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Analysis of Fraud Hexagon Dimensions and Their Effect on Financial Reporting Fraud Using the Beneish M-Score: Evidence from Infrastructure Companies Listed on the IDX (2020–2024)

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ABSTRACT

Financial statement fraud poses a major risk to stakeholders as it obscures a firm's true financial condition, disrupts market efficiency, and weakens corporate governance. This study investigates the determinants of financial statement fraud in Indonesian infrastructure firms listed on the stock exchange by applying the Fraud Hexagon framework, comprising pressure, opportunity, rationalization, capability, ego, and collusion, while incorporating political connections and discretionary accruals as additional factors. Using a quantitative approach with logistic regression on panel data from 2020–2024, the results show that external pressure, financial performance targets, weak monitoring, market outcomes, and political ties significantly increase the likelihood of fraudulent financial reporting. Discretionary accruals also demonstrate a strong association with fraud, indicating managers' opportunistic earnings manipulation. The findings empirically support the extended Fraud Hexagon framework in the Indonesian context and highlight the reinforcing role of political connections in unethical financial behavior. This study contributes to theory and practice by offering insights for regulators, auditors, and policymakers to strengthen fraud detection and prevention mechanisms.

Keywords: Financial Statement Fraud; Fraud Hexagon; Political Connections; Discretionary Accruals; Logistic Regression; Corporate Governance

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INTRODUCTION

The integrity of financial reporting is essential for maintaining investor confidence, ensuring the efficient functioning of capital markets, and supporting sustainable economic growth. Despite ongoing regulatory reforms and advancements in auditing practices, financial statement fraud remains a persistent global challenge, particularly in emerging markets such as Indonesia. Fraudulent reporting not only misrepresents a firm's financial position but also misleads stakeholders, damages reputation, and can trigger severe economic consequences.

Financial statement fraud is a multifaceted phenomenon influenced by organizational, environmental, and individual factors. The Fraud Hexagon framework, an extension of the well-established Fraud Triangle, offers a more comprehensive perspective by incorporating six dimensions: Pressure, Opportunity, Rationalization, Capability, Ego (Arrogance), and Collusion. This model reflects the complex interplay of incentives, behavioral traits, and structural weaknesses that create opportunities for managers to manipulate financial reports.

Prior studies have highlighted that pressures to meet financial targets, external financing needs, weak monitoring, and political connections are among the key enablers of fraudulent reporting (Skousen *et al.*, 2009; Rezaee, 2005; Faccio *et al.*, 2006). However, most research has primarily focused on developed economies, while evidence from emerging markets remains limited. Given Indonesia's unique institutional environment characterized by high ownership concentration, political linkages, and varying governance quality the applicability and explanatory power of the Fraud Hexagon model warrant further examination.

This study seeks to fill this gap by empirically testing the Fraud Hexagon framework, complemented by political connections and discretionary accruals, in Indonesian infrastructure companies listed on the Indonesia Stock Exchange (IDX) during 2020–2024. Specifically, this research investigates how financial stability, external pressure, auditor and director changes, auditor quality, monitoring effectiveness, market performance, accruals, financial targets, and political ties affect the probability of financial statement fraud, measured using the Beneish M-Score model.

By integrating these variables within the Fraud Hexagon perspective, the study contributes to the literature in two ways. First, it extends fraud research into the context of an emerging economy, offering insights into how political and institutional environments interact with fraud determinants. Second, it provides practical implications for auditors, regulators, and corporate governance practitioners to improve early detection and strengthen fraud prevention mechanisms in high-risk industries.

LITERATURE REVIEW

Financial statement fraud remains a critical issue in corporate governance and accounting, undermining the credibility of financial information and investor confidence. Numerous studies have sought to identify the antecedents and mechanisms that enable fraudulent reporting. The Fraud Hexagon model has gained prominence as an extension of the traditional Fraud Triangle by incorporating six key dimensions: Pressure, Opportunity, Capability, Rationalization, Ego (Arrogance), and Collusion.

Agency Theory

Agency theory explains the relationship between principals (shareholders) and agents (managers), emphasizing conflicts of interest arising from divergent objectives and

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information asymmetry (Jensen & Meckling, 1976). Principals delegate decision-making authority to agents, expecting them to act in the best interests of the owners. However, managers may pursue personal goals, including manipulating financial statements to meet performance benchmarks or secure personal benefits. This opportunistic behavior creates agency costs that undermine transparency and accountability.

In the context of financial reporting, agency theory highlights how weak monitoring mechanisms, high financial pressure, and political incentives may encourage managers to distort information. Strengthening governance structures such as independent boards, external audits, and regulatory oversight is therefore essential to mitigate agency problems and reduce fraud risk.

Fraud Hexagon Theory

The Fraud Hexagon framework extends the traditional Fraud Triangle (Cressey, 1953) and Fraud Diamond (Wolfe & Hermanson, 2004) by incorporating six interrelated elements: Pressure, Opportunity, Rationalization, Capability, Ego (Arrogance), and Collusion (Suryani & Prabowo, 2022). Pressure refers to financial or non-financial incentives driving fraudulent behavior; opportunity arises from weak internal controls; rationalization allows individuals to justify misconduct; capability reflects the skills to exploit weaknesses; arrogance relates to managerial overconfidence; and collusion highlights the role of collective efforts in fraud.

Empirical studies have shown that these six dimensions provide a more holistic explanation of fraudulent financial reporting compared to earlier models (Achmad *et al.*, 2022; Alfarago *et al.*, 2023). By capturing both behavioral and structural aspects, the Fraud Hexagon offers a stronger framework for detecting and preventing fraud in corporate settings.

Financial Statement Fraud Theory

Financial fraud is defined as intentional misrepresentation of financial information by management with the purpose of misleading stakeholders (Rezaee, 2005). This includes overstating revenues, understating expenses, manipulating accruals, and concealing liabilities. Fraudulent reporting distorts the true economic condition of a firm and undermines investor trust, often leading to severe financial and reputational consequences (Dalnial *et al.*, 2014).

Prior studies indicate that financial pressures, weak monitoring, and governance failures are among the primary drivers of such fraud (Apriliana & Agustina, 2017; Agustina, 2021). Political connections further exacerbate the problem by enabling firms to bypass regulatory scrutiny (Faccio *et al.*, 2006).

Beneish M Score Theory

The Beneish M-Score, developed by Beneish (1999), is a forensic accounting model designed to detect earnings manipulation. It combines eight financial ratios such as the Days Sales in Recevables Index (DSRI), Gross Margin Index (GMI), Asset Quality Index (AQI), and Total Accruals to Total Assets (TATA) to evaluate the likelihood of fraud. A score above –2.22 indicates a higher probability of manipulation.
The model has been widely validated across different settings as an effective early warning tool for fraudulent reporting (Beneish *et al.*, 2012; Maccarthy, 2017). Its application in this study allows for a systematic measurement of financial statement fraud risk within Indonesian infrastructure companies.

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The research model is illustrated in the following diagram:

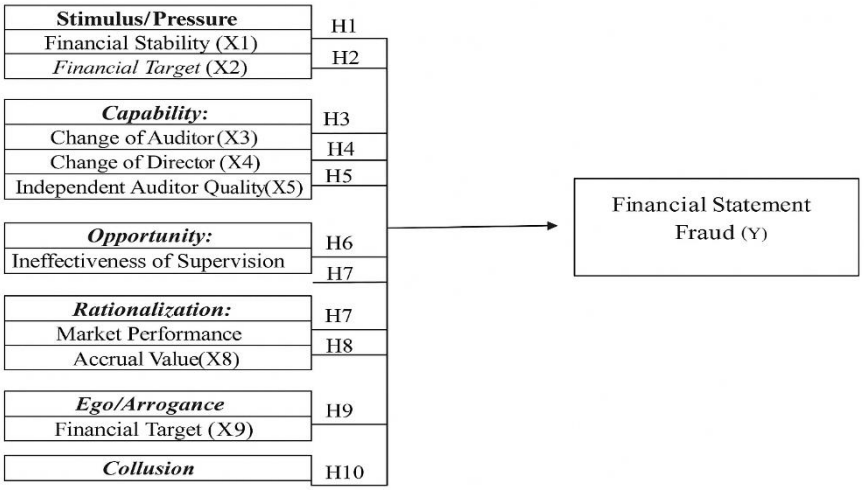

Figure 1. Research Model
Source: Own compilation, 2025

Research Hypotheses

Based on the theoretical review and conceptual framework above, the research hypotheses are as follows:

H1: Financial Stability has a positive effect on Financial Statement Fraud.
Financial stability refers to a company's ability to maintain consistent financial performance over time. According to the fraud triangle theory, pressure to maintain financial stability may drive management to manipulate financial statements to present favorable results. When a company experiences declining assets, profits, or growth, management may perceive this as a threat to the firm's image or investor confidence and resort to fraudulent reporting to maintain stability. Previous studies (Skousen *et al.*, 2009; Lou & Wang, 2009) have found that a decline in financial stability increases the likelihood of financial statement fraud.

H2: External Pressure positively affects Financial Statement Fraud.
External pressure refers to the need for the company to meet financial expectations or debt covenants. Based on the fraud hexagon theory, such pressure creates incentives for management to commit fraud to satisfy stakeholders and avoid default. Companies facing tight loan agreements or investor expectations may manipulate earnings to meet required ratios or performance targets. Studies by Skousen *et al.* (2009) and Tessa & Harto (2016) support that external pressure significantly influences fraudulent financial reporting.

H3: Auditor Switching positively affects Financial Statement Fraud.
Auditor switching occurs when a company changes its external auditor. Frequent auditor changes can be a red flag for fraud, as management may attempt to find auditors who are more lenient or less familiar with their operations. According to the fraud diamond theory, this can be linked to the element of rationalization and opportunity, as auditor changes may reduce the effectiveness of audit procedures. Research by Lennox (2000) and

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Damayanti & Budisusetyo (2017) suggests that auditor switching can increase the risk of financial statement manipulation.

H4: Change in Directors positively affects Financial Statement Fraud.
A change in the board of directors or top management often brings strategic and operational adjustments that may affect reporting behavior. From the fraud triangle perspective, such transitions create opportunities for fraud due to weakened internal controls during leadership changes. New directors may also feel pressure to quickly demonstrate success, leading to aggressive accounting practices. Prior research (Ujiyantho & Pramuka, 2007; Annisya *et al.*, 2016) found that management turnover tends to increase the likelihood of fraudulent reporting.

H5: Auditor Quality negatively affects Financial Statement Fraud.
Auditor quality, typically associated with the reputation and competence of external auditors, plays a crucial role in detecting irregularities. According to agency theory, high-quality auditors (e.g., Big Four firms) provide stronger monitoring mechanisms that reduce information asymmetry and fraudulent opportunities. Studies by Becker *et al.* (1998) and DeAngelo (1981) indicate that firms audited by high-quality auditors are less likely to commit financial statement fraud.

H6: Ineffective Monitoring positively affects Financial Statement Fraud.
Ineffective monitoring reflects weak oversight by the board of commissioners or audit committee. The fraud triangle and corporate governance theory suggest that when monitoring mechanisms are ineffective, opportunities for fraud increase because internal controls fail to detect manipulative behavior. Research by Beasley (1996) and Kusumawardhani (2013) shows that weak board independence and poor governance structures increase the likelihood of fraudulent reporting.

H7: Market Performance (measured by PBV) negatively affects Financial Statement Fraud.
Market performance, measured by Price to Book Value (PBV), reflects investor confidence in a firm's future profitability. According to signal theory, firms with strong market performance have less incentive to manipulate financial results because their value is already perceived positively. Conversely, companies with low PBV may face pressure to inflate earnings to improve market perception. Prior studies (Suyanto & Suprayogi, 2012; Fajri, 2018) found a negative relationship between market performance and financial statement fraud.

H8: Total Accruals Ratio positively affects Financial Statement Fraud.
Total accruals represent accounting estimates subject to management discretion. Under earnings management theory, a higher total accruals ratio indicates greater flexibility in manipulating earnings. The fraud triangle identifies this as an opportunity to distort reported profits without immediate detection. Studies by Dechow *et al.* (1995) and Beneish (1999) demonstrate that abnormal accruals are a key indicator of financial statement fraud.

H9: Financial Targets positively affect Financial Statement Fraud.
Financial targets, such as Return on Assets (ROA), serve as performance benchmarks for management. According to fraud hexagon theory, the pressure to meet unrealistic financial targets creates incentives for manipulation. Managers may adjust earnings to

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meet these goals and secure bonuses or maintain investor confidence. Prior research (Skousen *et al.*, 2009; Annisya *et al.*, 2016) supports that firms with higher financial targets are more likely to engage in fraudulent reporting.

H10: Political Connections positively affect Financial Statement Fraud.
Political connections can influence management behavior by creating opportunities for regulatory leniency or preferential treatment. According to political economy theory, politically connected firms may feel secure from sanctions, thereby increasing the opportunity to commit fraud. Research by Faccio (2006) and Leuz & Oberholzer-Gee (2006) found that politically connected firms often face weaker enforcement and higher levels of earnings manipulation.

RESEARCH METHOD

This study employs a quantitative explanatory research design aimed at examining the influence of multiple independent variables on financial statement fraud. The data utilized are secondary data obtained from the financial statements of infrastructure sector companies listed on the Indonesia Stock Exchange. Population and Sampling The population comprises all infrastructure companies listed on the IDX during the observation period. Samples were selected using purposive sampling, ensuring completeness and availability of the necessary data throughout the research timeline. Variables and Measurement The dependent variable in this study is financial statement fraud, measured using the Beneish M-Score model (Mahama, 2015). A Beneish M-Score greater than -2.22 indicates the presence of financial statement manipulation or fraud. The independent variables include financial stability, external pressure, auditor switching, change in directors, auditor quality, ineffective monitoring, market performance, total accruals, financial targets, and political connections. These variables are measured through financial ratios, dummy variables, and other relevant financial metrics, following prior literature (Skousen *et al.*, 2009; Ghozali, 2019). Table 1 below presents the operationalization of variables as a reference for measurement.

Data Analysis Technique

The analytical procedure of this study was conducted in several sequential stages. Initially, descriptive statistical techniques were applied to summarize the characteristics of the observed variables, including measures of central tendency (mean), dispersion (standard deviation), as well as minimum, maximum, and range values. This stage provided a comprehensive overview of the distributional properties and behavioral patterns of the sample data.

Subsequently, a series of classical assumption tests was performed to ensure the appropriateness of multiple linear regression analysis. In particular, the normality of residuals was examined using the non-parametric Kolmogorov–Smirnov test, given that the validity of inferential statistics such as the t-test and F-test relies on the assumption of normally distributed error terms.

In the final stage, multiple linear regression analysis was employed to evaluate the influence of the independent variables on the dependent construct, financial statement fraud. This approach allowed for the simultaneous testing of hypotheses regarding the predictive power of multiple determinants, thereby providing robust empirical evidence for the research model.

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Table 1. Operationalization of research variables

No	Variable Name	Measurement	Source	Scale
1	Financial Stability	Total Assetst−Total Assetst−1	Skousen *et al.*, 2009	Ratio
2	External Pressure	Total Liabilities/Total Assets	Skousen *et al.*, 2009	Ratio
3	Auditor Change	Dummy variable, coded 1 if the company changes its auditor, and 0 if not	Skousen *et al.*, 2009	Nominal
4	Board of Directors Change	Dummy variable, coded 1 if the company changes its board of directors, and 0 if not	Skousen *et al.*, 2009	Nominal
5	Independent Auditor Quality	Dummy variable, coded 1 if the company uses a Big Four audit firm, and 0 if not	Skousen *et al.*, 2009	Nominal
6	Ineffective Monitoring	Number of Independent Commissioners/Total Commissio ners	Skousen *et al.*, 2009	Ratio
7	Market Performance	PBV = Stock Price/Book Value per Share	Ross *et al.*	Ratio
8	Total Accrual Ratio	TATA = Net Income from Continuing Operations/Total	Skousen *et al.*, 2009	Ratio
9	Financial Target	Net Income after Tax/Total Assets	Skousen *et al.*, 2009	Ratio
10	Political Connection	Dummy variable, coded 1 if directors or commissioners have political connections during the observation period, and 0 if not	Skousen *et al.*, 2009	Nominal

Source: Own compilation (2025)

RESEARCH RESULTS

Table 2. Statistic descriptive analyze

Statistic	Y	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10
Mean	-1.9846	-0.0648	0.1576	0.6923	0.3846	0.5846	0.0125	0.0621	0.1691	0.2462	0.4154
Median	-2.8684	-0.1638	-0.1609	1.0000	0.0000	1.0000	-0.1502	-0.0327	0.2500	0.1429	0.0000
Maximum	2.8468	3.3654	3.8888	1.0000	1.0000	1.0000	3.4743	3.8683	2.3529	3.2857	1.0000
Minimum	-5.1526	-2.2522	-3.4867	0.0000	0.0000	0.0000	-3.0019	-2.4134	-2.6786	-2.5714	0.0000
Std. Dev.	1.2826	0.9578	0.7677	0.4647	0.4936	0.4955	1.2990	1.1936	0.9509	1.0309	0.4987
Skewness	1.2119	0.0264	0.6787	-0.4336	0.4743	-0.3431	0.1055	0.9368	-0.7736	0.7732	0.3144
Kurtosis	6.4839	2.5121	6.1493	1.6944	1.2250	1.1179	4.8327	5.9248	5.1221	6.1687	1.0871
Jarque-Bera	48.7852	2.4266	12.1934	3.1707	3.2401	4.0871	16.3072	32.0217	16.3674	27.0139	1.0871
Probability	0.0000	0.2970	0.0023	0.2048	0.1975	0.0436	0.0003	0.0000	0.0003	0.0000	0.5802
Sum	-129.015	-4.4482	10.2436	45.0000	25.0000	38.0000	0.8078	3.3966	11.0000	16.0000	27.0000
Sum Sq. Dev.	105.717	69.1931	77.9518	13.8462	15.8462	15.7846	76.9313	81.8631	77.2077	57.4286	15.7846
Observations	65	65	65	65	65	65	65	65	65	65	65

Source: Own compilation (2025)

The results show that the mean value of the dependent variable (Y) is -1.9848 with a standard deviation of 1.2852, indicating variation in the level of financial statement fraud across the sample. For the independent variables, Financial Stability (X1) and Financial Target (X2) have mean values of -0.0684 and 0.0158, respectively. Change of Auditor (X3) and Change of Director (X4) record means of 0.6923 and 0.3846, suggesting moderate occurrences of these events in the sampled firms.

Independent Auditor Quality (X5) shows an average value of 0.5846, while Ineffectiveness of Supervision (X6) records 0.0124, implying that supervisory

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weaknesses are relatively low but present in the sample. Market Performance (X7) and Accrual Value (X8) average 0.0521 and 0.1690, respectively. Financial Pressure (X9) records a mean of 0.0158, whereas Political Connection (X10) is observed with an average value of 0.4154.

Regarding the distribution characteristics, several variables exhibit skewness and kurtosis outside the normal range, such as Financial Stability (X1), Financial Target (X2), Market Performance (X7), and Accrual Value (X8). The Jarque-Bera test confirms that most variables are not normally distributed, with significance levels below 0.05.

Overall, the descriptive statistics reveal that the data distribution varies substantially across variables, highlighting the presence of extreme values and non-normality, which should be taken into consideration in subsequent regression testing.

Classical Assumption Test Results

The residual normality test indicates that the residuals are not perfectly normally distributed (Jarque-Bera probability = 0.018 < 0.05). However, given the relatively large sample size (n=65), the model remains robust under the Central Limit TheoremThe multicollinearity test using the Variance Inflation Factor (VIF) shows that all variables have centered VIF values below 10, suggesting no serious multicollinearity problem in the model. The heteroskedasticity test using Breusch-Pagan-Godfrey produces a probability value of 0.195 > 0.05, indicating no heteroskedasticity. Thus, the regression model satisfies the classical assumptions of OLS.

The regression results show that several variables significantly influence financial statement fraud (Y). Financial Stability (X1, p=0.0025), Financial Target (X2, p=0.0161), Ineffectiveness of Supervision (X6, p=0.0001), Market Performance (X7, p=0.0008), Accrual Value (X8, p=0.0000), and Financial Pressure (X9, p=0.0006) have a significant positive relationship with financial statement fraud. Meanwhile, Change of Auditor (X3), Change of Director (X4), Independent Auditor Quality (X5), and Political Connection (X10) are statistically insignificant (p>0.05). The model's explanatory power is very strong, with an R-squared of 0.9845 and Adjusted R-squared of 0.9817, indicating that approximately 98% of the variation in financial statement fraud can be explained by the independent variables. The overall model is highly significant, as reflected in the F-statistic (344.69, p=0.0000).

Panel Regression Model Selection

The model selection procedure was carried out through the application of the Chow, Hausman, and Lagrange Multiplier (LM) tests. The Chow test, which evaluates the suitability of the Common Effect Model (CEM) relative to the Fixed Effect Model (FEM), yielded an F-statistic of 0.6649 with a probability value of 0.7741. As the probability exceeds the 0.05 threshold, the null hypothesis cannot be rejected, indicating that CEM provides a better fit than FEM. Subsequently, the Hausman test was employed to distinguish between FEM and the Random Effect Model (REM). The chi-square statistic obtained was 7.0106 with a corresponding probability of 0.7244, which is greater than the 0.05 significance level. This outcome suggests that the null hypothesis cannot be rejected, thereby supporting the use of REM over FEM.

Finally, the LM test was used to compare CEM and REM. The test results showed that the variance of the random effect was not statistically significant, indicating that the null hypothesis of no random effect cannot be rejected. This outcome implies that the Common Effect Model remains the most suitable specification. Therefore, based on the

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combined results of the Chow, Hausman, and LM tests, the Common Effect Model (CEM) is selected as the final model for panel regression analysis.

Panel data regression test

The regression equation can be expressed as:

$$Yit=-1.942910+0.208607X1it + 0.150416X2it - 0.059869X3 -0.035763X4 + 0.039798X5 + 0.241167X6 +0.175450X7+0.238332X8 + 0.220009X9-0.041041X10 +\varepsilon$$

The results show that variables X1, X2, X6, X7, X8, and X9 are statistically significant at the 5% level, with probability values less than 0.05. This indicates that these variables have a significant effect on the dependent variable YY. Meanwhile, X3, X4, X5, and X10 are not statistically significant, suggesting no substantial influence on YY.

The model demonstrates a very high explanatory power, with an R-squared of 0.9846 and an Adjusted R-squared of 0.9817, implying that approximately 98% of the variation in YY can be explained by the independent variables included in the model. The F-statistic value of 344.6913 with a probability of 0.0000 further confirms that the model is statistically significant overall. Furthermore, the Durbin-Watson statistic of 2.2237 indicates no evidence of serious autocorrelation in the residuals, suggesting the reliability of the regression estimates. In summary, the panel regression results highlight that X1, X2, X6, X7, X8, and X9 play a crucial role in explaining the variation of YY, while the other variables do not exhibit significant effects.

Hypothesis Testing

Table 3. Hypothesis testing table

Variable	Coefficient	t-stat / p-value	Result	Interpretation
X1	+0.205843	p = 0.0029 (<0.05)	Significant	Positive effect on Y
X2	+0.151873	p = 0.0158 (<0.05)	Significant	Positive effect on Y
X3	–0.059033	p = 0.2423 (>0.05)	Not Significant	No effect on Y
X4	–0.035914	p = 0.4474 (>0.05)	Not Significant	No effect on Y
X5	+0.040829	p = 0.3990 (>0.05)	Not Significant	No effect on Y
X6	+0.241866	p = 0.0001 (<0.05)	Significant	Strong positive effect on Y
X7	+0.176900	p = 0.0008 (<0.05)	Significant	Positive effect on Y
X8	–	t = 4.5246, p = 0.0000 (<0.05)	Significant	Strong positive effect on Y
X9	+0.218004	p = 0.0007 (<0.05)	Significant	Positive effect on Y
X10	–0.040933	p = 0.4158 (>0.05)	Not Significant	No effect on Y

Source: Eviews 12

Coefficient of Determination (R^2)

The coefficient of determination (R^2) measures the explanatory power of the regression model. The results show that R2=0.9846R^2 = 0.9846R2=0.9846 and Adjusted R2=0.9817R^2 = 0.9817R2=0.9817, indicating that 98.46% of the variation in the dependent variable can be explained by the independent variables, while the remaining 1.54% is explained by other factors outside the model (Gujarati & Porter, 2009). This highly adjusted R2R^2R2 confirms that the model has strong predictive ability and is appropriate for explaining the phenomenon under study.

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t-Test (Partial Test)

The partial significance test was conducted using a 5% significance level (α=0.05\alpha = 0.05α=0.05) with a degree of freedom (df=54df = 54df=54) and a critical ttt-value of ±2.005. The results show that variables X1, X2, X6, X7, X8, and X9 have a positive and significant effect on the dependent variable. Conversely, X3, X4, X5, and X10 do not show significant effects.

Correlation Analysis

Correlation testing further supports the regression results. Variables X1, X2, X6, X7, X8, and X9 exhibit strong and significant positive correlations with the dependent variable, indicating consistent and robust relationships. In contrast, X3, X4, X5, and X10 display weak or insignificant correlations, suggesting limited explanatory power.

Overall, these findings indicate that the majority of the independent variables significantly contribute to explaining variations in the dependent variable, while a few have limited or no influence.

DISCUSSION

The findings of this study provide important insights into the determinants of financial statement fraud in infrastructure companies listed on the Indonesia Stock Exchange (IDX) during 2020–2024. The results show that financial stability (X1), external pressure (X2), ineffective monitoring (X6), market performance (X7), total accruals (X8), and financial targets (X9) significantly increase the likelihood of fraudulent reporting. Conversely, auditor change (X3), board change (X4), auditor quality (X5), and political connections (X10) are not statistically significant.

Significant Determinants

The significance of financial stability and external pressure supports the Fraud Hexagon framework and is consistent with agency theory, which highlights the role of financial incentives and information asymmetry in driving opportunistic behavior (Jensen & Meckling, 1976). Firms experiencing financial instability or high leverage are more likely to manipulate earnings to maintain investor confidence and secure financing (Skousen *et al.*, 2009).

The strong effect of ineffective monitoring underscores the importance of governance quality. Weak oversight by commissioners or audit committees increases management's opportunity to engage in fraudulent practices, aligning with prior studies showing that ineffective supervision facilitates earnings manipulation (Beasley, 1996; Apriliana & Agustina, 2017).

The positive effect of market performance (PBV) suggests that firms under market valuation pressures may inflate earnings to meet investor expectations. Similarly, financial targets and accruals are significant drivers of fraud, reflecting managerial discretion in applying accounting policies to achieve profit benchmarks. These findings resonate with the fraud triangle theory, in which pressure and rationalization motivate fraudulent behavior (Rezaee, 2005).

Insignificant Determinants

Surprisingly, auditor change and board change do not show a significant effect on financial statement fraud. This suggests that structural or personnel changes alone may

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not directly influence reporting integrity without broader governance reforms. Likewise, auditor quality is not a significant predictor, implying that external audits, even by Big Four firms, may not fully prevent fraud in the absence of strong internal controls. This finding contrasts with prior research suggesting that higher auditor quality reduces fraud risk (Clive & Pittman, 2010), but it supports the view that fraud prevention requires both external and internal mechanisms.

The insignificance of political connections also challenges the common assumption that politically connected firms are more prone to fraudulent reporting (Faccio *et al.*, 2006). This may reflect Indonesia's evolving regulatory environment, where political ties no longer guarantee immunity from scrutiny, or it may indicate that political connections affect firms through other channels not captured by the Beneish M-Score.

Limitation

Despite providing meaningful insights, this study has several limitations. First, the sample is restricted to infrastructure companies, which may limit the generalizability of the findings to other industries. Second, fraud detection relies solely on the Beneish M-Score, which, although widely recognized, may not capture all aspects of fraudulent behavior. Third, the analysis is based exclusively on secondary financial data and does not incorporate qualitative factors such as managerial ethics, organizational culture, or informal governance practices.

Future Research

Future studies could address these limitations by expanding the sample to include multiple sectors or cross-country comparisons. Employing alternative or complementary fraud detection models (e.g., F-Score, Dechow model, or machine learning approaches) may improve robustness. A mixed-methods approach combining quantitative indicators with qualitative insights (e.g., interviews with auditors or regulators) could also provide a deeper understanding of fraud dynamics. Additionally, incorporating variables such as ownership structure, executive compensation, and corporate culture would enrich the analysis of fraud determinants in emerging markets.

CONCLUSIONS

This study investigates the determinants of financial statement fraud in Indonesian infrastructure companies listed on the IDX from 2020–2024 using the Fraud Hexagon framework and the Beneish M-Score model. The results show that financial stability, external pressure, ineffective monitoring, market performance, total accruals, and financial targets significantly increase the likelihood of fraudulent reporting. In contrast, auditor change, board change, auditor quality, and political connections are not significant predictors.

These findings contribute to the literature by validating the Fraud Hexagon in an emerging market context and demonstrating that financial and governance-related pressures are key drivers of fraud. From a practical perspective, the results highlight the importance of strengthening monitoring mechanisms, improving transparency, and incorporating fraud indicators into regulatory and audit practices.

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