with firm-level characteristics to enhance empirical validity. Notably, in this study, the variables of opportunity, capability, and arrogance did not exhibit a statistically significant effect on the occurrence of fraudulent financial reporting. Therefore, further examination and refinement of these constructs are warranted.

Managerial Implications

This study provides practical insights for organizations in identifying potential risk factors associated with fraudulent financial reporting, thereby enabling the implementation of proactive preventive measures. One key recommendation is to avoid imposing excessive pressure on corporate management, as the findings indicate that heightened pressure may increase the likelihood of financial reporting fraud. Additionally, investors are advised to exercise greater caution when interpreting audit opinions or assessments, particularly in relation to risk factors associated with rationalization. The findings suggest that an unqualified opinion may inadvertently serve as a justification mechanism for managerial fraud. Accordingly, stakeholders should recognize that such opinions do not necessarily guarantee the absence of fraudulent activities but may instead represent a latent risk factor within the organization. Finally, collusion emerges as a significant risk factor that positively influences fraudulent financial reporting in this study. Therefore, it is imperative for organizations to establish and effectively enforce a robust code of ethics as a fundamental mechanism for mitigating fraud risk.

CONCLUSION

Based on the foregoing discussion and the synthesis of prior empirical findings, it can be concluded that collusion, pressure, and rationalization significantly contribute to the increased likelihood of fraudulent financial reporting. The hypothesis testing results demonstrate consistent evidence that the interaction of multiple directorships within the board of commissioners, rising asset turnover dynamics, and the receipt of unqualified audit opinions

collectively intensify the risk of financial statement fraud in state-owned enterprises. From the perspective of the Fraud Hexagon Theory, these findings reinforce the argument that fraudulent behavior emerges from the interplay of multiple reinforcing factors rather than from a single determinant. Collusion facilitates coordinated actions among internal actors, pressure creates incentives to manipulate reported performance, and rationalization provides the cognitive justification necessary to legitimize such actions.

Conversely, the study finds that opportunity and capability do not exhibit a significant role in mitigating or explaining fraudulent financial reporting. The negative direction observed in the arrogance and capability variables further indicates that the risk of fraud is not associated with the frequency of CEO photographs disclosed in annual reports, nor with the educational attainment of top executives. In addition, the presence of supervisory mechanisms, such as the board of commissioners, does not appear to effectively constrain fraudulent practices. These results suggest that formal governance structures and observable executive attributes may be insufficient as standalone mechanisms for fraud prevention. Instead, greater attention should be directed toward latent behavioral and relational factors particularly those related to collusion dynamics, organizational pressures, and cognitive justification processes that more fundamentally drive fraudulent financial reporting within state-owned enterprises.

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