Pentagon Fraud Analysis on the Financial Statements of Manufacturing Companies Listed On IDX 2018-2020

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ABSTRACT:
Financial statements in the business world are a description of the condition of a company. This usually encourages companies to present perfect financial statements so that they can meet the needs or desires of users which in turn can pose a risk of fraud. Management’s behavior and motives for committing fraud are described in the fraud pentagon theory. The research subject is the mining sector company. The purpose of this study was to determine and analyze the effect of pressure, opportunity, rationalization, ability and arrogance on fraudulent financial reporting in manufacturing companies listed on the Indonesia Stock Exchange in 2018 – 2020. The research data was obtained from the annual financial reports of manufacturing companies in the mining sector during the period 2018 - 2020 and collected data on the official IDX website. This research is a quantitative research with data analysis method in the form of Logistic Regression Analysis technique. The results showed that the pressure proxied by external pressure and the opportunity proxied by ineffective monitoring had a significant effect on fraudulent financial reporting. Meanwhile, rationalization as proxied by change in auditor, ability as proxied by changes in directors, and arrogance as proxied by the frequency of the appearance of CEO photos in the company’s annual report have no effect on fraudulent financial reporting, so it can be concluded that pressure, opportunity have a significant effect on fraudulent financial reporting, but rationalization, ability, arrogance have no effect on fraudulent financial reporting.

KEYWORDS: Fraud, Pentagon Fraud, Financial Reporting Fraud

I. INTRODUCTION

Financial statements in the business world are a description of the condition of a company. One of the uses of financial statements in the company is as a tool or consideration used in the company in making economic decisions both internally and externally within the company's scope. This encourages companies to present perfect financial statements so that they can meet the needs or desires of users which in turn can pose a risk of fraud. One of the fraudulent financial statements by a manufacturing company in the mining sector was carried out by PT Timah (Persero) Tbk in the first quarter of 2015. According to the Chairman of the Timah Employees Association (IKT) Ali Samsuri, PT Timah presented a fictitious financial report stating that PT Timah had good performance which is positive while in fact PT. Timah experienced an operational loss in the first quarter of 2015 of 59 billion, so it is believed that the financial statements of PT Timah in the first quarter of 2015 are fictitious and the result of manipulation (tambang.co.id, 2021).

Based on International Standards On Auditing (ISA) no 240 and the fraud theory proposed by Crowe Howarth (Horwarth, 2012), states that financial statement fraud is caused by Pressure, Opportunity, Rationalization, Ability and Arrogance. This is in line with research conducted by Mariana Ulfah and Anggita Wijaya who explained the factors related to pentagon fraud (Ulfah et al., 2017). The first factor is pressure, which is what motivates someone to commit financial statement fraud. Pressure will be analyzed through...
external pressure which is proxied by using leverage ratio. This is based on research conducted (Faradiza, 2019) which states that the pressure analyzed using external pressure measured by the leverage ratio has an effect on fraudulent financial reporting. The second factor in the fraud pentagon is opportunity, namely the opportunity possessed by an individual or group to commit fraud or fraud. in this study opportunity will be assessed using ineffective monitoring. This is based on research conducted (Faradiza, 2019) which states that ineffective monitoring as measured by the ratio of the number of independent commissioners has a significant effect on fraudulent financial reporting, while research (Juananda et al., 2020) shows that ineffective monitoring has a positive and negative effect, not significant to fraudulent financial reporting.

The third factor is rationalization, namely the justification of an attitude that contains fraud. In this study, rationalization was assessed using a change in auditor. This is based on research conducted (Septriyani & Handayani, 2018) that the rationalization factor analyzed using the change in auditor has a positive influence on financial reporting fraud. The fourth factor is ability, namely the attitude of controlling social situations that can bring benefits to him by influencing others who work with him (Ulfah et al., 2017). In this study, the ability is assessed using the change of directors in a company. This is based on research conducted (Septriyani & Handayani, 2018) showing that the change of the board of directors has an effect on fraudulent financial statements. The fifth factor is arrogance, namely the arrogant nature or lack of a person’s conscience so that they believe that the company’s internal control does not apply personally. In this study, arrogance is measured using the frequency of the CEO's photo appearing in the company's annual report (Ozcelik, 2020). This is based on research conducted by (Bawekes et al., 2018) that the frequency of the appearance of CEO photos in the company's annual report has a significant effect on fraudulent financial reporting and based on the Central Statistics Agency (BPS) on the distribution growth rate table in 2018, 2019, 2020 value gross domestic product in the mining sector is lower than other sectors (www.bps.go.id).

This research refers to the research conducted by Faradiza (2017). The novelty in this research lies in the research objectives, data analysis methods, and research period. In the research conducted by Faradiza, the purpose of the study was to examine the effect of the pentagon fraud factor on fraud in financial statements using multiple linear regression analysis and the research period 2014 - 2015. Meanwhile, this study aims to determine and analyze the effect of pressure, opportunity, rationalization, ability and arrogance on financial reporting fraud using logistic regression analysis techniques and the research period 2018 - 2020. Based on the background and there are inconsistencies between the independent variables on the fraud pentagon in detecting fraud financial statements and the many cases that occur in the mining sector against fraudulent financial reporting, therefore the authors are interested in conducting this research.

II. LITERATURE REVIEW

Agency theory (agency theory) was first introduced by Michael C. Jensen and Williah H. Meckling in 1976. Jensen and Meckling revealed that the agency relationship occurs when there is a handover of company management from shareholders or investors (principal) to management (agent). Therefore, the agent will seek the best performance results for shareholders or principals. However, the relationship between the principal and the agent does not escape agency conflicts because each party has different goals or interests so that it can lead to fraud (farud) in financial statements (Bawekes et al., 2018). This difference is called a conflict of interest. The relationship between agency theory and the fraud pentagon factors in detecting fraudulent financial statements is that agency theory explains how management or agents maintain investor or principal trust. Providing the best results to investors is a big pressure that is often felt by management as an agent, therefore management often makes various efforts to maintain investor confidence in the company, including by committing fraud or manipulating financial statements so that the company will appear to be in good condition.

According to the Association of Certified Fraud Examiners (ACFE, 2017) fraud is an act of fraud or error committed by a person or entity who knows that the error can result in several unfavorable benefits to individuals, entities and other parties. Crowe's fraud pentagon or also known as the fraud pentagon theory is a theory developed by Donald Cressey, namely the fraud triangle theory. The fraud pentagon is expected to identify fraud in all situations.

The first factor in the fraud pentagon is pressure. Pressure is one element or factor that drives someone to commit fraud. In a business activity, the company will definitely carry out lending and borrowing activities to support its business operations. The higher the leverage ratio of a company, the higher the level of debt or company obligations so that the credit risk is also higher which has an impact on the high risk of loss, so company managers will often manipulate financial statements by reducing the company's leverage ratio so that the company's debt looks small. meaning that the company's financial performance increases (Faradiza, 2019). The pressure factor in this study is proxied by external pressure which is calculated by the leverage ratio.

The second factor in the fraud pentagon is opportunity. Opportunity is an opportunity that allows fraud to occur. Opportunities or opportunities can occur due to weak internal control in the company or poor
management supervision. According to the American Institute of Certified Public Accountants (2002), ineffective monitoring is a condition where the company's control system is weak and does not work effectively, giving rise to opportunities to commit fraud or fraudulent acts in the company. Ineffective monitoring is calculated by the percentage of the number of independent commissioners (BDOUT) as a representative of the inefficiency of supervision (Agusputri & Sofie, 2019).

The third factor in the fraud pentagon is rationalization or rationalization. Rationalization is an attempt to justify the perpetrator for the fraud or fraud he has committed. An unfavorable character, attitude, or set of ethical values allows management or employees to act dishonestly and be in an environment that exerts considerable pressure to cause them to justify incorrect financial reporting. In this study, rationalization is proxied using the change in auditor. Changes in auditors in a company can be assessed as an effort to eliminate traces of fraud (fraud trial) found by previous auditors. This study is a proxy for auditor turnover which is measured using a dummy variable.

The fourth factor in the fraud pentagon is ability. According to (Wolfe et al., 2004) argues that fraud will not occur without the right ability so that it can commit fraud in detail so that it is not easy to detect. In this study, the ability is proxied by the change of director as measured by the dummy variable.

The last factor in the fraud pentagon is arrogance. Arrogance can trigger financial statement fraud by abusing the authority with the power possessed in an organization or company. The attitude or behavior of a CEO cannot be limited by the internal control system because of the power he has (Avortri & Agbanyo, 2021).

In this study, arrogance is measured by using the frequency of occurrence of CEO photos in the company's annual report.

III. METHODOLOGY OF THE STUDY

The main purpose of this study is to determine and analyze the effect of pressure, opportunity, rationalization, ability, and arrogance on financial statement fraud in manufacturing companies listed on the Indonesia Stock Exchange in 2018 - 2020. To achieve the research objectives, this study obtained 114 data consisting of from 43 mining sector companies with a three-year research period. Data collection was carried out using a purposive sampling technique with research instruments, namely mining sector companies that were consistently listed on the IDX in 2018 - 2020, mining sector companies that publish annual reports and audited financial reports consistently during the 2018 - 2020 period, and mining sector companies that have data – complete data needed in the study for the period 2018 – 2020. This research was conducted using secondary data. The analytical method used in this research is logistic regression analysis method and uses descriptive statistical analysis.

IV. ANALYSIS & RESULTS

Descriptive statistics are used to analyze data by describing or describing the collected data as they are without intending to make generally accepted conclusions or generalizations (Sugiyono, 2015). In this study, descriptive statistics have the aim of knowing the description of a data seen from the maximum value, minimum value, average value (mean), and standard deviation value of the variables of pressure, opportunity, rationalization, ability, arrogance and fraudulent financial reporting. The descriptive statistics in this study are presented in the following table:

Table 1
Descriptive statistics

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tekanan</td>
<td>114</td>
<td>.0880</td>
<td>1.3254</td>
<td>.556817</td>
<td>.2842415</td>
</tr>
<tr>
<td>Kesempatan</td>
<td>114</td>
<td>.2000</td>
<td>.6667</td>
<td>.423350</td>
<td>.1102664</td>
</tr>
<tr>
<td>Rasonialisasi</td>
<td>114</td>
<td>.00</td>
<td>1.00</td>
<td>.3772</td>
<td>.48682</td>
</tr>
<tr>
<td>Kemampuan</td>
<td>114</td>
<td>.00</td>
<td>1.00</td>
<td>.1228</td>
<td>.32966</td>
</tr>
<tr>
<td>Arogansi</td>
<td>114</td>
<td>1.00</td>
<td>4.00</td>
<td>2.4123</td>
<td>.72639</td>
</tr>
<tr>
<td>Kecurangan_Pelaporan_Keuangan</td>
<td>114</td>
<td>.00</td>
<td>1.00</td>
<td>.0702</td>
<td>.25657</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>114</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: SPSS 25 Output Results (2022)

Based on table 1, it is known that the minimum value of pressure is 0.0880, while the maximum value is 1.3254. The average pressure is 0.556817 with a standard deviation of 0.2842415. The minimum value of the opportunity is 0.2000, while the maximum value of the opportunity is 0.6667. The average opportunity is
0.423350 with a standard deviation of 0.1102664. The minimum value of rationalization is 0.00 and the maximum value of rationalization is 1.00. The average rationalization is 0.3772 with a standard deviation of 0.48682. The minimum value of ability is 0.00 while the maximum value of ability is 1.00. The average ability is 0.1228 with a standard deviation of 0.32966. The minimum value of arrogance is 1.00, while the maximum value of arrogance is 4.00. The average arrogance is 2.4123 with a standard deviation of 0.72639. The minimum value for fraudulent financial reporting is 0.00, while the maximum value is 1.00. The average fraudulent financial reporting is 0.0702 with a standard deviation of 0.25657.

Assessing the Feasibility of the Regression Model (Hosmer & Lemeshow Test)

<table>
<thead>
<tr>
<th>Step</th>
<th>Chi-square</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.701</td>
<td>8</td>
<td>.952</td>
</tr>
</tbody>
</table>

Source: SPSS 25 Output Results (2022)

Based on table 2, the Chi-Square value is 2.701 with a significance probability of 0.952 where 0.952 > 0.05 then the null hypothesis cannot be rejected (H0 is accepted). These results indicate that the regression model used in this study is suitable for further analysis, because there is no significant difference between the classifications observed.

Assessing Model Fit (Overall Model Fit)

<table>
<thead>
<tr>
<th>Overall model fit (-2LogL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-2LogL Block Number = 0</td>
</tr>
<tr>
<td>-2LogL Block Number = 1</td>
</tr>
</tbody>
</table>

Source: SPSS 25 Output Results (2022)

The decrease in value between the initial -2LL (initial -2LL function) and -2LL value in the next step (final -2LL) indicates that the hypothesized model fits the data (Ghozali, 2016). A decrease in the value of -2 log likelihood indicates that this research model is fit, meaning that the addition of independent variables namely pressure, opportunity, rationalization, ability, arrogance into the research model will improve the fit model in this study. So that this regression model is feasible to be used for further analysis.

Coefficient of Determination (Model Summary)

<table>
<thead>
<tr>
<th>Step</th>
<th>-2 Log likelihood</th>
<th>Cox &amp; Snell R Square</th>
<th>Nagelkerke R Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>40,880*</td>
<td>.139</td>
<td>.349</td>
</tr>
</tbody>
</table>

a. Estimation terminated at iteration number 20 because maximum iterations has been reached. Final solution cannot be found.

Source: SPSS 25 Output Results (2022)

Based on the data management in Table 4 using logistic regression, the coefficient obtained is 0.349. This value is interpreted as the ability to pressure, opportunity, rationalization, ability, arrogance in influencing fraudulent financial reporting by 34.9%, the remaining 65.1% is explained by other variables or factors.

Simultaneous Testing (Omnibus Test of Model Coefficients)

<table>
<thead>
<tr>
<th>Omnibus Tests of Model Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1 Step Block</td>
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<tr>
<td></td>
</tr>
</tbody>
</table>

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Based on the results of table 5, it can be seen that the Chi-square value is 17.054 with a degree of freedom of 5 with a significance level of 0.004 or 4%. Thus the research hypothesis shows that H0 is rejected or H1 is accepted, which means that simultaneously the dependent variable, namely pressure, opportunity, rationalization, ability, and arrogance, has a significant effect on the dependent variable, namely fraudulent financial reporting.

Based on table 6, the logistic regression equation is obtained as follows:

\[
\text{Cheating} = -11,432 + 3,484 \text{Pressure} + 9,347 \text{Opportunity} - 1,038 \text{Rationalization} - 17,925 \text{Ability} + 1,013 \text{Arrogance} + e
\]

Based on table 6, it is known:
1. The value of the logistic regression coefficient of pressure is 3.484 with a Sig value of 0.022 <0.05, it is concluded that pressure has a significant effect on fraudulent financial reporting.
2. The value of the logistic regression coefficient of opportunity is 9.347, with a Sig value of 0.014 > 0.05, it is concluded that opportunity has a significant effect on financial reporting fraud.
3. The value of the logistic regression coefficient of rationalization is -1.038, with a Sig value of 0.284 > 0.05, it is concluded that rationalization has no significant effect on fraudulent financial reporting.
4. The value of the logistic regression coefficient of ability is -17.925, with a Sig value of 0.999 > 0.05, it is concluded that ability has no significant effect on fraudulent financial reporting.
5. The value of the logistic regression coefficient of arrogance is 1.013, with a Sig value of 0.100 > 0.05, it is concluded that arrogance has no significant effect on fraudulent financial reporting.

V. DISCUSSION

Effect of Pressure Proxied by External Pressure on Fraudulent Financial Statements. The results of hypothesis testing indicate that the proposed hypothesis 1 is accepted. Thus the hypothesis which states that pressure proxied by External Pressure has a positive effect on fraudulent financial reporting in mining sector companies listed on the Indonesia Stock Exchange for the period 2018 - 2020. If the company has high leverage, it means that the company is considered to have large debt and its credit risk is also high. The higher the credit risk, the greater the level of concern for creditors to provide loans to the company. This pressure is caused by external parties, especially creditors because the company is unable to pay its debts so that the company has difficulty getting loans. While some companies choose to make loans as a source of funding for the company's operations. Therefore, external pressure in the form of high credit risk due to the large number of loans or debts encourages management to manipulate financial statements to convince creditors.
The Effect of Opportunity Proxied by Ineffective Monitoring of Fraudulent Financial Statements. The results of hypothesis testing indicate that the proposed hypothesis 2 is accepted. Thus the hypothesis which states that the opportunity proxied by ineffective monitoring has a positive effect on fraudulent financial reporting of mining sector companies listed on the Indonesia Stock Exchange for the 2018-2020 period. One of the ways to minimize fraud by doing earnings management is by maximizing good supervision. The board of commissioners is tasked with ensuring the implementation of the company's strategy and supervising management, as well as requiring accountability. A condition where internal control in a company is not effective is called ineffective monitoring. Based on the results of hypothesis testing, the effect of ineffective monitoring occurs due to the increasing level of ineffective supervision by the board of commissioners in mining sector companies. So that the independent commissioner is considered less effective and maximal in supervising management, thus opening up opportunities for management to commit fraud in preparing financial statements.

The Effect of Rationalization Proxied by Change In Auditor on Financial Statement Fraud. The results of hypothesis testing indicate that the proposed hypothesis 3 is rejected. Thus the hypothesis which states that rationalization proxied by change in auditors has a positive effect on fraudulent financial reporting empirically cannot be proven. This means that the change of auditors made by the company cannot be used to detect fraud committed by management in preparing financial statements. The management of companies that commit fraud will be more active in changing auditors. The change of auditors carried out by public companies is not because they want to erase the traces of fraudulent financial reporting found by previous auditors, but only because the company wants to comply with government regulation number 20 of 2015 concerning Public Accountant Practices article 11 paragraph 1.

The Effect of Ability Proxied by Change of Directors on Fraudulent Financial Statements. The results of hypothesis testing indicate that the proposed 4th hypothesis is rejected. Thus the hypothesis which states that the ability as proxied by changes in directors or change in directors has a positive effect on fraudulent financial reporting empirically cannot be proven. In a company, every performance of the directors will always be monitored, so that directors who have not optimal performance will be replaced by directors with the aim of improving the performance of the company. The replacement of the company's directors can be one of the efforts that can be made by the company to improve or improve the performance of the previous directors by changing the composition of the board of directors or recruiting new directors who are considered more competent than the previous directors. So this is not an effort made by the company to get rid of directors who are considered to know the fraud committed by the company.

The Effect of Arrogance Proxied by the Frequency of the Appearance of CEO's Photos or Images on Fraudulent Financial Statements. The results of hypothesis testing indicate that the proposed hypothesis 5 is rejected. Thus the hypothesis which states that arrogance proxied by the frequency of appearance of CEO photos in the company's annual report has a positive effect on fraudulent financial reporting empirically cannot be proven. This is because the image or photo of the CEO is important to include in the company's annual report so that it can introduce to the wider community, especially stakeholders, who is the CEO of the company. Based on the observations, the number of CEO photos in the mining sector companies that were sampled during the year of observation on average only displayed 2 to 4 photos. So based on the test results, it means that the number of photos displayed by the mining sector company in the annual financial report or annual report cannot indicate the high arrogance of the CEO of the mining sector company.

Effect of Pressure, Opportunity, Rationalization, Ability, and Arrogance Simultaneously on Fraudulent Financial Reporting. The results of hypothesis testing indicate that the proposed hypothesis 6 is accepted. Thus the hypothesis which states that pressure, opportunity, rationalization, ability, and arrogance have a simultaneous effect on fraudulent financial reporting can be empirically proven. The pressure faced by management as an agent for investors, such as pressure to improve performance or increase the value of the company on the Stock Exchange, is also one of the reasons for the justification/rationalization for management to manipulate financial statements. Moreover, if the opportunity to commit fraud, it is also a small risk to be detected or known. Opportunities will be an entry point for fraud, while pressure and rationalization will encourage management to commit fraud. However, fraud with complex techniques and large nominal is not possible if there are no certain people with special capabilities in the company. Feelings of superiority and arrogance with their position coupled with greed make perpetrators believe that internal control does not apply to them.

VI. LIMITATION& FUTURE RESEARCH DIRECTION

This research was conducted inseparable from the limitations contained in the quality of the research data. These limitations are the variables used and the method of measuring these variables have not been able to prove well if these variables can be used to detect fraud in financial statements. Of the 5 variables that are able to show a significant influence on financial reporting fraud, only 2 variables are pressure proxied by
external pressure and opportunity proxied by ineffective monitoring. From these results, it is possible that there are other factors or other measurement methods that can be used to detect fraud in financial statements.

VII. CONCLUSION & SUGGESTION

Based on the results of hypothesis testing and discussion, several conclusions can be drawn. The first is that pressure, opportunity, rationalization, ability, and arrogance simultaneously or simultaneously affect fraudulent financial reporting. The second, pressure and opportunity have a significant effect on fraudulent financial reporting, and the third rationalization, ability, arrogance have no significant effect on fraudulent financial reporting.

Based on the conclusions of the study, several suggestions are recommended to the next researchers related to the detection of fraudulent financial statements, namely that further researchers can choose research samples with various sectors so that they may be able to better describe the phenomenon of fraudulent financial reporting using the fraud pentagon. And it is hoped that further researchers can add variables from the fraud pentagon such as institutional share ownership, quality of external auditors, and capital turnover so that the scope of the variables becomes wider.

REFERENCES