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Does The Fraud Pentagon Theory Effectively Detect Financial Statement Fraud?

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Article info

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Abtract

This study aims to assess and evaluate the effectiveness of the Fraud Pentagon Theory in identifying fraudulent financial statements. The independent variables used in this study are Leverage, Inadequate monitoring, auditor turnover, change of directors, and frequent number of CEOT Related to this, this study focuses on financial sector companies listed on the Indonesia Stock Exchange in 2018 to 2022, because financial sector companies are more vulnerable to fraud. The sample approach used is purposive sampling. Based on the specified criteria, the sample consists of 55 results obtained from 11 companies in the financial industry. The data analysis methodology used a logistic regression model to assess its feasibility. The research findings indicate that leverage substantially impacts the prevalence of financial statement fraud. However, factors such as inadequate monitoring, auditor turnover, board turnover, and the number of CEO photo frequencies did not show a significant influence on financial statement fraud.

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1. Introduction

The concept of financial statement fraud encompasses a range of negligent behaviors that have the potential to result in financial losses for corporations, governmental entities, and the broader community (Larum et al., 2021; Fadhilah et al., 2022; and Wang et al., 2023). False financial statements can lead to substantial financial losses for investors and creditors in the capital market (Arifin & Prasetyo, 2018; Antawirya et al., 2019; Chen et al., 2019). One manifestation of financial statement fraud involves improperly utilizing accounting records, manipulating records, or intentionally altering accounting records to deviate from the factual conditions (Astuti et al., 2023; Rachman et al., 2023; and Farhan & Wondabio, 2023). The most detrimental type of fraud was financial statement fraud, resulting in a loss of $593,000. Nevertheless, it is worth noting that the incidence of financial statement fraud is a very modest 9%, in stark contrast to the prevalence of corruption at 50 % and asset misappropriation at 86 % (ACFE, 2020). The Indonesian Fraud Survey shows that detecting fraud in a company takes 12 months, and most of the sources come from the company's employee reports. Financial and banking companies are the most disadvantageous due to fraud at 41.4% (ACFE Indonesia, 2019).

The biggest cases of financial statement fraud that had an impact on the global economy are the cases of Enron, Worldcom, Tyco, Global Crossing, and Qwest, with total losses reaching US$ 460 billion (Yang et al., 2017; Omukaga, 2020; Putra & Kusnoegroho, 2021;). Fraudulent financial statements have been observed in Indonesia involving PT Waskita Karya (Persero) and PT Wijaya Karya (Persero).

These entities have manipulated financial data pertaining to bogus sub-contractor projects (Budhiman, 2019), and the event resulted in financial damages of up to IDR 202.29 billion for the state (CNN Indonesia, 2020). The case of PT Asabri (Persero) committed fraudulent financial statements during the period 2012-2019, leading to a financial deficit of IDR 22.78 trillion for the state (BPK, 2021). The case of PT Asuransi Jiwasraya (Persero) has signs of financial statement fraud through the JS Saving Plan product, where funds from customers are invested, not by the provisions, this has resulted in state financial losses of IDR 16.81 trillion (BPK, 2020).

The financial statement fraud case mentioned above shows that fraud can occur in a company without previous preventive measures (Sasongko & Wijayantika, 2019). The Fraud Pentagon is employed to mitigate and identify fraud in financial statements. The fraud pentagon theory comes from the development of Cressey & Clinard's (1954) research outlining the fraud triangle theory and Wolfe & Hermanson's (2004) research on fraud diamonds. The fraud pentagon, consisting of pressure, opportunity, rationalization, competence, and arrogance, is employed to identify instances of financial statement fraud (Tessa & Harto, 2016; Utami & Pusparini, 2019; Mukhtaruddin et al., 2020; Sahla & Ardianto, 2023; and Fakhroni & Setiawan, 2024).

Numerous research endeavors have produced a range of outcomes when investigating instances of financial statement fraud through the framework of the fraud pentagon theory. According to Septriyani & Handayani (2018); Ardhiansyah et al. (2019); Syafira & Cahyaningsih (2022) companies with high leverage levels are characterized by large debts and an increased likelihood of bankruptcy, resulting in the potential for financial statement fraud. In contrast, Situngkir & Triyanto (2020; and Yanti et al. (2023) show that management is not pressured to repay large amounts of debt, as there are alternative methods besides financial statement fraud. Sukmawati (2021) and Ghaisani & Supatmi (2023;) assert that inadequate monitoring oversight might result in financial fraud statements due to management's perception of lax control. Nevertheless, research by Nurchoirunanisa et al. (2020); Maryadi et al. (2020); and Fadhilah et al. (2022); indicates that inadequate monitoring does not impact financial statement fraud. Puspitasari & Hastuti (2020); Maryadi et al. (2020 indicate that the change of auditors significantly impacts the likelihood of misleading financial statements. This is because the replacement of auditors is seen as a way to conceal evidence of illegal economic activities. Apriliana & Agustina (2017); Ghaisani & Supatmi (2023) conducted a study that gave divergent results, concluding that the absence or presence of a change of auditor within a company does not indicate financial statement manipulation.

According to Sasongko & Wijayantika (2019; and Nurchoirunanisa et al., (2020) research, the change of directors indicates fraud in the company's financial statement. Nevertheless, according to Putra & Kusnoegroho (2021); and Widiastika & Junaidi (2021), there is no indication of financial statement fraud because the shift in directors produces new directors who are more experienced than the previous directors. Apriliana & Agustina (2017); and Sapulette & Risakotta (2020) it has been suggested that a high frequency of the CEO's pictures in financial statements indicates the CEO's degree of arrogance, and a high level of arrogance might be indicative of falsified financial statements. This differs from Anggraini & Suryani (2021); Fitriyah & Novita (2021); research, where fraudulent financial statements do not indicate the Frequ-ent number of the CEO's picture because the CEO's photo in the annual report only shows his status.

Financial statement fraud remains pertinent due to its potential occurrence across diverse organizational structures, encompassing public, private, and government entities. Fraudsters persist in adjusting and discovering fresh vulnerabilities despite preventative measures. So, ongoing research is important to understand recent trends and effective mitigation strategies. Consequently, this research aims to evaluate the effectiveness of the fraud pentagon theory in identifying instances of financial statement fraud within the financial sector firms publicly traded on the Indonesian Stock Exchange from 2018 to 2022. Furthermore, this research aids organizations and financial regulatory bodies in comprehending the utilization of the Pentagon Fraud Theory to detect deceptive financial statements. This knowledge empowers these stakeholders to implement measures to mitigate the adverse consequences of such fraudulent financial statements. The purpose of this study was to assess and evaluate the effec-

tiveness of the Fraud Pentagon Theory in identifying financial statement fraud.

2. Hyphotesis Development

This theory considers how individuals acquire, process, and use information in decision-making. Ikechi & Nwadiubu (2020) discuss the Social Cognitive Theory, which provides a comprehensive framework for understanding the factors that impact an individual's motivation to engage in fraudulent activities. According to Shi et al., (2017) and Wahidin et al. (2021), The Social Cognitive Theory considers behaviour as the outcome of an intricate interplay between cognitive, environmental, and individual behavioural factors. These factors mutually influence and mold one another. Grazioli et al., (2006) description of the social cognitive theory approach to fraud detection emphasises two crucial components: The first relates to efforts to detect outright fraud, such as manipulating financial records or creating falsified papers. Moreover, this approach acknowledges that fraud often entails manipulating the environment to deceive victims into forming inaccurate cognitive perceptions. The second component of the cognitive method focuses on comprehending the mental processes used by auditors in detecting fraud. This entails the auditor evaluating the material contained in reports created by someone other than the auditor. Auditors must possess the ability to identify flaws or inconsistencies that may signify fraudulent activity. Nevertheless, auditors are also prone to cognitive biases or weaknesses in their grasp of audit processes, which may impede their capacity to identify fraud. As a result, this theory functions as a benchmark for evaluating the efficacy of fraud prevention and detection strategies, as it necessitates not only the identification of fraudulent activities but also the comprehension of the psychological tactics employed by fraudulent individuals. Additionally, it aims to enhance the auditor's awareness of potential cognitive biases that could impede fraud detection.

Theories of deception have evolved over time, and each of them emphasizes a certain set of elements that can trigger a person to commit an act of deception. Cressey (1953) developed the fraud triangle theory in 1953, which explains that someone commits fraud consisting of three main elements: Opportunity, Pressure, and Rationalization (Ikechi & Nwadiubu, 2020). The Fraud Diamond Theory was first published in the December 2004 issue of the CPA Journal by Wolfe and Hermanson. The fraud diamond theory is a development of the Fraud Triangle by adding one additional element consisting of four main elements: Opportunity, Pressure, Rationalization, and Capability (Hernadi & Meiden, 2023). Furthermore, Howarth (2011) developed the concept of the two theories into the fraud pentagon theory by adding one element, namely arrogance (Soneji, 2022). Therefore, five key factors serve as motivators for individuals to engage in fraudulent activities.

External pressures can catalyze individuals to partake in fraudulent activities (Ratmono et al., 2020). A manager may use financial manipulation to present flawless financial accounts demonstrating the company's strong performance (Yanti et al., 2023). The probability of a corporation engaging in financial statement deception is heightened by more leverage, as it is considered that the corporation cannot satisfy its debt obligations. The aforementioned finding aligns with the research conducted by Fitri et al., (2019); Syafira & Cahyaningsih (2022). The statements assert that leverage, as a proxy for pressure, impacts fraud in financial statements.

H_1: Leverage has a significant impact on financial statement fraud

Statements on Auditing Standards (SAS) No. 99 of 2002 states that a company's insufficient internal control increases the likelihood of fraud (Victoravich, 2010). One of the factors that causes these opportunities is the weakness in corporate supervision that allows managers to manipulate financial statements (Putra & Kusnoegroho, 2021). Inadequate oversight by management might create opportunities for specific entities to engage in fraudulent activities within the financial statements. This finding is consistent with the study conducted by Septriyani & Handayani (2018); Andriani et al., (2022); Ghaisani & Supatmi (2023). According to the statement, the existence of ineffective monitoring has a significant influence on the occurrence of financial statement fraud.

H_2: Inadequate monitoring has a significant impact on financial statement fraud

Per Auditing Standard No. 99 (AICPA, 2002), replacing auditors inside a company might indicate possible fraudulent activity. Rationalization proxied by a change of auditors can serve as a means to conceal fraudulent ac-

tivities previously performed by the prior auditor (Sasongko & Wijayantika, 2019) The likelihood of the corporation committing financial statement fraud increases with the frequency of auditor changes. The finding indicated above is consistent with the research undertaken by Sasongko & Wijayatika (2019); Fauziah & Fadhilah (2022). The assertion posits that the occurrence of financial statement fraud is influenced by rationalization, which is represented by the change of auditors.

H_3: Change of auditor's influence on financial statement fraud is significant

Competence individuals possess a heightened capacity to engage in fraudulent activities with the aim of attaining specific objectives (Ayuningtyas et al., 2021). Competence is proxied by changes in directors; the company makes changes to more competent directors to hide the fraud that has occurred in the company (Fadhilah et al., 2022). A positive correlation exists between the frequency of director changes within a corporation and the likelihood of misleading financial statements occurring inside that organization (Achmad et al., 2022). The aforementioned finding aligns with the research conducted by Septriyani & Handayani (2018); Siddiq & Suseno (2019); and Humphrey et al. (2023). The proposition posits that the presence of competence, as indicated by a change in directors, impacts financial statement fraud.

H_4: There is a significant influence of changes in directors on financial statement fraud

Arrogance refers to the conduct of an individual who displays excessive self-importance or exhibits narcissistic traits (Handoko et al., 2020). Including CEO photographs in the annual report might be used as a proxy to indicate the level of arrogance (Tessa & Harto, 2016). A CEO seeks to demonstrate his status and wants to be seen by users of financial statements to maintain his position in the company (Putra & Kusnoegroho, 2021). A CEO has a larger chance of committing fraud the more conceited they are. This finding is consistent with the study conducted by Andriani et al., (2022); Yanti et al., (2023); Humphrey et al., (2023). The present study proposes that there exists a notable correlation between the frequency of CEO change and the incidence of fi-nancial statement fraud.

H_5: The frequency and number of CEO's pictures have a significant impact on the occurrence of financial statement fraud

3. Data and Methods

This quantitative analysis utilizes secondary data extracted from the annual reports of financial sector companies listed on the Indonesia Stock Exchange (IDX) for the period of 2018-2022. This study applies a purposive sampling technique with the following criteria: 1) companies in the financial industry that were listed on the Indonesia Stock Exchange (IDX) between 2018 and 2022; 2) companies that publish the full annual report on the company's website or the IDX for the period 2018-2022; 3) financial sector companies that publish complete annual reports by the variable data needed for research. So, 55 annual reports were used as samples for this study because only 11 financial sector companies were listed on the Indonesia Stock Exchange (IDX) during that period. The operationalisation of the research variables is presented in table 1.The data analysis method used is logistic regression. This study uses SPSS 25 software to test the regression model and its significance.

Table 1. Operational Variable

Variable	Measurements
Leverage	$LEV = \frac{Total\ debt}{Total\ asset}$
BDOUT	$BDOUT = \frac{Total\ independent\ commissars}{Total\ board\ of\ commissioners}$
ACHANGE	0: there is no change in KAP; 1: there is a change in KAP
DCHANGE	0: The board of directors is unchanged; 1: The board of directors has undergone a change.
CEOPIC	CEO photo size in the company's annual report
Financial Statement Fraud (Y)	F-Score =Accrual Quality + Financial Performance Accrual Quality (RSST Accrual) $= \frac{\Delta WC + \Delta NCO + \Delta FIN}{Average\ Total\ Asset}$ Financial Performance = change in receivables + change in inventories + change in cash sales + change in earnings

Source: Data processes Siddiq & Suseno (2019); Lin et al. (2020); Fitriyah & Novita (2021); and Fadhilah et al. (2022).

4. Result

In this study, descriptive statistics provide information about variables related to the mean and standard deviation generated by each variable measuring indicator. Based on the results of the description analysis presented in table 2, it shows that the average leverage is low, with low leverage variance. While the average percentage of independent commissioners is above 50%.

Table 2. Descriptive Statistics

Variable	Mean	Min.	Max	St. Dev.
Financial statement fraud	0.709	0.000	1.000	0.458
Leverage	0.387	0.000	0.912	0.294
BDOUT	0.518	0.000	1.000	0.146
CEOPIC	28.727	0.000	76.000	20.026

The present study employs the Nagelkerke R Square value to assess how much the independent variable may account for the variability observed in the dependent variable. According to the findings shown in Table 3, the Nagelkerke R Square coefficient yielded a value of 0.363. This finding suggests that the five independent variables examined in the study account for 36.3% of the variance in the factors that impact financial statement fraud. This study did not consider other variables, which explains the 63.7% unexplained variation.

The results of the hypothesis test shown in table 3 show that leverage significantly negatively affects fraudulent financial statements. Inadequate monitoring, change of auditor, change in director, and frequent number of CEOs do not affect fraudulent financial statements.

Table 3. Analysis Result

	β	S.E.	Wald	Df	Sig.	Exp (β)
Leverage	-2.975	1.348	4.871	1	0.027	0.051
BDOUT	0.250	2.661	0.009	1	0.925	1.284
ACHANGE	0.000	1.070	0.000	1	1.000	1.000
DCHANGE	1.336	0.828	2.601	1	0.107	3.804
CEOPIC	0.029	0.021	1.778	1	0.182	1.029
Constant	0.854	1.201	0.506	1	0.477	2.348
Cox & Snell R^2		0.255				
Nagelkerke R^2		0.363				

5. Discussion

This research shows that leverage significantly negatively affects financial statement fraud. High leverage results in external pressure on management, prompting them to maintain the company's financial performance stability (Humphrey et al., 2023). High leverage indicates a significant amount of debt within the company. Like a financial analyst, creditors who provide loans closely monitor the company's financial activities by carefully examining financial reports or even conducting independent audits, this can reduce the occurrence of fraudulent financial statements (Paramitha et al., 2022). Therefore, the tendency to commit fraud can have a negative impact because management will consider the risks that can harm the company before engaging in fraud. Consistent with previous research Anjilni (2021); and Iskandar et al. (2022), this study's findings indicate that an increase in leverage value is associated with a decrease in financial statement fraud within an organization.

According to this research's findings, inadequate monitoring does not substantially impact financial statement fraud. Inadequate monitoring is measured by the number of independent commissioners divided by the number of commissioners (Widiastika & Junaidi, 2021). The primary role of independent commissioners is to oversee and provide accountability for the company's management to shareholders. Independent commissioners are usually not involved in the company's day-to-day operations and typically meet in regular meetings. This shows that the presence or absence of independent commissioners has nothing to do with the occurrence of fraudulent financial statements because independent commissioners do not have a sufficient understanding of economic techniques to detect fraudulent financial statements effectively (Sangkala & Safitri, 2022). Therefore, independent commissioners exist only to fulfill company regulations, not to prevent fraudulent financial statements (Fadhilah et al., 2022). The results of this study are consistent with the research findings of Harman & Bernawati (2021); Anggraini & Suryani (2021); Qintharah & Riyanti (2023), the lack of inadequate monitoring does not have a major impact

on the occurrence of fraudulent financial statements.

Based on the results of this study indicate that the change of auditor has no significant relationship between change of auditor and financial statement fraud. These findings suggest that changes in auditors may not always be driven by attempts to conceal detected fraud. On the other hand, changes in auditors can occur due to dissatisfaction with the previous auditor's performance (Antawirya et al., 2019). The change of auditors in a company is regulated in government regulation article 11 number 20 of 2015 concerning Public Accountant Practices, which states that the provision of audit services is limited to a maximum of 5 years, it is a step to ensure transparency, independence, and audit quality (Ghaisani & Supatmi, 2023). Therefore, a change of auditor is not a factor that directly affects the occurrence of fraudulent financial statements, but rather a change of auditors to comply with regulations set by the Indonesian government. This research is in accordance with the research of Mulyadi et al., (2021); Nurhakim & Harto (2023); Syafira & Cahyaningsih (2022), which state that change of auditor does not make a significant contribution to predicting financial statement fraud.

This research's findings indicate no statistically significant relationship between director turnover and financial statement fraud. This is the basis for the company's directors in change because the company wants to recruit a more competent director. When the company has a qualified director, it can manage company risk more effectively and improve company performance (Rengganis et al., 2019). Therefore, having more competent directors can also reduce the occurrence of fraudulent financial statements (Nugroho et al., 2021). A change of directors also occurs because the director's term of office has expired or a board member has resigned. This result is consistent with the research of Harman & Bernawati (2020); Fitriyah & Novita (2021); Thamlim & Reskino (2023), the change of directors did not have a substantial impact on the occurrence of financial statement fraud.

This research's findings indicate no statistically significant relationship between the frequency of CEOs and financial statement fraud. This shows that the frequent number of CEOs is not related to the occurrence of fraud in the financial statements. The size of the CEO photo in the annual report does not reflect the level of arrogance of a CEO in the company but is used to introduce the CEO to stakeholders. CEOs whose photos appear in the annual report may consider themselves important and want to get more attention (Lin et al., 2020). This research shows that companies that prominently feature CEO images in their annual reports tend to exhibit a greater degree of CEO trust. The CEO's successes and achievements are the most likely reasons for having high self-confidence. This result is consistent with research Asmaranti et al., (2023); Maulidiana & Triandi (2020); Nurhakim & Harto (2023), there is no statistically significant relationship between the frequency of CEOs and financial statement fraud.

6. Conclusion and Suggestion

Conclusion

The results showed that the Pentagon fraud theory was not fully effective in detecting fraudulent financial statements. The leverage variable is the only variable that significantly negatively affects financial statement fraud. Meanwhile, other variables such as inadequate monitoring, change of auditor, change in directors, and frequent number of CEOs do not have a significant effect on financial statement fraud. This suggests that these factors may not be relevant or sensitive enough in detecting fraud in the context of financial sector companies. There may be more dominant psychological or social factors influencing financial statement fraud in these companies than the factors identified in the fraud pentagon theory.

Suggestion

Based on the results of this research, there are several limitations and suggestions that can be given by the author for further research; the sample of financial sector companies used for this study tends to be few listed on the Indonesia Stock Exchange (IDX), so it is advisable to use samples with other sectors. In addition, further research is recommended to try to develop other proxies by using measurement and testing models that have a higher level of accuracy in detecting financial statement fraud.

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