

Fraudulent Financial Reporting Analysis Using Fraud Hexagon Theory in ASEAN Healthcare Sector Companies

(Study of healthcare sector companies listed on stock exchanges in ASEAN countries, 2022–2023)

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Introduction

The health sector is an industry that includes services, products, and technology to maintain and improve public health. In the ASEAN forum, the Ministry of Health emphasized the important role of this sector in driving economic growth through increasing health investment, which has an impact on productivity and GDP (Negeriku, 2023). With an ASEAN population exceeding 680 million people, this sector has enormous market potential and healthcare service needs. ASEAN's growth will reach 5.6% in 2022, accompanied by an increase in trade to USD 3.8 trillion and an increase in FDI to USD 224.2 billion, showing the competitiveness of the region's increasingly strong economy and contributing to the development of the health sector (Ekon, 2023). The improvement in the economic region is reflected in the increase in health sector spending (Hu & Wang, 2024), where Southeast Asia's growth has the potential to increase by 1.5 points if the health allocation accumulates from 3% to 5% of GDP (Asian Development Bank, 2022). This increase in spending is, of course, influenced by health expenditure. The following is the value of government health expenditure per capita in ASEAN countries in 2022.

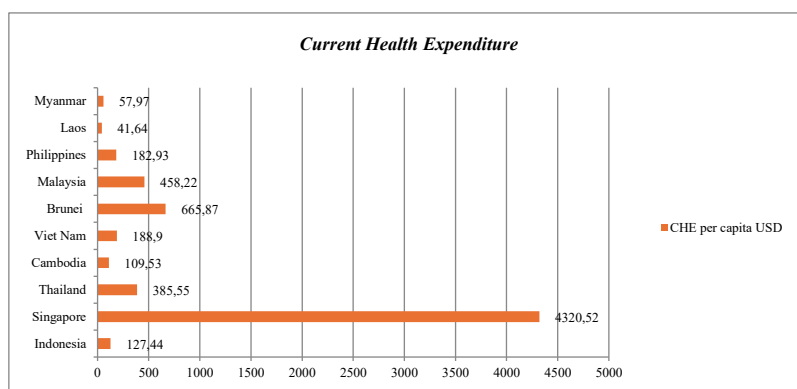


Figure 1 Health Expenditure Value in USD in ASEAN Countries 2022

Data show that there is a gap in health expenditure per capita in ASEAN; developed countries such as Singapore, Brunei, and Malaysia have the highest allocations, while Myanmar and Laos have the lowest, reflecting differences in economic levels and the quality of health services in these regions. Differences in health sector spending in each country are caused by variations in fundamental characteristics, such as population demographics, country income levels, economic conditions, and unique geographic factors (Putri, 2019).

The high Health Expenditure per capita in several ASEAN countries, such as Singapore and Brunei Darussalam, is directly proportional to the higher life expectancy in these countries. The following data can support this:

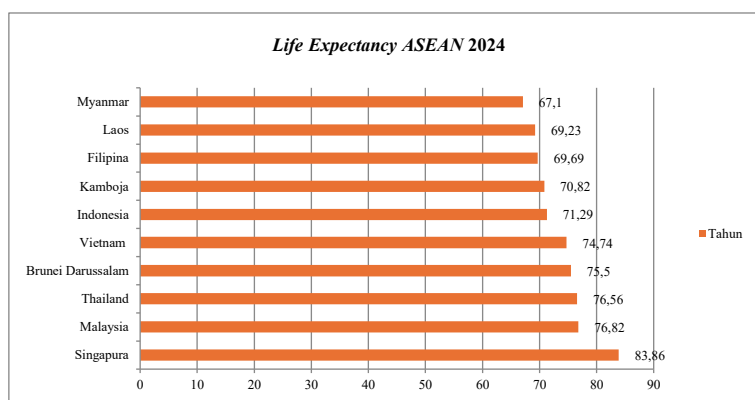


Figure 2 Life Expectancy ASEAN 2024

Countries with higher health expenditure, such as Singapore, tend to exhibit higher life expectancy compared to countries with lower health expenditure, such as Myanmar and Laos. This pattern

suggests a positive association between health investment and population welfare in ASEAN, where greater healthcare spending may contribute to improved health outcomes and longer life expectancy (WHO, 2021). However, the high ASEAN health sector budget also increases the risk of fraudulent financial reporting in the healthcare industry (Sholikaturun & Makaryanawati, 2021). The complexity of the healthcare sector, which involves numerous parties, creates opportunities for the manipulation of financial reports (Satria et al., 2024). Fraud cases in the healthcare sector include revenue overstatement, fictitious expenses, and the misuse of organizational funds, which can adversely affect financial performance and service quality. According to the Association of Certified Fraud Examiners (ACFE, 2024), organizations worldwide lose an estimated 5% of their annual revenue to occupational fraud, while financial statement fraud remains the most costly fraud scheme. Furthermore, approximately 42% of fraud cases are detected through tips and internal reporting mechanisms. The Occupational Fraud 2024: A Report to the Nations also identifies the healthcare sector as one of the industries with a relatively high number of reported fraud cases worldwide. The following image supports this.

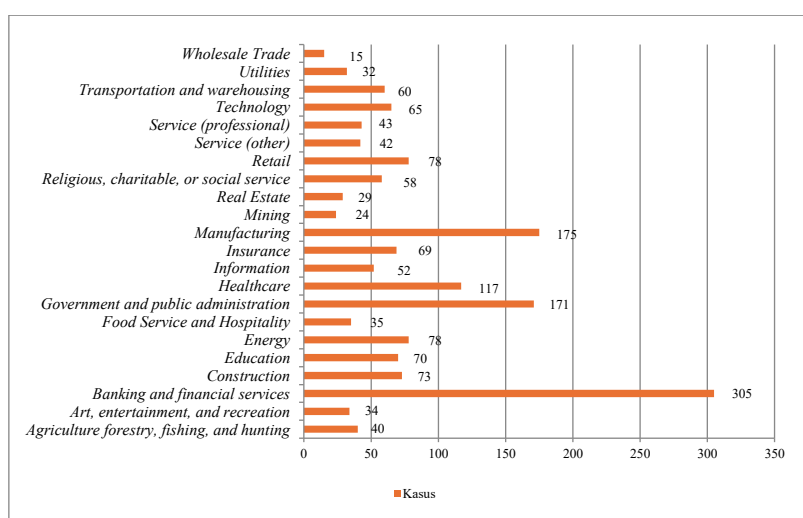


Figure 3 Industrial Fraud Cases Per Sector 2022-2023

Data show that the healthcare sector is in fourth place, with 171 fraud cases, reflecting a high vulnerability to the misuse of funds and inaccurate financial reporting, despite a relatively small number of cases, which have a significant financial impact. Fraud in health services can result in significant financial losses (Sustain, 2024). Data on ASEAN health companies that commit fraud include those in the health sector in Indonesia, which is facing serious challenges related to financial reporting fraud. ACFE Indonesia Chapter 2019 data indicate that the health industry is ranked fourth out of 11 industrial categories, with the highest number of fraud cases, contributing 4.2% of total cases, an increase from 3.5% in 2016 (ACFE Indonesia Chapter, 2019). This shows a trend of increasing fraud cases in the health industry. Additionally, the 2020 ACFE survey ranked Indonesia as the country with the highest number of fraud cases in the Asia Pacific, with 36 cases. This number exceeds that of China, which reported 33 cases, and the Philippines, with 24 cases (ACFE, 2020). This confirms that fraud in various sectors, including healthcare, remains a significant challenge in Indonesia. Another common form of fraud is overtreatment, namely the provision of unnecessary medical services for financial gain, which can increase health costs and endanger patients in the long term. Apart from that, the pharmaceutical sector also faces cases of drug price markups, financial report manipulation, and fund misuse, as seen in the case of pharmaceutical BUMNs, which suffered huge losses and prompted the DPR to ask the directors to resign [14](Finance Detik, 2024). A notable fraud case in the ASEAN healthcare sector occurred in Thailand, where Boon Vanasin, former chairman of Thonburi Healthcare Group, was accused of orchestrating a fraudulent investment scheme involving several healthcare projects in Thailand, Laos, and Vietnam. The scheme allegedly caused losses of approximately USD 340 million and

affected more than 250 investors, highlighting the vulnerability of the healthcare sector to large-scale financial fraud (News.com.au, 2024). In September 2024, SPRM Malaysia arrested 33 people, including three doctors, for falsifying Perkeso health insurance claims worth more than RM2.1 million since 2017, underscoring the importance of oversight and transparency in the health claims system (Astro Awani, 2024).

The increasing complexity of the healthcare industry, accompanied by various forms of fraud, has prompted the development of theories on the causes of fraud, beginning with the Fraud Triangle introduced by Donald R. Cressey on 1953. The Fraud Triangle posits that pressure, opportunity, and rationalization are the primary factors that drive someone to commit fraud, beginning with financial pressure, inadequate supervision, and a moral justification for the action (Gunawan & Siregar, 2023). The development of fraud theory continues from Fraud Diamond (Wolfe & Hermanson, 2004) which adds an element of capability, to Fraud Pentagon with an element of arrogance (Marks, 2012), to Fraud Hexagon (Vousinas, 2019) which adds a collusion factor, explaining cooperation between parties such as hospitals, doctors and pharmaceutical companies in various fraud cases in the healthcare sector. According to Vousinas (2019), fraud often involves collusion between internal and external parties, making it difficult to detect. The development from the Fraud Triangle to the Fraud Hexagon emphasizes that the causes of fraud are now more complex, involving individual, group factors, and weak supervision, so stronger internal controls are needed in the healthcare sector (Ulum & Suryatimur, 2022).

Research on fraudulent financial reporting has expanded considerably through the development of various fraud theories, including the Fraud Triangle, Fraud Diamond, Fraud Pentagon, and Fraud Hexagon Theory. However, previous studies have produced inconsistent findings regarding the determinants of fraudulent financial reporting. Several studies reported that financial pressure-related factors, such as financial stability, financial targets, and external pressure, significantly influence the likelihood of financial statement fraud (Khamainy et al., 2022; Achmad et al., 2023). In contrast, other studies found that these factors do not consistently affect fraudulent financial reporting (Handoko & Aurelia, 2021; Mukaromah & Budiwitjaksono, 2021; Gunawan & Siregar, 2023; Satria et al., 2024). Similar inconsistencies have also been observed in the effects of opportunity, capability, rationalization, arrogance, and collusion dimensions within the Fraud Hexagon framework. These mixed findings indicate that the determinants of fraudulent financial reporting remain inconclusive and may vary across industrial contexts.

Prior studies have primarily focused on manufacturing, banking, and other publicly listed companies, while empirical evidence from the healthcare sector remains limited. This gap is particularly important in the ASEAN context, where healthcare companies operate within highly regulated environments, involve multiple stakeholders, and manage substantial healthcare expenditures. These characteristics may create unique pressures, opportunities, and collusive relationships that distinguish the healthcare sector from other industries and potentially influence the occurrence of fraudulent financial reporting.

Based on these considerations, two research gaps can be identified. First, limited studies have examined fraudulent financial reporting in ASEAN healthcare companies using the Fraud Hexagon Theory. Second, previous research rarely investigates all dimensions of the Fraud Hexagon simultaneously within a cross-country healthcare setting. Therefore, this study aims to analyze the effects of financial stability, financial target, external pressure, director change, project with government, ineffective monitoring, auditor change, and company existence on fraudulent financial reporting among healthcare companies listed on ASEAN stock exchanges during 2022–2023. This study is expected to enrich the literature on Fraud Hexagon Theory and provide empirical evidence regarding fraudulent financial reporting in the ASEAN healthcare sector.

Research Methods

This research is a quantitative study that aims to explain the influence of factors in the Fraud Hexagon Theory on fraudulent financial reporting in healthcare sector companies in the ASEAN region.

The research objects in this study are healthcare sector companies listed on the stock exchanges of ASEAN countries, namely Indonesia, Malaysia, Singapore, Thailand, and the Philippines. Data was obtained from the company's annual financial report for the 2022–2023 period. The research population includes all healthcare companies listed on the ASEAN stock exchanges in the 2022–2023 period. The sampling technique used was purposive sampling, which involves selecting samples based on specific criteria, in this case, healthcare companies that consistently publish annual financial reports during 2022–2023.

Based on these criteria, 89 companies were identified, yielding a total of 166 observations that met the research sample requirements. The research variables consist of:

1. The dependent variable, namely Fraudulent Financial Reporting (FFR), which is measured using the Beneish M-Score Model.

Fraudulent Financial Reporting (FFR) was measured using the Beneish M-Score Model, which is widely used to detect potential earnings manipulation and financial statement fraud based on financial statement indicators. Following Beneish (1999), companies with an M-Score greater than -2.22 were classified as potential manipulators. This threshold was adopted because it provides a standardized and widely accepted benchmark for fraud detection, allowing consistent classification across healthcare companies from different ASEAN countries.

2. Independent variables, namely the six elements of the Fraud Hexagon Theory: Stimulus (financial stability, financial target, external pressure), Capability (director change), Collusion (project with government), Opportunity (ineffective monitoring), Rationalization (auditor change), and Arrogance (company existence).

This research uses a quantitative approach with a logistic regression analysis method, because the dependent variable is dichotomous (1 = indicated fraud, 0 = not indicated fraud). Data analysis was carried out using SPSS software with stages: Descriptive statistical analysis to describe the characteristics of the data, Overall Model Fit Test, Model feasibility test (Hosmer and Lemeshow Test), Coefficient of determination test (Nagelkerke R^2), Classification matrix to measure model accuracy, Hypothesis test (Wald Test and Omnibus Test) to determine the influence of each independent variable on the dependent variable.

Result

This section presents the results of the analysis based on the final 166 observations, after excluding companies that did not provide complete data for the research variables that could affect the accuracy of the results. Analysis of variable descriptions in the 166 samples of this study can be seen in Table 1.

The results of these descriptive statistics provide an initial picture of the condition of the research variables and potential risk factors that could influence the occurrence of fraudulent financial reporting in the ASEAN healthcare sector. The next stage is to carry out a model feasibility test (Goodness of Fit Test) to ensure that the logistic regression model used is suitable (fit) with the research data in Table 2.

The test results show a decrease in the -2 Log Likelihood value from 161.105 to 132.054, representing a 29.05% decrease. This decrease indicates that the model with independent variables has a better fit than the initial model, which only uses constants. Thus, the logistic regression model is deemed suitable for testing the influence of the Fraud Hexagon variable on the likelihood of fraudulent financial reporting.

Table 1. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Fraudulent Financial Reporting	166	.00	1.00	.1867	.39089
Financial Stability	166	-7.93	1.68	-.0495	.67859
Financial Target	166	-8.87	8.08	-.0169	1.01776
External Pressure	166	.03	12.36	.4913	1.07429
Director Change	166	.00	1.00	.3916	.48958
Project With Government	166	.00	1.00	.3795	.48674
Ineffective Monitoring	166	.27	1.00	.4545	.13288
Auditor Change	166	.00	1.00	.0783	.26948
Company Existence	166	.00	1.00	.9819	.13362

Sumber: Processed SPSS output, 2026

Table 2. Overall Model Test Results (Likelihood Ratio Test)

-2 Log Likelihood awal (Blok Number = 0)	161,105
-2 Log Likelihood akhir (Blok Number = 1)	132,054

Sources: Processed SPSS output, 2026

After the model is declared feasible based on a decrease in the value of -2 Log Likelihood, the next step is to carry out a Regression Model Feasibility Test using Hosmer and Lemeshow's Goodness of Fit Test to ensure that the logistic regression model fits the research data. A regression model is declared feasible and appropriate if the resulting significance value is greater than 0.05 (sig > 0.05). This indicates that the model built is in accordance with the observed data, and the higher the significance value, the better the model's level of fit. Conversely, if the significance value is at or below 0.05 (sig ≤ 0.05), then there is a significant difference between the model and the data, so the model is considered inappropriate or not fit (Ghozali, 2018).

Table 3. Regression Model Feasibility Test (Hosmer and Lemeshow's Goodness of Fit Test)

Step	Chi-square	df	Sig.
1	12.263	8	.140

Sources: Processed SPSS output, 2026

Based on the results of Hosmer and Lemeshow's goodness-of-fit test, a significance value of 0.140 (> 0.05) was obtained, indicating that the logistic regression model in this study was feasible and fit. Thus, there is no significant difference between the observed values and model predictions, so the model is declared to be in accordance with the data and can be used for further analysis. After the model is proven to fit the data, a coefficient of determination test (Nagelkerke R²) is then conducted to assess the extent to which the independent variable contributes to explaining variations in fraudulent financial reporting.

Table 4. Coefficient of Determination Test (Nagelkerke R²)

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	132.054 ^a	.154	.249

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than ,001.

Sources: Processed SPSS output, 2026

The Nagelkerke R² test result of 0.249 indicates that the model explains 24.9% of the variation in fraudulent financial reporting, while the remaining 75.1% is attributed to factors outside the model. This indicates that the model's predictive ability is moderate and can still be enhanced by incorporating additional relevant variables. After examining the predictive ability of the model through Nagelkerke R², the influence of the variables was partially tested using Wald and simultaneously with the Omnibus Test of Model Coefficients. The following are the results of the Wald test and the results of the Omnibus Test of Model Coefficient.

Table 5. Wald Test Results (t)

		<i>B</i>	<i>S.E.</i>	<i>Wald</i>	<i>df</i>	<i>Sig.</i>	<i>Exp(B)</i>
Step 1 ^a	Financial Stability	-2.054	.864	5.648	1	.017	.128
	Financial Target	-.028	.366	.006	1	.939	.972
	External Pressure	-.614	.503	1.489	1	.222	.541
	Director Change	.143	.469	.093	1	.760	1.154
	Project With Government	.161	.476	.114	1	.736	1.174
	Ineffective Monitoring	3.921	1.643	5.699	1	.017	50.466
	Auditor Change	1.689	.695	5.909	1	.015	5.412
	Company Existence	-3.281	1.355	5.862	1	.015	.038
	Constant	-.305	1.441	.045	1	.832	.737

a. Variable(s) entered on step 1: Financial Stability, Financial Target, External Pressure, Director Change, Project With Government, Ineffective Monitoring, Auditor Change, Company Existence .

Sources: Processed SPSS output, 2026

Table 6. Omnibus Test Results of Model Coefficient (F)

		<i>Chi-square</i>	<i>df</i>	<i>Sig.</i>
Step 1	Step	27.794	8	.001
	Block	27.794	8	.001
	Model	27.794	8	.001

Sources: Processed SPSS output, 2026

Based on the Wald test, Financial Stability ($\beta = -2.054$, $p = 0.017$), Ineffective Monitoring ($\beta = 3.921$, $p = 0.017$), Auditor Change ($\beta = 1.689$, $p = 0.015$), and Company Existence ($\beta = -3.281$, $p = 0.015$) have a significant effect on fraudulent financial reporting. At the same time, Financial Target, External Pressure, Director Change, and Project with Government do not show significant differences ($p > 0.05$). Then, an omnibus test was conducted to examine the simultaneous influence of independent variables on fraudulent financial reporting. The test results show a significance value of $p < 0.05$, which means that together the independent variables have a significant effect on fraudulent financial reporting. The relatively high odds ratio indicates that weaknesses in monitoring mechanisms substantially increase the likelihood of fraudulent financial reporting, highlighting the critical role of effective corporate governance in healthcare companies.

Discussion

The Influence of Financial Stability on Fraudulent Financial Reporting (FFR)

The Wald test results show that Financial Stability has a negative and significant effect on Fraudulent Financial Reporting (FFR), with a significance value of $0.017 (< 0.05)$ and a regression coefficient of -2.054 . This suggests that the more stable a company's financial condition, the lower the likelihood of fraud in financial reporting. Companies that have stable financial conditions tend to face lower financial pressure, so they have no incentive to manipulate reports to display false performance.

This finding aligns with Agency Theory, which posits that managers (agents) strive to maintain the trust of capital owners (principals) by demonstrating good financial performance. However, when economic conditions are stable, the pressure to keep this image becomes lighter, so the opportunity for manipulating financial statements decreases. Thus, economic stability acts as a natural controlling factor against fraudulent behavior, because the pressure to match the expectations of external parties is lower.

These results support the research of Nurhafifa et al. (2023) and Khamainy et al. (2022), who found that financial stability can reduce the risk of fraud. Apart from that, a classic study by Wolfe and Hermanson (2004) also states that companies with stable financial conditions are less likely to manipulate reports because they are not under heavy financial target pressure. Contextually, these findings are also consistent with the characteristics of the healthcare sector in the ASEAN

region, where financial sustainability and public reputation are important factors in maintaining the integrity of company operations.

The negative relationship between financial stability and fraudulent financial reporting suggests that healthcare companies operating under stable financial conditions tend to have lower incentives to manipulate financial information. This finding is particularly relevant in the ASEAN healthcare sector, where public trust, regulatory compliance, and long-term sustainability are essential organizational objectives. Companies with stable financial performance are generally better positioned to meet stakeholder expectations without engaging in earnings manipulation.

Furthermore, while this finding is consistent with Khamainy et al. (2022) and Nurhafifa et al. (2023), it differs from several previous studies that reported no significant association between financial stability and fraudulent financial reporting. These differences may be attributable to variations in industry characteristics, institutional environments, and regulatory oversight. Compared to manufacturing or banking companies, healthcare firms operate under greater public scrutiny because their activities directly affect public welfare. Consequently, maintaining the credibility of financial reporting becomes a strategic necessity, thereby reducing the likelihood of fraudulent financial reporting.

Influence of Financial Target on Fraudulent Financial Reporting (FFR)

Based on the analysis results, Financial Target has no significant effect on Fraudulent Financial Reporting (FFR), with a significance value of 0.939 ($p > 0.05$) and a regression coefficient of -0.028 . These results suggest that pressure to achieve financial targets is not a significant factor that encourages the manipulation of financial reports in healthcare sector companies in the ASEAN region. This finding suggests that financial targets, as measured in this study, do not constitute a dominant source of pressure associated with fraudulent financial reporting among healthcare companies in the ASEAN region.

Conceptually, within the Agency Theory framework, managers do have an incentive to demonstrate good financial performance to maintain shareholder trust. However, when the targets set are still realistic and supported by a strong internal control system, this pressure does not always turn into a stimulus for manipulating reports. This indicates that the company can balance profitability expectations with good governance, so that there is no need to commit fraudulent acts to achieve financial targets.

This finding aligns with research by Abbas & Laksito (2022) and Handoko & Aurelia (2021), which suggests that financial targets do not have a significant influence on fraudulent reporting. They argue that profitability indicators, such as ROA, often do not accurately reflect the real financial pressures on the ground, and many companies choose legal strategies to improve performance rather than manipulate their reports. Similar results were also obtained by Bader et al. (2024), who found that ROA does not accurately describe managerial pressure that can give rise to fraud, because other factors, such as supervisory effectiveness and management ethics, have a greater influence.

The insignificant effect of financial targets may also reflect the unique characteristics of healthcare companies in the ASEAN region. Unlike firms operating in highly profit-oriented industries, healthcare companies are subject to stricter regulatory oversight and greater public accountability because their operations are directly related to public welfare. Consequently, management may prioritize compliance, service quality, and long-term sustainability over short-term financial performance. This condition potentially reduces the pressure to manipulate financial statements solely for the purpose of achieving profitability targets. Therefore, financial targets alone may not be sufficient to explain the occurrence of fraudulent financial reporting in the ASEAN healthcare sector.

Effect of External Pressure on Fraudulent Financial Reporting (FFR)

The results of the analysis show that External Pressure has no significant effect on Fraudulent Financial Reporting (FFR), with a significance value of 0.222 (> 0.05) and a regression coefficient

of -0.614 . This means that external pressure originating from parties outside the company, such as creditors or investors, is not proven to be a triggering factor for fraudulent financial reporting in healthcare sector companies in the ASEAN region. Companies that face external demands are likely to have robust monitoring and governance systems, ensuring that these pressures do not become incentives for manipulation.

In the Agency Theory perspective, the relationship between the principal (capital owner) and agent (management) creates potential conflicts of interest when the company faces external pressure. However, when internal control mechanisms and reporting regulations are effective, this pressure can function as a disciplinary tool that strengthens management accountability. In other words, a strict monitoring system from creditors and shareholders can reduce the possibility of management presenting misleading financial reports.

These results are consistent with research by Mukaromah & Budiwitjaksono (2021) and Sihombing & Panggulu (2022), which shows that external pressure does not always have a positive impact on fraud, and can even reduce the risk of fraud when external supervision is adequate. Likewise, Handoko & Aurelia (2021) found that companies with a low debt-to-asset ratio have a healthy financial position, so they do not face major pressure that could trigger report manipulation. Situngkir & Triyanto's research (2020) also strengthens this finding, with the result that the higher the level of leverage, the smaller the tendency for fraud due to increased supervision from creditors.

The insignificant effect of external pressure may reflect the institutional characteristics of healthcare companies in ASEAN countries. Unlike firms operating in highly competitive industries that rely heavily on external financing, healthcare companies are often subject to stricter regulatory oversight and greater stakeholder scrutiny. As a result, external pressure from creditors and investors may function more as a monitoring mechanism than as a source of managerial pressure to manipulate financial statements. This finding suggests that the effectiveness of external pressure in explaining fraudulent financial reporting depends on the governance environment and industry context in which firms operate.

This result differs from studies that reported a positive association between external pressure and fraudulent financial reporting. Such differences may indicate that the impact of external pressure varies across industries and countries, particularly where regulatory enforcement, creditor monitoring, and corporate governance mechanisms differ.

Influence of Director Change on Fraudulent Financial Reporting (FFR)

The test results show that Director Change has no significant effect on Fraudulent Financial Reporting (FFR), with a significance value of $0.760 (> 0.05)$ and a coefficient of 0.143 . This means that the change of directors is not directly related to the possibility of financial statement fraud. In the context of the Fraud Hexagon Theory, changing directors does have the potential to influence company supervision and policy; however, in practice, it is more often done to improve performance or refresh management, rather than to conceal fraud. These results are in line with the findings of Suhesti et al. (2024), Fathmaningrum & Budgeti (2021), and Achmad et al. (2023), which state that leadership changes are usually caused by professional factors, not an indication of fraud.

Research by Carcello & Nagy (2004) and Beasley et al. (2013) also indicates that changing directors does not automatically reduce the risk of fraud unless improvements to the internal control system accompany it. In the ASEAN healthcare sector, changes in directors generally focus on improving service efficiency and ensuring regulatory compliance, rather than manipulating financial reports to achieve financial gains.

The insignificant relationship between director change and fraudulent financial reporting suggests that leadership turnover may not necessarily reflect managerial capability to commit or conceal fraud, as proposed in the Fraud Hexagon Theory. In ASEAN healthcare companies, changes in directors are often associated with strategic restructuring, succession planning, regulatory

compliance, and efforts to improve service quality rather than fraudulent intentions. Given the highly regulated nature of the healthcare sector and its direct responsibility for public welfare, leadership transitions are generally subject to greater scrutiny from regulators, shareholders, and other stakeholders.

This finding implies that the capability dimension may be influenced by broader governance and managerial factors that cannot be fully captured through director change alone. Therefore, director change may not be an adequate standalone proxy for capability in explaining fraudulent financial reporting within the healthcare sector. Future studies may consider alternative measures of managerial capability to provide a more comprehensive understanding of fraud risk.

The influence of Project with Government on Fraudulent Financial Reporting (FFR)

The test results indicate that the Project with Government has no significant effect on Fraudulent Financial Reporting (FFR), with a significance value of 0.736 ($p > 0.05$) and a coefficient of 0.161. This means that company involvement in government projects is not directly related to the possibility of fraudulent financial reporting in the healthcare sector.

In the Fraud Hexagon Theory framework, collusion measured through participation in government projects does not always reflect fraudulent behavior. In fact, cooperation with the government encourages companies to maintain their reputation and transparency, ensuring they remain trusted as business partners. This finding is consistent with Alfarago et al. (2023), Mukaromah and Budiwitjaksono (2021), who reported that government project involvement does not significantly influence fraudulent financial reporting. These studies suggest that participation in government projects does not necessarily indicate collusive behavior, as such projects are generally subject to regulatory oversight, accountability requirements, and transparency mechanisms.

Apart from that, Setyono et al. (2023) and Handoko (2021) emphasize that factors such as tender regulations and transparency have a greater influence on potential fraud than simply involvement in government projects. In the context of ASEAN healthcare companies, government projects are seen as long-term strategic opportunities, so management tends to avoid manipulative actions that could damage the regulator's credibility.

The insignificant effect of the project with the government suggests that participation in government-related projects may not necessarily represent collusive behaviour as conceptualized in the Fraud Hexagon Theory. In ASEAN healthcare companies, cooperation with government institutions is often an integral part of business operations, particularly in relation to public health programs, healthcare financing schemes, medical procurement, and healthcare service delivery. This condition is particularly relevant in ASEAN countries, where healthcare companies frequently collaborate with governments to support public health initiatives and healthcare infrastructure development. Therefore, participation in government projects may reflect legitimate operational activities rather than collusive behaviour. This finding also indicates that collusion is a complex phenomenon that may not be fully captured through a single proxy. Consequently, future studies may consider alternative measures of collusion to provide a more comprehensive explanation of fraudulent financial reporting.

The Effect of Ineffective Monitoring on Fraudulent Financial Reporting (FFR)

The results of the analysis show that Ineffective Monitoring has a positive and significant effect on Fraudulent Financial Reporting (FFR), with a significance value of 0.017 (< 0.05) and a regression coefficient of 3.921. This means that the weaker the company's internal control system, the higher the risk of financial statement fraud.

These findings support the theory that weak control and supervision functions open up opportunities for management to manipulate. In many cases, the existence of independent commissioners and audit committees is only a formality without carrying out an effective supervisory function, so that fraud gaps remain open.

These results align with research by Qintharah & Riyanti (2023), Skousen et al. (2008), and Sabatian & Hutabarat (2020), which demonstrate that ineffective supervision increases the risk of fraud due to weak internal controls and task division. Additional support comes from Beasley et al. (20) and Dorminey et al. (2012), which emphasizes that weak internal control is the main factor in the occurrence of fraud.

In the context of healthcare companies in ASEAN, monitoring mechanisms are often not substantially optimal, especially in companies with weak internal audit systems. As a result, the supervisory function is more administrative than preventive, thus increasing the opportunity for fraudulent financial reporting to occur.

Furthermore, the insignificant effect of project with government suggests that participation in government-related projects may not necessarily represent collusive behavior as conceptualized in the Fraud Hexagon Theory. In ASEAN healthcare companies, cooperation with government institutions is often an integral part of business operations, particularly in relation to public health programs, healthcare financing schemes, medical procurement, and healthcare service delivery. Therefore, participation in government projects may reflect legitimate operational activities rather than collusive behavior. This finding also indicates that collusion is a complex phenomenon that may not be fully captured through a single proxy. Consequently, future studies may consider alternative measures of collusion to provide a more comprehensive explanation of fraudulent financial reporting.

Effect of Auditor Change on Fraudulent Financial Reporting (FFR)

The research results show that Auditor Change has a positive and significant effect on Fraudulent Financial Reporting (FFR), with a significance value of 0.015 (< 0.05) and a regression coefficient of 1.689. This means that the more frequently there is a change of auditor, the higher the possibility of fraudulent financial reporting.

Management can use a change of auditor to hide fraud that the previous auditor may have detected or to avoid stricter inspections. This condition creates instability in the supervisory system, thus opening up opportunities for the manipulation of financial reports. However, in some cases, auditor changes can also occur due to professional reasons or auditor rotation regulations (Omukaga, 2021; Kim et al., 2021).

This finding aligns with Utomo et al. (2019) and Septiningrum & Mutmainah (2022), who demonstrate that the frequency of changing auditors can serve as an indicator of rationalization efforts in fraudulent practices. Additionally, Beasley et al. (2013) emphasized that the independence and consistency of the audit relationship are crucial in preventing the manipulation of reports. In the context of the ASEAN healthcare sector, audit standards and auditor rotation regulations that vary between countries can create opportunities for fraud if not balanced by a strong internal control system.

The significant effect of auditor change highlights the importance of external audit continuity in mitigating fraudulent financial reporting. Unlike director changes, which may occur for strategic or operational reasons, auditor changes directly affect the effectiveness of independent monitoring mechanisms. In ASEAN healthcare companies, where transparency and accountability are essential due to extensive stakeholder involvement and regulatory oversight, frequent auditor changes may weaken the consistency of audit procedures and reduce the ability to detect financial irregularities. This finding supports the rationalization dimension of the Fraud Hexagon Theory and suggests that auditor change remains an important early warning indicator of potential fraudulent financial reporting. Therefore, regulators, investors, and audit committees should pay greater attention to the reasons underlying auditor changes and their implications for financial reporting quality.

The Influence of Company Existence on Fraudulent Financial Reporting (FFR)

The test results show that Company Existence has a negative and significant effect on Fraudulent Financial Reporting (FFR), with a significance value of 0.015 (< 0.05) and a regression coefficient

of -3.281. This means that the longer a company has been around, the lower the tendency to commit fraudulent financial reporting.

This finding aligns with the Going Concern Theory, which posits that companies with a strong existence tend to prioritize long-term business sustainability. Established companies typically have a good reputation, a robust internal control system, and strict external oversight, which leads them to be more diligent in their financial reporting. This result differs from the findings of Haqq & Budiwitjaksono (2020), Mukaromah & Budiwitjaksono (2021), and Siregar & Murwaningsari (2022), which stated that the existence of a company has no significant effect on fraud. This difference shows that the influence of company existence is contextual, depending on industry characteristics and governance systems.

In the context of the ASEAN healthcare sector, business sustainability is highly dependent on public trust and regulatory compliance. Therefore, companies with a long existence are more motivated to maintain the integrity of financial reports to maintain their reputation and stakeholder trust.

The significant negative effect of company existence suggests that organizational maturity may serve as an important mechanism for reducing the risk of fraudulent financial reporting. Companies with a longer operating history generally possess more established governance structures, stronger internal control systems, and greater reputational capital that must be protected. This finding reinforces the Going Concern Theory by indicating that long-term business sustainability encourages companies to prioritize credibility and transparency in financial reporting. From a practical perspective, the results imply that investors and regulators should pay closer attention to relatively younger firms, as they may face greater pressures and possess less developed governance mechanisms compared to more established companies.

Simultaneous Influence of Variables on Fraudulent Financial Reporting (FFR)

The results of the Omnibus Test of Model Coefficient test show that simultaneously, the variables Financial Stability, Financial Target, External Pressure, Director Change, Project with Government, Ineffective Monitoring, Auditor Change, and Company Existence have a significant effect on Fraudulent Financial Reporting (FFR) (Chi-Square = 27.794; $p = 0.001$). This means that the combination of all variables in the Fraud Hexagon model can explain variations in the occurrence of fraud as a whole in the healthcare sector.

Generally, strong financial stability reduces the risk of fraud, while weak supervision, changing auditors, and certain pressures can increase the opportunity for financial statement manipulation. Several variables, such as Financial Target, External Pressure, and Director Change, are not partially significant, but still contribute to the model simultaneously. These results strengthen the concept of the Fraud Hexagon Theory (Vousinas, 2019) and Agency Theory, which suggest that fraudulent behavior is not caused by a single factor, but rather is the result of interactions between pressure, opportunity, rationalization, and organizational conditions. In the context of ASEAN healthcare companies, reputation factors, strict regulations, and long-term existence are natural controls that suppress the occurrence of fraudulent financial reporting.

Thus, the findings of this research indicate that the Fraud Hexagon model is effectively used to explain fraud tendencies comprehensively, where each element complements the others in influencing management behavior towards the integrity of financial reports.

Conclusion

This study examined fraudulent financial reporting in healthcare companies listed on ASEAN stock exchanges using the Fraud Hexagon Theory framework. The findings indicate that fraudulent financial reporting is influenced primarily by governance quality, monitoring effectiveness, audit-related factors, and organizational maturity rather than financial pressure alone. These results

confirm the relevance of the Fraud Hexagon Theory in explaining fraudulent financial reporting in the ASEAN healthcare sector, although not all dimensions demonstrate the same explanatory power.

From a theoretical perspective, this study contributes to the literature by extending the application of Fraud Hexagon Theory within the healthcare sector across ASEAN countries. The findings highlight the importance of governance-related factors in explaining fraudulent financial reporting and suggest that the effectiveness of certain Fraud Hexagon dimensions may vary depending on industry characteristics and institutional environments. From a practical perspective, healthcare companies should strengthen internal control systems, improve monitoring effectiveness, and maintain audit quality to reduce fraud risk and enhance stakeholder trust.

This study is limited to healthcare companies listed on ASEAN stock exchanges during the 2022–2023 period and employs a pooled sample from five ASEAN countries. Consequently, potential differences in regulatory quality, investor protection, and corporate governance practices across countries were not examined separately. Future research is encouraged to conduct country-specific or regional subsample analyses, extend the observation period, and explore alternative proxies for Fraud Hexagon dimensions to provide a more comprehensive understanding of fraudulent financial reporting under different institutional environments.

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