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Hexagon Fraud Theory in Detecting Financial Statement Fraud in Infrastructure Sector Companies

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Abstract
The fraud hexagon theory states that financial statement fraud is influenced by several factors. This research aims to test empirically and see the influence of pressure, opportunity, rationalization, capability, arrogance, and collusion on financial statement fraud using modified jones model as the dependent variable. The analytical method used in this research is multiple linear regression analysis with purposive sampling technique. The sample in this research numbered 99 consisting of 33 infrastructure sector companies that were listed on the Indonesia Stock Exchange (IDX) and published annual reports for the period 2020 to 2022. The research results show that the rationalization variable has a positive effect on financial report fraud. However, the variables pressure, opportunity, capability, arrogance, and collusion have no effect on financial statement fraud.

Keywords: *Fraud hexagon theory, financial statement fraud, pressure, modified jones model*.

INTRODUCTION
The infrastructure industry in Indonesia is one of the sectors that has a great contribution to the national economy. However, behind its rapid growth, the sector is also vulnerable to fraudulent practices in financial statements. This fraud can have a significant impact on various parties, such as investors, creditors, and the government. Therefore, it is important to develop effective methods to detect and prevent financial statement fraud in the infrastructure sector.

Fraud theory explains various factors that can contribute to the occurrence of fraud. In 1953, the fraud theory was initiated by Donald R. Cressey known as the "*Fraud Triangle*". The theory explains that there are three elements that cause fraud, namely pressure, opportunity, and rationalization. In 2004, David T. Wolfe and Dana R. H. stated that there are four elements that cause fraud, including pressure, opportunity, rationalization, and capability, this fraud theory is called "*Fraud Diamond*". In 2011, Crowe Horwath proposed the "*Fraud Pentagon*", which is that there are five elements that cause fraud, including pressure, opportunity, rationalization, capability, and ego. In 2019, Vousinas introduced the latest fraud theory "*Fraud Hexagon*".

Agency theory discusses principal-agent problems related to the separation of ownership and control of a business. In agency theory, the *principal* has a contractual relationship with the manager (*agent*) and gives the manager the power to make decisions on their behalf. This is done so that the company's operational agility becomes smooth. This agreement is contained in a contract that regulates the rules and responsibilities of each party (Jensen & Meckling, 1976).

Financial statement fraud is the practice of manipulating information in financial statements to deceive parties interested in the company. This fraud is carried out in many ways, including recording fictitious transactions, hiding assets or liabilities, and playing with accounting accounts. Financial reporting fraud can be carried out through various operational methods, such as falsification or manipulation of data, omission of material information, deliberate application of incorrect accounting principles, and deliberate omission of accounting policies (Sintabela & Badjuri, 2023).

This study uses data on infrastructure companies listed on the IDX from 2020 to 2022. Infrastructure companies have a high concentration of business and can provide better data variation in testing the effects of pressure variables, opportunities, rationalization, capability, arrogance, and collusion against financial statement fraud.

This study has a difference from the previous study, namely the sample used was an infrastructure company listed on the Indonesia Stock Exchange (IDX) in 2020 to 2020. In addition, there is a combination of independent variables that are different from previous research, including pressure projected by *financial stability,* opportunity projected by *ineffective monitoring*, rationalization projected by total accrual to total assets, capability projected by CEO education level and certification, arrogance projected by the company's existence, and collusion projected by *audit fees*.

LITERATURE REVIEW

Agency theory

In agency theory, the *principal* has a contractual relationship with the manager (*agent*) and gives the manager the power to make decisions on their behalf. This is done so that the company's operational agility becomes smooth (Jensen & Meckling, 1976). An agency relationship is an agreement between two parties where the first party (principal) gives trust and power to the second party (agent) to perform certain duties on behalf of the principal. This agreement is contained in a contract that regulates the rules and responsibilities of each party (Jensen & Meckling, 1976). Agency theory discusses principal-agent problems related to the separation of ownership and control of a business. Agency relationships are created through contracts where one party (principal) delegates tasks to another party (agent). The principal gives the authority to the agent to make decisions related to the delegated tasks. This theory affirms that the agent will behave in his own interests and may be contrary to the interests of the principal (Imam Ghozali, 2021). *Fraud* in financial statements is closely related to agency theory. This is affirmed in the Audit Standards Statement No. 99 which states that fraud is an act of deliberate manipulation of financial statements and must be further investigated. Financial statement fraud can be carried out by company management by including false information in financial statements so that investors and creditors can be financially harmed. Agency theory states that there is an asymmetric relationship of information between shareholders as principals and management as agents (ACFE, 2020).

Fraud Theory

Fraud is defined as fraud or intentional mistakes committed by an individual or

organization knowing that the activity will benefit himself or his group at the expense of the individual. institution or other stakeholders (ACFE, 2022). Fraud is a fraudulent act that is deliberately carried out by parties with power, such as management or external parties, in order to gain personal benefits illegally. This action is unlawful and can harm other parties (IFAC, 2020). Fraud is a deliberate act to harm other parties, such as making false statements, hiding evidence, or cheating. The goal is to gain unfair and illegal benefits for one party, which can be an individual, a company, or an organization. Fraud can be categorized into three main types, including asset abuse, financial statement fraud, and corruption (ACFE, 2020). In 2011, Crowe Horwath introduced the "*Fraud Pentagon*" by adding two elements to the fraud triangle, namely capability and arrogance. Developed Wolfe and Hermanson's "*Fraud Diamond*". Then this theory developed from "*Fraud Pentagon"* to "*Fraud Hexagon*" by adding an element of collusion (Vousinas, 2019).

Hexagon Fraud Triangle

Hexagon Fraud Theory is a development of previous fraud theories*.* The *Fraud Hexagon* theory was first introduced by Vousinas in 2019 by developing the theory of Donald R. Cressey (1953). The three elements that cause financial statement fraud are pressure, opportunity and rationalization called the fraud triangle theory (Cressey, 1953). This theory was later called the Diamond Theory of Fraud by Adding Possibilities (Wolfe & Hermanson, 2004). Then this theory was developed into the *Fraud Pentagon Theory* (Howarth, 2010) or also called SCORE by Vouisinas (*Stimulus, Capability, Opportunity, Rationalization, Ego*) with one new element, namely arrogance. The latest *fraud* theory is *the Hexagon Fraud Theory*, which developed SCORE into SCCORE by adding a sixth element, collusion. Collusion is added because it is one of the keys to the occurrence of the most detrimental fraud in large numbers (Vousinas, 2019). The *hexagon fraud* theory is a development of the pentagonal theory which is considered incapable of perfecting the factors that can affect the occurrence of fraud (Achmad, Ghozali, & Pamungkas, 2022). This model is the first *fraud* model that assumes that fraud is carried out in groups or collusion. So far, the element of collusion has not been considered a factor in the occurrence of fraud in previous fraud models (Ayati, Nupus, Yusdian, & Wulandari, 2023).

Financial Statement Fraud

Financial statement fraud is an act of fraud committed by management by manipulating the company's financial information. This is done in various ways, such as hiding expenses, recording fictitious income, or exaggerating the value of assets. The goal is to deceive users of financial statements, such as investors, creditors, or regulatory authorities, into obtaining undue profits (Global, 2020). Financial reporting fraud is an act of deliberately presenting better data (*over-reporting*) or worse data (*under-reporting*) which results in inconsistent financial statements in actual conditions. Financial statements become irrelevant in decision-making by users of financial statements because the information contained in the report is not in accordance with the actual situation (Winata, Suhartono, & Dema, 2024). Financial statements can be

analyzed to detect fraud using *a modified jones* model to measure discretionary accrual, an indicator of profit management. The model estimates discretionary provisions during the period in which fraud is suspected, assuming that all changes in credit sales during that period are the result of profit manipulation. This is based on the ease of manipulating profits through the recognition of income from credit sales rather than cash sales (Dechow, 1995). According to (Dechow, 1995) in (Abdurrahim, 2015), the accuracy level of *the modified jones* model is higher compared to other models (*healy* model, *de angelo model*, jones model and industrial model).

Pressure

The Pressure factor arises when a company or individual faces circumstances that force them to commit fraud such as financial constraints or the need to meet the expectations placed on them. Pressure can encourage managers to manipulate financial statements to look more positive, albeit in a dishonest and unethical way (Bader, Abu Hajar, Weshah, & Almasri, 2024). Pressure is one of the reasons individuals commit *fraud*. This method includes lifestyle, economic needs, and other financial and non-financial problems. The pressure to commit fraud is even higher when management is required to attract investors to invest in their companies (Rashid, Khan, Riaz, & Burton, 2023). The pressure projected by *financial stability* has proven to have a positive impact on financial statement fraud (Siregar & Murwaningsari, 2022). The pressure projected by *financial stability* has proven to have a significant impact on financial statement fraud (Siregar & Murwaningsari, 2022). *A* company's financial stability can encourage managers to commit fraud in financial statements. *Financial stability* is the degree of economic stability of a company. In an effort to gain trust in financial report users, companies must have good financial stability (Achmad et al., 2022).

Opportunity

The opportunity factor can be due to the absence of effective oversight and inherent weaknesses creating opportunities for individuals and companies to engage in fraudulent behavior. When a person who tends to commit fraud is aware of an opportunity without any moral restrictions, they tend to exploit it for personal gain without paying attention to others (Bader et al., 2024). Fraudulent activities of companies traded on the capital market are more likely than companies that are not listed on the market (Adhania, Holiawati, & Nofryanti, 2024). The opportunities projected by *ineffective monitoring* have been proven to have an impact on financial statement fraud (Wicaksono & Suryandari, 2021). *Fraud* occurs due to a lack of commitment to integrity and values, as well as ineffective supervision activities. The Board of Directors in addition to the CEO also acts as a representative to support the CEO in managing the company's operations and helping the board of directors achieve the goals that have been set (MEMODERASI, n.d.).

Rationalization

The rationalization factor can arise when the individual who commits the fraud justifies themselves why they committed the fraud, believing that they deserve the profits obtained through fraudulent means because of their rationalization. This can

happen due to various things, such as feeling disadvantaged, having an urgent need, or even having a false belief that they are more entitled to these benefits (Bader et al., 2024). Rationalization is one of the psychological factors that motivate managers to cheat (Ramos Montesdeoca, Sanchez Medina, & Blazquez Santana, 2019). The management's decision in rationalizing financial statements makes the total accrual related to the occurrence of financial reporting fraud. Profit management through accrual is shown when managers increase or decrease the accrual rate of accounting figures such as receivables, inventories, debts, deferred revenue, liabilities that still pay, and expenses paid in advance, to obtain the expected profit (MEMODERASI, n.d.). Total Accrual to Total Assets (TATA) is the most significant factor in evaluating the risk of financial statement fraud (Demetriades & Owusu-Agyei, 2022).

Capability

The capability factor can arise when an individual has the capability to commit fraud because of the skills, knowledge, and values he possesses, which allows them to engage in fraudulent activities (Bader et al., 2024). Higher capability means a greater chance of turning fraudulent motives into practice (Lastanti, 2020). The capability projected by the level of education and certification of CEO's has been proven to have an effect on financial statement fraud (Sihombing & Panggulu, 2022). A CEO's level of education reflects his mastery of understanding the ins and outs of the company, including his financial statements. On the one hand, this benefits companies because CEO's with higher education generally have sharp insights and are able to make the right strategic decisions. However, on the other hand, there is a potential for misuse of this knowledge to launch fraudulent actions. The higher the level of education of CEO's, the greater their chances of planning and executing financial fraud because of their deep understanding of the company's systems and gaps (Sihombing & Panggulu, 2022).

Arrogance

The arrogance factor can arise when a person who has power and authority feels above the laws and procedures that have been set by the company, thus encouraging him to commit fraudulent, manipulative, and exploitative behavior (Bader et al., 2024). Fraudsters have a high arrogance so they try their best to meet their needs by committing fraud in financial statements (Devi, Widanaputra, Budiasih, & Rasmini, 2021). The arrogance projected by the existence of the company has been proven to have an effect on financial statement fraud (Haqq & Budiwitjaksono, 2019). The existence of a business or business that continues to exist with good performance can be the cause of fraud (Siregar & Murwaningsari, 2022). Companies that have been established for a long time have very arrogant management. Management must make the company perform well by manipulating financial statements to continue the existence of the company. Therefore, companies with high existence are allowed to commit fraud in their financial statements when their operational performance declines or is not good enough to show good operational efficiency and company survival (Haqq & Budiwitjaksono, 2019).

Collusion

The collusion factor can arise due to the involvement of a group of individuals in committing fraud against others, often through a coordinated agreement aimed at committing fraud. Transactions involving related parties can sometimes be agreements that can be detrimental to the interests of stakeholders (Bader et al., 2024). When many parties work together to commit *fraud,* the losses incurred can be greater (Zahari, Said, & Muhamad, 2022). Collusion projected by *audit fees* has been proven to have an effect on financial statement fraud (Indriana, 2022). When management provides audit costs that are too large, a conflict of interest arises between the auditor and the company. This is done by the auditor's office to retain its clients (Aviantara, 2021). Intimate relationships can make auditors unprofessional and unmotivated to provide a quality audit process (Khaksar, Salehi, & Lari DashtBayaz, 2022).

***Return on Assets* (ROA)**

Return on Asset (ROA) reflects the effectiveness of a company's ability to use its assets to generate profits. The higher the ROA value, the better the company manages its assets to generate profits. This can reflect the company's financial condition so that it becomes an attraction for investors (Raiyan, Dewata, & Periansya, 2020). ROA is a ratio used to express profit margin (Khamainy, Amalia, Cakranegara, & Indrawati, 2022). A higher ROA indicates a higher likelihood of financial reporting fraud. This is due to the pressure to demonstrate high financial performance (Saluja et al., 2021). ROA as one of the prominent indicators to assess management efficiency in utilizing assets to generate profits (Hung, Ha, & Binh, 2017) dan (Julia & Yunita, 2022). A number of studies have confirmed that an increase in ROA is related to an increase in fraudulent activity in a company's financial statements. Companies with low ROA ratios also encourage their management to commit fraud in order to get better financial position results (Demetriades & Owusu-Agyei, 2022).

Hypothesis Research and Development Framework

The purpose of this study is to empirically prove that pressure, opportunity, rationalization, capability, arrogance, and collusion affect financial fraud in infrastructure sector companies listed on the Indonesia Stock Exchange (IDX) for 3 (three) years, namely 2020, 2021, and 2022. The research framework used is as follows.

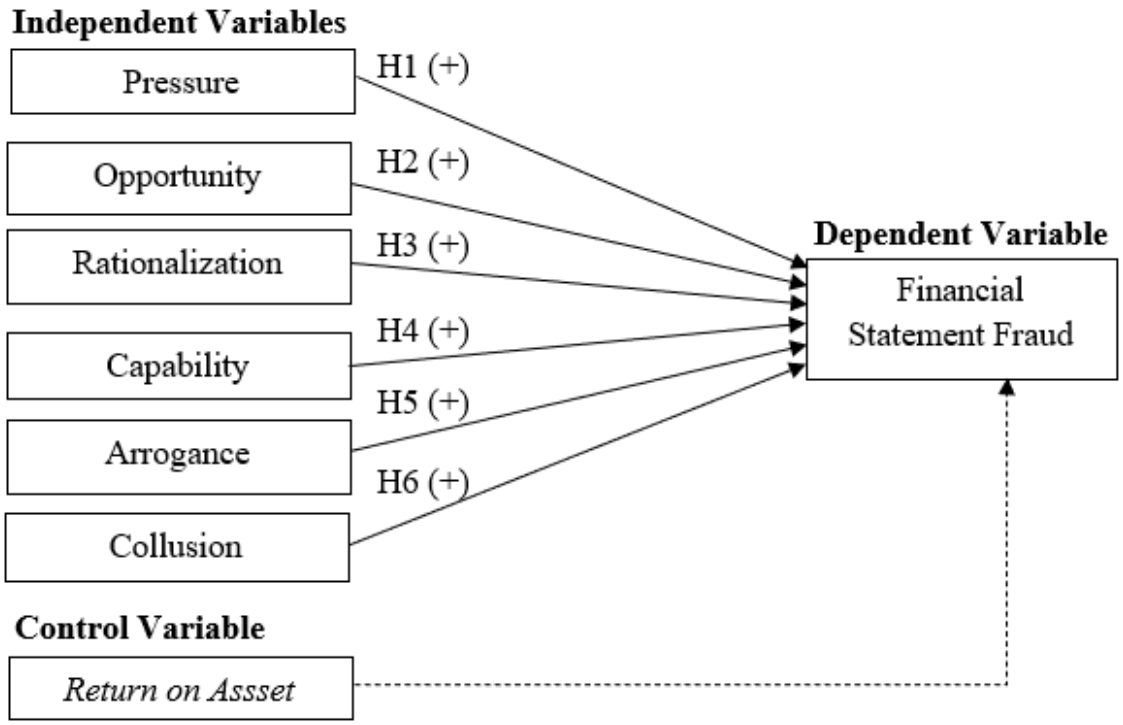


Figure 1. Framework of Thought
Source: processed by researchers

Hypothesis Development

Based on the description above, the researcher wants to prove empirically whether pressure, opportunity, rationalization, capability, arrogance, and collusion have an influence on financial statement fraud, with the following hypothetical description.

H_1: Pressure has a positive effect on financial statement fraud
H_2: Opportunity has a positive effect on financial statement fraud
H_3: Rationalization has a positive effect on financial statement fraud
H_4: Capability has a positive effect on financial statement fraud
H_5: Arrogance has a positive effect on financial statement fraud
H_6: Collusion has a positive effect on financial statement fraud.

RESEARCH METHOD

The data used in this study is secondary data derived from annual reports. The companies sampled in this study are infrastructure sector companies listed on the Indonesia Stock Exchange (IDX) with a reporting period of 2020 to 2022. The technique used in sampling in research sampling is the *purposive sample* technique, which is a sampling technique based on predetermined criteria. In this study, the sample that met the criteria was 99, consisting of 33 companies for 3 periods. The data was then analyzed by the multiple linear regression analysis method using the Eviews 9 application.

Variables and Their Measurements

1. **Financial Statement Fraud**

The deviation of financial statements projected by *Discretionary Accrual* (DA)

is measured using *the modified jones* model. This model uses total accruals (TA) which are classified into two components: *Discretionary Accrual* (DA) and *Nondiscretionary Accrual* (NDA). *Discretionary Accrual* (DA) is a form of accrual accounting policy that is not sourced from the needs of business conditions but is applied by management to transfer costs and income from one period to another to achieve certain management goals (Jones, 1991). *Nondiscretionary Accrual* (NDA) is an accrual component of a reasonable profit recognition or management policy that follows generally accepted accounting standards or principles as determined by the requirements of business conditions and occurs naturally in conjunction with changes in the company's assets. The complete formula of the modified John model is as follows (Dechow, 1995):

1) Total Accrual (TA) is net profit for year t minus operating cash flow for year t with the following formula:

$$TA_{it} = NI_{it} - CFO_{it}$$

The total accrual (TA) is estimated with *the Ordinary Least Square* (OLS) as follows:

$$\frac{\text{TAit}}{\text{Ait}-1} = + + + \beta 1 \left(\frac{1}{\text{Ait}-1}\right) \beta 2 \left(\frac{\Delta Rev_{it}}{\text{Ait}-1}\right) \beta 3 \left(\frac{PPE_{it}}{\text{Ait}-1}\right) \varepsilon$$

2) The formula *for Nondiscretionary Accruals* (NDA) is as follows:

$$NDA_{it} = + + \beta 1 \left(\frac{1}{\text{Ait}-1}\right) \beta 2 \left(\frac{\Delta Rev_{it}}{\text{Ait}-1} - \frac{\Delta Rec_{it}}{\text{Ait}-1}\right) \beta 3 \left(\frac{PPE_{it}}{\text{Ait}-1}\right)$$

3) *Discretionary accruals* (DA) are measures of profit management determined by the following formula:

$$DA_{it} = \frac{\text{TAit}}{\text{Ait} - 1} - NDA_{it}$$

Information:

TAP	= *Discretionary accrual* in Company i and Period t
Tait	= Total accrual in company i and period t
DATE-1	= Total assets in company i and period t-1
NDAit	= *Nondiscretionary accrual* In Company i and Period t
NIit	= Net profit on the company's company i and period t
CFOit	= Operating cash flow at company i and period t
AIT-1	= Total assets in company i and period t-1
PEEit	= Value of fixed assets in company i and period t
ΔREVit	= Change in revenue in company i between period t and period t-1
ΔRECit	= Change in receivables in company i between period t and period t-1
ε	= Term error in company i and period to t
β	= Regression coefficients

2. Pressure

The pressure projected by *financial stability* has been proven to have an effect on financial statement fraud (Siregar & Murwaningsari, 2022). *Financial stability* can be measured by looking at the change in total assets. If the growth value of a company's assets fluctuates, then management will be under pressure to adjust its financial statements so that the growth of the company's assets appears stable. At that time, business people were always required to maintain the financial stability of their business. Thus, financial stability is represented using the percentage change in total assets (Skousen, Smith, & Wright, 2009):

$$\textit{Financial stability} = \frac{(Total\ Aset(t) - Total\ Aset\ (t-1))}{Total\ Aset\ (t-1)}$$

3. Opportunity

The opportunities projected by *ineffective monitoring* have been proven to affect financial statement fraud (Wicaksono & Suryandari, 2021). The weaker the supervision, the higher the likelihood of fraud in financial reporting. The formula used to measure *ineffective monitoring* in this study is as follows (Skousen et al., 2009):

$$\textit{Ineffective monitoring} = \frac{Independent\ Board\ of\ Directors}{Total\ Board\ of\ Directors}$$

4. Rationalization

The rationalization projected by Total Accrual to Total Assets (TATA) has been proven to have an effect on financial statement fraud (Demetriades & Owusu-Agyei, 2022). If the results of the calculation show that the total accrual has a higher value than the company's cash, then it is likely that the company will manipulate its income (Beneish, 1999). The formula for calculating Total Accrual to Total Assets (TATA) is as follows:

$$\text{TATA} = \frac{\Delta Working\ Capital - \Delta Cash - \Delta Tax\ Payable - \Delta Depr\&Amor\ Exp}{Total\ Assets}$$

5. Capability

The capability projected by the level of education and certification of CEO's has been proven to have an effect on financial statement fraud (Sihombing & Panggulu, 2022). In Josephine 2022, the measurement of educational achievement refers to the combination of (Erlim & Juliana, 2017) and (Putri, 2020) indicators, which are carried out by combining 2 indicators (level of educational and certificate index) from 2 studies as follows:

1. President director with a bachelor's degree without certification: 1
2. President director with a bachelor's degree has certificates: 2
3. President director with a master's degree without a certificate: 2
4. President director with a master's degree with certificates: 3
5. President director with a doctoral degree without certification: 3
6. President director with a doctoral degree with certifications: 4
7. President director has not reached the minimum bachelor's education level: 0

6. Arrogance

The arrogance projected by the existence of the company has been proven to have an impact on financial statement fraud (Haqq & Budiwitjaksono, 2019). Companies that have been established for a long time have very arrogant management. Management must make the company perform well by manipulating financial statements to continue the existence of the company. Therefore, companies with high existence are allowed to commit fraud in their financial statements when their operational performance declines or is not good enough to show good operational efficiency and company survival (Haqq & Budiwitjaksono, 2019). The formula for calculating the existence of a company is as follows:

$$\text{Company existence} = \frac{n}{10\ years}$$

7. Collusion

Collusion projected by *audit fees* has been proven to have an effect on financial statement fraud (Indriana, 2022). When management provides audit costs that are too large, a conflict of interest arises between the auditor and the company. This is done by the auditor's office to retain its clients. Low audit quality can be the entrance to fraud, audit costs affect financial statement fraud (Aviantara, 2021). The following is the formula for calculating *audit fees*:

Audit fee = Ln (*Audit Fee*)

8. Data Analysis Methods

The data that has been collected in this study will be analyzed by descriptive statistical analysis techniques and panel data regression analysis using *Eviews 9 software.* The following is the model in this study:

$$DA = \alpha + \beta FS + \beta IM + \beta TATA + +\beta TPS + \beta EP + \beta AF + \beta ROA + e$$

Information:

DA = *Discretionary Accrual*
α = Constant Coefficient
β = Regression Coefficient
FS = *Financial Stability*
IM = *Ineffective Monitoring*
EC = Level of Education and Certification of CEO
TATA = Total Accrual to Total Assets
EP = Company Existence
AF = *Audit Fee*
ROA = *Return on Assets*
e = Error Rate

RESULTS AND DISCUSSION

Descriptive Statistical Analysis

Table 1. Descriptive Statistical Analysis Test Results

Variable	N	Mean	Minimum	Maximum	Std. Dev.
DA	99	-0,016	-0,279	0,178	0,075
FS	99	0,083	-0,658	3,772	0,412
IM	99	0,432	0,000	0,667	0,117
TATA	99	-0,003	-1,101	1,400	0,228
EC	99	1,606	0,000	3,000	0,603
EP	99	3,067	0,700	6,100	1,652
AF	99	20,285	18,064	24,980	1,436
ROA	99	-0,002	-1,277	0,172	0,164

Source: Processing Results on *the Eviews 9 application*

The results of the descriptive statistical test in table 1, show that the financial statement fraud projected by *the Discretionary Accrual (DA)* has *a mean* of -0.279, *a max* of 0.178, a standard deviation of 0.075 and *a mean* of -0.016. The pressure projected by *Financial Stability* (FS) has *a mean* of -0658 *max* of 3.772, a standard deviation of 0.412, and *a mean* of 0.083. The opportunity projected by *Ineffective Monitoring* (IM) has a *mean* of 0.000 *max* 0.667, a standard deviation of 0.117, and *a mean* of 0.432. The rationalization projected by Total Accrual to Total Assets (TATA) has *a mean of* -1.101, *a max* of 1.400, a standard deviation of 0.228, and *a mean* of -0.003. The Capability projected by the Education and Certification Level (EC) has *a min* of 0.000, *a max* of 3,000, a standard deviation of 0.603, and *a mean* of 1.606. The arrogance projected by the Company's Existence (EP) has a *min* of 0.700, *a max* of 6,000, a standard deviation of 1.652, and *a mean* of 3.067. The collusion projected by *Audit Fee* (AF) has *a mean* of 18.064, *a max* of 24.980, a standard deviation of 1.436, and *a mean* of 20.285. *Return on Assets* (ROA) has a *min* -1.277, *a max* of 0.172, a standard deviation of 0.164, and *a mean* of -0.002.

Panel Data Regression Analysis

Panel data regression model A model must go through various stages of testing to determine the right estimation model to determine the influence of independent variables on dependent variables. In the regression analysis of panel data, there are three models that can be used, including the Common Effect Model (CEM), the Fixed Effect Model (FEM), and the Random Effect Model (REM).

Table 2. Regression Model Selection Test Results

Model Selection Test			
Chow Test	**Cross-section Chi-square**	**Prob.**	**Decision**
	78,581	0,000	FEM accepted
Hausman Test	**Cross-section random**	**Prob.**	**Decision**
	30,899	0,000	FEM accepted
LM Test	**Breusch-Pagan (Both)**	**Prob.**	**Decision**

	0,326	0,551	CEM accepted

Source: Processing results on *the Eviews 9 application*

**Sig 5%*

Model Selection Test

Based on the results of the Chow test, the *prob value of the cross-section chi square* is 0.000 < 0.05 (alpha 5%), H_0 is rejected and H_1 is accepted so that *the Fixed Effect Model* (FEM) is chosen. Furthermore, the Hausman test was carried out with the results showing that *the random cross-section prob* value was 0.000 < 0.05 (alpha 5%), H_0 was accepted and H_1 was rejected so that *the Fixed Effect Model* (FEM) was chosen. Then, the Langrage Multiplier test was carried out and a *Breusch Pagan (Both) prob value* of 0.551 > 0.05 (alpha 5%) was obtained, H_0 was rejected and H_1 was accepted so that *the Common Effect Model* (CEM) was chosen. From these three tests, it can be concluded that the right regression model in estimating the right panel data in this study is *the Fixed Effect Model* (FEM).

Classical Assumption Test

In this study, the regression model used is the Fixed Effect Model (FEM) model. Therefore, a classical assumption test is needed. The classical assumption tests used include multicollinearity and heteroscedasticity tests (Basuki, 2014) in (Napitupulu, Ellyawati, & Astuti, 2021).

Multicollinearity Test

This study used six independent variables and one control variable in conducting a multicollinearity test. In the test, if the correlation coefficient is less than 0.85, it can be said that the model is free of multicollinearity. However, if the correlation coefficient is greater than 0.85, it can be said that the model contains collinearity.

Table 3. Multicollinearity Test Results

	FS	IM	TATA	EC	EP	AF	ROA
FS	1.000	0.212	0.290	0.051	-0.188	-0.066	0.255
IM	0.212	1.000	0.065	0.064	-0.304	-0.097	0.025
TATA	0.290	0.065	1.000	0.220	0.076	-0.099	0.145
EC	0.051	0.064	0.220	1.000	0.182	-0.035	0.049
EP	-0.188	-0.304	0.076	0.182	1.000	0.272	-0.117
AF	-0.066	-0.097	-0.099	-0.035	0.272	1.000	0.144
ROA	0.255	0.025	0.145	0.049	-0.117	0.144	1.000

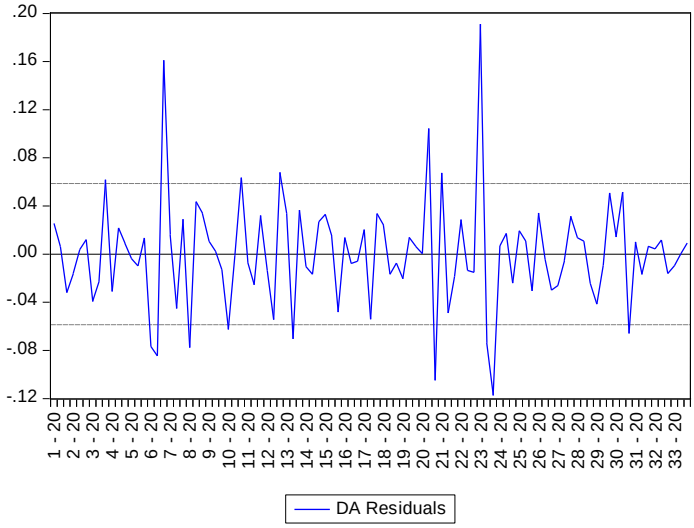
Source: Processing results on *the Eviews 9 application*

The table above shows the results of the data processing of the multicollinearity test between independent variables which shows that the model in this study is free from multicollinearity because the matrix value of each independent variable is less than 0.85 (Napitupulu et al., 2021).

Heteroscedasticity Test

The Heteroscedasticity test is used to find out if there is a residual variance that is not identical in other observations of one regression model. If the residual graph (blue color) can be seen not to cross the boundary (500 and -500), it means that the residual variant is the same. no symptoms of heteroscedacity or passing heteroscedacity (Napitupulu et al., 2021).

Figure 1. Heteroscedasticity Test Results



Source: Processing results on *the Eviews application*

The figure above shows the results of the heteroscedasticity test data processing in this study. The graph shows that the residual DA value (blue color) can be seen not to cross the limit (500 and -500), meaning that the residual variant is the same. Therefore, there was no heteroscenity or passed the heteroscenity test between independent variables in this study.

Determination Coefficient Test (R^2)

Table 4. R^2 Test Results

Type	Adj R^2
DA	0,385

Source: Processing results on *the Eviews 9 application*

The determination coefficient test was carried out in this study to measure the ability of the dependent variable to explain the behavior of the dependent variable by looking at the adjusted R-Squared value. The greater the value of R-Squared, the better the ability of the independent variable to explain the dependent variable and the better the quality of the regression model.

Based on the regression results in table 4.7, the Adjusted R-Squared was obtained by 0.385 or 38.5%. This shows that the independent variables consisting of pressure, opportunity, rationalization, capability, arrogance, and collusion have the ability of 38.5% in explaining the dependent variable, while the rest are the abilities of other independent variables that affect the dependent variables that are not included in this study.

Global Test or F Test

Table 5. Test Result F

Type	Fstat	Sig Fstat
DA	2,574	0,000505

Source: Processing results on *the Eviews 9 application*

The F test was carried out in this study to see if the variable as a whole was independent of the dependent variable. This test has the goal of seeing whether the model used in this study is good or not. If the Fstat value > *alpha* 0.05 (5%), then H_0 is rejected, which means that there is a significant difference between the model and the observed value so that the research model used is not correct. Meanwhile, if Fstat < *alpha* 0.05 (5%), then H_0 is accepted, which means that there is no significant difference between the model and the observed value so that the research model is able to predict the observation value so that the model in the study is correct.

Based on the results of the F test in table 5, the results of the Fstat value are 2.574 > the F table is 0.999 and the Fstat sig is 0.000505. The Fstat value is smaller than *alpha* 0.05 so that H_1 is accepted and it can be concluded that in this research model it is feasible and there is at least one independent variable that has a significant effect on the dependent variable.

Individual Hypothesis Test

Table 6. T Test Results

Variable	Predictions	Coefficient	Std. Error	Sig. (2 Tails)	Sig. (1 Tail)	Decision
C		-1,262	0,659	0,060	0,030	-
FS	+	-0,010	0,022	0,658	0,329	H_1 rejected
IM	+	-0,038	0,091	0,682	0,341	H_2 rejected
TATA	+	**0,118**	**0,037**	**0,002**	**0,001**	**H3 accepted**
EC	+	-0,065	0,051	0,212	0,106	H_4 rejected
EP	+	0,087	0,081	0,285	0,143	H_5 rejected
AF	+	0,054	0,033	0,107	0,054	H_6 rejected
ROA		-0,110	0,058	0,060	0,030	-

Source: Processing results on *the Eviews 9 application*

*Sig. 5%

DA = Discreationary Accrual (Financial Statement Fraud); FS = Financial Stability (Pressure); IM = Ineffective Monitoring (Opportunity); TATA = Total Accrual to Total Assets (Rationalization); EC = CEO Education Level and Certification (Ability); EP= Company Existence (Arrogance); AF= Audit Fee (Collusion); ROA = Return on Assets; SIZE = Company Size.

The Effect of Pressure (*Financial Stability*) on Financial Statement Fraud

The pressure projected by *financial stability* has no effect on financial statement fraud as shown by the results of the statistical test of table 6. The value of pressure significance is 0.658/2=0.329 > 0.05 (*alpha* 5%) thus, H_1 is rejected. This is in line with research (Khamainy et al., 2022), who stated that *financial stability* has no effect on financial statement fraud. This is because the change depends on the company's expertise in managing its assets. The magnitude of the percentage growth of total assets does not indicate that the company committed fraud in the financial statements. Every change in a company's assets can occur not because of fraud in financial statements, but as a result of the strategy carried out by management in managing its assets. On the other hand, the results of this study are not in line with (Achmad et al., 2022) research, which states that the pressure projected by *financial stability* has a positive effect on financial reporting fraud. Management will be pressured to adjust financial statements so that the growth of the company's assets looks stable because the growth

of a company's assets fluctuates. Businessmen are always required to maintain the financial stability of their business. Based on agency theory, management as an agent will face pressure so one way to achieve maximum performance is to falsify financial statements (Devi et al., 2021).

The Effect of Opportunity (*Ineffective Monitoring*) on Financial Statement Fraud

The opportunity projected by *ineffective monitoring* has no effect on financial statement fraud as shown by the results of the statistical test in table 6. The significance value of the opportunity is 0.682/2=0.341 > 0.05 (*alpha* 5%) thus, H_2 is rejected. The results of this study are in line with (Sihombing & Panggulu, 2022) research, which states that the opportunities projected by *ineffective monitoring* have no effect on financial statement fraud. No matter how many members of the independent board of commissioners in a company have no effect on the practice of financial reporting fraud in that company. Fraud in financial statements can occur even though all members of the board of commissioners are independent. Whether or not the supervision of the board of commissioners is effective or not does not rule out the possibility of management to commit financial reporting fraud. However, the results of the study contradict the results of Andriani's (2022) research, which stated that the opportunities projected by *ineffective monitoring* have a positive effect on financial statement fraud. This shows that the presence of independent commissioners tends to reduce the potential for fraud that will arise, where the presence of independent supervisors in the company will increase the effectiveness of supervision of management performance because management feels closely supervised so that it does not violate existing regulations. According to agency theory, agency problems can arise when management and company owners have different goals, so management as an agent who runs the company can take opportunistic actions that can have a bad impact on the company, one of which is financial statement fraud (Devi et al., 2021).

Effect of Rationalization (Total Accrual to Total Assets) on Financial Statement Fraud

The rationalization projected by total accruals to total assets has a positive effect on financial statement fraud as shown by the results of statistical testing in table 6. The value of pressure significance is 0.002/2=0.001 < 0.05 (*alpha* 5%) thus, H_3 is accepted. This result is in line with (Winata et al., 2024) research, which states that the projected rationalization with total accrual to total assets has a positive effect on financial statement fraud. An increase in the total value of accruals relative to total assets may indicate fraud in financial reporting in a company. The policy in recording accruals provides the opportunity for fraud to occur, as the difference between the listed assets and the physical assets provides an avenue for manipulation. However, the results of the study contradict the results of Pratiwi's (2022) research, which states that the projected rationalization with total accrual to total assets has no effect on financial statement fraud. Based on agency theory, problems can occur when management as an agent of the owner of the company makes rational decisions for his personal benefit. The accrual principle is able to increase management risk in financial statement fraud (Indriana, 2022).

Effect of Capability (CEO Education and Certification) on Financial Statement Fraud

The abilities projected by level of education and certification of CEO's have no effect on financial statement fraud as shown by the results of the statistical test of table

6. The value of pressure significance is 0.212/2=0.106 > 0.05 (*alpha* 5%) thus, H_4 is rejected. These results are in line with the research of (Wicaksono & Suryandari, 2021) which stated that the capability projected by the level of education and certification has no effect on financial statement fraud. CEO education does not affect financial statement fraud. This is because a person's level of capability and educational background are not factors that encourage someone to commit fraudulent practices. The level of capability possessed by a CEO with a higher educational background will actually make the CEO more qualified so that he is able to make the right decisions when experiencing problems without having to do fraudulent practices. However, the results of the study contradict the results of (Sihombing & Panggulu, 2022). research, which stated that the capability projected by the level of education and certification has a positive effect on financial statement fraud. The higher the level of education of a CEO, the higher the possibility of financial statement fraud. This means that a CEO can use his knowledge and understanding of business and finance that he has learned to commit financial statement fraud for the company he leads. Shareholders must be careful in choosing a CEO to lead the company. The chosen leaders are not only highly educated, but also have an honest character so that they are able to lead the company well. According to agency theory, management in carrying out its role as an agent is equipped with the capability to be a door to commit fraud that has a negative impact on the company. This capability can cause management to have goals that are not in line with the goals of business owners, causing information asymmetry, one of which is financial reporting fraud (Devi et al., 2021).

The Effect of Arrogance (Company Existence) on Financial Statement Fraud

The arrogance projected by the existence of the company has no effect on financial statement fraud as shown by the results of the statistical test in table 6. The value of pressure significance of 0.285/2=0.143 > 0.05 (*alpha* 5%) thus, H_5 is rejected. This result is in line with (Siregar & Murwaningsari, 2022) research, which states that the arrogance projected by the existence of a company has no effect on financial statement fraud. Companies that have been established for a long time so that with this experience, they are able to continue to exist without having to commit financial statement fraud. However, the results of the study contradict the results of the research of (Haqq & Budiwitjaksono, 2019), which stated that the arrogance projected by the existence of the company has a positive effect on financial statement fraud. Companies that have been established for a long time have top *management* with a high level of arrogance. Based on agency theory, problems can occur when management as an agent of the owner of the company makes rational decisions for his personal benefit. Based on agency theory, problems can occur when management as an agent of the owner of the company makes rational decisions for his personal benefit. According to agency theory, a person with high arrogance is not afraid to do anything to meet his needs (Devi et al., 2021).

The Effect of Collusion (*Audit Fee*) on Financial Statement Fraud

Collusion projected by *audit fees* has no effect on financial statement fraud as shown by the results of the statistical test in table 6. The value of collusion significance of 0.107/2=0.054 > 0.05 (*alpha 5%*) Thus, H_6 is rejected. This result is contrary to other studies that show that the collusion projected by *audit fees* has effect on financial statement fraud. The high value of audit fees can reflect the possibility of financial reporting fraud. This means that it is likely that management cooperates with external auditors to commit and hide financial statement fraud. High audit costs are a form of

reciprocity between auditors and management (Sihombing & Panggulu, 2022). This study also contradicts the results of Indriana (2022), which states that collusion projected by *audit fees* has an effect on financial statement fraud. When management provides audit costs that are too large, a conflict of interest arises between the auditor and the client company regarding the provision of inappropriate opinions. This is done by the auditor's office to retain its clients. In the agency relationship between management (agent) and shareholders (principal), excessive provision of audit fees can create a conflict of interest. This can encourage auditors to act inconsistent with their interests as independent parties (Aviantara, 2021).

CONCLUSION

Based on the findings of this study, it can be concluded that rationalization has a positive effect on financial statement fraud, while pressure, opportunity, capability, arrogance, and collusion have no effect on financial statement fraud. This study has a difference from the previous study, namely the sample used was an infrastructure company listed on the Indonesia Stock Exchange (IDX) in 2020 to 2022. In addition, there was a different combination of independent variables from previous research. Further research is expected to expand the number of research samples in other industrial sectors in order to find out the influence of each variable on other industrial sectors. Further research is expected to consider and add other independent variables that are different to this study in order to find out other factors that can detect fraud in financial statements such as the company's ownership structure and organizational culture.

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