

Governance structure and the tendency to do financial statements fraud

Agung Nur Probohudono¹, Anju Theresia Lubis², Ertambang Nahartyo³, Siti Arifah^{4*}^{1,2}Faculty of Economics and Business, Sebelas Maret University, Surakarta, Indonesia³Faculty of Economics and Business, Gajah Mada University, Yogyakarta, Indonesia⁴Faculty of Economics and Business, Tidar University, Magelang, Indonesia*Corresponding author: sitiarifah@untidar.ac.id

ARTICLE INFO

ABSTRACT

Article history:

Received 2021-09-16

Accepted 2022-06-27

Published 2022-06-28

Keywords:

Directors, financial statement fraud, governance structure, independent board of commissioners

DOI:

<https://doi.org/10.20885/jaai.vol26.iss1.art6>

This study aimed to examine the influence of the governance structure which consists of the age of directors, educational background of directors, directors' gender, managerial ownership, and the existence of Independent Board of Commissioners on financial statement fraud. This research's populations are Manufacturing, Property, Real estate, and Construction Companies listed on the Indonesia Stock Exchange (IDX) period 2014-2018. The type of data used in research was secondary data and using a purposive sampling method to determine 475 companies for the samples. This research used a logistic regression analysis. The result of this research indicated that the age of directors, the gender of directors, and managerial ownership had a significant negative effect on financial statement fraud. However, the study did not find the advantage of the educational background of directors and the existence of the independent member of the Board of Commissioners on financial statement fraud.

Introduction

Financial statements held valuable control in the economy of a country and even the world. Audit Standards (SA) confirmed that auditors were responsible for conducting audits to obtain a reasonable guarantee that the client's financial statements were free from material misstatement caused by fraud. Most parties used financial statements to make economic decisions. Therefore, the report must be relevant and reliable so that it would do no harm to those who used it. Every two years, the Association of Certified Fraud Examiners (ACFE) issued a Report to the Nation which contains information about frauds from various countries. Based on data from the 2014-2020 Report to the Nations, the most common causes of occupational fraud were asset misappropriation with a percentage of occurrence frequency of 83.5% to 89%. In contrast, financial statement fraud scheme was the least common (10% of schemes) but the costliest category of occupational fraud. It generated the most losses of \$1,000,000 and compared to other types of occupational frauds it never exceeded \$250,000.

Indonesia had a two-tiered council system (Probohudono, 2012). The Jakarta Stock Exchange (JJ) in 2000 issued a Decree of PT Bursa Efek Jakarta No: Kep-315 / BEJ / 06-2000, which was later amended by Decree No: Kep-339 / BEJ / 07-2001 stating that public companies must meet the requirements stipulated no later than December 31, 2001. However, Indonesia was also not free from fraud scandals. Based on the Report to Nations 2020 data, Indonesia ranked first with the highest number of fraud cases among other Asia Pacific countries. In 2001, the Ministry of BUMN and BAPEPAM considered that there was engineering that resulted in an overstatement of Kimia Farma's financial reports. Another manufacturing company, PT Tiga Pilar Sejahtera Food Tbk, found misappropriation of funds in 2019. The flow of funds of Rp1.78 trillion through various schemes from the AISA Group to parties suspected of being affiliated with the old management. In 2016 that Benny Tjokro as President Director of PT Hanson International Tbk (MYRX) was proven guilty by the Financial Services Authority (OJK) for manipulating the company's financial statements. In August 2020, the Corruption Eradication Commission arrested several high-ranking officials from PT Waskita Karya for carrying out work on fictitious projects which resulted in a loss of IDR 202 billion.

Cases of fraud dragged CEOs by 72%, and the board of directors who internally dominated the company and who had ties and even positions that influenced the company (Beasley et al., 1999). Previous studies have examined the relationship between board characteristics, outsiders, and financial statement fraud (Chen et al., 2006; Daboub et al., 1995; Skousen et al., 2009; Troy et al., 2011). However, there weren't any studies examining the relationship between the board of directors' characteristics and tendency to do financial statement fraud.

Illegal corporate behaviour would be recognized by examining the characteristics of the top management team (Daboub et al., 1995). Accounting fraud is influenced by individual character factors such as age, experience,

education, and gender (Zahra, 2007). The young leaders having no academic background of business were more likely to commit accounting fraud (Huang et al., 2012; Troy et al., 2011; Xu et al., 2015). However, Firdaus and Suryandari (2008) found that age and education did not influence accounting fraud, as supported by Firdaus and Suryandari (2008) about the non-influential element between educational background and accounting fraud. However, dealing with the courage to commit the acts, the top management men had more than women (Zahra, 2007), which was contradictory with other research (Kusumastuti et al., 2007; Marpaung et al., 2022).

Besides the effect of changes in assets, there were finance companies, cash flow operating and investment, managerial ownership, Independent Commissioners, and organizational structure influencing financial statement fraud (Skousen et al., 2009). In line with Murtanto et al, managerial ownership and the existence of an Independent Commissioner influences fraud (Murtanto & Sandra, 2019). In contrast, the existence of an Independent Commissioner does not affect the occurrence of corporate fraud (Hafizah et al., 2017; Nugraheni & Triatmoko, 2017).

According to the previous discussions, showing financial statements fraud is pretty common for us. Unfortunately, there are not many studies discussing this topic due to the limited data needed. Thus, authors are interested in doing this research and re-test the results of previous studies. This research will also use information from the company's annual report through the company's official website or the IDX website. So, investors can use this model in analyzing the tendency of financial statements fraud before investing their capital.

Literature Review

Fraud can be defined as the deliberate misrepresentation of the financial condition of an enterprise accomplished through the intentional misstatement of amounts, or disclosures in the financial statements to deceive financial statement users. Existing studies of corporate financial fraud mainly take a reasonable, economic perspective based on principal-agent logic (Jensen & Meckling, 1976). As both the principal and agent have their interests, it created a conflict of interest that would lead someone to commit fraud.

Indonesia used a two-tier system where the board of commissioners and board of directors' act as an internal mechanism that controls management to execute the interests of shareholders. This implementation is different to other countries, especially Europe (Lukviarman, 2004). The other countries adhering to the Two-Tier Board System, the elected Board of Commissioners is responsible to the General Meeting of Shareholders (GMS). Subsequently, the Board of Commissioners chose a Board of Directors. While in Indonesia, according to the Law of PT Year 2007, the Board of Directors and the Board of Commissioners are elected and responsible to the GMS.

The Law No. 40 of 2007 on Limited Liability Companies stated that the company's organs consisted of the GMS, the Board of Commissioners and the Board of Directors. The management adhered to a two-tier boards system namely the Board of Commissioners and Board of Directors, had clear authority and responsibility, following their respective functions. Respectable relationships between corporate structures reacted positively to the success of the Company's management and implementation of Good Corporate Governance. In addition to the main structure, namely the GMS, the Board of Commissioners, and the Board of Directors, the governance structure might have other supporting units such as committees, corporate secretaries, and Internal Supervisory Units (SPI).

As financial reports reflected the executives' capability and directly influenced their wealth (Zhang et al., 2008), committing a financial fraud might be a temptation. Corporate financial fraud was considered to be a common type of organizational misconduct that was often instigated by executives, CEOs in particular (Beasley, 1996).

The literature in this area proposed that principal-agent problems such as corporate financial fraud were mitigated by two types of internal governance mechanisms, i.e. agent-side and monitor-side mechanisms (Jin et al., 2018). Research on agent-side mechanisms mainly focused on the need to provide executives with incentives, such as managerial ownership, arguing that these measures can help align the interests of agents and principals and solve agency problems (Skousen et al., 2009).

Although the existing studies enhanced our knowledge, several gaps remain untouched. Firstly, past studies on internal governance had largely neglected the demographic characteristics of board directors, despite the repetitive findings in the rich decision-making literature that demographic characteristics influence the decisions and behaviour of individuals including executives (Talavera et al., 2018). Secondly, literature generally assumed that economic factors alone drove the behaviour of executives and directors (Jensen & Meckling, 1976). Finally, from the previous research, it was stated that the existence of outsiders cannot reduce fraud (Skousen et al., 2009). Based on those gaps in the corporate financial fraud literature, the authors investigated financial statement fraud by taking governance structure, directors, and the existence of independent commissioners.

Age was one of the characteristics that influence individual decisions, including committing common crimes and risk-taking behaviour (Xu et al., 2015). Hambrick, et al. said that the more mature an individual was, he/she would be more prudent, ethical, and conservative (Hambrick & Mason, 1986; Peterson et al., 2001). This was supported by Zahra (2007), who stated that the older executive age would be associated to moral development, further information in pre-decision making and had a more accurate diagnosis of information for decisions. These showed that older executives were reluctant to make quick decisions under industrial or organizational pressure. They had more working

experience, which was considered to have stronger both general and specific skills as stated by Xu et al. (2015), that young managers are more likely to take on the risk of earnings manipulation and corporate financial fraud.

H₁: Companies that have young directors tend to do financial statements fraud.

According to KNKG (2006) company management must have the right divisions, so that it can produce effectively, fruitfully and punctually. The level of education can measure a person's ability to develop the potential, knowledge, and skills needed (Kuo et al., 2018). That educational background also influenced someone's logic when she/he became a leader (Troy et al., 2011). The level of education would positively influence building morale in determining right and wrong Zahra (2007), so that someone was expected to have the awareness of committing fraud. However, in some studies, there was evidence stating that someone with a higher educational background had decreased moral development (Daboub et al., 1995). Perpetrators with the highest education level (i.e. a university degree) committed the largest frauds (Peltier-Rivest & Lanoue, 2012). They also stated that an MBA education enhanced self-interested behaviour that would harm other parties. It could be concluded as follows:

H₂: Higher educational background of directors tends to do financial statements fraud.

In a country with high gender equality, a female director would show that board performance increased, profit management and excessive risk-taking reduced, and corporate accounting as well as market performance improved (Belaounia et al., 2020). Some studies tried to explain how women's behavior made them easier to supervise than male ones, thereby reducing their incentives to make decisions that have the potential to lose (Adams & Ferreira, 2009). There were differences in financial risk-taking between men and women Powell and Ansic (1997) affecting strategies that may arise due to different motivations. Men were more confident in a general context and specifically to make decisions over investments (Estes & Hosseini, 1998; Schrand & Zechman, 2012). The presence of women in the top management ranks would provide obstacles to the practice of violating the rules of the report finance because of the involvement of gender issues in it (Gavious et al., 2012). The desire to report to women tended to be higher compared to men (Kaplan et al., 2009). The more cautious nature of women and the higher ethical standards were expected to strengthen the motivation of obeying the financial statement rules (Maula & Rakhman, 2018; Merawati & Mahaputra, 2017). Accounting conservatism increased significantly after the hiring of women and a female chief financial officer could reduce accounting fraud (Francis et al., 2015; Liao et al., 2019).

H₃: Companies with a smaller proportion of women directors tend to do financial statements fraud.

One way to minimize conflicts of interest between principals and agents was to add outstanding shares owned by the managerial of a company (Jensen & Meckling, 1976), because it could dominate the decision-making strategies and corporate social policies (Khan et al., 2013). Thus, management would also feel that they had the same interests in running the company's operations and ultimately would be in line with stakeholders, so that goal congruence can be achieved (Hanani & Aryani, 2011). Managerial ownership assessment could be seen from the proportion of share ownership by people in the company, especially the Directors and Board of Commissioners. Indirectly, executives were pressured to make careful decisions and present financial statements. They were also expected to be more enthusiastic about increasing the value of the company. On the other hand, incentives surely would affect their performance better than the threat of penalties when the company's financial performance is poor (Roden et al., 2016). When the executive had a sense of ownership of the company, all actions taken within the company would go in line with the principal's interests. Therefore, the regulation of business strategies and policies related to organizational social treatment can be determined by the existence of managerial ownership (Khan et al., 2013).

H₄: Limited number of managerial ownership tends to do financial statements fraud.

Board members were responsible for monitoring the decisions of executives and for preventing principal-agent problems such as corporate financial fraud (Hambrick et al., 2014). This was supported by agency theory where information asymmetry between shareholders and management can lead to agency relationship problems, ending in fraud. In general, the Board of Commissioners had the task of guaranteeing the achievement of company programs, overseeing management in managing the company, and requiring the achievement of accountability. The existence of an Independent Board of Commissioners in a company was expected to increase the supervision efficiency. In a sense, the Independent Board of Commissioners had no relationship to the internal company, so that the commissioner can work independently (Beasley, 1996). The larger boards of commissioners came from outside of the companies, the higher supervision must be carried out in a company (Nugraheni & Triatmoko, 2017). In fact, the board's independence partially helped explain the extent of risk disclosures (Probohudono et al., 2013). The existence of the Independent Commissioner Board influenced financial statement fraud, due to the fact that the greater proportion of independent directors granted was expected to increase the company's good performance (Beasley, 1996; Dechow et al., 1996; Murtanto & Sandra, 2019; Skousen et al., 2009).

H₅: Companies that have an Independent Board of Commissioners are less likely to do financial statements fraud.

Research Method

This study used secondary data obtained from the company's annual report, while the research objects were manufacturing, property, real estate, and construction companies listed on IDX for the period 2014-2018. Data from

Report to Nations 2020 showed the construction, manufacturing and real estate industries from the first 3 ranks with the most cases of financial report fraud from fifteen types of industries, underlying the object selection in this study.

The sampling technique of this study was purposive sampling with five criteria. The authors used five criteria used by Hafizah et al. (2017), as follows: First, manufacturing, property, real estate, and construction companies have been listed on IDX during the 2014-2018 period. Second, companies presented their annual reports through the company's official website or IDX. Third, companies showed a positive net profit during the period 2014-2018. The fourth were companies presenting financial statements in Rupiah, and the last completeness of the data needed for research. Finally, the authors obtained a sample of 475 companies applying for the research.

Dependent Variable

The financial statement fraud (FRAUD) variable was measured using the 1999 Beneish M-Score model (Beneish, 1999; Hafizah et al., 2017; Tarjo & Herawati, 2015). The 8 financial ratios of Beneish M-Score were used as a pitfall against companies with the tendency of doing financial statements fraud, see Table 1.

Table 1. Ratios of Beneish M-Score

No	Ratios	Formula
1.	Days Sales in Receivable Index (DSRI)	$DSRI = \frac{\frac{Receivable(t)}{Sales(t)}}{\frac{Receivable(t-1)}{Sales(t-1)}}$
2.	Gross Margin Index (GMI)	$GMI = \frac{\frac{Gross\ Profit(t-1)}{Sales(t-1)}}{\frac{Gross\ Profit(t)}{Sales(t)}}$
3.	Asset Quality Index (AQI)	$AQI = \frac{\left(1 - \frac{CA(t) + PPE(t)}{Total\ Asset(t)}\right)}{\left(1 - \frac{CA(t-1) + PPE(t-1)}{Total\ Asset(t-1)}\right)}$
4.	Sales Growth Index (SGI)	$SGI = \frac{Sales(t)}{Sales(t-1)}$
5.	Depreciation Index (DEPI)	$DEPI = \frac{\frac{Depreciation(t-1)}{Depreciation(t-1) + PPE(t-1)}}{\frac{Depreciation(t)}{Depreciation(t) + PPE(t)}}$
6.	Sales General and Administrative Expenses Index (SGAI)	$SGAI = \frac{\frac{SGA(t)}{Sales(t)}}{\frac{SGA(t-1)}{Sales(t-1)}}$
7.	Leverage Index (LVGI)	$LVGI = \frac{\frac{Total\ Liabilities(t)}{Total\ Asset(t)}}{\frac{Total\ Liabilities(t-1)}{Total\ Asset(t-1)}}$
8.	Total Accruals to Assets (TATA)	$TATA = \frac{Income\ before\ extraordinary\ items(t) - Cash\ and\ equivalents(t)}{Total\ Assets(t)}$

Source: Beneish (1999)

Beneish M-Score formula:

$$M\text{-Score} = -4,84 + 0,92DSRI + 0,528GMI + 0,404AQI + 0,892SGI + 0,115DEPI + -0,172SGAI + -0,327LVGI + 4,679TATA$$

If the M-score > -2.22, it indicated financial fraud within companies, scored 1. When the results of Beneish M-Score < -2.22 then the company was categorized as not committing fraud (NON-FRAUD) and scored 0.

Independent Variable

The first variable of this study was the age of directors (AGE). The age of directors would be measured using the average age of directors in a company. This measurement referred to the research from Goll and Rasheed (2005), Talavera et al. (2018), and Xu et al. (2015).

The second independent variable was the educational background of the directors (EDU). This variable used the average score of the last level of education attended by the directors. The indicators of the educational background score of directors used were divided into four categories, i.e. score 1 for diploma/equivalent level, 2 for bachelor's degree, 3 for Master's Degree, and score 4 for Doctoral degree (Hitt & Tyler, 1991; Kong & Zhang, 2010; Kuo et al., 2018; Papadimitri et al., 2020)

The third independent variable was the gender of directors (WOMEN). The proportion of female directors on the board of directors used dealt with the research conducted by Adusei (2019), Adusei and Obeng (2019), Belaounia et al. (2020), and Maula and Rakhman (2018).

The fourth independent variable was managerial ownership (OWNERSHIP), applying the measurement through the percentage of the number of shares owned by insiders then compared with the common shares outstanding. This study also referred to the proxy used by (Florackis et al., 2020; Murtanto & Sandra, 2019; Skousen et al., 2009; Sumilat & Destriana, 2017).

The last variable applied was the Independent Board of Commissioners (IBCOM). The presentation of quality and transparent financial statements existed because of the Independent Board of Commissioners in a company (Sumilat & Destriana, 2017). Measurement of this variable followed the previous research by Murtanto and Sandra (2019) and Skousen et al. (2009) using the number of Board of Commissioners who are Independent Board of Commissioners.

Empirical Models

This study uses model binary logistic regression to test our hypotheses.

$$\text{Ln}\left(\frac{p}{1-p}\right)\text{FRAUD} = \beta + \beta_1\text{AGE} + \beta_2\text{EDU} + \beta_3\text{WOMEN} + \beta_4\text{OWNERSHIP} + \beta_5\text{IBCOM} + \varepsilon$$

Information:

$\text{Ln}\left(\frac{p}{1-p}\right)\text{FRAUD}$ = Fraud (Financial Statement Fraud) is calculated using a Beneish M-Score and then proxied by a dummy variable. Score 1 for fraud companies and a score of 0 for non-fraud companies.

AGE = The average age of directors

EDU = Average directors' education score

WOMEN = Proportion of female directors

OWNERSHIP = Total shares owned by insiders

IBCOM = Number of Independent Commissioners

ε = Error

Result and Discussion

Descriptive Statistics

The descriptive statistics for dependent variables, found out to be 475 companies, in which 65 companies committed fraud (13.7%), while 410 others were not found to have committed fraud (see Table 2).

Table 2. Dependent Variable Descriptive Statistics Based on Industry Sector

		Manufacture	Property, Real estate, and Construction	Total
2014	Fraud	8	9	17
	Non-Fraud	51	27	78
2015	Fraud	4	10	14
	Non-Fraud	55	26	81
2016	Fraud	4	7	11
	Non-Fraud	55	29	84
2017	Fraud	5	7	12
	Non-Fraud	54	29	83
2018	Fraud	4	7	11
	Non-Fraud	55	29	84
Total		295	180	475

From the descriptive statistics based on the industry sector, in 2014 there were 17 companies indicated to have a tendency to do financial statements fraud based on Beneish M-Score, with a division of 8 in the manufacturing industry sector and 9 in the property, real estate, and construction industry sector. In the manufacturing sector, SBA and WCA codes were found to have committed fraud, while there were LCG and PPI in the property, real estate, and construction industry sectors. In 2015, there was a decrease in the total number of

companies indicated having a tendency to do financial statements fraud based on the Beneish M-Score, which was 17 into 14 companies. There were 4 companies in the manufacturing sector and 10 in the property, real estate, and construction industry sectors. In the manufacturing sector, STT and HAA companies were identified carrying out financial statements fraud, while there were BFE and SEG in the property, real estate, and construction sectors.

Table 2 showed that in 2016 there was another decline in cases of companies that indicated that they had a tendency to do financial statements fraud based on the Beneish M-Score, which previously had 14 companies to 11 companies. KNL and TBG were two of the 4 companies in the manufacturing sector, while SUY and BEI were two of the seven companies in the property, real estate, and construction sectors proven to have committed financial statements fraud. Meanwhile, in 2017 there was an increase in cases of financial statements fraud made from 11 to 12 companies. Of the five companies in the manufacturing sector, MBA and SRP were indicated to have committed financial statements fraud. On the other hand, 2 out of seven companies in the property, real estate, and construction sectors, AIA and SSA were indicated to have committed fraud in 2017. In 2018, there was a decrease again in financial statements fraud committed by companies, into 11. There were 4 companies in the manufacturing sector and 7 companies in the property, real estate, and construction sectors. In the manufacturing sector, TAN and UEA were found to be fraudulent companies, while in the property, real estate, and construction sectors, it was INT and WAA. Based on the explanation of Table 2, it can be concluded that the total financial statements fraud committed by the company abruptly changed every year. Overall, from 2014 to 2018 there was a decrease in financial statements fraud committed by companies. While in the industrial sector, the property, real estate, and construction companies committed more fraud than the manufacturing sector.

Multi-collinearity Test

Multi-collinearity test was applied to test whether the regression model found a correlation among independent variables. Table 3 provided a summary of the multi-collinearity test for this research.

Table 3. Multi-collinearity Test

Model	Tolerance	VIF
(Constant)		
AGE	.935	1.070
EDU	.967	1.034
WOMEN	.976	1.025
OWNERSHIP	.952	1.050
IBCOM	.952	1.051

The basis for decision making from the multi-collinearity test was completed by examining the value of Tolerance and VIF. Based on Table 3, the tolerance value of each variable was found to be greater than 0.1, while for the VIF value for each variable was less than 10. Thus, it could be deduced that there were no symptoms of multi-collinearity in the regression model.

Overall Model Fit Test

Table 4. -2 Log Likelihood

-2 Log Likelihood (Block Number = 0)	379,230
-2 Log Likelihood (Block Number = 1)	344,715

The log 2 likelihood value in this model involving independent variables (-2 LogL Block Number = 1) of 344,715 had a smaller value than the model without involving independent variables (-2 LogL Block Number = 0) of 379,230. These results indicated that the addition of independent variables resulted better than when it wasn't, so this model was fit to use.

Table 5. Omnibus Test

Chi-square	Df	Sig.
34.514	5	.000

The Chi-square value obtained was 34.514 with degrees of freedom (df) of 5. Obtaining the value of Sig., the model was 0.00 because this value was less than 0.05 (5%) so it concluded that the independent variable simultaneously influenced the tendency to do financial statements fraud.

Wald Test

Table 6. Wald Test

Variables in the Equation		B	S.E.	Wald	Df	Sig.	Exp (B)
Step 1 ^a	AGE	-.058	.027	4.735	1	.030	.944
	EDU	-.372	.403	.852	1	.356	.690
	WOMEN	-2.314	1.086	4.541	1	.033	.099
	OWNERSHIP	-35.034	14.306	5.997	1	.014	.000
	IBCOM	.571	1.381	.171	1	.679	1.770
	Constant	2.397	1.848	1.683	1	.195	10.989

Variable(s) entered on step 1: AGE, EDU, WOMEN, OWNERSHIP, IBCOM.
Significant at 5%

The AGE variable showed a significance value of $0.30 < 0.05$ resulted in the negative regression coefficient. There was a significant negative effect between the age of directors on the tendency to do financial statements fraud, so that H1 was supported. The young executives had higher eagerness to take risks and caused conflicts of interest (Zahra, 2007). The more mature a person is, the better the quality of the financial statements reported and the more excellent in improving market performance (Maulia & Januarti, 2014). When it was correlated to the agency theory, the older directors wanted stable careers so that they would try to reduce agency conflicts affecting their careers (Hambrick & Mason, 1986). The older age was also associated with moral development which was the basis of ethical behavior (Zahra, 2007). The older directors with experiences also helped their colleagues in making decisions (Xu et al., 2015). So, shareholders would get advantage over the funds they provided, as it would be used more efficiently and effectively. This study was found to be linear with, however, contrary to the study conducted by Huang et al. (2012) and Xu et al. (2015), however, contrary to the study conducted by Firdaus and Suryandari (2008) and Girau et al. (2019). argued that the younger directors had a mentor to assist in directing and the fact that they did not see the advantage of committing fraud, so that it did not occur.

The EDU variable showed a significance value of $0.356 > 0.05$, meaning that the educational background of directors had no influence to do financial statements fraud, so H2 was rejected. One possible reason for that was because in this study the definition of educational background was only about the level of education. The high morality of individuals can be seen from the participation of the respondents in the course/training/ technical guidance in the field of accounting (Lestari et al., 2017). Having an educational background based on the type of business and industry can increase the directors' knowledge in business continuity (Kusumastuti et al., 2007). The results from Harvard University research explained that a person's success was not only determined by the knowledge of science (hard skills), which was only 20%, but also the required skills to manage themselves and others (soft skills) of 80% (Kusumastuti et al., 2007). Fraud was caused by the presence of female gender in the ranks but not due to differences in education levels. The results of this study was in line with the Firdaus and Suryandari (2008), yet Kusumastuti et al. (2007) argue that there is no influence on the education of board members with firm value and earnings management. However, it contradicts research conducted by King et al. (2016) and Troy et al. (2011).

The WOMEN variable shows a significance value of $0.033 < 0.05$ and with a negative regression coefficient value. It indicates that the gender independent variable of directors is proxied by the proportion of female directors negatively influencing the tendency to do financial statements fraud so that H3 is supported. When associated with agency theory, women tend to feminine leadership style so that in their leadership, they will try to minimize agency conflict by minimizing violations in financial statements (Adusei & Obeng, 2019). Gul et al. (2011) state that women directors tend to be more diligent in carrying out monitoring and evaluation activities compared to male directors. Besides, women's boards of directors tend to be more active in attending meetings to create the decisions needed by companies (Hanani & Aryani, 2011). The existence of women in the top management can reduce fraud, violation of financial reporting rules, and earnings management (Liao et al., 2019; Luo et al., 2019; Maula & Rakhman, 2018; Merawati & Mahaputra, 2017). Contradictory, the other research found no effect of gender differences in firm value, risk-taking, and earnings management companies (Kusumastuti et al., 2007).

The OWNERSHIP variable showed a significance value of $0.014 < 0.05$ and the value of the regression coefficient obtained was negative, meaning that this variable harmed the tendency to do financial statements fraud so that H4 was supported. Managerial ownership was a means used to resolve conflicts of interest between agents and principals (Jensen & Meckling, 1976). This managerial ownership assisted the managers to have the same position as shareholders. The greater the outstanding shares owned by management, the stronger their motivation to work better to increase the value of the company's shares (Nor et al., 2017). The management would choose to improve the performance of the company because the policies made can affect the dividends, in which someone would receive and indirectly benefited themselves because they had a share in the company (Hanani & Aryani,

2011). This finding was linear to the finding Girau et al. (2019), Hafizah et al. (2017), and Skousen et al. (2009) found that there was no relationship between the financial needs of individual management and financial statement fraud.

Meanwhile, the IBCOM variable had a significant value of $0.679 > 0.05$ indicating that the variable existence of the Independent Board of Commissioners did not affect the tendency to do financial statements fraud so that H5 was rejected. The independent Board of Commissioners was a commissioner having no relationship with companies, so that they can work independently. The performance didn't go well even though the number of Independent Commissioners followed applicable standards, because the existence of the Independent Board of Commissioners was only to fulfill regulations. The issuer's low awareness of the regulation was due to the absence of strict sanctions from the authority. They were no different from other Asian Companies, in which most of the companies in Indonesia were family companies so that family supervision is more significant despite being a public company (Kusumastuti et al., 2007). This allowed intervention to the Independent Board of Commissioners, resulted in being unable to supervise objectively (Sihombing & Rahardjo, 2014). The nature of the company's industry also provided opportunities for companies to commit fraud, which was linear to the research by Hafizah et al. (2017), Nurbaiti and Hanafi (2017), Sihombing and Rahardjo (2014), and Skousen et al. (2009) where supervision by the Independent Board of Commissioners did not affect the tendency to do financial statements fraud. This research contradicted the results from Murtanto et al that succeeded in proving that the Independent Board of Commissioners influences financial statement fraud (Murtanto & Sandra, 2019; Nugraheni & Triatmoko, 2017).

Conclusion

After processing and testing the data, the empirical evidence obtained about the influence of the five independent variables (the age of the directors, the educational background of the directors, the gender of the directors, managerial ownership, and the Independent Board of Commissioners) having a simultaneous influence on the tendency to commit financial statements fraud. Partially the age of directors, the gender of directors, and managerial ownership had a significant negative effect on the tendency to carry out financial statements fraud. While the other two variables, specifically the educational background of the directors and the Independent Board of Commissioners, did not influence the tendency to do this fraud.

The limitation in this study was that the coefficient of determination was still relatively small at 12.7% that it showed the existence of other factors outside this research model affecting the dependent variable. This study also did not compare the findings of research with companies proven to have committed fraud committed by the OJK.

Future studies would be recommended to use a measurement of dependent variables other than the Beneish M-Score, for example, the F-Score Model developed by Dechow et al. (1996). Besides, further research would be necessary to examine other independent variables that allegedly influence the financial statement fraud, e.g share ownership structure, the board of directors' tenure, and the type of company industry.

References

- Adams, R. B., & Ferreira, D. (2009). Women in the boardroom and their impact on governance and performance. *Journal of Financial Economics*, *94*(2), 291–309. <https://doi.org/10.1016/j.jfineco.2008.10.007>
- Adusei, M. (2019). Board gender diversity and the technical efficiency of microfinance institutions: Does size matter? *International Review of Economics & Finance*, *64*, 393–411.
- Adusei, M., & Obeng, E. Y. T. (2019). Board gender diversity and the capital structure of microfinance institutions: A global analysis. *The Quarterly Review of Economics and Finance*, *71*, 258–269.
- Beasley, M. S. (1996). An empirical analysis of the relation between the board of director composition and financial statement fraud. *The Accounting Review*, *71*(4), 443–465.
- Beasley, M. S., Carcello, J. V., & Hermanson, D. R. (1999). *Fraudulent Financial Reporting: 1987-1997 - An Analysis of U.S. Public Companies*.
- Belaounia, S., Tao, R., & Zhao, H. (2020). Gender equality's impact on female directors' efficacy: A multi-country study. *International Business Review*, *29*(5), 101737.
- Beneish, M. D. (1999). The detection of earnings manipulation. *Financial Analysts Journal*, *55*(5), 24–36.
- Chen, G., Firth, M., Gao, D. N., & Rui, O. M. (2006). Ownership structure, corporate governance, and fraud: Evidence from China. *Journal of Corporate Finance*, *12*(3), 424–448.
- Daboub, A. J., Rasheed, A. M. A., Priem, R. L., & Gray, D. A. (1995). Top management team characteristics and

- corporate illegal activity. *The Academy of Management Review*, 20(1), 138–170.
- Dechow, P. M., Sloan, R. G., & Amy P. Sweeney. (1996). Causes and consequences of earnings manipulation: An analysis of firms subject to enforcement actions by the SEC. *Contemporary Accounting Research*, 13(1), 1–36.
- Estes, R., & Hosseini, J. (1998). The gender gap on Wall Street: An empirical analysis of confidence in investment decision making. *The Journal of Psychology*, 122(6), 577–590.
- Firdaus, E. F., & Suryandari, E. (2008). Pengaruh faktor kultur organisasi, manajemen, strategi, keuangan, auditor dan pemerintahan terhadap kecenderungan kecurangan akuntansi. *Jurnal Akuntansi Dan Investasi*, 9(2), 173–188.
- Florackis, C., Alexandros KostakisKostakis, A., & Sainani, S. (2020). Idiosyncratic risk, risk-taking incentives and the relation between managerial ownership and firm value. *European Journal of Operational Research*, 283(2), 748–766.
- Francis, B., Hasan, I., Park, J. C., & Wu, Q. (2015). Gender differences in financial reporting decision making: Evidence from accounting conservatism. *Contemporary Accounting Research*, 32(3), 1285–1318.
- Gavious, I., Segev, E., & Yosef, R. (2012). Female directors and earnings management in high-technology firms. *Pacific Accounting Review*, 24(1), 4–32.
- Girau, E. A., Kee, D. K. H. A., Bujang, I., & Jidwin, A. P. (2019). The empirical analysis of corporate fraud and corporate governance in Malaysia. *The Business and Management Review*, 10(3), 168–175.
- Goll, I., & Rasheed, A. A. (2005). The relationships between top management demographic characteristics, rational decision making, environmental munificence, and firm performance. *Organization Studies*, 26(7), 999–1023.
- Gul, F. A., Srinidhi, B., & Ng, A. C. (2011). Does board gender diversity improve the informativeness of stock prices? *Journal of Accounting and Economics*, 51(3), 314–338.
- Hafizah, N., Respati, N. W., & Chairina, C. (2017). Faktor-faktor yang mempengaruhi kecurangan laporan keuangan dengan analisis fraud triangle. *Jurnal Reviu Akuntansi Dan Keuangan*, 6(1), 811–822.
- Hambrick, D. C., & Mason, P. A. (1986). Upper Echelons: The organization as a reflection of its top managers. *Academy of Management Review*, 9(2), 193–206.
- Hambrick, D. C., Misangyi, V. F., & Park, C. A. (2014). The quad model for identifying a corporate director's potential for effective monitoring: Toward a new theory of board sufficiency. *Academy of Management Review*, 40(3), 323–344.
- Hanani, F., & Aryani, Y. A. (2011). Pengaruh gender dewan komisaris, gender dewan direksi, dan kepemilikan manajerial terhadap kinerja perusahaan. *Wahana*, 14(1), 7–19.
- Hitt, M. A., & Tyler, B. B. (1991). Strategic decision models: Integrating different perspectives. *Strategic Management Journal*, 12(5), 327–351.
- Huang, H.-W., Rose-Green, E., & Lee, C.-C. (2012). CEO age and financial reporting quality. *Accounting Horizons*, 26(4), 725–740.
- Jensen, C., & Meckling, H. (1976). *Theory of the Firm: Managerial behavior, agency costs and ownership structure*. 3, 305–360.
- Jin, Z., Shang, Y., & Xu, J. (2018). The impact of government subsidies on private R&D and firm performance: does ownership matter in china's manufacturing industry? *Sustainability*, 10(7), 1–20.
- Kaplan, S., Pany, K., Samuels, J., & Zhang, J. (2009). An examination of the association between gender and reporting intentions for fraudulent financial reporting. *Journal of Business Ethics Volume*, 87, 15–30.
- Khan, A., Muttakin, M. B., & Siddiqui, J. (2013). Corporate governance and corporate social responsibility disclosures: Evidence from an emerging economy. *Journal of Business Ethics*, 114, 207–223.
- King, T., Srivastav, A., & Williams, J. (2016). What's in an education? Implications of CEO education for bank performance. *Journal of Corporate Finance*, 37, 87–308.
- Komite Nasional Kebijakan Governace. (2006). *Pedoman Umum Good Corporate Governance*. KNKG.
- Kong, V. X., & Zhang, J. (2010). The effect of managerial education and firm-ownership structure. *The Chinese*

- Economy Volume 43, 43(6), 34–53.*
- Kuo, H.-C., Wang, L.-H., & Yeh, L.-J. (2018). The role of education of directors in influencing firm R&D investment. *Asia Pacific Management Review, 23(2)*, 108–120.
- Kusumastuti, S., Supatmi, S., & Sastra, P. (2007). Pengaruh board diversity terhadap nilai perusahaan dalam perspektif corporate governance. *Jurnal Akuntansi Dan Keuangan, 9(2)*, 88–98.
- Lestari, E. B., Tarjo, & Prasteyono. (2017). The factors affecting tendency of fraud in government sector. *Journal of Auditing, Finance, and Forensic Accounting, 5(2)*, 67–76.
- Liao, J., Smith, D., & Liu, X. (2019). Female CFOs and accounting fraud: Evidence from China. *Pacific-Basin Finance Journal, 53*, 449–463.
- Lukviarman, N. (2004). *Ownership structure and firm performance: the case of Indonesia*. Curtin Theses.
- Luo, J., Peng, C., & Zhang, X. (2019). The impact of CFO gender on corporate fraud: Evidence from China. *Pacific-Basin Finance Journal, 53*, 449–463.
- Marpaung, A. P., Koto, M., Shareza Hafiz, M., & Hamdani, R. (2022). Female directors and firm performance: evidence of family firm in Indonesia. *Asian Journal of Economics, Business and Accounting, 22(1)*, 19–30. <https://doi.org/10.9734/ajeba/2022/v22i130538>
- Maula, K. A., & Rakhman, A. (2018). Pengaruh board diversity (CEO wanita, CFO wanita, proporsi dewan komisaris wanita, proporsi komite audit wanita) terhadap pelanggaran aturan laporan keuangan. *Accountthink: Journal of Accounting and Finance, 3(1)*, 431–445.
- Maulia, S. T., & Januarti, I. (2014). Pengaruh usia, pengalaman, dan pendidikan dewan komisaris terhadap kualitas laporan keuangan. *Diponegoro Journal of Accounting, 3(3)*, 1–8.
- Merawati, L. K., & Mahaputra, I. N. K. A. (2017). Moralitas, pengendalian internal dan gender dalam kecenderungan terjadinya fraud. *Jurnal Akuntansi, 21(1)*, 35–46.
- Murtanto, M., & Sandra, D. (2019). Pengaruh fraud diamond dalam mendeteksi financial statement fraud. *Jurnal Media Riset Akuntansi, Auditing & Informasi, 19(2)*, 209–226.
- Nor, N. H. M., Nawawi, A., Nawawi, A., & Salin, A. S. A. P. (2017). The influence of board independence, board size and managerial ownership on firm investment efficiency. *Pertanika Journal of Social Science and Humanities, 25(3)*, 1039–1058.
- Nugraheni, N. K., & Triatmoko, H. (2017). Analisis faktor-faktor yang mempengaruhi terjadinya financial statement fraud: Perspektif diamond fraud theory (studi pada perusahaan perbankan yang terdaftar di Bursa Efek Indonesia periode 2014–2016). *Jurnal Akuntansi Dan Auditing, 14(2)*, 118–143.
- Nurbaiti, Z., & Hanafi, R. (2017). Analisis pengaruh fraud diamond dalam mendeteksi tingkat accounting irregularities. *Jurnal Akuntansi Indonesia, 6(2)*, 167–184.
- Papadimitri, P., Pasiouras, F., Tasiou, M., & Ventouri, A. (2020). The effects of board of directors' education on firms' credit ratings. *Journal of Business Research, 116*, 294–313.
- Peltier-Rivest, D., & Lanoue, N. (2012). Thieves from within: occupational fraud in Canada. *Journal of Financial Crime, 19(1)*, 54–64.
- Peterson, D., Rhoads, A., & Vaught, B. C. (2001). Ethical beliefs of business professionals: A study of gender, age and external factors. *Journal of Business Ethics, 31*, 225–232.
- Powell, M., & Ansic, D. (1997). Gender differences in risk behaviour in financial decision-making: An experimental analysis. *Journal of Economic Psychology, 18(19)*, 605–628.
- Probohudono, A. N. (2012). *A Comparative Analysis of Voluntary Risk Disclosures*. Curtin University.
- Probohudono, A. N., Tower, G., & Rusmin, R. (2013). Diversity in risk communication. *Australasian Accounting, Business and Finance Journal, 7(1)*, 43–58.
- Roden, D. M., Cox, S. R., & Kim, J. Y. (2016). The fraud triangle as a predictor of corporate fraud. *Academy of Accounting and Financial Studies Journal, 20(1)*, 80–92.
- Schrand, C. M., & Zechman, S. L. C. (2012). Executive overconfidence and the slippery slope to financial misreporting. *Journal of Accounting and Economics, 53(2)*, 311–329.

- Sihombing, K. S., & Rahardjo, S. N. (2014). Analisis fraud diamond dalam mendeteksi financial statement fraud: Studi empiris pada perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia (BEI) tahun 2010-2012. *Diponegoro Journal of Accounting*, 3(2), 657–668.
- 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. *Corporate Governance and Firm Performance*, 13, 53–81.
- Sumilat, H., & Destriana, N. (2017). Faktor-faktor yang mempengaruhi pengungkapan corporate social responsibility. *Jurnal Bisnis Dan Akuntansi*, 19(1a), 129–140.
- Talavera, O., Yin, S., & Zhang, M. (2018). Age diversity, directors' personal values, and bank performance. *International Review of Financial Analysis*, 55, 60–79.
- Tarjo, & Herawati, N. (2015). Application of Beneish M-Score Models and Data Mining to Detect Financial Fraud. *2nd Global Conference on Business and Social Sciences (GCBSS-2015) on "Multidisciplinary Perspectives on Management and Society"*, 924–930.
- Troy, C., Smith, K. G., & Domino, M. A. (2011). CEO demographics and accounting fraud: Who is more likely to rationalize illegal acts? *Strategic Organization*, 9(4), 259–282.
- Xu, Y., Zhang, L., & Chen, H. (2015). Board age and corporate financial fraud: An interactionist view. *Long Range Planning*, 51(6), 815–830.
- Zahra, S. A. (2007). Understanding the causes and effects of top management fraud. *Human Resource Management International Digest*, 15(7). <https://doi.org/10.1108/hrmid.2007.04415gad.001>
- Zhang, X., Bartol, K. M., Smith, K. G., Pfarrer, M. D., & Khanin, D. M. (2008). CEOs on the edge: Earnings manipulation and stock-based incentive misalignment. *The Academy of Management Journal*, 51(2), 241–258.