

UNMASKING FINANCIAL SHENANIGANS INDICATION: FRAUD HEPTAGON APPLICATION IN INDONESIA'S HEAVY CONSTRUCTION AND CIVIL ENGINEERING SECTOR

Aulia Dewi Puspita^{1*}, Richatul Jannah²

Affiliation:

^{1,2} Accounting Study Program,
Faculty of Economics and
Business, Universitas Negeri
Semarang

Article Process:

Received 02- 20, 2026

Revised 02- 26, 2026

Accepted 02- 26, 2026

* Correspondence:

aliadewipuspita@students.unnes
.ac.id

DOI : 10.30813/jab.v19i1.9774



This work is licensed under a Creative Commons
Attribution-ShareAlike 4.0 International License

Abstrak

Background: Fraudulent financial statements represent the most financially damaging form of fraud and the construction sector ranks as the highest risk sector globally for this scheme. Alongside, Indonesia currently ranks as the third nation for fraud cases across Asia Pacific, creating an urgent need to examine this phenomenon within its national context.

Objective: This research explores the factors driving financial shenanigans in Indonesian heavy construction and civil engineering companies through the lens of the fraud heptagon framework.

Research Methods: This study employs a quantitative panel data analysis method using secondary financial data from 13 publicly listed companies (2017-2023), selected with purposive sampling, and analyzed using Eviews with fixed effect regression models.

Research Results: The findings reveal that intense financial target pressures and high employee turnover significantly elevate fraud risk. In contrast, external pressures from financial leverage demonstrates a counterintuitive mitigating effect. Furthermore, most conventional fraud triggers show no statistically significant influence.

Originality/Novelty of Research This research extends the academic discourse by integrating financial shenanigans analysis within the Fraud Heptagon framework, especially allowing the use of the religiosity variable while still considering the greed variable.

Keywords: Heavy Construction, Fraud Heptagon Theory, Fraudulent Financial Statement, Financial Shenanigans

Introduction

The heavy construction and civil engineering companies involved in designing and constructing large scale infrastructure projects, including toll roads, bridges, airports, hospitals, and other public facilities (Indonesia Stock Exchange, 2021). While these projects are vital for development, they typically demand large capital and require coordination among multiple parties, such as contractors, governments, and investors. As a result, stakeholders demand accountability through accurate reporting on both project progress and corporate financial condition. However, financial reports are vulnerable to misstatement,

Homepage : <http://journal.ubm.ac.id/index.php/business-accounting/>

which can be either unintentional errors or deliberate fraud defined as intentional deception for personal or organizational gain (Arens, Elder, & Beasley, 2015).

Fraud is more prevalent in companies with complex transactions. Therefore, the complexity transaction of heavy construction projects makes the industry susceptible to fraudulent practices. This is because revenue is recognized using the percentage of completion method, as opposed to upon final delivery. This involves tracking project progress, managing costs, and dealing with contract variations and retentions, which adds significant layers of complexity to their financial records (Ayu, 2024; Jamal & Ian, 2025). According to the Association of Certified Fraud Examiners (2024), fraud is generally categorized into three schemes including corruption, asset misappropriation, and financial statement fraud. Despite representing only 5% of global fraud cases, financial statement fraud has a financial impact that far exceeds other schemes and is particularly dominant in the construction sector, with a 10% prevalence rate.

In Indonesia, according to data from the Indonesia Corruption Watch (2024), fraud or also known as corruption in Indonesia continue to increase annually from 271 case in 2019 to 791 case in 2023. Along side with that, the high number of fraud cases in Indonesia can be seen in ACFE data, which shows that in 2020, Indonesia ranked first with 36 fraud cases in the Asia Pacific region. Although in 2022, Indonesia dropped to third place with 23 cases, Indonesia currently remains in third place with a total of 25 cases, behind China with 33 cases and Australia with 29 cases (Association of Certified Fraud Examiners, 2020, 2022, 2024).

There are several fraud cases that attract public attention in Indonesia. Among them are cases involving PT Waskita Karya (Persero) Tbk and PT Wijaya Karya (Persero) Tbk, two giant state owned construction companies strategically vital to national infrastructure projects. Both companies engaged in similar manipulation practices, where they reduced their expenses to appear profitable despite their cash flows consistently showing negative figures. Additionally, PT Waskita Karya was implicated in alleged markups in project budgets, concealment of vendor payables since 2016, and abuse of authority that resulted in significant state losses, while PT Wijaya Karya was also suspected of financial statement manipulation, cost mark-ups in procurement, and collusion with contractors to embezzle project funds (Amelia & Ardini, 2024; Ulfani & Ernawati, 2024). The exposure of fraud in these major state owned enterprises not only eroded public trust but also caused substantial state losses

These fraud cases can be analyzed using the theory of financial shenanigans. As defined by Schilit, Perler, & Engelhart (2018) financial shenanigans refer to the manipulation of financial data to create a misleadingly favorable impression of a company's performance. There are three ways to do this such as earnings manipulation, cash flow manipulation, and key metric manipulation. In the cases of PT Waskita Karya and PT Wijaya Karya, the fraudulent practices represent earnings manipulation and key metric manipulation, as both companies manipulated their expenses to appear profitable despite consistently negative cash flows, which in turn made other profitability measures such as EBITDA also appear positive.

Additionally, other practices such as abuse of authority, collusion with contractors, and other non financial statement irregularities that can indicate fraud are better explained through the fraud heptagon theory. According to Reskino (2022), the fraud heptagon has seven factors such as pressure, opportunity, rationalization, capability, arrogance, company culture and religiosity which are generally based on certain conditions. The first factor is pressure. Based on fraud theory financial targets create pressure on managers to meet profit goals and Sumampow, Manaroinsong, & Sumual (2021) found that financial targets specifically measured by ROA significantly influence fraud, thus financial targets are predicted to positively influence financial shenanigans. Financial stability reflects the company's ability to maintain stable conditions. Consist with research by Nurrohman & Hapsari (2020) that found financially stable company have less incentive to manipulate earnings, thus financial stability is predicted to negatively influence financial shenanigans. Based on research by Achmad, Ghozali, & Pamungkas (2022) external pressure from high debt will make stakeholders monitor financial reporting more strictly, thus external pressure is predicted to negatively influence fraud. However, Retnowati & Triyanto (2020) note that companies must appear profitable to avoid debt covenant violations.

The second factor is opportunity, where changes in audit committees often create oversight gaps that weaken internal control, research by Aviantara (2021) found that frequent audit committee changes increase fraud risk, thus change of audit committee is predicted to positively influence financial shenanigans. The third factor is rationalization, auditor changes and low audit quality allow companies to rationally hide manipulations and research by Wicaksono & Suryandari (2021) found that both factors are positively correlated with fraud, thus change of auditor and low audit quality are predicted to positively influence financial shenanigans. The fourth factor is capability, director turnover creates management instability, particularly when new directors have not yet mastered the company's financial recording systems and unfamiliar with the specific regulations governing the industry. This temporary lack of

expertise creates opportunities for errors or intentional manipulation to go undetected, align with Aviantara (2021) research which found changes in directors can influence risky accounting policies implementation, thus change of director is predicted to positively influence financial shenanigans. The fifth factor is arrogance, this can be observe when CEO holding concurrent positions and may feel overconfident and above oversight, research by Rianggi & Novita (2023) found that CEO duality increases fraud likelihood in a company, thus CEO duality is predicted to positively influence financial shenanigans. The sixth factor is company culture which is proxied by collusion. Company culture reflects the shared values, norms, and practices within an organization. When collusion becomes a common practice among board members holding concurrent positions across companies, it indicates a culture that normalizes hidden collaboration and weakens ethical boundaries. Vousinas (2019) states that such board structures facilitate fraud, thus collusion as a proxy for company culture is predicted to positively influence financial shenanigans. The seventh factor is religiosity, companies with strong religious values prioritize ethical behavior like integrity and employee welfare. Research by Megawati & Reskino (2023) found that this creates stability and lower turnover, thus low employee turnover reflecting religiosity is predicted to negatively influence financial shenanigans.

Based on the conditions above, several research gaps can be identified that justify the need for this study. First, while fraud heptagon theory increasingly utilized in fraud research, previous studies in Indonesia have predominantly focused on banking and manufacturing sector, leaving the heavy construction and civil engineering sector relatively underexplored despite being identified as the highest risk sector globally for financial statement fraud. This gap is particularly pronounced in Indonesia, which ranks as the third nation for fraud cases in the Asia Pacific region, making its publicly listed construction companies a critical setting for examining fraud determinants. Second, this study contributes by proxying religiosity through employee turnover, offering a new measurable approach to a factor often treated only conceptually in fraud research. Thus, this study aims to examine the influence of fraud heptagon factors on financial shenanigans in Indonesian heavy construction and civil engineering companies, with results expected to contribute theoretically by extending fraud heptagon application to the construction sector and practically by informing fraud prevention policies for regulators and corporate governance bodies in Indonesia.

Literature Review

Financial Shenanigans

Financial shenanigans refer to various financial statement manipulation practices to create misleadingly positive picture of a company's performance. This financial statement manipulation occurs in a gray area motives behind financial shenanigans vary, from meeting market expectations, obtaining management bonuses, avoiding debt covenant violations, to increasing company value for mergers or acquisitions. Financial shenanigans can be grouped into three main categories based on the areas manipulated in the financial statements (Schilit et al., 2018).

The first type is earnings manipulation. This is when a company manipulate with its profit and loss report. For example, it might record sales too early, record fake sales, or use one time activities like sale lease back to boost profit. It can also move expenses around delaying them to a future period or bringing future expenses into the current period to make a stabil financial performance appearance.

The second type is cash flow manipulation. Here, the goal is to make the company's cash flow from its main business operations look strong and healthy. Tricks include recording money from loans or investors as if it came from daily operations, or moving regular business costs out of the operations section. And manipulate the sales in result high and positive operating cash flow. Companies might also temporarily boost operating cash by aggressively collecting customer payments or delaying payments to suppliers.

The third type is key metric manipulation. This involves changing how important financial numbers are calculated or presented. A common trick is to use a customized adjusted profit measure like adjusted EBITDA that ignores significant costs. Companies might also temporarily improve balance sheet ratios, for example by selling their customer receivables right before reporting day, to make their debt or asset efficiency look better.

To detect these patterns, researchers often use a proxy called the F-Score by Dechow, Ge, Larson, & Sloan (2011). This is a mathematical model that uses seven ratios from the financial statements to calculate a score. A high score suggests a high probability that the company is using manipulative tricks. The model suitable because the formulas are designed to spot warning signs linked to the shenanigans described above.

Fraud Heptagon Theory

Fraud theory has come a long way since it was first developed, beginning with the Fraud Triangle Theory introduced by Cressey (1971). This theory identifies three main elements that trigger fraud including pressure, opportunity, and rationalization. Pressure arises from pressing financial or non financial needs, while opportunity arises from weak internal controls. Rationalization is the perpetrator's subjective justification for legitimizing fraudulent acts. The theory's development continued with the Fraud Diamond Theory by Wolfe & Hermanson (2004), which added a fourth element capability. This capability includes technical expertise, strategic position, or the perpetrator's access to manipulate the system. This theory emphasizes that fraud requires not only pressure, opportunity, and rationalization but also the perpetrator's capability to carry it out effectively. Marks (2012) expanded this concept through the Fraud Pentagon Theory by including two new elements, competence and arrogance. Competence refers, while arrogance describes an overconfident attitude that disregards rules.

This theory highlights the complex psychological and technical aspects of fraudulent acts. Furthermore, Vousinas (2019) developed the Fraud Hexagon Theory by adding collusion as a sixth element. Collusion involves hidden collaboration between individuals or groups, both inside and outside the organization to facilitate fraud. This theory emphasizes the role of social dynamics and networks in fraud. The most recent development is the Fraud Heptagon Theory when first popularized by Yusof (2016) before fraud hexagon theory was published. This theory introduces greed and ignorance, greed refers to an excessive desire for possessions, wealth, or power, creating personal financial pressure that motivates employees to commit fraud and ignorance refers to a lack of knowledge or information, where individuals mistakenly believe they are knowledgeable and reject valid contradictory information without understanding its importance. While collusion was not included in Yusof's fraud heptagon framework, Reskino (2022) later developed an alternative fraud heptagon model which reflects moral values in corporate culture and religious beliefs that can prevent fraud. This theory explains fraud based on the premise that individuals or groups commit fraud due to weak faith and the absence of a strong ethical culture within an organization, incorporates integrity as a key element, reflecting moral values, corporate culture, and religious beliefs that can prevent fraud.

Hypothesis Development

Based on the financial shenanigans theory and the fraud heptagon theory it can be concluded that companies in heavy construction and civil engineering sectors may commit fraud. This can be examined using the fraud heptagon theory by elaborating on the factors that can lead to fraud.

The pressure in this study is measured through three indicators including financial targets, financial stability, and external pressure. First, financial targets reflect the company's pressure to achieve its set financial targets. This aligns with findings that financial targets measured by ROA significantly precipitate financial shenanigans (Sumampow et al., 2021; Wulandari & Sari, 2024). Second, financial stability indicates the company's ability to maintain financial stability elevated financial stability reduces manipulation incentives, consistent with evidence that financially stable firms avoid fraud risk (Nurrohman & Hapsari, 2020; Retnowati & Triyanto, 2020), though Sumampow et al. (2021) reported insignificance for this variable. Third, leverage reflects external pressures such as high debt obligations. Previous research by Retnowati & Triyanto (2020) found that high leverage compels firms to obscure poor performance to prevent debt covenant breaches, corroborated by studies on construction firms. Mean while Achmad, Ghozali, & Pamungkas (2022) who argued that external monitoring can act as a deterrent to fraud. Drawing from the theoretical framework elaborated earlier, the hypothesis for this research is derived as follows:

H1: Financial Target has a positive influence on the indication of financial shenanigans.

H2: Financial Stability has a negative influence on indications of financial shenanigans.

H3: External Pressure has a negative influence on indications of financial shenanigans.

Opportunity is measured through changes in audit committees. These changes can create oversight gaps that allow for financial statement manipulation. Research by Aviantara (2021) shows that frequent audit committee changes can reduce the effectiveness of internal oversight by increasing the risk of financial statement manipulation. From the theoretical foundation above, the study proposes the following hypothesis:

H4: Change of Audit Committee has a positive influence on indications of financial shenanigans.

Rationalization is measured through auditor change and audit quality. Companies can use auditor changes to avoid fraud detection, while low audit quality makes it easier for companies to manipulate financial statements. Research by Wicaksono & Suryandari (2021) found that auditor change and low audit

quality are positively influence financial statement fraud. From the theoretical rationale and empirical support presented, the hypothesis is formulated:

H5: Change of Auditor has a positive influence on indications of financial shenanigans.

H6: Audit Quality has a positive influence on indications of financial shenanigans.

Competence is measured through director turnover. Frequent director turnover can indicate management instability, potentially increasing the risk of fraud. Research by Aviantara (2021) shows that changes in directors can influence risky accounting policies. From the theoretical framework and literature review that has been described the research hypothesis is developed as follows:

H7: Change of Director has a positive influence on the indication of financial shenanigans.

Arrogance is measured by CEO duality, CEO holding concurrent positions at another company. This can create conflicts of interest and reduce effective oversight. Research by Rianggi & Novita (2023) found that CEO duality increases the likelihood of financial statement fraud. Drawing from the theoretical framework and literature review that has been described, this study formulates the following hypothesis:

H8: CEO duality has a positive influence on indications of financial shenanigans.

Company culture that reflect collusion is measured by the number of board of director and committee members who hold concurrent positions in other companies. This aligns with the fraud theory by Vousinas (2019), where such collusion can facilitate financial statement manipulation due to collaboration between individuals or organizations that enable such action. Research by Achmad, Ghozali, Rahardian, et al. (2022) and Achmad, Ghozali, & Pamungkas (2022) state that board of director and committee might allow collusion correlated with financial statement fraud. On the basis of the theoretical framework presente and literature review that has been described, the research hypothesis is developed as follows:

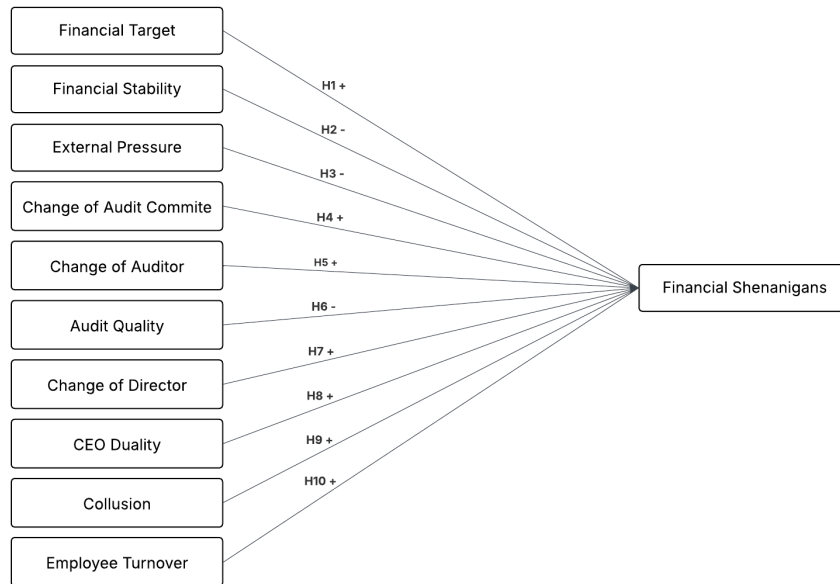
H9: Collusion has a positive influence on the indication of financial shenanigans.

Fraud heptagon theory, fist developed and popularized by Yusof (2016) in his dissertation, explains that fraud caused by two main factors. First, ignorance, which refers to a lack of knowledge or information where individuals mistakenly believe they are knowledgeable and reject valid contradictory information. Second, greed which relates to an excessive desire for possessions, wealth, or power that creates personal

financial pressure motivating employees to commit fraud. This theory was further developed by Reskino (2022) in his dissertation, which replace ignorance and greed with two new dimensions, religion and culture company based on the premise that individuals or groups commit fraud due to weak faith and the absence of a strong ethical culture within an organization. Megawati & Reskino (2023) states that religious companies tend to prioritize social justice, including protecting employee rights, which creates human resource stability and create lower employee turnover. Drawing from the theoretical framework outlined and previews research above, the research hypothesis is proposed as follows:

H10: High Employee Turnover has a positive influence on indications of financial shenanigans.

Figure 2. Research Model



Source: Author (2026)

Research Methods

This study uses a quantitative approach with a panel data analysis method to examine the financial statements of heavy construction and civil engineering companies listed on the Indonesia Stock Exchange (IDX). The selection of this method was based on its ability to accommodate time-series and cross-sectional

data during the 2017-2023 period. Secondary data were obtained from the company's annual reports and financial statements that met the purposive sampling criteria: (1) actively recorded on the IDX during the research period, (2) published complete annual reports, and (3) consistently presented annual reports and audited financial statements. From 24 companies listed on IDX, 13 companies were sampled. The initial sample consisted of annual reports from 13 companies from 2017 to 2023, yielding a total of 91 firm-year observations. However, 7 outliers were identified and excluded due to extreme values that could bias the statistical results, thus the final sample comprised 84 observations. This research attempts to explore the impact of fraud heptagon variables on the occurrence of financial shenanigans through detail regarding the operational definitions and measurement of the variables are provided below:

Table 1. Operational Definition of Variable

Factor	Variable	Definition	Measurement
Dependen			
Financial Shenanigans	F-Score	F-Score is a statistical model for detecting financial statement manipulation, serving as a proxy for financial shenanigans because it measures anomalies in accruals and performance.	$F\text{-Score} = \frac{\text{Predict Probability}}{\text{Unconditional Probability}}$ $\text{Unconditional Probability} = 0.0037$ $\text{Predict Probability} = \frac{2.71828183^{(\text{Predict value})}}{1 + 2.71828183^{(\text{Predict value})}}$ $\text{Predict Value} = -7.893 + 0.790 * \text{RSSTaccrual} + 0.2518 * \Delta \text{REC} + 1.191 * \Delta \text{INV} + 1.979 * \text{SOFTASSETS} + 0.171 * \Delta \text{CASHSALES} - 0.932 * \Delta \text{ROA} + 1.092 * \text{ISSUE}.$

Factor	Variable	Definition	Measurement
Independen			
Pressure	Financial Target	Financial Target is proxied by net income/total assets because this profitability ratio reflects pressure to achieve aggressive targets.	Financial Target = Net Income/Total Assets
	Financial Stability	Financial Stability is proxied by revenue/total assets because a low ratio indicates instability that increases the potential for fraud.	Financial Stability = Income/Total Assets
	External Pressure	External Pressure is proxied by total debt/total assets because high debt creates external pressure (stimulus) from creditors.	Leverage = Total Liabilities/Total Assets
Opportunity	Change of Audit Committee	The Change of Audit Committee serves as a proxy for opportunity because the turnover reduces oversight effectiveness, company understanding, and introduces competency gaps, creating opportunities for fraud.	Dummy variable, 1 = change occurs in the audit committee during the year, 0 = no change
Rationalization	Change of Auditor	Auditor Switching serves as a proxy for rationalization because	Dummy variable,

Factor	Variable	Definition	Measurement
		companies may switch auditors to avoid fraud detection, which is part of rationalizing fraudulent actions.	1 = company switches external auditor during the year, 0 = no switch
	Audit Quality	Audit Quality serves as a proxy for rationalization because low quality auditors are at higher risk of failing to detect misstatements in financial reports.	Dummy variable 1 = audited by Big 4 public accountat firm 0 = audited by non-Big 4 public accountat firm
Competence	Change of Director	Change of Director serves as a proxy for competence because director turnover affects the competence in strategic decision making.	Dummy variable 1 = change occurs in director position during the year, 0 = no change
Arrogance	CEO Duality	CEO Duality serves as a proxy for arrogance because the concentration of power fosters arrogance and reduces checks and balances.	Dummy variable 1 = CEO holds concurrent position at another company 0 = CEO holds no positions at other companies
Culture Company	Collusion	Collusion is influenced by company culture and the number of BOD and BOC members because an unethical culture and a small board	Number of BOD and BOC that can committed collusion

Factor	Variable	Definition	Measurement
		facilitate collusion by reducing internal oversight.	
Religiosity	Employee Turnover	Employee Turnover serves as a proxy for religiosity because a high level of religiosity can make employees more loyal and act with integrity, thereby lowering turnover.	Turnover Employee Rate = $\frac{\text{Number of Employees Leaving}}{\text{Average Number of Employees}} \times 100\%$

Source: Author (2026)

Results and Discussion

Panel data regression analysis was carried out to be able to determine whether the hypothesis that had been made was accepted or not. The type of panel data regression is determined by performing the Chow Test, Hausman Test, and Lagrange Multiplier Test if necessary to determine the type of model panel data regression between Fixed Effect, Random Effect, or Common Effect. After testing for the selection of regression methods, the regression results with Random Effect were obtained which was a regression in accordance with this study. Next, regression was carried out using the fixed effect model. However, there is a data outlier of a number of data so that the data can be distributed normally and get results such as Table 3 and Table 4.

Table 2. Chow Test and Hausman Test

Test	Statistic	Prob	Conclusion
Chow Test	Cross-section Chi-Square	0,0002	FEM Accepted
Hausman Test	Cross-section Random	0,0003	FEM Accepted

Source: Author (2025)

Based on the results presented in Table 3, three hypotheses are accepted, while the remaining seven are not. The effect of Financial Target (H1) is accepted with a coefficient of 2.793565, a t-statistic of 2.482173, and a p-value of 0.0158, indicating a significant positive relationship. Similarly, External

Pressure (H3) shows a significant negative influence, with a coefficient of -0.875682, a t-statistic of -2.199392, and a p-value of 0.0316, leading to its acceptance. Furthermore, Employee Turnover (H10) has a significant positive effect, with a coefficient of 0.918739, a t-statistic of 3.161525, and a p-value of 0.0024. However, the effects of Financial Stability (H2), Change of Audit Committee (H4), Auditor Switching (H5), Audit Quality (H6), Change of Director (H7), CEO Duality (H8), and Collusion (H9) are all statistically insignificant, as indicated by p-values greater than 0.05, leading to the rejection of these hypotheses. Notably, CEO Duality (H8) shows a p-value of 0.0947, which is close to but still above the conventional threshold of 0.05, thus it is not accepted. These findings suggest that among the factors examined, only financial targets, external pressure, and employee turnover have a significant influence on the outcome in this model.

Table 3. Rgression Test with Fixed Effect Model

Variabel	Coefficient	Std. Error	t-Statistic	Prob	Conclusion
C	2,302289	0,385519	5,971923	0,000000	
Financial Target	2,793565	1,125451	2,482173	0,015800	H1 Accepted
Financial Stability	0,124763	0,410921	0,303619	0,762400	H2 Rejected
External Pressure	-0,875682	0,398147	-2,199392	0,031600	H3 Accepted
Change of Audit Committee	0,035981	0,133407	0,269705	0,788300	H4 Rejected
Auditor Switching	-0,114150	0,155359	-0,734750	0,465300	H5 Rejected
Audit Quality	-0,095452	0,252859	-0,377492	0,707100	H6 Rejected
Change of Director	0,044267	0,131000	0,337919	0,736600	H7 Rejected
CEO Duality	0,322675	0,190114	1,697269	0,094700	H8 Rejected
Collusion	-0,046514	0,037622	-1,236354	0,221000	H9 Rejected
Employee Turnover	0,918739	0,290600	3,161525	0,002400	H10 Accepted

Source: Author (2025)

Based on Table 4, the overall significance test results (Prob(F-statistic) = 0.000000), the model is statistically significant, allowing the rejection of the null hypothesis that all regression coefficients are

jointly insignificant. The independent variables collectively explain approximately 65.78% of the variation in Financial Shenanigans, as shown by the R-squared value of 0.657789. After adjusting for model degrees of freedom, the Adjusted R-squared value of 0.536359 indicates that about 53.64% of the variation in the dependent variable is explained, suggesting some potential inefficiency due to the inclusion of less relevant variables.

Table 4. R-Square and F-statistic Test

Test	Prob
R-Squared	0,657789
Adjust R-squared	0,536359
F-statistic	5,417030
Prob (F-statistic)	0,000000

Source Author (2025)

The Effect of Financial Target on Financial Shenanigans

The results show that Financial Target has a positive significant effect on Financial Shenanigans, accepted the hypothesis 1. This is consistent with the research by Wulandari & Sari (2024) and Naldo & Widuri (2023) which confirmed that financial targets significantly contribute to fraudulent activities due to external pressures and ambitious corporate objectives. This means that the higher the pressure to achieve certain financial targets, the greater the likelihood of financial statement manipulation. This finding also aligns with the perspective of Pressure from the Fraud Triangle theory where intense pressure to meet financial goals can incentivize unethical behavior. When management faces stringent performance benchmarks shareholder, expectations or external financing requirements the temptation to manipulate financial reports increases.

The Effect of Financial Stability on Financial Shenanigans

The results show that Financial Stability does not have a statistically significant effect on Financial Shenanigans, leading to rejection of Hypothesis 2. This is supported by previous studies by Lubis & Purba (2024) and Wulandari & Sari (2024) which found that high liquidity or profitability does not automatically correlate with fraudulent behavior. This indicates that a company's stable financial condition is neither a significant driver nor a deterrent of manipulation. The implication is that fraud detection efforts should not

focus exclusively on financially distressed firms, as stable entities may also engage in manipulation under different motivations such as market expectations or executive bonus targets.

The Effect of External Pressure on Financial Shenanigans

Interestingly, External Pressure shows a significant negative influence on Financial Shenanigans, accepted the Hypothesis 3. This result aligns with Achmad, Ghozali, Rahardian, et al. (2022) and Achmad, Ghozali, & Pamungkas (2022) who argued that external monitoring can act as a deterrent to fraud. This implies that increased external oversight, such as from creditors or investors, can actually reduce financial manipulation. One possible explanation is that such pressure enforces discipline and transparency, forcing companies to maintain credible financial reporting to maintain trust. This finding highlights the role of external pressure in increasing accountability and reducing opportunities for manipulation.

The Effect of Change of Audit Committee on Financial Shenanigans

The results show that Audit Committee Turnover does not significantly effect Financial Shenanigans, rejecting the Hypothesis 4. This is in line with previous research by Megawati & Reskino (2023) who found that changes in audit committee members only impact financial fraud if accompanied by structural weaknesses, such as low competence, decreased independence, and the malfunctioning of the Whistleblowing System (WBS) in detecting and reporting governance violations. This indicates that change of audit committee changes alone do not necessarily improve or weaken financial oversight. The implication is that audit committee effectiveness derives not from turnover stability but from the strength of the underlying governance system, expertise, and independence.

The Effect of Auditor Switching on Financial Shenanigans

Auditor Switching is found to have no significant impact on Financial Shenanigans, rejected the Hypothesis 5. This outcome aligns with studies by Nurbaiti & Ferdiawan (2023), Naldo & Widuri (2023) and Lubis & Purba (2024) which indicate that auditor rotations are often driven by regulatory requirements or cost considerations rather than by intent to conceal fraud. The implication is that mandatory auditor rotation policies may not be a sufficient standalone measure to prevent fraud unless accompanied by enhanced audit quality and deeper substantive testing.

The Effect of Audit Quality on Financial Shenanigans

The results reveal that Audit Quality does not have a statistically significant effect on Financial Shenanigans. Rejected the Hypothesis 6. This finding aligns with Bestari & Triyanto (2025) and Wicaksono & Suryandari (2021) who noted that compliance with auditing standards SA and SPAP is widespread minimizing variation in audit outcomes. This contradicts the conventional expectation that higher audit quality deters fraud. A possible explanation is that both large and small audit firms generally follows professional standards reducing the observable difference in fraud detection across audit types. The implication is that reliance on audit firm reputation alone may not be adequate, instead fraud prevention requires a more holistic approach involving internal controls and corporate governance.

The Effect of Director Turnover on Financial Shenanigans

Director Turnover is found to have no significant influence on Financial Shenanigans, rejecting hypothesis 7. This indicates that changes in director are not a primary driver of financial manipulation. This result is consistent with multiple studies including Lubis & Purba (2024), Riangga & Novita (2023) and Agusputri & Sofie (2019) which argue that director changes are often motivated by normal organizational dynamics such as retirement or career moves rather than by fraudulent intent. Therefore, automatically associating director turnover with increased fraud risk may be misleading. The practical implication is that regulators and analysts should consider the context and reasons behind turnover rather than treating it as a direct red flag. This conclusion is reinforced by Djami & Murtanto (2024), Wulandari & Sari (2024), Apriliana & Agustina (2017), Thamlim & Reskino (2023), Khamainy, Amalia, Cakranegara, & Indrawati (2022) who collectively demonstrate fraudulent financial statements are not significantly influenced by director changes.

The Effect of CEO Duality on Financial Shenanigans

CEO Duality which includes the CEO holding a C-level position in another company does not show a significant effect on Financial Shenanigans, rejecting Hypothesis 8. Research by Dewi & Anisykurlillah (2021) and Wicaksono & Suryandari (2021) supports this indicating that strong internal controls and oversight can mitigate potential conflicts of interest. This suggests that having multiple leadership roles across companies does not inherently increase the risk of financial manipulation. This can be explained by the effectiveness of governance mechanisms and the CEOs ability to manage responsibilities without compromising integrity.

Cumulative controls by audit committees, both internal and external auditors, and internal systems critically prevent potential abuse by overconfident leadership. Strong governance and accountable corporate culture minimize fraud risks despite inherent arrogance potential Thamlim & Reskino (2023). The arrogance factor is not empirically substantiated. Enhanced governance, effective internal oversight, and transparent organizational culture are key to mitigating leadership arrogance effects. This aligns with Djami & Murtanto (2024), Pamungkas & Irwandi (2025), and Warseno & Ayu (2023) confirming CEO duality does not significantly influence fraudulent financial statements. The implication is that corporate governance systems and personal integrity play a critical role in ensuring that multiple roles do not lead to fraudulent behavior.

The Effect of Collusion on Financial Shenanigans

Collusion is found to have no significant impact on Financial Shenanigans, rejecting hypothesis 9. This aligns with Achmad, Ghozali, & Pamungkas (2022) and Achmad, Ghozali, Rahardian, et al. (2022) who found no evidence that plural positions inherently foster collusion. This result challenges the assumption that board members holding multiple positions necessarily lead to fraudulent collaboration. Instead it suggests that individuals in such roles can maintain independence and adhere to ethical standards. The implication is that antifraud policies should focus on transparency disclosure and conflict of interest management rather than broadly restricting multiple board memberships.

The Effect of Employee Turnover on Financial Shenanigans

Employee Turnover exhibits a significant positive effect on Financial Shenanigans, accept hypthesis 10. This finding aligns with the Fraud Heptagon theory by Reskino (2022) and research by Megawati & Reskino (2023) which identifies instability and a nonconductive work environment as factors that create opportunities for fraud. This means that higher staff turnover increases the likelihood of financial manipulation. Frequent employee changes can disrupt internal controls, reduce institutional knowledge and increase operational vulnerability. The practical implication is that organizations should not only monitor financial indicators but also prioritize human resource stability, ethical culture and internal control continuity to mitigate fraud risks associated with high turnover.

Conclusion

This study concludes that the application of fraud heptagon theory has not been able to fully explain the practice of financial shenanigans comprehensively. Subsequently, with relatively low adjusted R² (53.64%) which indicated the presence of other explanatory variables outside the model. The findings reveal that three factors significantly influence financial shenanigans. First, financial target demonstrates a positive significant effect, confirming that pressure to achieve performance benchmarks increases manipulation risk, consistent with fraud theory. Similarly, employee turnover shows a significant positive impact, indicating that workforce instability disrupts internal controls and creates fraud opportunities, supporting the fraud heptagon perspective on environmental vulnerability. Interestingly, external pressure exhibits a significant negative effect, suggesting that heightened scrutiny from creditors and investors paradoxically reduces financial manipulation by enforcing discipline and transparency. These findings collectively emphasize that while internal pressures and instability elevate fraud risk, robust external monitoring serves as an effective deterrent.

In contrast, seven variables showed no significant effect on financial fraud. Financial stability did not affect manipulation, suggesting that stable firms may still engage in fraud for reasons beyond survival, such as market expectations or executive bonuses. Change of audit committee, change of director, CEO duality positions, and collusion were also insignificant, suggesting that structural changes, leadership transitions, and dual positions do not inherently increase fraud risk if supported by effective internal controls, appropriate onboarding processes, and a strong ethical culture. These findings suggest that the presence of structural characteristics is not sufficient to explain fraud without considering the quality of governance mechanisms and the surrounding organizational culture. Similarly, auditor switching and audit quality did not show a significant effect. Auditor switching was insignificant because companies rotate auditors primarily due to government regulations limiting auditor tenure, not out of an intention to conceal fraud. Meanwhile, audit quality did not show a significant effect because both large and small audit firms adhere to professional standards, so there were no significant differences in procedures and quality.

Based on the findings, this study has several limitations. First, the research sample was limited to the 2017-2023 period. While this provides rich longitudinal data, extending the period to more recent years would enhance relevance to current conditions. Second, this study employed only a quantitative approach using secondary data from annual reports, which may not capture deeper cultural and ethical dimensions. Regarding the insignificant findings, future researchers are recommended to consider alternative proxies.

Since change of audit committee as a proxy for opportunity showed no significant effect, the Whistle Blowing System is suggested because whistleblowing mechanisms reflect internal control effectiveness. Given that auditor change and audit quality as proxies for rationalization were insignificant, audit opinion type is recommended since modified opinions may more accurately reveal financial report manipulation. As collusion measured through concurrent board positions showed no significant influence, financial restatements are proposed as a more direct indicator because restatements explicitly signal past misstatements and potential hidden collaboration. Academically, this study contributes to fraud literature by extending fraud heptagon application to the Indonesian construction sector and validating employee turnover as a proxy for religiosity. Practically, this study suggests that regulators should use external pressure to enforce transparent contracting and promote accurate financial reporting.

References

- Achmad, T., Ghozali, I., & Pamungkas, I. D. (2022). Hexagon Fraud: Detection of Fraudulent Financial Reporting in State-Owned Enterprises Indonesia. *Economies*, 10(1), 1–16. <https://doi.org/10.3390/economies10010013>
- Achmad, T., Ghozali, I., Rahardian, M., Helmina, A., Hapsari, D. I., & Pamungkas, I. D. (2022). Detecting Fraudulent Financial Reporting Using the Fraud Hexagon Model: Evidence from the Banking Sector in Indonesia. *Economies*. <https://doi.org/10.3390/economies>
- Agusputri, H., & Sofie. (2019). Faktor-Faktor yang Berpengaruh Terhadap Fraudulent Financial Reporting dengan Menggunakan Analiis Fraud Pentagon. *Jurnal Informasi Perpajakan, Akuntansi dan Keuangan Publik*, 14(2), 105–124. <https://doi.org/10.25105/jipak.v14i2.5049>
- Amelia, L., & Ardini, L. (2024). Pendeteksian Fraud: Analisis Komprehensif Melalui Bukti Dengan Analisis Rasio F-Score, Dan M-Score pada PT Waskita Karya (Persero) Tbk. *Media Akuntansi Dan Perpajakan Indonesia*, 5(2). <https://doi.org/10.37715/mapi.v5i2.4416>
- Apriliana, S., & Agustina, L. (2017). The Analysis of Fraudulent Financial Reporting Determinant through Fraud Pentagon Approach. *Jurnal Dinamika Akuntansi*, 9(2), 154–165. <https://doi.org/10.15294/jda.v9i2.4036>
- Arens, A. A., Elder, R. J., & Beasley, M. S. (2015). Auditing dan Jasa Assurance. In 2 (13th ed.).

- Association of Certified Fraud Examiners. (2020). *Report To The Nations 2020 Global Study On Occupational Fraud and Abuse*. Retrieved from <https://acfe-public.s3-us-west-2.amazonaws.com/2020-Report-to-the-Nations.pdf>
- Association of Certified Fraud Examiners. (2022). *Occupational Fraud 2022: A Report To The Nations*. Retrieved from <https://acfe-public.s3-us-west-2.amazonaws.com/2022+Report+to+the+Nations.pdf>
- Association of Certified Fraud Examiners. (2024). *Occupational Fraud 2024: A Report to the Nations*. Retrieved from <https://www.ivey.uwo.ca/media/kjllj5cy/2024-report-to-the-nations.pdf>
- Aviantara, R. (2021). The Association Between Fraud Hexagon and Government's Fraudulent Financial Report. *Asia Pacific Fraud Journal*, 6(1), 26. <https://doi.org/10.21532/apfjournal.v6i1.192>
- Ayu, N. A. K. (2024). Analisis Pengakuan Pendapatan Dan Pembebanan Biaya Kontrak Konstruksi Menurut PSAK No. 72 Pada Perusahaan Jasa Konstruksi (Studi Pada Cv. Wanamartha Anugerah Samawa). *JURNAL SOSIAL EKONOMI DAN HUMANIORA*, 10(4), 775–781. <https://doi.org/10.29303/jseh.v10i4.655>
- Bestari, D. D. D., & Triyanto, E. (2025). Pengujian Model Beneish M-Score dalam Mendeteksi Fraudulent Financial Statement dengan teori Fraud Hexagon. *Substansi: Sumber Artikel Akuntansi Auditing Dan Keuangan Vokasi*, 5(2), 12–12. Retrieved from <https://jurnal.pknstan.ac.id/index.php/SUBS/article/view/3643>
- Cressey, D. R. (1971). *Other People's Money; a Study in the Social Psychology of Embezzlement*. In *Free Press*. Belmont, Calif., Wadsworth Pub. Co. Retrieved from <https://archive.org/details/otherpeoplesmone0000cres>
- Dechow, P. M., Ge, W., Larson, C. R., & Sloan, R. G. (2011). Predicting Material Accounting Misstatements. *Contemporary Accounting Research*, 28(1), 17–82. <https://doi.org/10.1111/j.1911-3846.2010.01041.x>
- Dewi, K., & Anisykurlillah, I. (2021). Analysis of the Effect of Fraud Pentagon Factors on Fraudulent Financial Statement with Audit Committee as Moderating Variable. *Accounting Analysis Journal*, 10(1), 39–46. <https://doi.org/10.15294/aaaj.v10i1.44520>
- Djami, R. A., & Murtanto. (2024). Factors That Influence Fraud Heptagon Theory On Financial Statements Fraud (Empirical Study on the Mining Sector Listed on the Indonesia Stock Exchange for the Period 2018-2022). *Journal Research of Social Science, Economics, and Management*, 4, 85–103. <https://doi.org/10.59141/jrssem.v3i08.559>

- Indonesia Stock Exchange. (2021, January 12). *Panduan IDX Industrial Classification*. Retrieved from www.idx.co.id
- Jamal, & Ian, M. R. (2025). Analisis Faktor Penyebab Keterlambatan Proyek Konstruksi di Indonesia. *Jurnal Kajian Teknik Sipil*, 10(1), 1–8. <https://doi.org/10.52447/jkts.v10i1.8071>
- Khamainy, A. H., Amalia, M. M., Cakranegara, P. A., & Indrawati, A. (2022). Financial Statement Fraud: The Predictive Relevance of Fraud Hexagon Theory. *Journal of Accounting and Strategic Finance*, 5(1), 110–133. <https://doi.org/10.33005/jasf.v5i1.249>
- Lovadena, A., Atikahasri, H., & Nurul, U. (2024). *Laporan Hasil Pemantauan Tren Korupsi Tahun 2023*. Retrieved from Lovadena, Alesha
- Lubis, A. F., & Purba, R. (2024). Pengaruh Fraud Pentagon terhadap Fraudulent Financial Statement pada Perusahaan Sub Sektor Konstruksi dan Bangunan yang Terdaftar di Bursa Efek Indonesia (BEI). *Jurnal Ilmiah Kajian Politik Lokal Dan Pembangunan*, 10, 157–165. <https://doi.org/10.56015/gjikplp.v10i3.175>
- Marks, J. (2012). The Mind Behind the Fraudsters Crime: Key Behavioral and Environmental Elements. *United States of America: Crowe Horwath LLP*.
- Megawati, & Reskino. (2023). Pengaruh Pengendalian Internal, Whihstleblowing System, dan Komitmen Organisasi Terhadap Pencegahan Kecurangan Dengan Moralitas individu Sebagai Variabel Moderasi. *Jurnal Akuntansi Trisakti*, 10(1), 31–50. <https://doi.org/10.25105/jat.v10i1.15818>
- Naldo, R. R., & Widuri, R. (2023). Fraudulent Financial Reporting and Fraud Hexagon: Evidence from Infrastructure Companies in ASEAN. *Economic Affairs (New Delhi)*, 68(3), 1455–1468. <https://doi.org/10.46852/0424-2513.3.2023.14>
- Nurbaiti, A., & Ferdiawan, R. R. (2023). Financial Shenanigans in the Perspective of the Hexagon Theory. *Jurnal Akuntansi, Audit Dan Sistem Informasi Akuntansi*, 7(2), 249–258. <https://doi.org/10.36555/jasa.v7i2.2194>
- Nurrohman, A. M., & Hapsari, D. W. (2020). Pengaruh Fraud Pentagon Terhadap Kecurangan Laporan keuangan Menggunakan F-Score Model (Studi Kasus pada Perusahaan Sektor Properti, Real Estate dan Konstruksi yang Terdaftar di Bursa Efek Indonesia (BEI) Periode 2016-2018). *E-Journal of Management*, 5790–5797. Retrieved from <https://openlibrarypublications.telkomuniversity.ac.id/index.php/management/article/view/13897>

- Pamungkas, I. D., & Irwandi, S. A. (2025). Detecting Fraudulent Financial Reporting: Heptagon Fraud Model. *The Indonesian Accounting Review*, 14(2), 153–174.
<https://doi.org/10.14414/tiar.v14i2.4523>
- Reskino. (2022). Fraud Prevention Mechanism and their Influence on Performance of Islamic Financial Institutions. Retrieved from <http://ir.upm.edu.my/find/Record/my-uitm-ir.76179/Details>
- Retnowati, D., & Triyanto, D. N. (2020). Pengaruh Fraud Diamond Terhadap Financial Statement Fraud (Studi Kasus Pada Perusahaan Properti, Real Estate, dan Konstruksi Bangunan yang terdaftar di Bursa Efek Indonesia Periode 2015-2019). *E-Proceeding of Management*, 5780–5789. Retrieved from <https://openlibrary.telkomuniversity.ac.id/pustaka/162792/pengaruh-fraud-diamond-terhadap-financial-statement-fraud-studi-kasus-pada-perusahaan-properti-real-estate-dan-konstruksi-bangunan-yang-terdaftar-di-bursa-efek-indonesia-periode-2015-2019-.html>
- Rianggi, F., & Novita. (2023). Fraud Hexagon dan Fraudulent Financial Statement dengan Pendekatan Beneish M-Score Model. *Jurnal Akuntansi Universitas Jember*, 21(2).
<https://doi.org/10.19184/jauj.v21i2.38089>
- Schilit, H. M., Perler, J., & Engelhart, Y. (2018). *Financial Shenanigans : How to Detect Accounting Gimmicks and Fraud in Financial Report* (4th ed.). McGraw-Hill Education.
- Sumampow, J. E. O., Manaroinsong, J., & Sumual, F. M. (2021). Pengaruh Financial Stability & Financial Targets Terhadap Financial Statement Fraud Pada Perusahaan Manufaktur Sektor Property, Real Estate & Konstruksi Bangunan Yang Terdaftar Pada Bei Tahun 2016-2019. *Jurnal Akuntansi Manado*, 2, 129–141. <https://doi.org/10.53682/jaim.v2i2.1412>
- Thamlim, W., & Reskino. (2023). Fraudulent Financial Reporting with Fraud Pentagon Perspective: The Role of Corporate Governance as Moderator. *American Journal of Humanities and Social Sciences Research (AJHSSR) 2023 American Journal of Humanities and Social Sciences Research*, 18–38. Retrieved from www.ajhssr.com
- Ulfani, A., & Ernawati. (2024). Studi Literatur : Pengaruh Audit Investigatif Terhadap Pengungkapan Fraud Pada Perusahaan Waskita Karya Tbk Dan Wijaya Karya Tbk. *Fusion Multidisciplinary Journal*, 02. Retrieved from <https://yasyahikamatzu.com/index.php/FSN/article/view/56>
- Vousinas, G. L. (2019). Advancing theory of fraud: the S.C.O.R.E. model. *Journal of Financial Crime*, 26(1). <https://doi.org/10.1108/JFC-12-2017-0128>

- Warseno, & Ayu, S. N. (2023). Fraud Pentagon Analysis In Detecting Fraudulent Financial Reporting Using Beneish MScore Model On Banking Companies Registered In Indonesia Stock Exchange Bei In 20142018. *Indonesian Journal Accounting*, 4, 134–148. <https://doi.org/10.33050/ijacc.v4i2.2937>
- Wicaksono, A., & Suryandari, D. (2021). Accounting Analysis Journal The Analysis of Fraudulent Financial Reports Through Fraud Hexagon on Public Mining Companies. *Accounting Analysis Journal*, 10(3), 220–228. <https://doi.org/10.15294/aaj.v10i3.54999>
- Wolfe, D. T., & Hermanson, D. R. (2004). The Fraud Diamond: Considering the Four Elements of Fraud. *The CPA Journal*. Retrieved from <https://digitalcommons.kennesaw.edu/facpubs>
- Wulandari, & Sari, R. P. (2024). Analisis Faktor-Faktor yang Mempengaruhi Kecurangan Laporan Keuangan dalam Perspektif Fraud Triangle dan Manajemen Laba pada Perusahaan Konstruksi yang Terdaftar di Bursa Efek Indonesia Tahun 2018-2022. *Jurnal Ekonomi Manajemen*, 28, 116–137. Retrieved from <https://jurnalhost.com/index.php/jekma/article/view/1690>
- Yusof, K. M. (2016). *Fraudulent Financial Reporting: An Application of Fraud Models to Malaysian public listed companies* (University of Hull). University of Hull. Retrieved from <https://hull-repository.worktribe.com/output/4218892/fraudulent-financial-reporting-an-application-of-fraud-models-to-malaysian-public-listed-companies>