

## Fraud hexagon modified model and its impact on fraudulent financial statements

Hexana Sri Lastanti <sup>1</sup>   - Unviersitas Trisakti, Indonesia

Etty Murwaningsari  - Unviersitas Trisakti, Indonesia

Murtanto Murtanto  - Unviersitas Trisakti, Indonesia

### Abstract

The purpose of this study is to test the Modified Fraud Hexagon Model, which identifies the causal factors of fraudulent financial reporting, with governance and culture as moderating variables. This study was conducted on 191 companies listed on the Indonesia Stock Exchange using data from 2020 to 2023. The results indicate that incentives have a positive effect on financial reporting fraud; lack of integrity has a positive effect on financial reporting fraud; governance and culture weaken the positive effect of incentives on financial reporting fraud; and governance and culture weaken the positive effect of lack of integrity on financial reporting fraud. Governance and culture can mitigate the impact of incentives and integrity deficits on financial reporting fraud. Governance and culture only function as moderating variables. However, governance and culture do not mitigate the effects of Opportunity, Rationalization, Capability, and Collusion on financial reporting fraud. Governance and culture characteristics emerge as potential moderating variables. Governance and culture are not found to weaken the effects of Rationalization and Capability on financial reporting fraud.

**JEL Classification:** G32, M42, Z13

**Keywords:** Fraudulent Financial Statements, Opportunity, Rationalization, Capability, Lack of integrity, Governance and Culture.

## Modelo hexágono modificado de fraude y su impacto en los estados financieros fraudulentos

### Resumen

El propósito de este estudio es probar el Modelo Hexagonal de Fraude Modificado, que identifica los factores causales del fraude en la información financiera, con la gobernanza y la cultura como variables moderadoras. Este estudio se realizó con 191 empresas que cotizan en la Bolsa de Valores de Indonesia, utilizando datos de 2020 a 2023. Los resultados indican que los incentivos tienen un efecto positivo en el fraude en la información financiera; la falta de integridad tiene un efecto positivo en el fraude en la información financiera; la gobernanza y la cultura debilitan el efecto positivo de los incentivos en el fraude en la información financiera; y la gobernanza y la cultura debilitan el efecto positivo de la falta de integridad en el fraude en la información financiera. La gobernanza y la cultura pueden mitigar el impacto de los incentivos y los déficits de integridad en el fraude en la información financiera. La gobernanza y la cultura solo funcionan como variables moderadoras. Sin embargo, la gobernanza y la cultura no mitigan los efectos de la Oportunidad, la Racionalización, la Capacidad y la Colusión en el fraude en la información financiera. Las características de la gobernanza y la cultura emergen como posibles variables moderadoras. No se encontró que la gobernanza y la cultura debiliten los efectos de la Racionalización y la Capacidad en el fraude en la información financiera.

**Clasificación JEL:** G32, M42, Z13

**Palabras clave:** Estados financieros fraudulentos, oportunidad, racionalización, capacidad, falta de integridad, gobernanza y cultura.

<sup>1</sup> Corresponding Author. Email: [hexana.sri@trisakti.ac.id](mailto:hexana.sri@trisakti.ac.id)

\*No funding source was received for the development of this research.



## 1. Introduction

Financial reports must be generated in a pertinent and dependable manner (Purwaji & Muslim, 2023). However, some factors cause company management to deliberately manipulate the presentation of financial reports to achieve their own goals or those of certain groups (Association of Certified Fraud Examiners, 2020). Various cases of fraudulent presentation of financial reports still often occur, including the case of Several cases related to fraud have also occurred in various financial institutions, including the case of Sun Prima Nusantara Pembiayaan (SNP) Finance which falsified data and manipulated financial reports by creating fictitious receivables through fictitious sales, the case of Asuransi Jiwa Seraya (Purba & Rusydi, 2023) and the case of PT Asabri (Ritonga & Budhiawan, 2024). On the other hand, several banking cases that have occurred in Indonesia include 1) The case of fictitious credit disbursement carried out by Bank BJB Syariah and PT Bank Tabungan Negara Tbk, the case of BPR Citraloka Dana Mandiri Bandung which deliberately did not include or caused banking transactions not to be recorded in the books to Bank Indonesia.

Fraud trigger factor models have been developed by previous researchers (Fraud Triangle) (Cressey, 1953); Fraud Diamond (Wolfe & Hermanson, 2004); Fraud Pentagon (Crowe, 2011) and Fraud Hexagon Model (Vousinas, 2019). However, there are still weaknesses in these studies, including Vousinas (2019) research on the Fraud Hexagon Model, which still contains weaknesses because the model uses ego factors as one of the triggers for fraudulent actions based on Psychoanalytic Fraud Theory (Freud, 1923). In fact, this theory has been updated with the Post-Freudian Theory (Erikson, 1963), which states that ego does not always direct someone to commit fraud; it can even encourage someone to act according to social norms. The model is increasingly controversial because many researchers use the number of CEO photos in the annual report as a measure of the ego variable (Ariyanto & Jhuniantara, 2021; Cantú Esquivel et al., 2022; Handoko & Tandean, 2021; Lastanti et al., 2022). This measurement is not accurate because management that uploads too many photos or is narcissistic is considered arrogant and can trigger fraudulent actions (Ariyanto & Jhuniantara, 2021; Lastanti et al., 2022; Vivianita & Indudewi, 2018), but according to Ratus and Nevid in their book, *Abnormal Psychology in a Changing World*, narcissistic people exaggeratedly view themselves and like to brag about themselves and expect others to give them praise.

The Diagnostic and Statistical Manual of Mental Disorders categorizes narcissistic personality disorder within Cluster B, which encompasses dramatic, emotional, and unpredictable personality disorders. If this personality disorder remains undetected and inadequately addressed, it may result in depression rather than an inclination towards fraudulent behavior (Mulawarman & Aldila Dyas, 2017; Nevid, 2018). Therefore, this study replaces the ego factor as a trigger for fraud with the lack of integrity factor. The research further expands upon other studies (Ariyanto & Jhuniantara, 2021; Handoko & Tandean, 2021; Lastanti et al., 2022) by incorporating governance and culture variables, which are believed to attenuate the impact of fraud triggers on the presentation of fraudulent financial statements. This study seeks to address the identified research gap by reformulating the Fraud Hexagon Model into the Fraud Hexagon Modified Model and incorporating moderating variables, specifically governance and culture, which affect the relationship between the Fraud Hexagon Modified Model and Fraudulent Financial Statements. This study will test the main model,

expansion model and sensitivity model, comparing this study with previous studies to confirm the new measurement model, namely the fraud hexagon modified model. This research will be further grounded in a literature review containing the theoretical basis of the research. Research methods are used to support the research and determine the research findings. Next, the research is tested in depth and described in a discussion. General results are drawn in the conclusions.

## **2. Literature Review**

### **2.1. Agency Theory**

Agency theory elucidates the interaction between shareholders as principals and management as agents. Management is the entity engaged by shareholders to act in their interests (Jensen & Meckling, 1976). This topic is closely associated with agency theory. Management is the entity engaged by shareholders to operate the firm on their behalf, thereby providing them with enhanced insights into the company's financial status. Nonetheless, managers may occasionally possess divergent interests from the owner; in pursuit of their objectives, management may engage in fraudulent activities that contravene the contractual agreement established by both parties, utilizing their access to information, including deceptive practices in the presentation of financial statements.

### **2.2. Positive Accounting Theory (PAT)**

Watts & Zimmerman (1986) assert that observations of accounting phenomena, grounded in the causative factors of events, can be elucidated using Positive Accounting Theory. PAT can be applied to explain the consequences that occur if managers determine certain choices using the basis of contracting processes or agency relationships between managers and their stakeholders. In Positive Accounting Theory, there are three hypotheses to test the ethical or opportunistic behavior of a manager in managing earnings/earnings management, namely: debt/equity hypothesis, bonus plan hypothesis and political cost hypothesis.

### **2.3. Post-Freudian Theory / Psychosocial Theory**

Post-Freudian theory was developed by Erikson (1963). This theory states that the ego is a positive force that creates self-identity. Erikson uses the society's influence approach, which emphasizes that the ego is formed from social and historical factors, not just the potential that is brought at birth. So, the ego exists as a potential at birth. However, the cultural environment of society and history can form a personality that is in accordance with the needs of the environment and social norms. In this theory, Erikson views that the ego is the strongest component, so it can control the id and superego. The ego does not depend on the energy given by the id. However, it grows gradually and is influenced by the social environment and historical factors that ultimately shape a person's personality. Erikson believes that the ego develops according to the stage of life (epigenetic principle). Therefore, the ego has adaptable, creative, and autonomous characteristics.

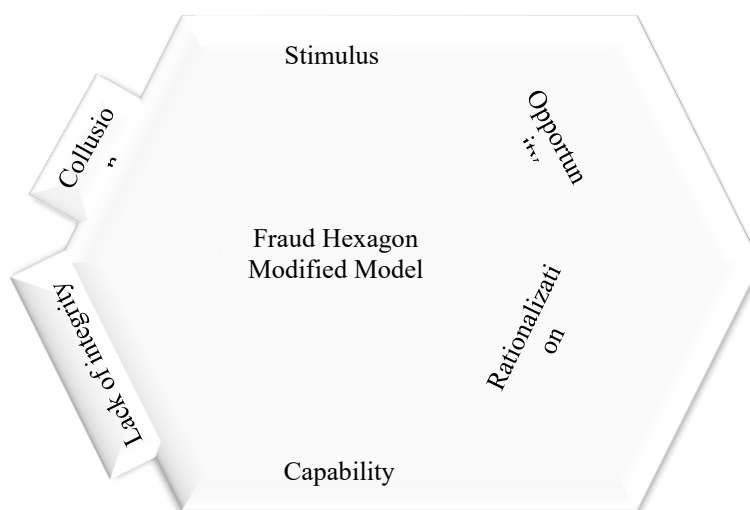
### **2.4. Financial Reporting Fraud**

Fraudulent financial statements can be assessed by earnings management (Barus et al., 2021; Bintara, 2018; Iqbal & Murtanto, 2016; Zeptian & Rohman, 2013). Earnings management, as defined

by the National Association of Certified Fraud Examiners (NACFE, 1993), refers to the deliberate misrepresentation or omission of material information in financial statements, resulting in misleading accounting data that can influence the opinions or decisions of users of the information. Earnings management can be assessed by many models, including the Model Jones (1991), M-Score Beneish (1999), F Score - Dechow et al. (2011), Model Beaver and Engel (1996), and model Kanagaretnam et al. (2010). The designated earnings management measurement models for the banking sector are the Model Beaver and Engel (1996), and model Kanagaretnam et al. (2010).

## 2.5. Fraud Hexagon Development into Fraud Hexagon Modified

This study aims to revise the Fraud Hexagon Model, also known as the S.C.C.O.R.E Model (Vousinas, 2019), into the Fraud Hexagon Modified Model 2022. The Modified Fraud Hexagon Model will substitute the ego variable with lack of integrity, thereby proposing aspects that affect financial statement fraud, including stimulus, opportunity, capability, rationalization, lack of integrity, and collusion, as illustrated in the subsequent figure:



**Figure 1.** Fraud Hexagon Modified Model  
Source: Author's elaboration based on Hexana (2022)

## 2.6. Hypothesis Development. The Effect of Stimulus on Fraudulent Financial Statements

Stimulus refers to the pressure exerted on an individual that can inspire or urge them to attain objectives, although it is constrained by the potential inability to realize these aims, which may lead to fraudulent behavior (Albrecht et al., 2012). Stimulus or pressure arises from various factors that exert influence on firm management, including financial stability, external demands, personal financial necessity, and financial objectives. SAS No. 99 elucidates that managers encounter pressure to perpetrate financial statement fraud when economic circumstances, industry dynamics, and the operational entity's conditions jeopardize its financial stability or profitability. That is in accordance with agency theory, where managers have certain goals that may differ from the owner, for example,

related to obtaining a large bonus. Suppose the manager faces pressure due to poor financial performance. In that case, the manager will be motivated to commit fraud in presenting financial statements to appear to perform well so that they get the bonus they want.

When managers face significant pressure due to poor financial performance, various internal justifications often emerge for committing fraud. One common justification is the belief that the act is temporary and will be corrected in the future when conditions improve (Bader et al., 2024). Managers may think that fraud is a “quick fix” to get through a difficult period, to maintain the company’s image with investors, or even to save their jobs. They may convince themselves that the act is in the long-term best interest of the company, or that everyone would do it in a similar situation. Sometimes managers also feel entitled to certain bonuses or compensation, and when poor performance threatens those gains, they may justify the fraud as a way to get what they believe they deserve, especially if they have felt underappreciated or unfairly compensated in the past (Achmad, Ghozali, & Pamungkas, 2022; Hemrit & Belgacem, 2024). In essence, these justifications are often rooted in self-rationalization and strong situational pressures, allowing individuals to violate ethics for perceived pressing goals. Based on the research results of Becker et al. (2006), Lastanti (2020), Murtanto and Sandra (2019), Sari and Nugroho (2020), Skousen et al., (2009) discovered that more stimuli or pressures encountered by an individual correlate with a heightened likelihood of fraudulent behavior. Meanwhile, the results of Handoko and Tandean (2021) study showed the opposite result, namely that stimulus or pressure did not affect Fraudulent Financial Statements. From the aforementioned description, the subsequent hypothesis is proposed:

Ha1: Stimulus has a positive effect on Fraudulent Financial Statements

## **2.7. The Influence of Opportunity on Fraudulent Financial Statements**

Opportunity, as defined by Albrecht et al. (2012), is a circumstance that enables an individual to perpetrate fraud and is perceived as secure for such actions. Weak supervision creates opportunity for managers to act defiantly. According to agency theory, managers and owners may possess divergent objectives, leading each party to pursue their respective aims. Managers may think that cheating is a “quick fix” to get through a difficult period, to maintain the company’s image with investors, or even to save their jobs.

They may convince themselves that the act is in the long-term best interest of the company, or that everyone would do it in a similar situation. Sometimes managers also feel entitled to a bonus or other compensation, and when poor performance threatens those gains, they may justify cheating as a way to get what they believe they deserve, especially if they have felt underappreciated or unfairly compensated in the past (Kuchta & Mrzygłocka-Chojnacka, 2020; Reichenbach, 2021).

In essence, these justifications are often rooted in self-rationalization and strong situational pressures, allowing individuals to violate ethics for what they perceive to be urgent goals. Managers possess enhanced control over the company's operational activities, hence increasing the potential to perpetrate fraud by exploiting industry characteristics and inadequate oversight.

Zaini & Setiawan (2015) study concluded that the absence of opportunity renders fraud impossible; thus, an increase in accessible opportunities correlates with a heightened probability of fraudulent activity (Ponce Rodriguez & Ponce Rodriguez, 2019). Research conducted by Handoko and Tandean (2021), Vivianita and Indudewi (2018) indicated that opportunity did not influence

Fraudulent Financial Statements. From the aforementioned description, the subsequent hypothesis can be articulated:

Ha2: Opportunity has a positive effect on Fraudulent Financial Statements

## **2.8. The Influence of Rationalization on Fraudulent Financial Statements**

Rationalization is a method employed by individuals to excuse immoral conduct (Albrecht et al., 2012: 56). According to agency theory, managers experiencing pressure may resort to numerous methods, including fraudulent activities, to alleviate the pressure and justify their actions.

The justification prompting corporate management to engage in fraudulent activities can be quantified by the frequency of auditor changes and the ratio of total accruals to total assets. Rationalization is evidenced by auditor changes, as indicated by SAS No. 99 (AICPA, 2002), which suggests that such changes within a corporation may signify fraudulent activity. Veteran auditors may possess a superior capacity to identify potential fraud perpetrated by management, whether directly or indirectly.

Nonetheless, the alteration of auditors will elevate the likelihood of fraud. The findings of Yesiariani and Rahayu (2017) demonstrate that the resignation or alteration of auditors influences the likelihood of financial statement fraud. Additional research supporting this concept includes studies by Sihombing and Rahardjo (2014), which indicate that increased rationalization correlates with a higher likelihood of fraudulent behavior.

Research conducted by Agusputri and Sofie (2019) and Handoko and Tandean (2021) indicates that rationalization does not influence fraudulent behavior. From the aforementioned description, the subsequent hypothesis can be articulated:

Ha3: Rationalization has a positive effect on Fraudulent Financial Statements

## **2.9. The Influence of Capability on Fraudulent Financial Statements**

Capability is an employee's ability to ignore Internal controls, develop concealment strategies, and observe social conditions to fulfill their interests Crowe (2011) and Wolfe and Hermanson (2004) stated that individual capabilities are personal traits and abilities that play a major role in causing fraud actually to occur, even with the presence of the other three elements.

Based on agency theory, managers who are under pressure or want to achieve certain personal and group goals that can harm other parties will make various efforts, including committing fraud in presenting financial statements. To be able to carry out these fraudulent actions, managers need abilities or capabilities such as level of education and length of service.

Research conducted by Sihombing and Rahardjo (2014) and Zaini and Setiawan (2015) indicates that while individuals may experience pressure and opportunities without possessing the requisite ability, the likelihood of committing fraud remains minimal.

This is attributed to the fact that those who engage in fraudulent activities typically possess a corresponding level of ability; thus, an increase in an individual's capability correlates with a heightened propensity for fraudulent behavior. Studies conducted by Agusputri and Sofie (2019) and

Handoko and Tandean (2021) indicated that capacity does not influence Fraudulent Financial Statements. From the aforementioned description, the subsequent hypothesis can be articulated:  
Ha4: Capability has a positive effect on Fraudulent Financial Statements

## **2.10. The Influence of Lack of Integrity on Fraudulent Financial Statements**

According to the Post-Freudian Theory (Erikson, 1963), behavior is largely determined by environmental factors, although there are historical and innate factors that influence it. Bad environmental factors can lead someone to choose dystonic elements that can give birth to core pathology when facing a crisis. The existence of this core pathology will lead someone to behave deviantly from the norms expected by the environment, thus triggering fraud. Based on agency theory, managers who face pressure will make various efforts to deal with this pressure by making various efforts to be able to continue to display good performance. Managers devoid of integrity will be inclined to seek the most expedient solutions to their issues through fraudulent actions, including the fabrication of Financial Statements. The findings of the research conducted by (Bakri et al., 2017) indicate that integrity influences fraudulent behavior. From the aforementioned description, the subsequent hypothesis can be articulated:

Ha5: Lack of integrity has a positive effect on Fraudulent Financial Statements

## **2.11. The Influence of Collusion on Fraudulent Financial Statements**

Collusion is a conspiracy between two or more entities to perpetrate fraud against a third party. Regardless of the system's effective implementation, the organization will persistently encounter issues related to the establishment of collusion. According to agency theory, firm management under pressure or for personal benefit may resort to different methods, including committing fraud. These actions may be facilitated by a consensus among multiple parties to engage in fraudulent activities, including the misrepresentation of financial reporting. When collusion occurs, the justification for cheating is often reinforced by group dynamics and a sense of belonging among the colluding parties (Tarighi et al., 2022). Individuals may feel that responsibility is spread among group members, reducing personal moral burden. There is a tendency to normalize the act within the collusive circle, where "everyone is doing it" becomes a powerful justification. In addition, the sense of trust and loyalty among collaborators may make them reluctant to expose the cheating practice, even if they have personal doubts (Sánchez-Bravo et al., 2020). Shared profits or the promise of future profits also serve as powerful incentives, encouraging each party to justify their actions as part of a collective strategy to "win" or "survive." In short, collusion creates an ecosystem in which the justification for cheating is not only derived from individual pressure, but is also reinforced by group support, mutual benefit, and risk sharing (Sánchez-Bravo et al., 2020).

The Report to The Nations 2020 Global Study on Occupational Fraud and Abuse indicates that the majority of fraudulent activities (51%) are perpetrated by two or more individuals or involve collusion. The damages resulting from this conspiracy to commit fraud will be substantial, as the perpetrators must collaborate and allocate responsibilities to undermine the internal control system designed to prevent fraud. Collusion, as defined by Black's Law Dictionary, is a false agreement between two or more individuals to conspire unlawfully at the expense of the rights of others. Increased collaboration within the company correlates with a heightened risk of financial statement

fraud. This assertion is corroborated by the findings of research by Chaney et al. (2011), indicating that the profits quality of politically connected firms is markedly inferior than that of firms lacking such links. Piotroski et al. (2015), conducted a study indicating that companies with political connections provide uninformative financial statements and select low-quality auditors to obscure discrepancies in their financial presentations to external stakeholders. Research conducted by Sari and Nugroho (2020) indicates that stimulation, ego, and collusion factors affect financial statement fraud. From this description, the subsequent hypothesis is formulated:

Ha6: Collusion has a positive effect on Fraudulent Financial Statements

## **2.12. The Impact of Governance and Culture in the Application of the Modified Fraud Hexagon Model on Fraudulent Financial Reports**

The stimulus illustrates the pressures encountered by managers that compel them to engage in fraudulent activities. Despite the pressure on management to develop effective governance and culture within the organization, they will persist in their efforts to mitigate this by refraining from fraudulent activities, including the misrepresentation of financial figures. According to Verbeke et al. (1998), organizations with effective governance and culture promote ethical behavior among managers through the established norms and behaviors internalized by their members, hence influencing their operational conduct. Despite the strong incentives or pressures, strong corporate governance and a high-integrity organizational culture can significantly weaken the incentive to commit fraud (Yu & Rha, 2021). Opportunity refers to a circumstance that enables an individual to perpetrate fraud, perceived as secure by the conduct associated with fraudulent activities (Cressey, 1953; Vousinas, 2019; Wolfe & Hermanson, 2004). As to COSO ERM 2017, effective governance is attained when the Board of Directors and Commissioners execute proficient oversight of the company's strategy and fulfill governance tasks to assist management in realizing the organization's business aims and objectives. The company sets an organizational structure, job descriptions, and delineated roles to ensure the attainment of its business strategy and objectives. An effective culture is characterized by the entity's definition of desired behaviors, a commitment to core values, and a dedication to developing human resources matched with corporate strategy and objectives. Rationalization is the cognitive process of justifying an act of deception (Cressey, 1953). Rationalization is a mindset that enables an individual to perpetrate fraud while perceiving their criminal activities as justifiable. Nonetheless, the cognitive mechanisms that rationalize fraudulent behavior can be regulated through effective governance and a culture that promotes ethical conduct and reasoning. Strong corporate governance and a high-integrity organizational culture are crucial bulwarks in weakening the influence of rationalization on financial statement fraud (Arum et al., 2023). When an entity has effective internal control mechanisms, strong independent oversight by the board of directors and audit committee, and transparent accounting practices, the room for individuals to justify fraudulent acts is greatly limited (Oncioiu et al., 2020). Capability encompasses the personal attributes and skills that significantly contribute to the manifestation of fraud, alongside three other elements: pressure, opportunity, and rationalization. While individuals may perpetrate fraud in financial statement presentation, ethical conduct and reasoning fostered by effective governance and culture can mitigate fraudulent activities. Research by Beaulieu and Reinstein (2020) indicates that business culture, employee values, and managerial actions influence financial

statement fraud. The establishment of effective governance and culture will promote ethical conduct and reasoning in individuals, hence reducing fraudulent financial reporting. An entity characterized by effective governance and culture promotes ethical behavior among managers, as a system of norms and behaviors is instilled in organizational members, influencing their actions (Verbeke et al., 1998). Regulations established in the banking sector, such as Financial Services Authority Regulation Number 39 of 2019, aim to enhance governance and cultural practices to mitigate integrity violations that may lead to fraudulent activities. Through the implementation of effective governance and culture, managers are motivated to act ethically, emphasizing not just their own interests and those of their organization but also the interests of other stakeholders. Ultimately, it can reduce the incidence of agency disputes among the numerous stakeholders involved with the entity. Kalbers (2009) conducted research on the impact of unethical behavior on fraudulent acts. Collusion is a pact or arrangement among two or more individuals to perpetrate fraud and infringe upon the rights of others (Vousinas, 2019). When managers encounter pressure and explore alternatives, including cooperation, to address the company's financial instability, effective governance and a strong corporate culture can mitigate collusive behaviors that result in fraudulent activities, such as fake financial statements.

- Ha7: Governance and culture weaken the positive influence of stimulus on Fraudulent Financial Statements
- Ha8: Governance and culture weaken the positive influence of opportunity on Fraudulent Financial Statements
- Ha9: Governance and culture weaken the positive influence of rationalization on Fraudulent Financial Statements
- Ha10: Governance and culture weaken the positive influence of capability on Fraudulent Financial Statements
- Ha11: Governance and culture weaken the positive influence of lack of integrity on Fraudulent Financial Statements
- Ha12: Governance and culture weaken the positive influence of collusion on Fraudulent Financial Statements

### **3. Methodology**

The sample in this study was determined as 191 companies listed on the Indonesia Stock Exchange (IDX) using a purposive sampling method, where the sample was selected based on specific criteria established to address the research objectives. The observation period covered four years, from 2020 to 2023. The data used was secondary data, obtained from public sources such as audited annual financial statements, company annual reports, and other official announcements and publications available on the IDX website or the official websites of each company.

#### **3.1. Confirmatory Factor Analysis (CFA) and Loading Factor**

In this study, several alternative indicators were used as measurement tools for stimulus, opportunity, rationalization and capability variables. The Kanagaretnam Model explains auditors' conservative attitudes toward fraud due to legal risks and the negative impact of failing to detect

fraud, such as overstatement of financial performance (Kanagaretnam et al., 2010). The cost of failure is high, while the risk of excessive caution is relatively low. This model also incorporates economic and psychological factors that influence auditor conservatism, including litigation and reputation. A strict regulatory environment encourages auditors to be more aggressive in detecting fraud, and it is important for audit committees to select auditors who are not bound by potentially perverse economic incentives.

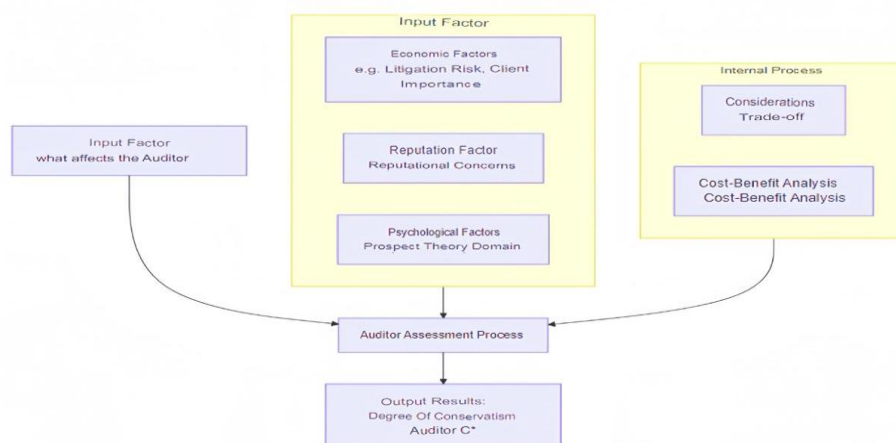


Figure 1. Kanagaretnam Model  
 Source: Author's elaboration based on Kanagaretnam et al. (2010)

A feasibility assessment of the indicators was conducted using KMO and anti-image correlation tests to determine which indicators would be incorporated into the primary model, with the selection based on the highest loading factor values. The KMO analysis for picking indicators in the stimulus variable yielded a KMO value of 0.568, indicating that four indicators are deemed suitable for measuring the stimulus. The test results using anti-image correlation showed that out of 4 indicators, it is feasible to be used as a proxy for the stimulus because it produces an anti-image correlation of more than 0.5 (Hair. et al., 2010) where the indicators in question are ACHANGE, LEV, OSHIP and ROA. The results of processing the loading factor using AMOS to select the most feasible indicator showed that the ACHANGE variable was selected as the indicator to be used in measuring the stimulus because it has the highest loading factor value of 0.4780, followed by LEV of 0.2222, OSHIP of 0.2018 and ROA of -0.7541. The feasibility test of the opportunity variable measurement using 2 measurement indicators, namely LCHANGE and BDOUT, resulted in the conclusion that both indicators are feasible to be used as measuring instruments, as shown by the KMO and Anti-image correlation values in Table 3.3. The selection of indicators in the opportunity variable carried out using loading factors showed that the BDOUT indicator was chosen as the opportunity measuring variable because it produced a higher loading factor compared to the LCHANGE indicator. The feasibility test results for the rationalization variable, comprising two indicators, concluded that both measurement indicators, TATA and AUDO, are suitable for assessing the rationalization variable. The analysis of the loading factor for indicators within the rationalization variable concluded that the TATA indicator is preferred for measuring this variable, as it yields a loading factor of 0.2714, surpassing the AUDO variable's loading factor of 0.1347. The results of the feasibility test of the

measurement of indicators in the capability variable consisting of 2 measurement indicators, namely DCHANGE and CEOT, produced a KMO value and anti-image correlation of 0.500, which means that both indicators are suitable to be used as a measurement of the Capability variable. The selection of indicators used to measure capability shows that the CEOT indicator is chosen for measuring the capability variable because it has a higher loading factor value compared to the DCHANGE variable. This research refers to several variable elements which are explained in the following table:

**Table 1.** Research Variables

No	Variables	Desc.
1	Fraudulent Financial Statements (Kanagaretam Model) (Sukmadilaga et al., 2022; Tellechea, 2021)	Fraudulent financial statements are statements intentionally presented to mislead users by falsely recording, presenting, or disclosing material financial information. This action is usually intended to conceal true financial performance, meet market expectations, or obtain illegal profits.
2.	Stimulus (Financial Stability) (Achmad, Ghozali, Helmina, et al., 2022; Y. Choi, 2022)	Stimulus, in the context of financial stability, refers to policies or interventions by authorities (such as central banks or governments) designed to support and restore the financial system, particularly in the face of crises or economic stress. These actions aim to maintain smooth market functioning, banking liquidity, and public confidence to prevent broader disruption to the economy.
3	Opportunity (Ineffective Monitoring) (Sukmadilaga et al., 2022; Trzeciak & Jonek-Kowalska, 2021)	Opportunity, in the context of ineffective supervision, refers to weak internal control mechanisms, oversight by the board of commissioners, or external audits that fail to detect and prevent misconduct. This creates loopholes for individuals or certain parties to commit acts such as fraud without a high risk of detection.
4	Rationalization (Total Accruals) (Achmad, Ghozali, Helmina, et al., 2022; Siladjaja et al., 2022; Widianingsih et al., 2022)	Rationalization, in the context of total accruals, refers to management's justification for using aggressive accounting estimates and policies in recording revenues and expenses, which results in large net accruals often unsupported by operating cash flow. This justification is usually based on the desire to meet profit targets, achieve bonuses, or maintain market valuation, despite the potential to distort the true picture of financial performance.
5	Capability (CEO's Tenure) (Lee, 2023; Mousavi et al., 2022)	The capabilities demonstrated by a CEO's long tenure refer to their experience, network, and in-depth understanding of the company, enabling them to identify and exploit loopholes in the control system. However, excessively long tenure can also create excessive authority and reduce

		effective oversight, thus increasing the CEO's capacity to commit or conceal fraud.
6	Lack of integrity (Munteanu et al., 2024; Onesti & Palumbo, 2023; van Ruth & de Pagter-de Witte, 2020)	A lack of integrity is a condition in which an individual or organization consistently acts inconsistently with ethical values, moral principles, and applicable laws. In the context of corporate governance, this is manifested through behaviors such as financial statement manipulation, abuse of authority, or decision-making that prioritizes personal interests over obligations to stakeholders.
7	Collusion (Achmad, Ghozali, Helmina, et al., 2022; Cho & Kang, 2024; Sukmadilaga et al., 2022)	Collusion is a form of secret and illegal cooperation between individuals or organizations aimed at defrauding others, restricting competition, or gaining an improper advantage. In the business world, this practice often takes the form of hidden agreements to fix prices, divide markets, or rig bids, thereby undermining free market mechanisms and harming consumers and other competitors.
8	Governance and Culture (Onesti & Palumbo, 2023; Sukmadilaga et al., 2022)	Governance refers to the regulatory framework, processes, and structures that guide and control an organization to achieve accountability and transparency. Meanwhile, organizational culture reflects the collective values, norms, and behaviors that shape day-to-day working practices and decision-making, both of which influence each other to create an ethical and sustainable operating environment.

Source: Author's compilation from prior studies

### 3.2. Multiple Linear Regression and moderating regression

This study employs multiple linear regression panel data analysis approaches and moderating regression analysis panel data for hypothesis testing as follows:

$$\text{KAN}_{it} = \beta_0 + \beta_1 \text{ACHANGE}_{it} + \beta_2 \text{BDOUT}_{it} + \beta_3 \text{TATA}_{it} + \beta_4 \text{CEO}_{it} + \beta_5 \text{NUOFF}_{it} + \beta_6 \text{POLCN}_{it} + \beta_7 \text{GAOC}_{it} + \beta_8 \text{ACHANGE}_{it} * \text{GAOC}_{it} + \beta_9 \text{BDOUT}_{it} * \text{GAOC}_{it} + \beta_{10} \text{TATA}_{it} * \text{GAOC}_{it} + \beta_{11} \text{CEO}_{it} * \text{GAOC}_{it} + \beta_{12} \text{NUOFF}_{it} * \text{GAOC}_{it} + \beta_{13} \text{POLCN}_{it} * \text{GAOC}_{it} + \epsilon_{it1}$$

Information:

KAN	: Fraudulent Financial Statements (Kanagaretam Model)
ACHANGE	: Stimulus (Financial Stability)
BDOUT	: Opportunity (Ineffective Monitoring)
TATA	: Rationalization (Total Accruals)
CEO	: Capability (CEO's Tenure)
NUOFF	: Lack of integrity
POLCN	: Collusion
GAOC	: Governance and Culture

---

$\beta_0$	: Constants
$\beta_1 - \beta_{12}$	: Variable coefficient
i	: Cross section
t	: Time
$\varepsilon$	: Error ter

This study can utilize panel data models including the Common Effect (Pooled Least Squares), Fixed Effect model, and Random Effect model. This study used the Chow test, Hausman test, and LM test for model selection to identify the appropriate model.

## 4. Results

### 4.1. Classical Multiple Assumption Test

The normality test findings indicate that the error distribution closely aligns with the ideal normalcy line, hence satisfying the normality assumption necessary for the model. The multicollinearity test indicates that the correlation among independent variables is less than 0.7, thereby concluding the absence of multicollinearity in the regression model. The heteroscedasticity test findings indicate that the p-value of Obs\*R-square is 0.3110, which above 0.05. Therefore, the null hypothesis is accepted, concluding that there is no heteroscedasticity in the employed regression model. The autocorrelation test findings indicate that the p-value of Obs\*Rsquare is 0.3893, which above 0.05. Therefore, the null hypothesis is accepted, concluding that there is no autocorrelation in the model produced. Following the enhancement of autocorrelation, it was determined that all four necessary classical assumptions were satisfied, hence allowing for the continuation of hypothesis testing of the theory.

### 4.2. Testing the Coefficient of Determination (R2)

The determination coefficient test findings were analyzed to assess the degree to which the independent variables elucidate the dependent variables in a model, as shown by the adjusted R2 value. The Adjusted R2 value of 0.07010 suggests that the factors of stimulus, opportunity, capability, rationalization, lack of integrity, collusion, and their interactions with governance and culture account for 7.01% of the variance in the Fraudulent Financial Statements variable. The remaining 92.99% is affected by variables not encompassed in this research model.

This relatively low number indicates that there are many other factors that are not identified or measured in the model that contribute significantly to fraudulent financial statements. These factors could include unforeseen macroeconomic conditions, sudden regulatory changes, extreme competitive pressures in the industry, weaknesses in information technology systems, highly complex personal motives beyond common rationalizations, or even deeper psychological and sociological factors that are difficult to measure. In other words, fraud is a multifaceted phenomenon influenced by a much broader spectrum of factors than are captured by the variables studied, leaving a significant portion of the variance unexplained. Factors that have the potential to have a greater impact on Fraudulent Financial Statements and are often not fully measured in standard models include: the individual psychology of the perpetrator (e.g., a degree of narcissism, arrogance, or even a personality disorder that makes someone more willing to engage in manipulation without guilt),

extreme external pressures (such as unrealistic market expectations, the threat of delisting, or an economic crisis that forces a company to survive at all costs), and fundamental weaknesses in internal control systems that create systemic loopholes (Procentese et al., 2020). In addition, sudden changes in key management or highly concentrated ownership structures without adequate oversight can also be powerful drivers of fraud. The combination of these factors, especially when occurring in volatile industry conditions or amid macroeconomic uncertainty, is often the primary catalyst for larger, more systematic acts of financial statement manipulation.

### 4.3. Simultaneous Testing (F Test)

The F test is used to concurrently assess the impact of all independent factors on the dependent variable. The outcomes of the F test are presented in the subsequent table:

**Table 2.** F Test

Model 1	Mark F	Sig.
1	2.060860	0.015813

Source: Author’s computation based on research data.

According to the data in the table above, the significant value of model 1 is 0.015813, which is less than 0.05; therefore, H0 is rejected. This suggests that at least independent variable inside the regression model of this study influences the dependent variable.

#### 4.3.1. Partial testing (t-Test)

**Table 3.** T-Test

Variable	Coef (β)	Sig.	Conclusion
STIMULUS (ACHANGE)	-0.0703	0.0483*	Ha1 Accepted
OPPORTUNITY (BDOUT)	0.0161	0.2051	Ha2 Rejected
RAZIONALIZATION (TATA)	-0.0913	0.0717	Ha3 Rejected
CAPABILITY (CEOT)	0.0032	0.3768	Ha4 Rejected
LACK OF INTEGRITY (NUOFF)	0.0133	0.0158*	Ha5 Accepted
COLLUSION (POLCN)	-0.0005	0.4715	Ha6 Rejected
GOVERNANCE AND CULTURE (GAOC)	0,044751	0,0382*	Ha5 Accepted
ACHANGE → GAOC	0.1428	0.0308*	Ha7 Accepted
BDOUT→GAOC	-0.0425	0.1282	Ha8 Rejected
TATA→GAOC	0.1302	0.1322	Ha9 Rejected
CEOT→GAOC	-0.0146	0.2251	Ha10 Rejected
NUOFF→GAOC	-0.0236	0.0271*	Ha11 Accepted
POLCN→GAOC	0.0049	0.3815	Ha12 Rejected

(\*) significance level 0.05

Source: Author’s computation based on research data.

According to the data processing results presented in the table above, it can be seen that the stimulus measured using financial stability has a significance value (p-value) of 0.0483, which means it is smaller than 0.05 (p-value < 0,05) with the value of  $1 > 0,0703$  or in a negative direction. So, the

stimulus has proven to have a positive effect on Fraudulent Financial Statements. Likewise, the lack of integrity variable has a significant value (p-value) is 0.0158, which means it is smaller than 0.05 (p-value < 0,05) with value 0.0133 or in a positive direction. A deficiency in integrity positively influences fraudulent financial statements. The opportunity variable is assessed through inadequate monitoring, rationalization is quantified by the ratio of total accruals to total assets, and capacity is evaluated based on the CEO. Tenure and collaboration do not influence fraudulent financial statements.

The testing results regarding the impact of Stimulus on Fraudulent Financial Statements, with governance and culture as moderating variables, indicate a significance value (p-value) of 0.0308, which is less than 0.05 (p-value < 0,05), accompanied by a value of  $\beta = 0.1428$ , indicating a positive correlation. Governance and culture can diminish the impact of stimuli on fraudulent financial statements. The findings from the examination of the impact of integrity deficiency on Fraudulent Financial Statements, with governance and culture as moderating variables, reveal a significance value (p-value) of 0.0271, indicating it is less than 0.05 (p-value < 0,05), accompanied by a value of  $\beta = -0.0236$ , reflecting a negative correlation. Governance and culture can mitigate the impact of integrity deficits on fraudulent financial statements.

The results of testing the impact of opportunity, rationalization, capability, and collusion on Fraudulent Financial Statements, with governance and culture as moderating variables, yielded a significance value (p-value) beyond 0.05. Governance and culture cannot diminish the impact of opportunity, rationalization, capability, and coordination on fraudulent financial statements.

#### **4.4. Sensitivity Test**

A sensitivity analysis was performed to enhance the validity of the test outcomes in this study. A sensitivity analysis was performed by juxtaposing this study model with prior investigations. Model 1 is the Fraud Hexagon Modified Model introduced in this study, which examines the influence of stimulus, opportunity, rationalization, capability, lack of integrity, and collusion on fraudulent financial statements, with governance and culture serving as moderating variables. Model 1 incorporates moderating variables related to governance and culture, with five indicators derived from COSO ERM 2017, along with an additional indicator reflecting dedication to achieving certification and awards. Model 2 is the Fraud Hexagon model, formulated by (Vousinas, 2019), which examines the influence of stimulus, opportunity, rationalization, capability, ego, and collaboration on fraudulent financial statements, with governance and culture serving as moderating variables. Model 2 employs moderating variables of governance and culture, utilizing only five indicators derived from COSO ERM 2017.

The sensitivity test results indicated that the ego variable, quantified by the amount of board of directors' photographs in the annual report, does not significantly influence Fraudulent Financial Statements. The deficiency of integrity, quantified by the frequency of infractions, substantially influences fraudulent financial statements. The results corroborate the study's findings that the integrity variable can substitute the ego variable in the Modified Fraud Hexagon Model. The sensitivity test results indicate that governance and culture, as assessed by five COSO ERM 2017 factors, do not reduce the impact of integrity deficiency on fake financial statements. Nonetheless, the inclusion of an indicator reflecting the company's dedication to securing honors and certifications

may diminish the impact of integrity deficits on misleading financial statements through governance and culture.

## 5. Discussion

The stimulus indicated by financial stability is reflected in financial growth, encompassing asset expansion, sales, and annual profit increases. The expansion of assets influences the productivity and efficiency of the organization, so serving as a contributing factor to the enhancement of corporate profitability (Budiasa et al., 2016). The findings of this study indicate that asset expansion significantly influences fraudulent financial statements, exhibiting a negative coefficient. The hypothesis testing results indicate that low asset growth, signifying unstable financial conditions, generates significant pressure on management, prompting them to enhance the company's financial stability through various means, including the fabrication of financial statements. The findings of this study corroborate the investigations conducted by Annisya (2016), Budiasa et al. (2016), Sari and Nugroho (2020), Sihombing and Rahardjo (2014), Yesiariani and Rahayu (2017). The findings of this study further corroborate Agency Theory and Positive Accounting Theory.

The incidence of dishonest financial reporting is attributable to variables beyond mere pressure. Nonetheless, it is significantly affected by opportunity considerations, as assessed by the efficacy of monitoring conducted within the corporation, specifically by the Independent Board of Commissioners. A greater proportion of independent board commissioners correlates with enhanced supervisory efficacy, hence reducing the likelihood of fraudulent financial reporting. The findings of this study contradict this assertion, as the test results indicate a likelihood beyond 0.05 with a positive correlation, suggesting that inadequate monitoring does not significantly impact Fraudulent Financial Statements. The findings of this study align with those of Handoko and Tandean (2021).

This situation presumably arises because, despite banks having numerous independent commissioners, their effectiveness in avoiding fake financial statements remains inadequate. Statistical data from the sample utilized in this study indicates that the proportion of independent commissioners exceeds 55%, although this correlates with an increase in fraudulent financial statements. Significant examples continue to arise, such as instances of fraudulent credit, misappropriation of client funds, and the submission of substandard financial statements, among others. This indicates the continued necessity to enhance the efficacy of supervision within the banking sector, both internally through the Board of Commissioners and the Audit Committee, and externally via regulatory bodies such as the Financial Services Authority and Bank Indonesia.

This study measures financial statement fraud, executed via accrual profit management, using the ratio of Total Accrual to Total Assets. The profit achieved is more indicative of accrued profit during a single time. A diminished accrual profit value correlates with an increased operating cash flow. This assertion is not corroborated by the findings of this investigation, which indicate a significance value exceeding 0.0. The findings of this study align with the research outcomes of Ayem and Astuti (2019).

This circumstance may arise from banks management opting for real earnings management over accrual earnings management to perpetrate financial statement fraud. Statistical data from sample enterprises and advancements in the banking sector corroborate this idea. Statistical data

from sample companies indicates that the total accrual to total asset value predominantly exhibits a negative figure, with 191 companies (82.7%) reporting such results, whilst just 40 companies (17.3%) present a positive figure. This indicates that, on average, banks possess a lower operating profit compared to operating cash flow. The premise that the banking sector engages in genuine earnings management is further substantiated by observable trends within the business, wherein banking management strategies increasingly facilitate loan issuance through the provision of inexpensive capital or more lenient credit criteria.

A metric for assessing capacity is the tenure of the board of directors or management. An extended tenure correlates with increased experience in executing diverse tasks and cases related to the presentation of the company's financial statements, thereby enhancing their awareness of internal control deficiencies and augmenting their capacity to engage in fraudulent financial reporting. The findings of this study do not corroborate this assertion, as the test results indicate a significance value beyond 0.05. Statistical data from sample firms indicate that the majority of board directors have tenures above six years, with 196 directors (84.84%), while just 35 companies (15.16%) have directors with tenures below this threshold. It can be stated that the majority of directors possess tenures over six years; nonetheless, this does not influence the occurrence of fraudulent financial statements. This circumstance may arise from the fact that longer employment fosters more loyalty and discourages acts that could harm the organization. This assertion aligns with Kurniawati (2014), which indicates that prolonged tenure correlates with increased job engagement.

A deficiency in integrity signifies a failure to adhere to moral and ethical norms, reflecting a compromised moral character, dishonesty, or a morally corrupt state. The deficiency of integrity is the primary catalyst for fraudulent activities. The findings of this study indicate that a deficiency in integrity, as evidenced by breaches of relevant laws, regulations, and ethical standards, positively influences Fraudulent Financial Statements. The statistical test findings corroborate the aforementioned conclusion, indicating that the majority of banking firms, specifically 134 organizations (58%), contravene legal and ethical standards. Conversely, 97 organizations (42%) do not engage in violations. The findings of this study align with those of research by Kakati and Gosmawi (2019) and Siahaan (2019). Collusion is quantified by the presence of 194 banks with substantial political links, or 83.9%. Despite numerous banks possessing boards of commissioners with political affiliations, the test results indicate a significance value beyond 0.05, suggesting that collaboration does not significantly influence fraudulent activities, including the misrepresentation of financial reporting.

The findings of this study demonstrate that collaboration, as assessed through political relationships, does not invariably result in fraudulent activities. Numerous corporations, particularly within the banking sector, appoint commissioners with political affiliations for various purposes, including securing support in times of pressure to avoid engaging in fraudulent activities, such as misrepresenting financial figures. This aligns with the findings of study conducted by Johnson and Mitton (2003). Similarly, Khwaja and Mian (2005) demonstrated that enterprises with political connections are more prevalent and have more access to loans. Correia (2014) contends that firms with political affiliations have less stringent oversight from regulators compared to those without such links.

The test results show that the influence of stimulus and lack of integrity on Fraudulent Financial Statements is weakened by governance and culture. These results prove that good

corporate governance and culture will shape the behavior of managers as agents who hold operational control of the company to act efficiently and realistically so that the continuity of the company's business will be guaranteed. Good corporate governance and culture will also influence the behavior of managers as agents who hold operational control of the company to act in accordance with applicable norms and provisions. According to the Post-Freudian Theory (Erikson, 1963), behavior is largely determined by environmental factors, although there are historical and innate factors that influence it. Environmental influences stem from the establishment of effective government and culture, guiding individuals to select syntonetic aspects that can generate fundamental strengths during a crisis, including under pressure. The existence of this basic strength will direct someone to behave as expected by the social environment, namely avoiding financial statement fraud when facing pressure and looking for other alternatives to resolve the pressure of the company's financial instability. The research results are in accordance with research conducted by Beaulieu and Reinstein (2020) and Kalbers (2009).

The test results in this study cannot establish the impact of opportunity, rationalization, capability, and collusion on Fraudulent Financial Statements diminished by governance and culture. The suspicion arises from the insufficient number of independent commissioners and the absence of effective oversight, which may provide management with significant opportunities to perpetrate fraud in financial statement presentations; the degree of fairness is affected despite the implementation of sound governance and culture. In addition, it is also suspected that the attitude or view of management regarding the measure of the level of fairness of a fraudulent act is not solely influenced by the governance and culture that applies in the entity. In addition, although banking already has various regulations to create good corporate governance and culture, including POJK number 39 of 2019, the implementation and supervision of the implementation of these regulations must be carried out and improved continuously so that they can have an impact on reducing fraud and deviations from the concept of good corporate governance.

The analysis shown in the table above indicates that the moderating variables of governance and culture can serve as pure moderators when influencing the relationship between stimulus variables and the lack of integrity on Fraudulent Financial Statements. The moderating variables of governance and culture may serve as possible moderators (Homologizer Moderator) in influencing the effects of opportunity, rationality, capability, and collusion.

The outcomes of the second expansion test categorized banks into two groups based on books 1 and 2, and books 3 and 4. The test results demonstrate that banks in groups 1 and 2 exhibit a lack of integrity, which impacts fraudulent financial statements. Furthermore, the findings from the model 2 test indicate that in smaller banks, the establishment of effective governance and culture diminishes the impact of incentives and integrity deficiencies on Fraudulent Financial Statements. The examination of bank groups in volumes 3 and 4 indicates that stimulation, opportunity, capability, absence of integrity, and collusion do not influence Fraudulent Financial Statements.

This study has limitations including: 1.) The use of linear regression (OLS) on binary dependent variables can produce probability estimates outside the range of 0 to 1, making them substantively meaningless. 2.) The OLS method assumes normality and homoscedasticity of errors, assumptions that are generally not met when the dependent variable is dichotomous, thus disrupting the reliability of statistical inference. Future research is advised to apply more appropriate models

such as logistic or probit regression to ensure valid prediction results and more reliable statistical inferences according to the nature of the binary dependent variable in a more specific Research Model. Furthermore, The use of purposive sampling methods has the potential to result in selection bias because the sample is not randomly selected from the population. To increase external validity, future research is recommended to use probability sampling methods, such as simple random sampling or stratified random sampling, to obtain a more representative sample of the relevant research object.

## 6. Conclusions

The findings from the hypothesis testing reveal that financial stability and a deficiency of integrity, as shown by the frequency of violations, positively influence Fraudulent Financial Statements. Opportunity, assessed through ineffective monitoring, does not influence Fraudulent Financial Statements; rationalization, evaluated via the Total Accruals to Total Assets Ratio, has no impact on Fraudulent Financial Statements; capability, determined by CEO Tenure, does not affect Fraudulent Financial Statements; and collusion, gauged by political connections, does not influence Fraudulent Financial Statements. The study's results indicate that Governance and Culture can mitigate the impact of stimulus and integrity deficits on Fraudulent Financial Statements. Governance and culture serve solely as moderating variables. Nevertheless, Governance and Culture do not diminish the influence of Opportunity, Rationalization, Capability, and Collusion on Fraudulent Financial Statements. The characteristics of governance and culture emerge as potential moderating variables (Homologizer Moderator).

The hypothesis testing results indicate that the variable's integrity deficiency and stimulation are the primary variables (Necessary Condition) for fraud. Conversely, other elements such as opportunity, rationality, capability, and collusion serve as sufficient conditions to promote fraud. These findings align with present circumstances, wherein the integrity zone is the primary element that necessitates ongoing reinforcement to avert fraudulent activities, including deceptive financial statements. Multiple rules concerning integrity enforcement have been implemented, including ISO 37001, which pertains to the Anti-Bribery Management System aimed at preventing, detecting, and investigating instances of fraud. The Regulation of the Minister of State Apparatus Empowerment and Bureaucratic Reform Number 10 of 2019 establishes criteria for the development of an integrity zone aimed at creating a corruption-free region and a clean, service-oriented bureaucratic environment within government organizations. The outcomes of the initial expansion test indicate that the measuring indicator of the stimulus variable, represented by financial targets, may substantiate the impact of the stimulus variable on Fraudulent Financial Statements. The external pressure indicator, personal financial need, fails to demonstrate the impact of the stimulus variable on Fraudulent Financial Statements.

The sensitivity test results corroborate the study's findings: the integrity variable can substitute the ego variable in the Modified Fraud Hexagon Model, and the inclusion of an indicator, specifically the company's commitment to securing awards and certifications, can enhance the governance and cultural factors that mitigate the impact of integrity deficiency on fraudulent financial statements.

## 7. Recommendations and Limitations

This study identified some limits and flaws that future researchers should address and enhance. The limitations encompass a relatively low determination coefficient of merely 7% in this research model, the subjective nature of the content analysis employed for measuring governance and culture disclosure indices, and the potential for the selection of indicators based on loading factors to yield viable conclusions for all indicators. Nonetheless, they are exclusively chosen according to the highest loading factor value.

This study's results reveal that the stimulus and integrity deficiency variables influence financial statement fraud. Consequently, regulators, specifically the Financial Services Authority, Bank Indonesia, the Ministry of Finance, and the Corruption Eradication Commission, must enhance regulations and oversight in their execution to effectively prevent fraud, including Fraudulent Financial Statements. Moreover, governance and cultural elements, particularly a desire to obtaining awards and certifications, have demonstrated efficacy in reducing management's motivations to engage in fraudulent activities despite existing incentives. This study recommends the inclusion of an additional principle in the governance and culture component of COSO ERM 2017, specifically regarding awards and certification. This study's findings are pertinent to professional associations, particularly the Indonesian Institute of Public Accountants (IAPI), highlighting the necessity for auditors to address the issue of integrity deficiency during entity audits. The absence of integrity is a requisite condition that must be present to facilitate financial statement fraud. It is anticipated that instances of financial statement fraud may be diminished. Consequently, the integrity of corporate management must be enhanced by diverse legislation, standards, and professional ethical codes.

## References

- [1] Achmad, T., Ghozali, I., Helmina, M. R. A., Hapsari, D. I., & Pamungkas, I. D. (2022). Detecting fraudulent financial reporting using the fraud hexagon model: Evidence from the banking sector in Indonesia. *Economies*, 11(1), 5. <https://doi.org/10.3390/economies11010005>
- [2] Achmad, T., Ghozali, I., & Pamungkas, I. D. (2022). Hexagon fraud: Detection of fraudulent financial reporting in state-owned enterprises Indonesia. *Economies*, 10(1), 13. <https://doi.org/10.3390/economies10010013>
- [3] Agusputri, H., & Sofie, S. (2019). Faktor-faktor yang berpengaruh terhadap fraudulent financial reporting dengan menggunakan analisis fraud pentagon. *Jurnal Informasi Perpajakan, Akuntansi dan Keuangan Publik*, 14(2), 105–124. <https://doi.org/10.25105/jipak.v14i2.5049>
- [4] American Institute of Certified Public Accountants. (2002). Consideration of fraud in a financial statement audit. <http://www.aicpa.org/Research/Standards/AuditAttest/DownloadableDocuments/AU-00316.pdf>

- 
- [5] Albrecht, W. S., Albrecht, C. C., Albrecht, C. O., & Zimbelman, M. F. (2012). *Forensic accounting*. South-Western Cengage Learning.
- [6] Annisya, M. (2016). *Pendeteksian fraudulent financial statement dengan analisis fraud diamond: Studi empiris perusahaan jasa sektor properti dan real estate yang terdaftar di Bursa Efek Indonesia tahun 2010–2014* [Thesis, Lampung University].
- [7] Ariyanto, D., & Jhuniantara, I. (2021). Fraudulent financial statements in pharmaceutical companies: Fraud pentagon theory perspective. *Journal of Legal, Ethical and Regulatory Issues*, 24(1).
- [8] Arum, E. D. P., Wijaya, R., Wahyudi, I., & Brilliant, A. B. (2023). Corporate governance and financial statement fraud during the COVID-19: Study of companies under special monitoring in Indonesia. *Journal of Risk and Financial Management*, 16(7), 318. <https://doi.org/10.3390/jrfm16070318>
- [9] Association of Certified Fraud Examiners. (2020). *Report to the nations: 2020 global study on occupational fraud and abuse*. ACFE. <https://www.acfe.com>
- [10] Ayem, S., & Astuti, A. (2019). Konsep fraud diamond dan financial statement fraud: Studi empiris pada perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia tahun 2014–2018. *Jurnal Ilmiah Akuntansi dan Humanika*, 9(3). <https://doi.org/10.23887/jiah.v9i3.22604>
- [11] 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), 120. <https://doi.org/10.3390/jrfm17030120>
- [12] Bakri, H. H. M., Mohamed, N., & Said, J. (2017). Mitigating asset misappropriation through integrity and fraud risk elements. *Journal of Financial Crime*, 24(2), 242–255. <https://doi.org/10.1108/JFC-04-2016-0024>
- [13] Barus, Y. P. P., Chung, J., & Umar, H. (2021). Pengaruh fraud triangle terhadap kecurangan laporan keuangan dengan ukuran perusahaan sebagai pemoderasi pada perusahaan perbankan yang terdaftar di Bursa Efek. *Kocenin Serial Konferensi*, 1, 3–1.
- [14] Beaulieu, P., & Reinstein, A. (2020). Connecting organizational culture to fraud: Buffer/conduit theory. In *Advances in Accounting Behavioral Research* (Vol. 23, pp. 21–45). Emerald Publishing Limited. <https://doi.org/10.1108/S1475-148820200000023002>
- [15] Beaver, W. H., & Engel, E. E. (1996). Discretionary behavior with respect to allowances for loan losses and the behavior of security prices. *Journal of Accounting and Economics*, 22(1–3), 177–206. [https://doi.org/10.1016/S0165-4101\(96\)00428-4](https://doi.org/10.1016/S0165-4101(96)00428-4)

- [16] Becker, D., Connolly, J., Lentz, P., & Morrison, J. (2006). Using the business fraud triangle to predict academic dishonesty among business students. *Academy of Educational Leadership Journal*, 10(1).
- [17] Beneish, M. D. (1999). The detection of earnings manipulation. *Financial Analysts Journal*, 55(5), 24–36. <https://doi.org/10.2469/faj.v55.n5.2296>
- [18] Bintara, R. (2018). Pengaruh profitabilitas, growth opportunity, dan struktur modal terhadap nilai perusahaan dengan good corporate governance sebagai variabel pemoderasi: Studi empiris pada perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia tahun 2012–2015. *Profita: Komunikasi Ilmiah dan Perpajakan*, 11(2), 306–328. <https://doi.org/10.22441/profita.v11.02.010>
- [19] Budiasa, I. K., Purbawangsa, I. B. A., & Rahyuda, H. (2016). Pengaruh risiko usaha dan struktur modal terhadap pertumbuhan aset serta profitabilitas pada Lembaga Perkreditan Desa. *Jurnal Ekonomi dan Bisnis Universitas Udayana*, 5(7), 1919–1952.
- [20] Cantú Esquivel, J. A., Ríos Bolívar, H., & Jiménez Preciado, A. L. (2022). Causalidad y acoplamiento cíclico entre variables macroeconómicas en la conformación de crisis financieras. *Revista Mexicana de Economía y Finanzas*, 18(1), 1–28. <https://doi.org/10.21919/remef.v18i1.669>
- [21] Chaney, P. K., Faccio, M., & Parsley, D. (2011). The quality of accounting information in politically connected firms. *Journal of Accounting and Economics*, 51(1–2), 58–76. <https://doi.org/10.1016/j.jacceco.2010.07.003>
- [22] Cho, M. K., & Kang, M. (2024). Executives implicated in financial reporting fraud and firms' investment decisions. *Sustainability*, 16(11), 4865. <https://doi.org/10.3390/su16114865>
- [23] Choi, D., Chung, C. Y., Seyha, T., & Young, J. (2020). Factors affecting organizations' resistance to the adoption of blockchain technology in supply networks. *Sustainability*, 12(21), 8882. <https://doi.org/10.3390/su12218882>
- [24] Choi, Y. (2022). Economic stimulus and financial instability: Recent case of the U.S. household. *Journal of Risk and Financial Management*, 15(6), 266. <https://doi.org/10.3390/jrfm15060266>
- [25] Committee of Sponsoring Organizations of the Treadway Commission. (2017). Enterprise risk management: Integrating with strategy and performance. COSO.
- [26] Correia, M. M. (2014). Political connections and SEC enforcement. *Journal of Accounting and Economics*, 57(2–3), 241–262. <https://doi.org/10.1016/j.jacceco.2014.04.004>
- [27] Cressey, D. R. (1953). *Other people's money: A study in the social psychology of embezzlement*. Free Press.

- 
- [28] Crowe, H. (2011). Why the fraud triangle is no longer enough. Crowe Horwath LLP.
- [29] Dechow, P. M., Ge, W., Larson, C. R., & Sloan, R. G. (2011). Predicting material accounting misstatements. *Contemporary Accounting Research*, 28(1), 17–82. <https://doi.org/10.1111/j.1911-3846.2010.01041.x>
- [30] Erikson, E. H. (1963). *Childhood and society* (2nd ed.). W. W. Norton.
- [31] Freud, S. (1923). *The ego and the id*. Internationaler Psychoanalytischer Verlag.
- [32] Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.). Pearson Prentice Hall.
- [33] Handoko, B. L., & Tandean, D. (2021). An analysis of fraud hexagon in detecting financial statement fraud: Empirical study of listed banking companies on Indonesia Stock Exchange for period 2017–2019. *Proceedings of the 2021 7th International Conference on E-Business and Applications*, 93–100. <https://doi.org/10.1145/3457640.3457657>
- [34] Hemrit, W., & Belgacem, I. (2024). Spotlight on corporate fraud: How is takaful insurance stability affected by its disclosure? *Risks*, 12(9), 145. <https://doi.org/10.3390/risks12090145>
- [35] Iqbal, M., & Murtanto, M. (2016). Analisa pengaruh faktor-faktor fraud triangle terhadap kecurangan laporan keuangan pada perusahaan property dan real estate yang terdaftar di Bursa Efek Indonesia. *Seminar Nasional Cendekiawan 2016*.
- [36] Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs, and ownership structure. *Journal of Financial Economics*, 3(4), 305–360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
- [37] Johnson, S., & Mitton, T. (2003). Cronyism and capital controls: Evidence from Malaysia. *Journal of Financial Economics*, 67(2), 351–382. [https://doi.org/10.1016/S0304-405X\(02\)00255-6](https://doi.org/10.1016/S0304-405X(02)00255-6)
- [38] Jones, J. J. (1991). Earnings management during import relief investigations. *Journal of Accounting Research*, 29(2), 193–228.
- [39] Kakati, S., & Goswami, C. (2019). Factors and motivation of fraud in the corporate sector: A literature review. *Journal of Commerce & Accounting Research*, 8(3), 86–96.
- [40] Kalbers, L. P. (2009). Fraudulent financial reporting, corporate governance, and ethics: 1987–2007. *Review of Accounting and Finance*, 8(2), 187–209. <https://doi.org/10.1108/14757700910959510>
- [41] Kanagaretnam, K., Lim, C. Y., & Lobo, G. J. (2010). Auditor reputation and earnings

- management: International evidence from the banking industry. *Journal of Banking & Finance*, 34(10), 2318–2327. <https://doi.org/10.1016/j.jbankfin.2010.02.020>
- [42] Khwaja, A. I., & Mian, A. (2005). Do lenders favor politically connected firms? Rent provision in an emerging financial market. *The Quarterly Journal of Economics*, 120(4), 1371–1411. <https://doi.org/10.1162/003355305775097524>
- [43] Kim, S. (2023). Internal control managers' accounting experiences on audit quality: Focus on ESG. *International Journal of Financial Studies*, 11(2), 65. <https://doi.org/10.3390/ijfs11020065>
- [44] Kuchta, D., & Mrzygłocka-Chojnacka, J. (2020). An approach to increase the sustainability of projects and their outcomes in public sector through improving project definition. *Sustainability*, 12(12), 4804. <https://doi.org/10.3390/su12124804>
- [45] Kurniawati, I. D. (2014). Masa kerja dengan job engagement pada karyawan. *Jurnal Ilmiah Psikologi Terapan*, 2(2), 311–324. <https://doi.org/10.22219/jipt.v2i2.2005>
- [46] Lastanti, H. S. (2020). Role of audit committee in the fraud pentagon and financial statement fraud. *International Journal of Contemporary Accounting*, 2(1), 85–102. <http://dx.doi.org/10.25105/ijca.v2i1.7163>
- [47] Lastanti, H. S., Murwaningsari, E., & Umar, H. (2022). The effect of hexagon fraud on fraud financial statements with governance and culture as moderating variables. *Media Riset Akuntansi, Auditing & Informasi*, 22(1), 143–156. <http://dx.doi.org/10.25105/mraai.v22i1.13533>
- [48] Lee, H. (2023). Surviving the time: CEO tenure and its impact on risky foreign direct investment in conflict-prone Belt and Road Initiative participant countries. *Sustainability*, 15(17), 13250. <https://doi.org/10.3390/su151713250>
- [49] Mousavi, M., Zimon, G., Salehi, M., & Stepnicka, N. (2022). The effect of corporate governance structure on fraud and money laundering. *Risks*, 10(9), 176. <https://doi.org/10.3390/risks10090176>
- [50] Mulawarman, M., & Aldila Dyas, N. (2017). Perilaku pengguna media sosial beserta implikasinya ditinjau dari perspektif psikologi sosial terapan. *Buletin Psikologi*, 25(1), 36–44. <https://doi.org/10.22146/buletinpsikologi.22759>
- [51] Munteanu, V., Zuca, M.-R., Horaicu, A., Florea, L.-A., Poenaru, C.-E., & Anghel, G. (2024). Auditing the risk of financial fraud using the red flags technique. *Applied Sciences*, 14(2), 757. <https://doi.org/10.3390/app14020757>
- [52] Murtanto, M., & Sandra, D. (2019). Pengaruh fraud diamond dalam mendeteksi tingkat accounting irregularities dengan komite audit sebagai variabel moderating. *Media Riset*

- 
- Akuntansi, Auditing & Informasi, 19(2), 209–226.  
<https://doi.org/10.25105/mraai.v19i2.5320>
- [53] Nevid, J. S. (2018). Psikologi: Konsepsi dan aplikasi. Nusamedia.
- [54] Oncioiu, I., Petrescu, A.-G., Bîlcan, F.-R., Petrescu, M., Fülöp, M. T., & Topor, D. I. (2020). The influence of corporate governance systems on a company's market value. *Sustainability*, 12(8), 3114. <https://doi.org/10.3390/su12083114>
- [55] Onesti, G., & Palumbo, R. (2023). Tone at the top for sustainable corporate governance to prevent fraud. *Sustainability*, 15(3), 2198. <https://doi.org/10.3390/su15032198>
- [56] Piotroski, J. D., Wong, T. J., & Zhang, T. (2015). Political incentives to suppress negative information: Evidence from Chinese listed firms. *Journal of Accounting Research*, 53(2), 405–459. <https://doi.org/10.1111/1475-679X.12071>
- [57] Ponce Rodríguez, R. A., & Ponce Rodríguez, B. A. (2019). Social weights and the regional allocation of inter-governmental transfers. *Revista Mexicana de Economía y Finanzas*, 14(4), 745–767. <https://doi.org/10.21919/remef.v14i4.389>
- [58] Procentese, F., Fasanelli, R., Carnevale, S., Esposito, C., Pisapia, N., Arcidiacono, C., & Di Napoli, I. (2020). Downside: The perpetrator of violence in the representations of social and health professionals. *International Journal of Environmental Research and Public Health*, 17(19), 7061. <https://doi.org/10.3390/ijerph17197061>
- [59] Purba, R. J. A., & Rusydi, M. K. (2023). The interrelationship of fraud triangle in PT Asuransi Jiwasraya (Persero) 2018 saving plan case [Thesis, Brawijaya University]. <https://repository.ub.ac.id/id/eprint/211040/>
- [60] Purwaji, A., & Muslim, S. (2023). Akuntansi biaya (3rd ed.; A. Suslia, Ed.). Penerbit Salemba.
- [61] Ramos Montesdeoca, M., Sánchez Medina, A. J., & Blázquez Santana, F. (2019). Research topics in accounting fraud in the 21st century: A state of the art. *Sustainability*, 11(6), 1570. <https://doi.org/10.3390/su11061570>
- [62] Reichenbach, B. R. (2021). On James Sterba's refutation of theistic arguments to justify suffering. *Religions*, 12(1), 64. <https://doi.org/10.3390/rel12010064>
- [63] Ritonga, R. F., & Budhiawan, A. (2024). Review of criminal law on manipulation of PT Asabri's financial statements as an act of fraud. *Journal Equity of Law and Governance*, 4(2), 316–326. <https://doi.org/10.22225/elg.4.2.10210.316-326>
- [64] Sánchez-Bravo, P., Chambers, E., Noguera-Artiaga, L., López-Lluch, D., Chambers, E., Carbonell-Barrachina, Á. A., & Sendra, E. (2020). Consumers' attitude towards the sustainability of different food categories. *Foods*, 9(11), 1608. <https://doi.org/10.3390/foods9111608>

- [65] Sari, S. P., & Nugroho, N. K. (2020). Financial statements fraud dengan pendekatan Vousinas fraud hexagon model: Tinjauan pada perusahaan terbuka di Indonesia. *IHTIFAZ: Islamic Economic, Finance and Banking*, 4(5), 409–430.
- [66] Siahaan, I. (2019). Pengaruh opini audit, pergantian auditor, kesulitan keuangan, dan efektivitas komite audit terhadap audit delay: Studi empiris pada seluruh perusahaan yang terdaftar di Bursa Efek Indonesia tahun 2014–2017. *Jurnal Akuntansi Keuangan dan Bisnis*, 12(2), 135–144.
- [67] Sihombing, K. S., & Rahardjo, S. N. (2014). Pengaruh fraud diamond dalam mendeteksi financial statement fraud: Studi empiris pada perusahaan ritel yang terdaftar di Bursa Efek Indonesia tahun 2014–2016. *Diponegoro Journal of Accounting*, 3(2), 1–12.
- [68] Siladjaja, M., Anwar, Y., & Djan, I. (2022). The relationship between dividend policy and earnings quality: The role of accounting information in Indonesia's capital market. *Economies*, 10(6), 140. <https://doi.org/10.3390/economies10060140>
- [69] Skousen, C. J., Smith, K. R., & Wright, C. J. (2009). Detecting and predicting financial statement fraud: The effectiveness of the fraud triangle and SAS No. 99. In *Advances in Financial Economics* (Vol. 13, pp. 53–81). Emerald Group Publishing Limited. [https://doi.org/10.1108/S1569-3732\(2009\)0000013005](https://doi.org/10.1108/S1569-3732(2009)0000013005)
- [70] Sukmadilaga, C., Winarningsih, S., Handayani, T., Herianti, E., & Ghani, E. K. (2022). Fraudulent financial reporting in ministerial and governmental institutions in Indonesia: An analysis using hexagon theory. *Economies*, 10(4), 86. <https://doi.org/10.3390/economies10040086>
- [71] Tarighi, H., Salehi, M., Moradi, M., & Zimon, G. (2022). Social capital, intellectual capital, and audit fee: Conflicting evidence from Iran. *Economies*, 10(2), 39. <https://doi.org/10.3390/economies100200390>
- [72] Tellechea, M. (2021). Étude du fonctionnement des comités d'audit et de l'audit interne: Au-delà du contrôle formel? [Doctoral dissertation, Université de Lorraine]. <https://hal.univ-lorraine.fr/tel-03335937>
- [73] Trzeciak, M., & Jonek-Kowalska, I. (2021). Monitoring and control in program management as effectiveness drivers in Polish energy sector: Diagnosis and directions of improvement. *Energies*, 14(15), 4661. <https://doi.org/10.3390/en14154661>
- [74] van Ruth, S. M., & de Pagter-de Witte, L. (2020). Integrity of organic foods and their suppliers: Fraud vulnerability across chains. *Foods*, 9(2), 188. <https://doi.org/10.3390/foods9020188>
- [75] Verbeke, W., Volgering, M., & Hessels, M. (1998). Exploring the conceptual expansion within the field of organizational behaviour: Organizational climate and organizational culture. *Journal of Management Studies*, 35(3), 303–329. <https://doi.org/10.1111/1467-6486.00095>

- [76] Vivianita, A., & Indudewi, D. (2018). Financial statement fraud pada perusahaan pertambangan yang dipengaruhi oleh fraud pentagon theory: Studi kasus di perusahaan tambang yang terdaftar di BEI tahun 2014–2016. *Jurnal Dinamika Sosial Budaya*, 20(1), 1–15. <https://doi.org/10.26623/jdsb.v20i1.1229>
- [77] Vousinas, G. L. (2019). Advancing theory of fraud: The S.C.O.R.E. model. *Journal of Financial Crime*, 26(1), 372–381. <https://doi.org/10.1108/JFC-12-2017-0128>
- [78] Watts, R. L., & Zimmerman, J. L. (1986). *Positive accounting theory*. Prentice-Hall. <https://ssrn.com/abstract=928677>
- [79] Widianingsih, Y. P. N., Setiawan, D., Aryani, Y. A., & Gantowati, E. (2022). Accrual management and firm-specific risk. *International Journal of Financial Studies*, 10(4), 111. <https://doi.org/10.3390/ijfs10040111>
- [80] Wolfe, D. T., & Hermanson, D. R. (2004). The fraud diamond: Considering the four elements of fraud. *The CPA Journal*, 74(12), 38–42.
- [81] Yesiariani, M., & Rahayu, I. (2017). Deteksi financial statement fraud: Pengujian dengan fraud diamond. *Jurnal Akuntansi & Auditing Indonesia*, 21(1), 49–60. <https://doi.org/10.20885/jaai.vol21.iss1.art5>
- [82] Yu, S.-J., & Rha, J.-S. (2021). Research trends in accounting fraud using network analysis. *Sustainability*, 13(10), 5579. <https://doi.org/10.3390/su13105579>
- [83] Zaini, C., & Setiawan. (2015). Analisis pengaruh diamond fraud dan gone theory terhadap academic fraud: Studi kasus mahasiswa akuntansi Se-Madura. *Simposium Nasional Akuntansi, XVIII*, 1–20.
- [84] Zeptian, A., & Rohman, A. (2013). Analisis pengaruh penerapan corporate governance, struktur kepemilikan, dan ukuran perusahaan terhadap manajemen laba pada perbankan. *Diponegoro Journal of Accounting*, 2(4).