ProBusiness: Management Journal, 15 (5) (2024) pp. 963-970

Published by:Jonhariono Research, Publication and Consulting Institute

ProBusiness: Management Journal

Financial Statement Fraud in Construction Companies: A Perspective of the Hexagon Fraud Theory

Ratu Persada Pahlevi Pasca Mahardika[1], Warsito Kawedar[2]
[1,2]Master of Accounting, Faculty of Economics and Business, Diponegoro University, Indonesia

ARTICLEINFO

Article history:

Received Nov 01, 2024
Revised Nov 25, 2024
Accepted Des 10, 2024

Keywords:

Construction industry;
External pressure;
Financial target;
Fraud;
Hexagon fraud theory

ABSTRACT

Fraud in financial statements refers to the deliberate manipulation of information to mislead stakeholders, often occurring in companies facing high external pressure and ambitious financial targets. This study aims to analyze the influence of the Hexagon Fraud Theory on financial statement fraud in construction companies listed on the Indonesia Stock Exchange (IDX) during the 2018–2022 period. Using a quantitative method with descriptive analysis and multiple linear regression, the study sampled construction companies selected through purposive sampling based on annual reports. Secondary data were collected through empirical and literature studies, then analyzed using descriptive statistical tests, classical assumption tests, and hypothesis testing to examine variable relationships using SPSS. The results show that external pressure, financial targets, the nature of the industry, external auditor quality, changes in auditors, changes in directors, and arrogance significantly influence fraud. In contrast, financial stability, ineffective monitoring, and the status of a company as a state-owned enterprise (SOE) are not significant. These findings highlight the importance of strict oversight of specific factors in the construction industry, such as external pressure and the industry's nature, as well as improving governance quality to prevent financial statement manipulation. The implications of this study suggest that construction companies need to enhance supervision and governance related to external pressure, financial target achievement, and the unique characteristics of the industry. Furthermore, prioritizing the quality of auditors and management of changes is essential to minimize the risk of financial statement manipulation.

Corresponding Author:

Ratu Persada Pahlevi Pasca Mahardika,
Master of Accounting, Faculty of Economics and Business
Diponegoro University,
Jl. Prof. Moeljono S. Trastotenojo, Kampus Undip Tembalang, Semarang, 50275, Indonesia
Email: ratupersadappm@gmail.com

1. INTRODUCTION

Financial statement fraud refers to the deliberate manipulation of information intended to mislead stakeholders (Camfferman & Wielhouwer, 2019; Hassan et al., 2022). This phenomenon is often associated with corruption, asset concealment, or inaccurate revenue reporting (Kassem, 2019; Young, 2020). According to the ACFE (2020) report, corruption accounts for 70% of fraud cases in Indonesia, placing the country 85th out of 180 nations in terms of corruption. While the percentage of financial statement fraud cases is relatively small (2% in 2016, increasing to 9.2% in 2019), its impact is significantly larger, with losses amounting to IDR 242,260,000 (ACFE Global, 2020). Cases such as those involving PT Garuda Indonesia, PT Waskita Karya Tbk, and PT Asuransi Jiwasraya illustrate how fraud can cause substantial damage across various sectors, including government and private companies (Inayah & Chariri, 2024; Natalia et al., 2024; Prasetiyo et al., 2024). Financial statement fraud poses a major challenge for auditors and regulators, particularly because the

manipulation of information often involves individuals with privileged access to corporate data. The unbalanced agency relationship between management and shareholders creates opportunities for fraud (Puspitha & Yassa, 2019; Sakawa & Watanabel, 2022). Moreover, privileged access to information enables management to conceal critical data from shareholders, leading to information asymmetry. This issue is further exacerbated by weaknesses in oversight, especially in large and complex companies (Bowman et al., 2022; Hiller & Jones, 2022; Zabolotnyy & Wasilewski, 2019).

Fraudulent practices in corporate governance often result from conflicts of interest stemming from agency relationships, where management has greater access to internal information than shareholders. This disparity allows for the concealment of crucial information and manipulation of financial statements. Based on Cressey's Fraud Triangle Theory (1953), there are three main factors that drive fraud: pressure, opportunity, and rationalization. Wolfe and Hermanson (2004) expanded this theory into the Diamond Fraud Theory by adding the element of competency, emphasizing that fraud requires individuals with specific skills to exploit opportunities (Awang et al., 2020; Homer, 2020). Later, Crowe (2011) introduced the Fraud Pentagon Theory by including arrogance as the fifth factor, where individuals with an overconfident and authoritarian attitude feel immune to organizational scrutiny (Zakiy et al., 2022). Finally, Vousinas (2019) developed the Fraud Hexagon Theory by adding collusion as the sixth variable, referring to collaboration between internal and external parties that influences trusted individuals to engage in fraud within an unethical environment (Wahyulistyo & Cahyonowati, 2023; Zalukhu & Reskino, 2024). These theories provide a comprehensive framework for understanding the causes of fraud in organizations.

This study shares similarities with previous research in utilizing the Hexagon Fraud Theory to analyze factors influencing financial statement fraud but differs in its focus. It specifically examines construction companies listed on the Indonesia Stock Exchange (IDX) during the 2018–2022 period. This distinguishes it from the study by Yadiati et al. (2023), which analyzed state-owned enterprises (SOEs) during the 2012–2019 period; the study by Achmad et al. (2023), which focused on the banking sector in Indonesia; and the study by Bader et al. (2024), which examined industrial companies in Jordan. This study also incorporates unique variables, such as external auditor quality, SOE status, and changes in auditors, which have not been extensively explored in previous research. By comprehensively integrating the Hexagon Fraud Theory into the construction industry, a sector characterized by a high risk of financial statement fraud, this study offers new contributions and specific insights relevant to Indonesia, thereby expanding the scope of literature that has previously been more focused on other sectors or geographic regions.

This research aims to analyze the influence of the Hexagon Fraud Theory (comprising financial stability, external pressure, financial targets, nature of the industry, ineffective monitoring, external auditor quality, changes in auditors, changes in directors, arrogance, and SOE status) on financial statement fraud in construction companies listed on the IDX during the 2018–2022 period. The contributions of this research are expected to provide new insights for regulators, auditors, and other stakeholders in designing more effective fraud prevention policies. Additionally, this study is anticipated to serve as a reference for academics in developing future studies related to fraud.

2. RESEARCH METHOD

Multiple linear regression analysis and descriptive research techniques were used in this study's quantitative methodology. All construction businesses registered on the Indonesia Stock Exchange (IDX) between 2018 and 2022 made up the study's population. Purposive sampling was used in the sample selection process to guarantee representation based on predetermined standards, namely construction businesses who regularly released yearly reports during the research period and scored at least one point on the evaluation index.

The secondary data used in the study came from yearly reports that were seen on the official IDX website (www.idx.co.id). Financial stability, external pressure, financial target, industry nature, ineffective monitoring, external auditor quality, changes in auditors, changes in directors, arrogance (as indicated by the number of CEO photos in the annual report), and the company's status (state-owned enterprises) were among the independent variables included in the data collection. The dependent variable, financial statement fraud, was measured using the Fraud Score Model (F-Score).

Techniques for gathering data were done using two methods: literature reviews and empirical research. In the empirical study, the IDX's yearly reports were examined, and in the literature review, relevant journals, literature, and scientific publications were examined to bolster the research analysis. To evaluate data attributes like mean, standard deviation, minimum value, and maximum value, descriptive statistical analysis was used to examine the gathered data. The independent and dependent variables' associations were then investigated using multiple linear regression analysis. The study's regression model was created in the manner described below:

$$F\text{-}Score = \beta 0 + \beta 1FS + \beta 2EP + \beta 3FT + \beta 4NoI + \beta 5IM + \beta 6EAQ + \beta 7CiA + \beta 8CiD + \beta 9ARO + \beta 10SOE + \varepsilon$$

Description:
F-Score = financial statement fraud
FS = financial stability
EP = external pressure
FT = financial target
NoI = nature of industry
IM = ineffective monitoring
EAQ = external auditor quality
CiA = change in auditor
CiD = change in director
ARO = arrogance
SOE = state-owned enterprises

The regression model's validity was checked using traditional assumption tests, such as the heteroscedasticity, multicollinearity, and normality tests. A series of phases of hypothesis testing were then conducted. To do this, the model's capacity to explain the data's variability was first assessed using the coefficients of determination (R2 and Adjusted R2). In order to assess the overall viability of the regression model, an F-test was conducted. In order to make decisions based on the F-test, the calculated F-value (F-calculated) and the F-table value were compared at a significance level of 5% ($\alpha = 0.05$). In the event that the F-calculated value was less than the F-table value, the null hypothesis was accepted and the regression model was deemed unsuitable. The null hypothesis was rejected if the model was considered fit if the F-calculated value exceeded the F-table value.

In the SPSS analysis, the significant value of F was examined in order to perform the F-test. When the significance value was less than α, the model was deemed fit; if it was more than α, the model was rejected. Furthermore, each independent variable's partial impact on the dependent variable was assessed at a 5% significance level using a t-test. When the t-calculated value and the t-table value were compared, decisions were taken. The null hypothesis, which states that the independent variable has no partial influence on the dependent variable, was adopted if the t-calculated value was less than the t-table value. If, on the other hand, the t-calculated value exceeded the t-table value, the null hypothesis was rejected and the independent variable was deemed to have a substantial partial influence on the dependent variable.

The hypotheses of this study were as follows:
H1: Financial stability had an effect on financial statement fraud.
H2: External pressure had an effect on financial statement fraud.
H3: Financial target had an effect on financial statement fraud.
H4: Nature of industry had an effect on financial statement fraud.
H5: Ineffective monitoring had an effect on financial statement fraud.
H6: External auditor quality had an effect on financial statement fraud.
H7: Change in auditor had an effect on financial statement fraud.
H8: Change in director had an effect on financial statement fraud.
H9: Arrogance had an effect on financial statement fraud.
H10: State-owned enterprises had an effect on financial statement fraud.

3. RESULTS AND DISCUSSIONS

Research Findings

Descriptive Statistical Analysis

Table 1. Descriptive Statistical Analysis

	N	Minimum Value	Maximum Value	Average value	Standard Deviation
FSF	75	-6,1481	1,3613	-1,5855	1,0000
FS	75	-0,7080	0,8540	0,0399	0,4150
EP	75	0,1820	0,9730	0,5907	0,5280
FT	75	-1,2770	0,1820	-0,0192	0,5663
NoI	75	-0,7270	0,6860	0,0031	-0,1578
IM	75	0,1670	0,6670	0,3997	0,0018
EAQ	75	0,0000	1,0000	0,1867	0,2549
CiA	75	0,0000	1,0000	0,0800	-0,1512
CiD	75	0,0000	1,0000	0,5067	0,5770
ARO	75	1,0000	4,0000	2.6000	-0,2580
SOE	75	0,0000	1,0000	0,4000	0,0589

Description: Financial Statement Fraud (FSF), Ineffective Monitoring (IM), Financial Stability (FS), External Auditor Quality (EAQ), External Pressure (EP), Change in Auditor (CiA), Financial Target (FT), Change in Director (CiD), Nature of Industry (NoI), jumlah foto CEO (JDCEO), state-owned enterprises (SOE)

The dependent variable, financial statement fraud, had a minimum value of -6.1481 (PT. Meta Epsi) and a maximum value of 1.3613 (PT. Jasa Marga), with a mean of -1.5855 and a standard deviation of 1.000, indicating high variation. Financial stability, measured by changes in assets, had a minimum value of -0.7080 (PT. Acset Indonusa) and a maximum value of 0.8540 (PT. Meta Epsi), with a mean of 0.0399 and a standard deviation of 0.415, indicating high variation but generally higher stability. External pressure, calculated using the leverage ratio, ranged from 0.1820 (PT. Paramita Bangun Sarana) to 0.9730 (PT. Acset Indonusa), with a mean of 0.5907 and low variation. Financial target, based on ROA, ranged from -1.2770 (PT. Meta Epsi) to 0.1820 (PT. Adhi Karya), with a mean of -0.0192 and high variation. Nature of industry, calculated through the revenue-to-sales ratio, showed low variation with a mean of 0.0031. Ineffective monitoring, based on the composition of independent commissioners on the board, also showed low variation with a mean of 0.3997. External auditor quality and change in auditor, both measured using dummy variables, showed high and low variations, respectively. Meanwhile, change in director displayed high variation with a mean of 0.5067. Arrogance, measured by the number of CEO photos, showed low variation with a mean of 2.6. State-owned enterprises, another dummy variable, showed low variation with a mean of 0.4, indicating that most companies in this study were SOEs.

Classic Assumption Test

Table 2. Normality Test

	Unstandardized Residual
N	75
Asymp. Sig. (2-tailed)	0,536

Table 2 displays the K-S test findings, which reveal an Asymp. Sig. (2-tailed) value of 0.536. It is possible to infer that the test shows the data are regularly distributed since this result is bigger than 0.05.

Table 3. Multicollinearity Test

Independent Variable	Collinearity Statistics		Conclusion
	Tolerance	VIF	
FS	0,550	1,819	There is no multicollinearity
EP	0,659	1,518	
FT	0,578	1,732	
NoI	0,868	1,152	
IM	0,909	1,100	
EAQ	0,734	1,362	
CiA	0,885	1,129	
CiD	0,860	1,163	

ARO	0,659	1,519
SOE	0,542	1,846

Description: Financial Stability (FS), External Pressure (EP), Financial Target (FT), Nature of Industry (NoI), Ineffective Monitoring (IM), Change in Auditor (CiA), Change in Director (CiD), Arrogance (ARO), State-Owned Enterprises (SOE), External Audit Quality (EAQ).

Heteroscedasticity Test

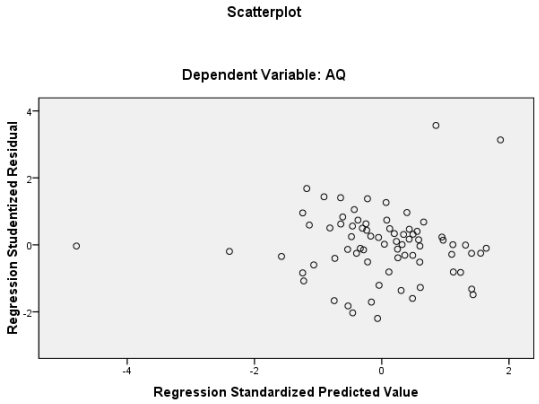

Figure 1. Heteroscedasticity Test - Scatterplot Analysis

Based on the results shown in Figure 1, there is a specific pattern resembling a regular dot pattern. It can be concluded that heteroscedasticity has occurred.

Multiple Regression Analysis

Table 4. Results of the Regression Analysis

F-Score = β0 + β1FS + β2EP + β3FT + β4NoI + β5IM + β6EAQ + β7CiA + β8CiD + β9ARO + β10SOE + ε

Variables	Coefficient	t value	Significant
FS	-0,094	-1,382	0,172
EP	0,362	5,856	0,000
FT	0,519	7,865	0,000
NoI	-0,171	-3,176	0,002
IM	-0,059	-1,129	0,263
EAQ	0,288	4,925	0,000
CiA	-0,137	-2,561	0,013
CiD	0,375	6,932	0,000
ARO	-0,244	-3,945	0,000
SOE	-0,131	-1,923	0,059
Adjusted R2		0,814	
F-Statistics		33,333	
Significance of F		0,000	

The F-value was 33.333 with a significance level of 0.000, according to Table 4. As a result, the dependent variable is influenced by all of the factors in the table. Additionally, Table 4 indicates that the study's variables explained 81.4% of the dependent variable, with the remaining 18.6% being impacted by other factors. This is shown by the adjusted R2 value of 0.814.

T-Test Statistics

Table 5. T-Test Statistics

No	**Information**	**Results**
1	Financial stability influences financial statement fraud (H1)	Rejected
2	External pressure influences financial statement fraud (H2).	Accepted
3	Financial target influences financial statement fraud (H3).	Accepted
4	Nature of industry influences financial statement fraud (H4).	Accepted
5	Ineffective monitoring influences financial statement fraud (H5).	Rejected
6	External auditor quality influences financial statement fraud (H6).	Accepted

7	Change in auditor influences financial statement fraud (H7)	Accepted
8	Change in director influences financial statement fraud (H8).	Accepted
9	Arrogance influences financial statement fraud (H9).	Accepted
10	State-owned enterprises influence financial statement fraud (H10).	Rejected

H1 (Financial Stability) was rejected since it had no influence on financial statement fraud, according to the findings of the hypothesis test in Table 5 (coefficient of -0.094, t-value of -1.382, and significance of 0.172 (>0.05). H2 (External Pressure) was accepted since it had a favorable influence on fraud, as shown by its coefficient of 0.362, t-value of 5.856, and significance of 0.000 (<0.05). The approval of H3 (Financial Target) was based on its favorable impact on fraud, as shown by its t-value of 7.865, significance of 0.000 (<0.05), and coefficient of 0.519. At a significance level of 0.002 (<0.05), a t-value of -3.176, and a coefficient of -0.171, H4 (Nature of Industry) was shown to have a negative impact on fraud. H5 (Ineffective Monitoring) was rejected since it had no influence on fraud, as shown by its coefficient of -0.059, t-value of -1.129, and significance of 0.263 (>0.05). With an external auditor quality (external auditor quality) coefficient of 0.288, t-value of 4.925, and significance of 0.000 (<0.05), H6 was accepted because it had a favorable impact on fraud. H7 (Change in Auditor) was accepted because it had a negative impact on fraud, as shown by its t-value of -2.561, significance of 0.013 (<0.05), and coefficient of -0.137. H8 (Change in Director) was accepted because it had a favorable impact on fraud, as shown by its coefficient of 0.375, t-value of 6.932, and significance of 0.000 (<0.05). H9 (Arrogance) was accepted since it similarly had a negative influence on fraud, as shown by its t-value of -3.945, significance of 0.000 (<0.05), and coefficient of -0.244. Finally, with a coefficient of -0.131, t-value of -1.932, and significance of 0.059 (>0.05), H10 (State-Owned Enterprises) was rejected since it had no influence on fraud.

Discussion

The objective of this study was to examine how financial stability, external pressure, financial target, industry nature, ineffective monitoring, the quality of external auditors, changes in auditors and directors, arrogance, and state-owned enterprises affected financial statement fraud in construction companies listed on the Indonesia Stock Exchange (IDX) between 2018 and 2022. External pressure (H2), financial goal (H3), industry nature (H4), external auditor quality (H6), auditor change (H7), director change (H8), and arrogance (H9) were shown to have substantial positive and negative impacts on financial statement fraud. In contrast, there were no discernible impacts of state-owned businesses (H10), insufficient oversight (H5), or financial stability (H1) on financial statement fraud. These results are consistent with Hexagon Fraud Theory, which was put out by Wolfe and Hermanson in their creation of the Fraud Diamond Theory and holds that financial objectives and outside pressure are the main forces behind financial statement manipulation (Achmad et al., 2022; Anggraeni, 2024).

Furthermore, the significant influence of external auditor quality and change in auditor on financial statement fraud supports previous research by Harris & Williams (2020), which found that auditor quality and changes in auditors often serve as effective indicators of oversight in financial fraud. The positive influence of change in director on financial fraud is also consistent with Obrenovic et al. (2020), who noted that leadership changes often create instability in organizational structures, opening opportunities for manipulation. Additionally, arrogance, defined as overconfidence or excessive belief in decision-makers, had a significant impact on fraud, consistent with Roszkowska & Melé (2021), who emphasized that individual factors such as arrogance often trigger unethical decision-making. However, the insignificance of financial stability, ineffective monitoring, and state-owned enterprises suggests that in construction companies, financial stability and internal monitoring are not dominant factors influencing fraudulent behavior. This contradicts findings by Zabolotnyy & Wasilewski (2019), who stated that financial stability generally affects financial reporting practices. The unique characteristics of the construction industry, such as fluctuating revenue patterns and distinct financing structures, may explain this discrepancy. With an adjusted R^2 value of 0.814, this study indicated that 81.4% of the variation in financial statement fraud could be explained by the variables within the Hexagon Fraud Theory, while the remaining 18.6% was influenced by factors outside the model, which require further exploration.

This study offers advantages over previous research as it specifically examines the construction sector, which has unique characteristics such as fluctuating revenue patterns and long-

term projects, aspects that have not been extensively discussed in other studies. Additionally, it integrates a broader range of variables within the Hexagon Fraud Theory, such as external auditor quality, change in auditor, and SOE status, providing a more comprehensive insight. Moreover, the study used recent data (2018–2022), offering higher relevance to current market conditions.The results of this study support certain findings from Yadiati et al. (2023), particularly regarding the significant influence of external pressure, financial target, and nature of industry. However, it does not support the significance of financial stability and SOE status. This study is also consistent with Achmad et al. (2023) regarding the importance of variables such as change in auditor and arrogance in detecting fraud. However, it differs from Bader et al. (2024) by emphasizing unique factors in the construction sector, which make financial stability and ineffective monitoring insignificant, whereas Study by Bader et al. (2024)highlighted the influence of financial stability on fraud in the industrial sector.

Because the construction business has particular features, such varying income patterns and long-term projects, the study's results underscore the need of comprehending the precise elements impacting financial statement fraud within this sector. According to these studies, the industry's nature, financial aim, and external pressure are all important considerations when attempting to stop fraud in this area. Corporate decision-makers' haughtiness should be controlled by better governance and internal monitoring, while the caliber of external auditors and auditor changes may also be significant indications for detecting fraud threats. Hexagon Fraud Theory use in the construction industry requires more targeted and contextual techniques due to the insignificance of financial stability, inadequate supervision, and SOE status. Thus, in addition to supporting current ideas, the study's findings provide useful advice for regulators, auditors, and construction businesses on how to create more efficient supervision procedures that reduce the possibility of financial statement fraud.

4. CONCLUSION

This study successfully analyzed the influence of Hexagon Fraud Theory on financial statement fraud in construction companies listed on the IDX during the 2018–2022 period. The findings revealed that external pressure, financial target, nature of industry, external auditor quality, change in auditor, change in director, and arrogance significantly influenced financial statement fraud, while financial stability, ineffective monitoring, and SOE status were not significant. With an Adjusted R^2 value of 81.4%, this study provides new insights into the factors influencing fraud in the construction industry, which is characterized by fluctuating revenue patterns and long-term projects as its unique traits. The limitation of this study lies in the restricted scope of variables outside the Hexagon Fraud Theory that might also influence fraud, such as organizational culture or technological factors. Future research is recommended to expand the scope of variables, include other industrial sectors, and integrate longitudinal analysis to better understand the dynamics of fraud over a longer time period.

REFERENCES

ACFE Global. (2020). Report to the Nations on Occupational Fraud and Abuse: 2020 Global Fraud Study. In *Association of Certified Fraud Examiners, Inc.* https://acfepublic.s3-us-west-2.amazonaws.com/2020-Report-to-the-Nations.pdf

Achmad, T., Ghozali, I., Helmina, M. R. A., Hapsari, D. I., & Pamungkas, I. D. (2023). Detecting Fraudulent Financial Reporting Using the Fraud Hexagon Model: Evidence from the Banking Sector in Indonesia. *Economies*, *11*(1), 1–17. https://doi.org/10.3390/economies11010005

Achmad, T., Ghozali, I., & Pamungkas, I. D. (2022). Hexagon Fraud: Detection of Fraudulent Financial Reporting in State-Owned Enterprises Indonesia. *Economies*, *10*(1), 1–16. https://doi.org/10.3390/economies10010013

Anggraeni, D. (2024). Determinants of Fraudulent Financial Statements Through the Fraud Hexagon Theory Perspective : The Empirical Study of Mining Sector Companies Listed on the Indonesia Stock Exchange 2018 – 2022. *Futurity Economics & Law*, *4*(4), 137–153. https://www.futurity-econlaw.com/index.php/FEL/article/view/274

Awang, N., Hussin, N. S., Razali, F. A., & Abu Talib, S. L. (2020). Fraud Triangle Theory: Calling for New Factors. *Insight Journal*, *7*(1), 54–64. https://doi.org/10.24191/ij.v7i1.62

Bader, A. A., Abu Hajar, Y. A., Weshah, S. R. S., & Almasri, B. K. (2024). Predicting Risk of and Motives behind Fraud in Financial Statements of Jordanian Industrial Firms Using Hexagon Theory. *Journal of Risk and Financial Management*, *17*(3), 1–27. https://doi.org/10.3390/jrfm17030120

Bowman, S. R., Hyun, J., Perez, E., Chen, E., Pettit, C., Heiner, S., Lukošiūtė, K., Askell, A., Jones, A., Chen, A., Goldie, A., Mirhoseini, A., McKinnon, C., Olah, C., Amodei, D., Amodei, D., Drain, D., Li, D., Tran-Johnson, E., … Kaplan, J. (2022). Measuring Progress on Scalable Oversight for Large Language Models. *Human-Computer Interaction*, *1*(1), 1–21. http://arxiv.org/abs/2211.03540

Camfferman, K., & Wielhouwer, J. L. (2019). 21St Century Scandals: Towards a Risk Approach To Financial Reporting Scandals. *Accounting and Business Research*, *49*(5), 503–535. https://doi.org/10.1080/00014788.2019.1614267

Harris, M. K., & Williams, L. T. (2020). Audit quality indicators: Perspectives from Non-Big Four audit firms and small company audit committees. *Advances in Accounting*, *50*(1), 1–13. https://doi.org/10.1016/j.adiac.2020.100485

Hassan, U. U., Kadiri, I. K., & Oloba, U. C. (2022). The effect of financial leverage on the performance of selected listed firms in Nigeria. *Gusau Journal of Business Administration*, *1*(2), 1–16.

Hiller, J. S., & Jones, L. S. (2022). Who's Keeping Score?: Oversight of Changing Consumer Credit Infrastructure. *American Business Law Journal*, *59*(1), 61–121. https://doi.org/10.1111/ablj.12199

Homer, E. M. (2020). Testing the fraud triangle: a systematic review. *Journal of Financial Crime*, *27*(1), 172–187. https://doi.org/10.1108/JFC-12-2018-0136

Inayah, J. Z., & Chariri, A. (2024). The Determinants of Financial Statement Fraud: Fraud Pentagon Perspective. *Jurnal Akuntansi Aktual*, *11*(1), 1–19. https://doi.org/10.17977/um004v11i12024p019

Kassem, R. (2019). Understanding financial reporting fraud in Egypt: evidence from the audit field. *Third World Quarterly*, *40*(11), 1996–2015. https://doi.org/10.1080/01436597.2019.1626709

Natalia, L., Widarsono, A., & Widyaningsih, A. (2024). The role of auditee , auditor , and engagement to audit fee at SOEs. *InCAF*, *2*(2), 11–24. https://journal.uii.ac.id/inCAF/article/view/32582/16165

Obrenovic, B., Du, J., Godinic, D., Tsoy, D., Khan, M. A. S., & Jakhongirov, I. (2020). Sustaining enterprise operations and productivity during the COVID-19 pandemic: "Enterprise effectiveness and sustainability model." *Sustainability (Switzerland)*, *12*(15), 1–27. https://doi.org/10.3390/su12155981

Prasetiyo, Y., Riyani, E. I., & Novita Nugraheni. (2024). Detection Accounting Fraud: Role Internal Auditor and Whistleblowing Data System in Study Literature. *Indonesian Journal of Business Analytics*, *4*(2), 503–516. https://doi.org/10.55927/ijba.v4i2.8849

Puspitha, M. Y., & Yassa, G. W. (2019). Fraud Pentagon Analysis in Detecting Fraudulent Financial Reporting (Study on Indonesian Capital Market). *International Journal of Sciences: Basic and Applied Research*, *42*(5), 93–109. https://core.ac.uk/download/pdf/249336738.pdf

Roszkowska, P., & Melé, D. (2021). Organizational Factors in the Individual Ethical Behaviour. The Notion of the "Organizational Moral Structure." *Humanistic Management Journal*, *6*(2), 187–209. https://doi.org/10.1007/s41463-020-00080-z

Sakawa, H., & Watanabel, N. (2022). Accounting Frauds and Main-Bank Monitoring in Japanese Corporations. *Journal of Business Ethics*, *180*(2), 605–621. https://doi.org/10.1007/s10551-021-04888-z

Wahyulistyo, F., & Cahyonowati, N.-. (2023). Determining Factors of Asset Misappropriation Tendency by Employees in Perspective of Fraud Hexagon Theory. *Jurnal Dinamika Akuntansi*, *15*(1), 52–67. https://doi.org/10.15294/jda.v15i1.42090

Yadiati, W., Rezwiandhari, A., & Ramdany. (2023). Detecting Fraudulent Financial Reporting In State-Owned Company: Hexagon Theory Approach. *JAK (Jurnal Akuntansi) Kajian Ilmiah Akuntansi*, *10*(1), 128–147. https://doi.org/10.30656/jak.v10i1.5676

Young, S. D. (2020). Financial Statement Fraud: Motivation, Methods, and Detection. In *Corporate Fraud Exposed*. Emerald Publishing Limited. https://doi.org/10.1108/978-1-78973-417-120201021

Zabolotnyy, S., & Wasilewski, M. (2019). The concept of financial sustainability measurement: A case of food companies from Northern Europe. *Sustainability (Switzerland)*, *11*(18), 1–16. https://doi.org/10.3390/su11185139

Zakiy, M., Pramono, H., Wahyuni, S., & Inayati, N. (2022). Perspective Of Crowe's Fraud Pentagon In Detecting Fraudulent Financial Statement. *International Journal of Economics, Business and Accounting Research (IJEBAR)*, *6*(4), 2314–2329. https://jurnal.stie-aas.ac.id/index.php/IJEBAR

Zalukhu, A. A. J., & Reskino, R. (2024). Analysis of Fraud Hexagon Theory on Fraudulent Financial Reporting Based on The Role of Intellectual Capital As A Mediator That is Influenced by Earnings Management Practices. *Co-Value Jurnal Ekonomi Koperasi Dan Kewirausahaan*, *15*(01), 1–10. https://doi.org/10.59188/covalue.v15i01.4444