



## The Determinants of Financial Statement Fraud: Fraud Pentagon Perspective

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### Abstract

#### Purpose:

This study investigates the determinants of financial statement fraud from the perspectives of fraud pentagon theory. It is important to study the issue within the context of state-owned companies (BUMN) as stakeholders pay a lot of attention on the companies.

#### Method:

This research is quantitative one, with a logistic regression analysis of the 16 BUMN's financial statements listed on the Indonesian Stock Exchanges for the period of five years (2018-2022). The F-Score model is adopted to measure the indications of fraudulent statement of the companies.

#### Findings:

The findings show that the five components of fraud pentagon theory do not fully determine the indication of fraudulent financial statements of the companies. Only financial targets (FT) and CEO duality (CEOD) show significant values with negative relationship. This implies that on the context of BUMN, the five components of fraud pentagon theory do not play important roles in triggering fraudulent financial statements.

#### Originality/Value:

This paper stands out for being one of the few studies analyzing the arrogance component of fraud Pentagon theory using CEO duality. Most of previous studies on Pentagon fraud utilize CEO photographs to represent arrogance and result in inconsistent findings. Thus, this paper extends current studies on the importance of using CEO duality as a proxy of arrogance.

#### Keywords:

F-Score Model; Financial Fraud Statement; State-owned company, CEO Duality, Fraud Pentagon

#### Paper Type:

Research Paper

## 1. Introduction

It is widely known that some corporations have engaged in unethical practices since its inception, resulting in several investigations and legal actions since its founding (Maniatis, 2022) that lead to some controversies. These ongoing controversies have damaged the company's reputation, which has resulted in a loss of confidence from both customers and investors. Despite efforts to improve transparency and accountability, the corporation continues to face scrutiny for its questionable business practices. Unethical practices seem like an option for entrepreneurs looking to profit. According to Aprian *et al.* (2023), inadequate financial management may hamper company operations and sustainability.

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Aprian *et al.* (2023) emphasize the importance of companies implementing financial reporting standards as a fundamental aspect of their operations. Earnings management is a common form of financial fraud that involves changing accounting standards and procedures to present a company's financial conditions in a better light or to hide economic downturns (Ismael and Kamel, 2020; Widyasari *et al.*, 2017; Wu *et al.*, 2014).

Fraudulent practices in revenue transactions include reducing billings, capitalizing intangible assets, and recognizing significant expenses during profitable years. Manipulating financial statements may lead to decrease in the value of a company's shares and result in bankruptcy (Hartanto *et al.*, 2019). Moreover, investors may lose trust in the company and become less interested in investing their money after financial statement fraud occurs.

The Enron scandal is a well-known example of a company's poor management in maintaining financial records. The company used limited financial records to hide the fact that they were billions of dollars in debt (Cabello *et al.*, 2009). The incident exposed fraudulent business practices and inaccurate accounting, resulting in significant financial losses for investors and workers' pension funds (Troy, 2023). According to a survey report from the Association of Certified Fraud Examiners Indonesia published in 2019, corruption is the most prevalent type of fraud in Indonesia, with 167 reported cases. Additionally, the report identified 22 cases of fraudulent accounting reports and 50 cases of asset misappropriation (ACFE, 2019).

In the Indonesia environment, the public also witnessed similar fraudulent financial statement cases. The accounting issues plaguing major Indonesian companies such as PT Asuransi Jiwaseraya, PT Kimia Farma, and PT Garuda Indonesia have raised serious concerns about the credibility and reliability of their financial reports (Tiffani and Marfuah, 2015). Consequently, detecting fraudulent activities represents a significant challenge, demanding a thorough understanding of fraud patterns and the tactics employed to mask them. Shonhadji and Irwandi (2023) stated that organizations must establish strong internal controls and routinely perform fraud risk assessments to prevent and detect fraudulent activities. Additionally, investing in anti-fraud training for employees can enhance their awareness and vigilance in identifying potential red flags (Akinbowale *et al.*, 2023). Companies can continuously monitor financial transactions and conduct thorough investigations when necessary to mitigate the potential of fraudulent schemes and protect their assets. This proactive approach can help companies identify suspicious activity and take appropriate measures to prevent financial losses (Singleton, 2010). State-owned enterprises (hereafter called as BUMN) may also suffer from this fraudulent practices.

Based on UU No. 19/2003, BUMN is businesses that the Indonesian government owns and runs. Due to its ownership by the government sector and strategic role in managing specific economic sectors for the benefit of the state and society, BUMN is constantly in the spotlight for stakeholders and the public. Indeed, BUMN receives public attention and accountability, and its performance and management are of great concern to stakeholders and the public.

Over the last eight years, Indonesian legal institutions have handled around 119 corruption cases within BUMN (Anandya and Easter, 2023). Corruption perpetrators within BUMN often use window dressing or manipulation of financial statements as a method of corruption. The Indonesia Corruption Watch has found that at least 23 cases use this practice. The director of Jasa Marga testified as a witness in a corruption investigation at PT Waskita Karya, Tbk. Furthermore, the banking industry was involved in window dressing related to the failed claim of PT Asuransi Jiwaseraya. They were suspected of collaborating with the auditors to achieve this. The increase in cases of financial statement fraud shows that the issue of causality on this topic is still a significant

concern in the field of accounting and finance research (Alhadab *et al.*, 2020). Unfortunately, the prior studies only focus on the role of auditors in disclosing the condition of financial reports, and the results are still mixed (Firnanti *et al.*, 2019; Imen and Anis, 2021; Sitanggang *et al.*, 2020; Wu *et al.*, 2021). Therefore, this research considers internal and external factors that may motivate companies to manipulate financial statements. These factors include financial targets, the nature of the industry, director turnover, CEO duality, and total company accruals.

This study focuses on the context of state-owned companies listed on the Indonesia Stock Exchange with the belief that they do not tend to manipulate financial reporting using Fraud Pentagon Theory. Cressey (1953) explained three factors that may trigger someone to commit fraud: pressure, opportunity, and rationalization. Then, Wolfe and Hermanson (2004) added one factor, namely competence, and their theory became popular as the fraud diamond theory. Furthermore, in 2012, Fraud Pentagon Theory emerged when Crowe Horwath (2012) extended another factor, namely arrogance. Crowe's theory focus on pressure, rationalization, opportunity, competence and arrogance as factors that motivate someone to commit fraud. The decision to focus on state-owned companies is strategically sound, as it addresses the issue of financial statements manipulation prevalent within these organizations. Shedding light on this problem is a critical first step toward developing solutions that promote transparency and fairness in all financial reporting. The Regulation of State-Owned Enterprises Minister Number PER-2/MBU/03/20231 concerning Guidelines for Governance and Activities of Important BUMN Companies states that companies must always be sustainable and highly competitive. Both of these things might trigger pressure on top management teams and may motivate them to manipulate financial statements (Achmad *et al.*, 2022). This pressure can lead to unethical behavior, such as fraud, to meet these expectations. By understanding the factors contributing to fraud, companies may be able to implement preventive measures to mitigate the risk of financial misconduct.

A prior study by Achmad *et al.* (2022) revealed that factors such as financial stability, inadequate supervision, changes in auditors and directors, arrogant attitudes, and collaboration significantly affect fraudulent acts in financial reporting within state-owned companies. In contrast to Sari *et al.* (2022), a change of directors has no impact on manipulating financial statements. On the contrary, industry characteristics have a favorable influence on financial statement fraud. This variation in findings shows that fraudulent actions in financial reporting may take different motive and interest depending on the unique context and conditions of the companies. Hence, this study investigates the variables affecting financial statement fraud from the perspectives of five elements of fraud pentagon theory including arrogance and competence.

This research aims to validate the F-Score metric in the BUMN and provide practical guidance to BUMN management in evaluating the company's financial health. The F-Score metric developed by Dechow *et al.* (2011) may help identify the red flag of fraudulent financial statements. Moreover, this study examines the effectiveness of using the F-Score in analyzing the Indonesia state-owned companies. The study contribute to BUMN management on the importance of improving financial monitoring procedures to identify and avoid fraudulent acts. In fact, Husnurrosyidah and Fatihah (2022) claim that the F-Score can be used to identify and mitigate misstatement activities in the future. The F-Score model, a development of the Beneish M-Score model, has a tsoreshreshold value of 1 (one). A higher F-Score number indicates an increased likelihood of fraud (Dechow *et al.*, 2011). Dechow *et al.* (2011) identified inflated income, misrepresentation of costs,

and capitalization of costs as the most common forms of misstatement in accounting fraud. Accordingly, this study aims to answer the following specific research questions:

RQ<sub>1</sub>: What is the relationship between financial targets and the indications of BUMN's fraudulent financial statement?

RQ<sub>2</sub>: What is the relationship between director turnovers and the indications of BUMN's fraudulent financial statement?

RQ<sub>3</sub>: What is the relationship between the nature of the industry and the indications of BUMN's fraudulent financial statement?

RQ<sub>4</sub>: What is the relationship between total accruals and the indications of BUMN's fraudulent financial statement?

RQ<sub>5</sub>: What is the relationship between CEO duality and the indications of BUMN's fraudulent financial statement?

## 2. Literature Review

### 2.1. Pressure and Fraud Financial Statement

From the perspective of the Pentagon theory, "pressure" denotes the influence that drives individuals to engage in fraudulent activities. Pressure can arise from internal factors, such as personal goals, and external factors, such as social pressure or company expectations, to achieve financial targets (Nurcahyono and Hanum, 2023). Achieving high financial targets can be a challenge, causing significant stress for employees in a managerial position. The fraud Pentagon theory provides a complementary framework for understanding financial reporting frauds (Crowe Horwath, 2012). Organizations and stakeholders may improve their ability to detect and prevent fraudulent financial reporting by considering the impact of pressure along with other components of the Pentagon theory. Sihombing and Rahardjo (2014) argue that financial ratios such as return on assets (ROA) can be adopted as a proxy for financial targets (FT). Return on assets (ROA) is an important financial metric that measures a company's profitability from its assets.

A high ROA indicates that the company is utilizing its assets effectively to generate profits (Sihombing and Rahardjo, 2014). Unsurprisingly, ROA is often used as a key performance indicator to evaluate a company's financial performance. However, it is important to note that a high ROA may also be a dangerous sign of financial statement manipulation. Analyzing these financial ratios over time can help identify potential abnormalities or inconsistencies indicating the potentials of fraud. Indeed, financial target as external pressure may influence managers to commit fraudulent financial reporting, as has been assumed. Based on these arguments and supported by previous research (Fathmaningrum and Anggraini, 2021; Kusumosari and Solikhah, 2021; Tarjo *et al.*, 2021), we propose the following hypothesis:

H<sub>1</sub>: Financial targets positively affect fraudulent financial statements

### 2.2. Competence and Fraud Financial Statement

Competence, as defined by Crowe Horwath (2012), refers to an individual's capacity to engage in fraudulent activities, encompassing their expertise, talents, and proficiency in

manipulating others. According to this theory, individuals with high competence are more likely to effectively execute fraudulent activities without detection. The role an individual holds within a company plays a crucial part in their ability to exploit opportunities for fraudulent activities, as it involves having knowledge of the accounting system, identifying weaknesses in internal controls, and possessing the confidence to carry out fraud (Sahla *et al.*, 2024).

The concept of Changing Directors (**CHADIR**) becomes significant in evaluating an individual's potential to facilitate fraudulent activities. Prior studies have examined the effect of change in directors (Hartanto *et al.*, 2019; Sasongko and Wijyantika, 2019) on fraudulent financial statements. The findings indicate that change in directors can lead to internal power struggles, conflicts of interest, or efforts to gain control over corporate assets, creating an environment favorable to fraud. In such circumstances, individuals may be motivated to engage in unethical behaviors to achieve personal or group objectives. This demonstrates how director changes can greatly affect a company's governance structure and its possibility of fraudulent behavior. Based on these findings, the following hypothesis are proposed:

H<sub>2</sub>: Change in directors positively affect fraudulent financial statements

### 2.3. Opportunity and Fraud Financial Statement

According to the fraud Pentagon theory, the opportunity for fraudulent activities is shaped by industry characteristics, potentially creating conditions conducive to fraud (Crowe Horwath, 2012). Agbaje and Olorunto (2018) stated industries with too high regulations or complex financial reporting requirements may offer opportunities for fraudulent activities. Additionally, companies operating in fiercely competitive sectors may feel pressure to meet financial goals, increasing the likelihood of engaging in fraudulent activities. Industries characterized by inadequate oversight or internal controls, especially in competitive or high-risk markets like state-owned enterprises (SOEs), are more susceptible to financial statement fraud (Khamainy *et al.*, 2022). This susceptibility arises from managerial discretion, allowing for subjective evaluation of receivables and the potential use of deceptive strategies to present a more positive financial position (Maharani *et al.*, 2023; Mulia and Tanusdjaja, 2021).

Previous studies (Fathmaningrum and Anggraini, 2021; Hidayah and Saptarini, 2020; Narew *et al.*, 2021) have identified the manipulation of bad debt accounts as a common tactic used by management to inflate receivable balances and engage in financial fraud. The estimation of bad debts relies on subjective judgment, providing an avenue for manipulation. Collectively, these findings emphasize the intricate interplay between industry characteristics and the opportunities for fraudulent activities within organizations. Hence, we propose the following hypothesis:

H<sub>3</sub>: The nature of industry positively affect fraudulent financial statements

### 2.4. Rationalization and Fraud Financial Statement

Financial analysis heavily relies on total accruals, which are calculated as the difference between operating cash flow and sales (Gomes, 2012; Skousen *et al.*, 2009). These accruals provide essential data regarding the financial well-being and performance of an organization. Financial statements contribute to the comprehension of the historical aspects of revenue and expense recognition, offer management a holistic perspective on the organization's activities to facilitate decision-making, and provide significant insights into the financial state of the company (Evana *et al.*, 2019; Gomes, 2012).

Despite their importance, [Gomes \(2012\)](#) suggest that rationalization, as measured by total accruals (**TATA**), positively contributes to the inclination for fraudulent financial statements. Consequently, it becomes essential for investors and analysts to consider multiple factors when assessing the risk of fraudulent financial reporting in a company.

An example highlighting the impact of accrual-based accounting methods on financial reporting is seen in PT Garuda Indonesia. These methods, allowing management to adjust revenues to achieve desired profitability levels, demonstrate how accruals can indicate favorable conditions for the company, influencing stakeholders' and investors' decisions ([Jensen and Meckling, 1976](#)). The relationship between total accruals and financial statement fraud remains a subject for further studies. Thus, we believe that total accruals as representation of fraud risks may contribute to the possibility of fraudulent financial statements. Thus, the following hypothesis is proposed:

H<sub>1</sub>. Total accrual positively affect fraudulent financial statements

### 2.5. Arrogance and Fraud Financial Statement

The Fraud Pentagon theory expands upon the original Fraud Triangle theory by incorporating competence and arrogance. Arrogance manifests when an individual perceives themselves as superior to others, leading to a belief that they are exempt from adhering to company policies and internal controls ([Crowe Horwath, 2012](#)). In Indonesia, based on [Peraturan Otoritas Jasa Keuangan Nomor 33/POJK.04/2014](#) explicitly prohibits Board members from concurrently holding positions in government agencies and related industries in both structural and functional roles. This prohibition aims to prevent arrogance stemming from CEO duality (**CEOD**), where one person holds multiple positions in a company. Such a setup can foster a sense of exemption from laws and internal regulations, increasing the likelihood of disregarding governance standards and engaging in fraudulent activities ([Jensen and Meckling, 1976](#)).

CEOD undermines the division of authority between shareholders and management, leading to conflicts of interest and a blurred line between personal and professional duties ([Mubeen et al., 2021](#)). This scenario heightens the probability of self-dealing and other fraudulent activities, potentially diminishing shareholder value and creating ambiguity regarding the roles of "decision management" and "decision control" within company management. The above arguments highlight the significance of evaluating governance structures and their influence on fraud risk, stressing the necessity for customized strategies depending on individual organizational contexts. Hence, we offer the following hypothesis.

H<sub>5</sub>: CEO Duality positively affect fraudulent financial statements

## 3. Research Method

This study adopts a positive research paradigm by confirming the proposed hypotheses to explain the determinants of financial statement fraud. Hence, we investigate the influence of Financial Target (FT), Nature of Industry (NOI), Change in Director (ChaDir), Total Accrual (TATA), and CEO Duality (CEOD) on Financial Fraud Statement (FSS). The positivism method emphasizes identifying and validating cause-and-effect relationships, such as when companies manipulate financial figures ([Neuman and Djamba, 2014](#)). Using purposive sampling, we then collected data from financial statements of the 16 state-owned companies listed on the Indonesia Stock Exchanges between 2018 and 2022 excluding financial sector companies. By employing five years observation, this

study utilized 80 data for further analysis (Table 1) We gather data by utilizing financial reporting tools available at the publicly accessible Bloomberg Laboratory. Financial targets represent pressure, the nature of industry indicate an opportunity, changing director represents capability, total accruals demonstrate rationalization, and CEO dualism shows arrogance.

**Table 1. Research Criteria**

| No.                                   | Criteria  | Amount    |
|---------------------------------------|---|-----------|
| 1                                     | State-Owned Enterprises (BUMN) listed on the Indonesia Stock Exchange for the 2018-2022         | 24        |
| 2                                     | State-owned enterprises (BUMN) that are inconsistent in submitting comprehensive annual reports | (1)       |
| 3                                     | State-owned enterprises (BUMN) operating in the financial sector                                | (7)       |
| <b>The number of research samples</b> |   | <b>16</b> |

The study adopts logistic regression to statistically examine the relationship of dependent and independent variables (Ghozali, 2018). This method enables researchers to comprehend the effects independent variables on the dependent variable, formulating hypotheses and insights regarding the analyzed data. Ghozali (2018) mentioned that binary logistic regression is suitable when the dependent variable is a binary variable. Binary logistic regression examines a dependent variable with two categories, like yes/no or success/failure, and independent variables, which can be ordinal or ratio scale data (Hosmer and Lemeshow, 2000). The binary logistic regression model can predict a company's financial performance.

Several studies have utilized binary logistic regression models that include the F-Score variable as a predictor to detect potential financial reporting scenarios. Previous studies (Dechow *et al.*, 2011; Primasari and Wahyuningsih, 2021; Situngkir and Triyanto, 2020) employ the F-Score to forecast the possible state of financial reports; companies with an F-Score surpassing a specific threshold suggest an increased probability of fraud. Hosmer *et al.* (2013) argue that logistic regression is used to develop a prediction model for the likelihood of success or failure of an event, specifically in the context of fraudulent financial statements in state-owned companies with the following equation:

$$\mathbf{FFS} = \alpha + \beta_1\mathbf{FT} + \beta_2\mathbf{ChaDir} + \beta_3\mathbf{NOI} + \beta_4\mathbf{TATA} + \beta_5\mathbf{CEOD} \quad (1)$$

The F-Score model serves as a standardized probability tool to identify potential earnings manipulation or misstatement, as discussed by Dechow *et al.* (2011). Within this model, Richardson *et al.* (2005) emphasize the significance of Richardson, Sloan, Soliman dan Tuna (RSST) Accrual analysis for calculating the F-Score value and predicting the potential for overstatement (Richardson *et al.*, 2005). This analytical approach using RSST Accrual offers a comprehensive perspective on the reliability of financial data.

Within this framework, three key indicators of financial performance are thoroughly examined. The first factor involves the adjustment of receivables or changes in receivables, a parameter deemed significant for investors (Richardson *et al.*, 2005). The fluctuations in receivables not only provide insights into the company's financial condition but also enhance its appeal to investors. The second accrual component pertains to stock shifts or changes in inventory. Given investors' heightened responsiveness to gross margins, comprehending stock movements aids in recognizing potential operational efficiency and its influence on company profitability (Richardson *et al.*, 2005). It is important to note that

companies engaging in fraud often conceal a decrease in financial performance to maintain high stock market valuations (Dechow *et al.*, 2011).

This study further explores change in sales and profits as the third factor in evaluating a company's financial performance, aligning with the suggestions of Beasley (1996), Richardson *et al.* (2005) and Skousen *et al.* (2009). Managers may feel compelled to resort to fraudulent activities when economic, industry, and entity factors jeopardize financial stability and profitability, as outlined in SAS No. 99 (Skousen *et al.*, 2009). The F-Score model creates a comprehensive approach to identifying potential earnings manipulation and misstatement in financial reporting. The measurement of all variables are reflected on Table 2.

**Table 2. Research variables**

| Variable              | Proxy   |
|-----------------------|---|
| F-Score test          | = RSST Accrual + Financial Performance  |
| RSST Accrual          | = $\frac{(Working\ Capital\ (WC) + NCO + FIN)}{Average\ Total\ Assets}$                                       |
| Financial Performance | = Financial Performance = Change in receivable + Change in inventories + Change in sales + Change in earnings |
| Change in receivable  | = $\Delta$ Receivable/Average Total Assets  |
| Change in inventories | = $\Delta$ Inventory/Average Total Assets   |
| Change in sales       | = $(\Delta$ Sales/Sales(t))/( $\Delta$ Receivable/Receivable(t))  |
| Change in receivable  | = (Earnings(t)/Average Total Asset(t)) -(Earnings(t-1)/Average Total Asset(t-1))                              |
| Financial target      | = $\frac{net\ profit}{total\ asset} \times 100\%$   |
| Nature of industry    | = $\frac{Inventory(t)}{Sale(t)} - \frac{Inventory(t-1)}{Sale(t-1)}$   |
| Change in director    | = Dummy variable, if there is a change of director, it is coded 1, and otherwise coded 0.                     |
| Total Accrual         | = TATA = Net income - Cash From Operation   |
| CEO Duality           | = Dummy variable, if a director with multiple positions is found, it is coded 1, and otherwise coded 0.       |

## 4. Results and Discussion

### 4.1. Descriptive Statistics

Descriptive statistical analysis provides a summary of the variables and their distributions in a dataset. The analysis utilizes statistical measures like mean, median, mode, range, variance, and standard deviation to summarize the data and detect patterns or trends, as displayed in Table 3.

**Table 3. Descriptive Statistic**

| Variable                    | N  | Minimum | Maximum | Mean  | Standard Deviation |
|-----------------------------|----|---------|---------|-------|--------------------|
| Financial target (FT)       | 80 | -46.26  | 55.67   | -0.13 | 9.02               |
| Change in director (chadir) | 80 | 0.00    | 1.00    | 0.27  | 0.44               |
| Nature of industry (NOI)    | 80 | -1.41   | 1.75    | -0.03 | 0.32               |
| Total accrual (TATA)        | 80 | -2.39   | 0.53    | -0.06 | 0.28               |
| Ceo duality (CEOD)          | 80 | 0.00    | 1.00    | 0.21  | 0.41               |
| FFS                         | 80 | 0.00    | 1.00    | 0.29  | 0.45               |

**Tabel 4. Omnibus Tests of Model Coefficients**

|        |       | Chi-square | df | Sig.  |
|--------|-------|------------|----|-------|
| Step 1 | Step  | 5.293      | 5  | 0.381 |
|        | Block | 5.293      | 5  | 0.381 |
|        | Model | 5.293      | 5  | 0.381 |

Table 3 presents descriptive statistics revealing that the F-Score, with a value of 0.29, serves as a metric for measuring fraudulent financial reporting. This value indicates that the prevalence of fraudulent financial reporting in state-owned companies during the 2018–2022 period stands at 29%. This finding signals a potential significant issue with fraudulent financial reporting within this timeframe, prompting the need for further analysis to unravel underlying causes and potential implications.

Table 4, the Chi-square value is calculated at 5.293, with a degree of freedom (df) of 5 and a significance level of 0.381 ( $>0.05$ ). This statistical finding indicates that none of the five variables can simultaneously explain the possibility of false financial statements. The lack of statistical significance emphasizes the need for a nuanced exploration of each variable and their interactions to discern any patterns or contributing factors to fraudulent financial reporting.

**Tabel 5. Output Model Summary**

| Step | -2 Log likelihood | Cox and Snell R Square | Nagelkerke R Square |
|------|-------------------|------------------------|---------------------|
| 1    | 90.691*           | 0.064                  | 0.092               |

**Tabel 6. Output Hosmer and Lemeshow Test**

| Step | Chi-square | df | Sig.  |
|------|------------|----|-------|
| 1    | 9.729      | 8  | 0.285 |

In logistic regression, the extent of the influence of the independent variable can be gauged through the coefficient of determination, measured by the Cox and Snell R-square. The values in Table 5 shows that when five independent variables (FT, ChaDir, NOI, TATA, and CEOD) are introduced into the regression model, the parameter estimate (-2 log likelihood) is 90.691. Examining the R-square values, we observe figures of 0.064 (6.4% for Cox and Snell) and 0.092 (9.2% for Nagelkerke). This suggests that the model, incorporating these five variables, can only account for approximately 9.2% of the likelihood of financial statement manipulation.

Table 6 presents the results of a test aiming to evaluate how well the regression model can predict the relationship between independent and dependent variables. The obtained significance value is 0.285 ( $>0.05$ ), indicating that the model is reasonably adept at predicting the relationship between the variables under examination. In essence, while the model may not be flawless, it demonstrates a reliable ability to forecast the relationship between the variables being scrutinized.

#### 4.2. Hypothesis Testing

The hypothesis was assessed by comparing significance values from Table 7 with significance levels of 5% and 10%. Rejecting hypothesis 0 occurs when the significance value is  $<0.05$  or  $<0.01$ , indicating a significant influence of the independent variable on the dependent variable.

**Table 7. Variable in The Equation**

| Variable | B      | S.E.  | Wald  | df | Sig.    | Exp(B) |
|----------|--------|-------|-------|----|---------|--------|
| FT       | -0,045 | 0.041 | 1.217 | 1  | 0.027*  | 0.956  |
| ChaDir   | -0.165 | 0.576 | 0.082 | 1  | 0.774   | 0.848  |
| NOI      | -0.414 | 0.826 | 0.251 | 1  | 0.616   | 0.661  |
| TATA     | 0.921  | 1.792 | 0.264 | 1  | 0.608   | 2.511  |
| CEOD     | -0.983 | 0.583 | 2.839 | 1  | 0.092** | 0.374  |
| Constant | -0.036 | 0.665 | 0.003 | 1  | 0.957   | 0.965  |

\*significant at 5%; \*\*significant at 10%

#### **4.3. Financial Target (FT) Demonstrates a Positive Effect on the Tendency for Fraudulent Financial Statement**

The first proposed hypothesis is that the financial target positively influence fraudulent financial statement. The empirical finding show that financial target significantly influence fraudulent financial statement but with negative direction. This result aligns with studies [Evana et al. \(2019\)](#), [Mcclure \(2021\)](#), [Mulia and Tanusdjaja \(2021\)](#) that a high ROA reflects strong financial and operational performance and do not indicates fraud. Financial statement fraud is a complex phenomenon that is influenced by various factors, and the relationship between ROA and financial statement fraud is only one aspect; it may not be a strong predictor of financial statement fraud in state-owned companies ([Achmad et al., 2023](#)).

#### **4.4. A Change of Director has a Positive Effect on the Tendency for Fraudulent Financial Statements**

The second hypothesis examine the relationship between director changes and fraudulent financial statement. The empirical finding did not support the hypothesis. Changing the director of a company does not directly address fraud within the organization. Fraud detection are complex issues that involve various factors such as organizational culture, internal controls, transparency, and ethical leadership. This aligns with research by [Evana et al. \(2019\)](#), [Khamainy et al. \(2022\)](#), and [Situngkir and Triyanto \(2020\)](#) which indicates that changing directors does not influence a company's decision to commit financial statement fraud. The lack of significance could be attributed to director changes driven by factors such as competence, retirement, or optimal performance ([Sasongko and Wijyantika. 2019](#)). BUMN companies may change their directors as a form of internal control to prevent fraud and implement BUMN Ministerial Regulation No. [PER-11/MBU/07/2021](#). The new board of directors may encourage more open and accountable practices, which could reduce the potential for financial statement fraud.

#### **4.5. The Nature of Industry has a Positive Effect on the Tendency for Fraudulent Financial Statements**

The nature of the industry aspect, which reflects the element of opportunity in this research shows that it does not have a significant impact on the practice of manipulating financial reports in state-owned companies in Indonesia. This finding is consistent with previous research by [Fathmaningrum and Anggraini \(2021\)](#), which found that companies have sufficient cash and can manage their receivables efficiently and effectively so that they can prevent fraudulent financial reports in terms of receivables. Thus, changes in the receivables ratio do not encourage managers to engage in fraudulent practices in financial reporting.

#### 4.6. Total Accruals Have a Positive Effect on the Tendency for Fraudulent Financial Statements

The logistic regression analysis in Table 6 shows that X4 (TATA) does not have a effect on the chance of fraudulent financial statements based on the difference between net income and cash from operations. This research aligns with [Aprian \*et al.\* \(2023\)](#) finding, which indicates that TATA does not impact accounting fraud. Fraudsters will discover industry characteristics to take advantage of the company's control weaknesses. Fraudsters rationalize their fraudulent actions by manipulating total accruals, believing that committing fraud will provide a quick solution to pressing issues. According to [Lokanan and Sharma \(2018\)](#), individuals who rationalize fraudulent actions tend to justify their dishonest behavior by associating it with the company's circumstances, which helps decrease suspicion from others.

#### 4.7. CEO Duality has a Positive Effect on the Tendency for Financial Statement Fraud

Hypothesis 5, stating that CEO duality (CEOD) has a positive effect on financial statement manipulation. The finding shows that CEOD significantly influence fraudulent financial statement of state-owned companies with negative direction. According to fraud pentagon theory, CEOD reflects arrogance that can encourage fraud behaviour. The prior study also unconsistently prove that CEOD has positive effect to fraudulent financial statement ([Sasongko & Wijyantika, 2019](#)). Fraudulent activities are usually caused by weak corporate governance, inadequate internal controls, opportunistic behavior of individuals, and other organizational weaknesses, rather than just CEO duality. The connection between CEO duality and financial fraud is complex and requires an examination of various contextual elements to comprehend its influence on fraudulent behavior in corporations.

### 5. Conclusion

Financial statement fraud, an intentional and manipulative act aimed at presenting financial information to mislead users of financial reports, is a critical concern within the corporate landscape ([ACFE, 2019](#)). The repercussions of fraud extend throughout the business ecosystem, with exposed companies experiencing a sharp decline in share prices, market volatility, and adverse impacts on overall financial markets. Stakeholders, including investors, shareholders, creditors, and business partners, bear the brunt of financial losses, while regulatory authorities may impose sanctions and fines, leading to severe legal consequences. Consequently, fraud prevention becomes paramount, involving multifaceted measures such as reinforcing internal controls, fostering a robust ethical culture, and enhancing transparency in financial reporting.

This research, adopting the perspectives and elements of the fraud pentagon, delves into financial statement fraud in state-owned companies. The results show that all the hypotheses proposed, including the financial target hypothesis, director change, industry characteristics, total accruals, and CEO duality, were not supported. This implies that these variables may not serve as robust indicators of financial report fraud within the context of state-owned enterprises. Consequently, variables like total accruals or industry characteristics may not exhibit a strong correlation with fraud, especially given the strict supervision and control within the government structure playing a preventive role.

For future research endeavors, exploring alternative variables such as government regulations, corporate governance practices, and internal control mechanisms may offer more pertinent and profound insights. Acknowledging limitations in data availability, this research encountered constraints accessing data only until 2022 and utilizing a limited

sample of 16 state-owned companies. Thus, the data utilized may not be sufficient to offer a comprehensive understanding of the nuanced dynamics of financial report fraud in state-owned enterprises. Future research endeavors should consider integrating qualitative approaches such as case studies, phenomenology, or ethnomethodology to provide a more nuanced and contextual perspective on financial statement fraud.

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