Employee Perceptions of the Fraud Risk Triangle Factors Against Asset Misappropriation

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ABSTRACT

Misappropriation of assets refers to unauthorized or inappropriate actions intheuse, handling, or processing of company assets. This study aims to identify the influence of pressure, opportunity, and rationalization on misappropriation of assets, both simultaneously and partially. The population for this study consisted of all employees in the Mechanical Department of PT XYZ, with a sample of 60 individuals selected using a saturated sampling technique or census from a non-probability sampling method. Data were collected by distributing questionnaires to the selected respondents. Data analysis was conducted using JASP software version 0.18.30. The results of the study indicate that pressure, opportunity, and rationalization have a significant influence on misappropriation of assets, both simultaneously and partially. Rationalization contributed significantly to the misappropriation of assets among employees of the Mechanical Department of PT XYZ, with these factors increasing the likelihood of unethical behavior.

***Keywords**: Pressure, Opportunity, Rationalization, Misappropriation of Assets*

ABSTRAK

Penyalahgunaan aset merujuk pada tindakan yang tidak sah atau tidak tepat dalam penggunaan, penanganan, atau pemrosesan aset perusahaan. Penelitian ini bertujuan untuk mengidentifikasi pengaruh tekanan, peluang, dan rasionalisasi terhadap penyalahgunaan aset, baik secara simultan maupun secara parsial. Populasi dalam penelitian ini adalah seluruh karyawan Departemen Mekanik PT XYZ, di mana sampel sejumlah 60 orang dipilih menggunakan teknik pengambilan sampel jenuh atau sensus dari metode non-probability sampling. Data dikumpulkan melalui penyebaran kuesioner kepada responden yang dipilih. Analisis data menggunakan software JASP versi 0.18.30. Hasil penelitian menunjukkan bahwa tekanan, peluang, dan rasionalisasi memiliki pengaruh signifikan terhadap penyalahgunaan aset, baik secara simultan maupun secara parsial. Rasionalisasi memberikan kontribusi yang signifikan terhadap penyalahgunaan aset di kalangan karyawan Departemen Mekanik PT XYZ, dengan faktor-faktor ini meningkatkan kemungkinan perilaku tidak etis.

***Kata kunci**: Tekanan, Peluang, Rasionalisasi, Penyalahgunaan aset.*

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INTRODUCTION

One of the company's departments, especially in the manufacturing industry, is the mechanical department. Mechanical department employees are essential to maintaining the availability and reliability of production equipment. According to Anthony et al. (2007); Putri & Dwija (2015), company assets are economic resources that are very important for the sustainability of the company. Every business must have assets, namely goods that are considered to have value and can be used to maintain the company's operations. Therefore, it is important for businesses to carry out good asset management (Mulyanti, 2017; Nahar & Hadiyanti 2018; Winarko, 2019; Ratu, 2021). Companies must consider things such as planning and budgeting needs, utilization or use, security and maintenance, assessment, deletion, transfer, coaching, supervision, and control, as well as funding and compensation claims when carrying out asset management. Therefore, company assets can provide optimal contributions to the company concerned so that the management of company assets can be programmed and integrated properly (Ma et al., 2020; Piryonesi & El-Diraby, 2020; De Jonge & Scarf, 2020). A survey by the Association of Certified Fraud Indonesia produced data that losses caused by fraud in private companies were 13.3%. This is not surprising because company management is often unaware or unable to recognize that there is ineffectiveness in the implementation of the company's operational activities, so prevention of fraud risks is not carried out effectively. Because the production cycle supported by the mechanical department is part of the company's business, this sector is very complex, so good internal control is needed to prevent the risk of fraud (Nanda et al., 2021; Tanuwijaya, 2021; Rahadianti et al., 2022; Alwing et al., 2022).

In general, asset misappropriation occurs in several companies, one of which is PT XYZ, a manufacturing company that produces ready-to-wear clothing located in Sukabumi Regency which is marketed internationally. As a company, PT XYZ has various assets to support production operations, therefore it is important for the company to manage assets effectively. However, accounting fraud or asset misappropriation in the mechanical department cannot be ignored. During 2022, the mechanical department experienced an equipment loss of IDR 95,950,000. Although this amount is relatively small compared to the company's assets, there are two ways to assess its materiality. First, research by Nelson et al. (2002) and Nugrahini (2015), the potential impact on business continuity and the relevance of the information disclosed greatly affect the auditor's assessment of materiality. In addition, studies by Messier et al. (2005) and Brennan & Gray (2005) and Houghton (2011), state that auditors often use professional judgment to evaluate errors that have significant qualitative implications, even though the errors are quantitatively small. This study aims to determine employee perceptions of the fraud risk triangle factor in the context of asset misuse. The fraud risk triangle is a conceptual model that identifies three main factors that can cause fraud, namely pressure, opportunity, and rationalization (Cressey, 1953; Rizvi et al., 2020; Priantar, 2022).

Agency theory from Jensen and Meckling (2019), which views it as a version of game theory that creates a contractual model between two or more people (parties), where one party is called the agent and the other party is called the principal. The triangle theory consists of three components, namely: pressure, opportunity, and rationalization (Cressey, 1953; Priantara, 2022; Gerber et al., 2022). This theory explains the hypothesis of the fraud triangle to explain the reasons why people commit fraud, where a person's motivation to commit fraud is relatively diverse. According to him, there are three dimensions to explain why someone commits fraud, namely: pressure, opportunity, and justification. Pressure refers to something that happens in the perpetrator's personal life that motivates him to steal (Marliani & Christiawan, 2016; Budiartini et al., 2019; Rahman, 2019; Dewi, 2021). According to Wilopo (2006), the creation of opportunities is caused by the weakness of the organization's internal control system. According to Didi & Kusuma (2018) and Febriani & Suryandari (2019); Christian & Veronica (2022), rationalization or justification is the most difficult fraud trigger factor to understand,

because it is related to a person's subjective reasoning which is influenced by internal and external factors. In addition to using agency theory, this study also uses previous research findings as a reference. Such as the study conducted by Tarmizi (2021), entitled The Influence of Fraud Risk Triangle Components on Asset Misappropriation, on PD Pasar Jaya Employees, DKI Jakarta Regional Government, the results of the study showed that first there was a positive influence of pressure on asset misappropriation. Second, there was a positive influence of opportunity on asset misappropriation. Third, there was a positive influence of justification on asset misappropriation.

H1: *Pressure has a partial effect on the perception of asset misuse of PT XYZ employees.*
H2: *Opportunity has a partial influence on the perception of asset misuse of PT XYZ employees.*
H3: *Rationalization has a partial effect on the misuse of assets of PT XYZ employees' perceptions.*
H4: *Pressure, Opportunity and Rationalization have a simultaneous influence on the perception of asset misuse by PT XYZ employees.*

METHODS

This study adopted a quantitative descriptive approach to describe the data collected through research instruments, especially questionnaires (Sugiono, 2016). This study was conducted at PT XYZ, a Korean-owned company operating in the manufacturing sector in Sukabumi, West Java. The focus of the study was on the employees of the mechanical department of this company. In this study, the variables studied consisted of independent (free) and dependent (bound) variables. The researcher used a non-probability sampling method to determine the sample, especially with a saturated sampling approach. This method involves using the entire population of mechanical department employees as a research sample, ensuring that all members of the population are involved in the study. The data used in this study came from primary and secondary data. Primary data was obtained through questionnaires distributed to respondents, while secondary data was obtained through literature studies and field studies. Before analyzing the data, the research instrument was first tested for validity and reliability to ensure that the instrument could measure the variables accurately and consistently. The data analysis process involved several statistical tests to ensure that the regression model to be used was in accordance with the data collected. The tests carried out included normality tests, multicollinearity tests, and heteroscedasticity tests. After that, multiple linear regression analysis was used to evaluate the relationship between the independent variables—pressure, opportunity, and rationalization—with the dependent variable, namely asset misappropriation. Hypothesis testing was conducted using the F test and the T test. The F test was used to determine whether the regression model used as a whole was significant, while the T test was used to test the significance of the influence of each independent variable on the dependent variable. Through this approach, the study aims to understand the factors that influence asset misappropriation in the company.

RESULTS

In this study, 60 questionnaires were distributed to respondents, representing 100% of the total planned sample. Of these, only 1 questionnaire was not returned, or approximately 1.67% of the total questionnaires distributed. A total of 59 questionnaires were successfully returned by respondents, equivalent to 98.33% of the total questionnaires distributed. However, of the 59 questionnaires returned, 1 questionnaire could not be processed because it might be incomplete or did not meet the predetermined analysis criteria. This means that 1.69% of the returned questionnaires could not be processed. Finally, only 58 questionnaires could be processed by the author, representing 98.31% of the total questionnaires distributed and returned. Table 1 presents detailed data explaining the distribution of questionnaires, including the number distributed, returned, and processed. This information is important to provide an overview of the effectiveness of data collection and the quality of responses obtained in this study.

Table 1. Questionnaire Data Collection Results

Information	Respondents	Percentage %
The questionnaire was distributed	60	100%
Unreturned questionnaires	1	1.67%
Returned questionnaire	59	98.33%
Un-processable questionnaire	1	1.69%
Processable questionnaire	58	98.31%

Based on the results of research conducted at the Mechanical Department of PT XYZ, the description of the variables from 58 respondents can be seen in the following table. The highest average value in the asset misuse variable is 34. Meanwhile, the lowest value is in the pressure variable which is 31. The highest standard deviation is in the asset misuse variable which is 4.10 and the lowest is the pressure variable which is 3.62. The results of the Shapiro-Wilk test for the asset misuse variable are 0.968, the pressure variable is 0.971, the opportunity variable is 0.969 and the rationalization variable is 0.975. This shows that the data has been normally distributed because the significance value or P-value of Shapiro-Wilk is greater than 0.05. So, it can be concluded that the data is normally distributed and there is no bias deviation and is feasible for regression analysis. This means that the data obtained from the results of the questionnaire answers of the employees of the Mechanical Department of PT XYZ can be used to use the multiple linear regression equation tool so that it can meet the research to obtain the effect of Pressure, Opportunity and Rationalization on asset misuse.

Table 2. Descriptive Statistic Test of Variables

Model	Variable	Misappropriation of Assets	Pressure	Opportunity	Rationalization
Descriptive Variables	Valid	58	58	58	58
	Mean	26.77	23.34	24.03	22.89
	Std. Deviation	4.10	3.62	3.85	3.91
	Minimum	19	16	17	16
	Maximum	34	31	32	32
Shapiro-Wilk	Valid	58	58	58	58
	Shapiro-Wilk	0.968	0.971	0.969	0.975
	P-value of Shapiro-Wilk	0.132	0.171	0.142	0.283

Before conducting data, analysis and hypothesis testing in a study, there are several requirements that must be met first. One important step that should not be ignored is testing the research instrument. This testing is carried out to ensure that the measuring instrument or instrument used in the study is truly valid and reliable. In this context, validity refers to the extent to which the instrument actually measures what it is supposed to measure. Meanwhile, reliability relates to the consistency of the results provided by the instrument over time. In other words, if the instrument is reused under the same conditions, the results obtained must be similar. This validity and reliability testing is very important because it ensures that the data collected through the instrument is reliable and supports the results of the analysis and conclusions of the research conducted.

Table 3. Validity Test Results

Variables	Item	R_{count}	r_{table}	Information
Pressure	X1.1	0.283	0.258	Valid
	X1.2	0.372	0.258	Valid
	X1.3	0.630	0.258	Valid
	X1.4	0.697	0.258	Valid
	X1.5	0.784	0.258	Valid
	X1.6	0.755	0.258	Valid
	X1.7	0.687	0.258	Valid
	X1.8	0.543	0.258	Valid
Opportunity	X2.1	0.596	0.258	Valid
	X2.2	0.710	0.258	Valid
	X2.3	0.543	0.258	Valid
	X3.4	0.407	0.258	Valid
	X2.5	0.602	0.258	Valid
	X2.6	0.407	0.258	Valid
	X2.7	0.716	0.258	Valid
	X2.8	0.467	0.258	Valid
Rationalization	X3.1	0.735	0.258	Valid
	X3.2	0.736	0.258	Valid
	X3.3	0.726	0.258	Valid
	X3.4	0.613	0.258	Valid
	X3.5	0.641	0.258	Valid
	X3.6	0.639	0.258	Valid
	X3.7	0.676	0.258	Valid
	X3.8	0.667	0.258	Valid
Misappropriation of Assets	Y1	0.749	0.258	Valid
	Y2	0.783	0.258	Valid
	Y3	0.568	0.258	Valid
	Y4	0.654	0.258	Valid
	Y5	0.767	0.258	Valid
	Y6	0.607	0.258	Valid
	Y7	0.641	0.258	Valid
	Y8	0.713	0.258	Valid

Validity test in Table 3 shows that all items measured in the variables of pressure, opportunity, rationalization, and misappropriation of assets have r-table values higher than the r-table value of 0.258. This indicates that each item included in these variables is valid and able to accurately measure the concept it represents. For the pressure variable, eight items were tested with r-table values ranging from 0.283 to 0.784, all of which are valid. In the opportunity variable, eight items were tested with r-table values between 0.407 to 0.716, also all of which are valid. The rationalization variable has eight items tested with r-table values between 0.613 to 0.736, indicating that all items are valid. Likewise with the asset embezzlement variable, the eight items tested showed r-table values between 0.568 to 0.783, confirming the validity of all items. These results strengthen the reliability of the research instrument in measuring each variable studied.

Table 4. Reliability Test Results

Variables	Cronbach's Alpha	r_{table}	Information
Pressure	0.744	0.6	Reliable
Opportunity	0.682	0.6	Reliable
Rationalization	0.829	0.6	Reliable
Misappropriation of Assets	0.840	0.6	Reliable

As seen in Table 4, the Cronbach's alpha values for the variables Pressure, Opportunity, Rationalization, and Asset Abuse are considered reliable and trustworthy. Cronbach's alpha is a measure of internal consistency that is often used to determine how well a set of items in a questionnaire measures the same concept. In this context, a high Cronbach's alpha value indicates that the questions measuring each of these variables provide consistent and reliable results. This means that the instruments used to measure

Pressure, Opportunity, Rationalization, and Asset Abuse are good enough and reliable for this study. In other words, the results obtained from measuring these variables can be trusted to reflect the actual conditions in the population studied. The quality of data produced by this measuring instrument can support the validity of the research conclusions drawn from the analysis of these variables. The first normality test is carried out by looking at the histogram graph and the normal probability plots graph which can be seen in Figure 1.

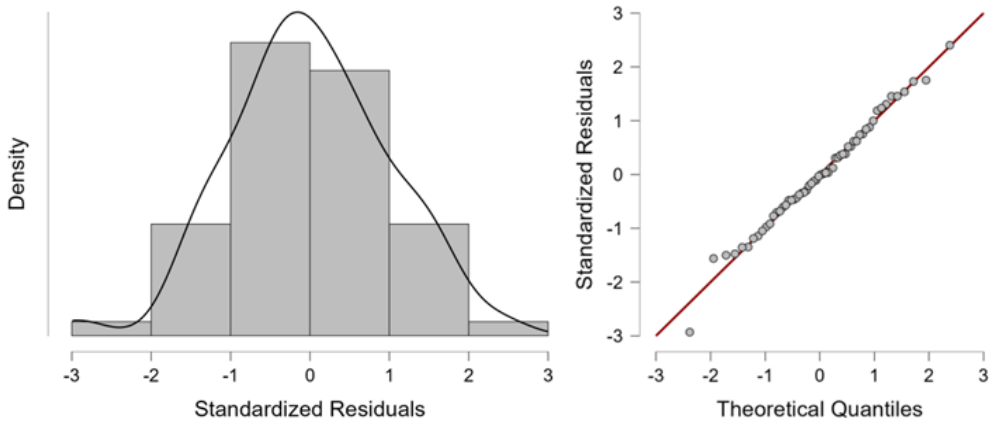

Figure 1. Histogram Graph & Normal Q-Q Plot Graph

The histogram graph in Figure 1, it is concluded that the histogram graph provides a normal distribution pattern expressed by a bell-shaped curve. Meanwhile, if we observe the normal probability plots graph, it can be seen that the points are spread around the diagonal line, with the distribution following the direction of the diagonal line. So, by looking at the histogram graph and the probability plot graph, it can be said that the regression model meets the assumption of normality and the data is suitable for use.

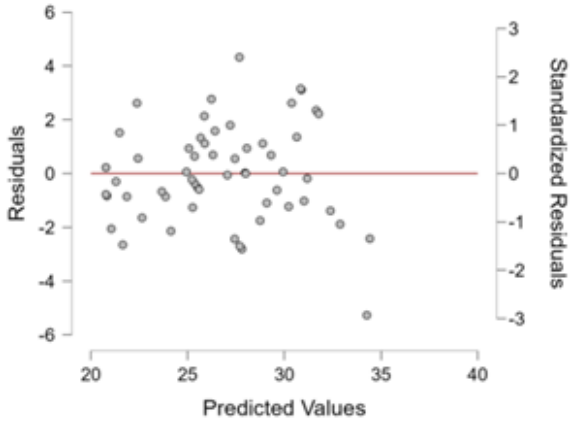

Figure 2. Heteroscedasticity Test Results with the Scatter Plot Method

Based on Figure 2, the points are spread randomly, do not form a clear pattern, and are spread both above and below the number 0 on the Y axis. This indicates that there is no heteroscedasticity in the regression model, so the regression model is suitable for predicting asset misuse based on input variables of pressure, opportunity and rationalization. This means that between pressure, opportunity and rationalization there is no relationship with the residual, the variance of the residual from one observation to another observation remains constant, so there is no heteroscedasticity and the variables in this study can be tested in a multiple linear regression equation.

Table 5. Correlation Results Determination

Model	R	R^2	Adj. R^2	RMSE
H_0	0.000	0.000	0.000	4.104
H_1	0.899	0.808	0.797	1.847

The Adjusted R2 (R Square) figure is 0.797 or 79.7%. This shows that the percentage contribution of the influence of pressure, opportunity and rationalization to asset misuse. While the remaining 20.1% is influenced by other variables not included in this study. Adjusted R Square is the adjusted R square value, this value is always smaller than R square. Standard Error of the Estimate is a measure of the number of errors in the regression model in predicting the Y value. From the regression results, the value of 1.847 was obtained, this means that the number of errors in predicting asset misuse is 1.847.

Table 6. F Test Results

	Model	Sum of Squares	df	Mean Square	F	p
H_1	Regression	775.828	3	258.609	75.790	< .001
	Residual	184.258	54	3.412		
	Total	960.086	57			

Because $F_{count} > F_{table}$ (75,790 > 2.779) with a significance value of F of 0.01 < 0.05, then H0 is rejected and Hα is accepted. This condition indicates that pressure, opportunity and rationalization simultaneously have a positive and significant effect on asset misuse. So, it can be concluded that the variables of pressure, opportunity and rationalization together have an effect on asset misuse on the perception of mechanical department employees at PT XYZ.

Table 7. Results of Multicollinearity Test, Multiple Linear Regression Analysis & T-Test

	Model	Col. Sta. Tolerance	Col. Sta. VIF	Un-std.	Std. Error	t	p
H_0	Intercept			26.776	0.539	49.687	< .001
H_1	Intercept			1.709	1.731	0.988	0.328
	Pressure	0.487	2.053	0.263	0.097	2.718	0.009
	Opportunity	0.352	2.845	0.485	0.107	4.531	< .001
	Rationalization	0.301	3.322	0.317	0.114	2.788	0.007

Based on Table 7. The Pressure variable has a tolerance value of 0.487 with a VIF value of 2.053. For the Opportunity variable, it has a tolerance value of 0.352 with a VIF value of 2.845 and for the Rationalization variable, it has a tolerance value of 0.301 and a VIF of 3.322. All of these variables have a VIF value of less than 10 and a tolerance value greater than 0.1. So, it can be concluded that the regression model does not show symptoms of multicollinearity and the model is feasible for regression testing. This means that the Pressure, Opportunity and Rationalization variables do not have a clear relationship and can affect asset misuse.

Based on Table 7, it is known that the value of the regression equation is Y= 1,709 + 0,263X1 + 0,485X2 + 0,317X3 + e. The constant of 1.709 means that if the pressure, opportunity and rationalization are 0, then the misuse of assets is 1.709. The regression coefficient of Pressure is 0.263, meaning that if other independent variables are fixed and pressure increases by 1, then misuse of assets will increase by 0.263. The coefficient is positive, meaning that there is a positive relationship between pressure and misuse of assets. So, the higher the pressure, the higher the misuse of assets. The regression coefficient of opportunity is 0.485, meaning that if other independent variables are fixed and opportunity increases by 1, then misuse of assets will increase by 0.485. The coefficient is positive, meaning that there is a positive relationship between opportunity and misuse of assets. So, the higher the opportunity, the higher the misuse of assets. The regression coefficient of rationalization is 0.317, meaning that if other independent variables are fixed and rationalization increases by 1, then misuse of assets will increase

by 0.317. The coefficient is positive, meaning that there is a positive relationship between rationalization and misuse of assets. So, the higher the rationalization, the higher the misuse of assets.

The results of the analysis show that the t_{count} value ≥ t_{table} (2.718 ≥ 2.005) with a significance value of t of 0.009 < 0.05, then H0 is rejected and Hα is accepted. This means that Pressure has a partial influence on the misuse of assets of the perception of employees of the Mechanical Department of PT XYZ. This means that Pressure is the cause of asset misuse. The greater the pressure received by an individual or group, the greater the occurrence of asset misuse. The first hypothesis is accepted. The results of the analysis show that the t_{count} value ≥ t_{table} (4.531 ≥ 2.005) with a significance value of t of < .001 < 0.05, then H0 is rejected and Hα is accepted. This means that Opportunity has a partial influence on the misuse of assets of the perception of employees of the Mechanical Department of PT XYZ. This means that Opportunity is the cause of asset misuse. The greater the opportunity obtained by an individual or group, the greater the occurrence of asset misuse. The second hypothesis is accepted. The results of the analysis show that the t_{value} ≥ t_{table} (2.788 ≥ 2.005) with a significance value of 0.007 <0.05, then Ho is rejected and Hα is accepted. This means that Pressure has a partial influence on the misuse of assets in the perception of employees of the Mechanical Department of PT XYZ. This means that Pressure is the cause of asset misuse. The greater the pressure received by an individual or group, the greater the occurrence of asset misuse. The third hypothesis is accepted. Because the t_{value} ≥ t_{table} (2.718 ≥ 2.005), with a significance value of 0.009 <0.05, then H0 is rejected and Hα is accepted. This means that pressure has a partial influence on asset misuse in employee perceptions of asset misuse.

CONCLUSION

The research conducted on the Mechanical Department Employees of PT XYZ, it can be concluded that there are three main factors that influence asset misuse, namely pressure, opportunity, and rationalization. First, pressure has a significant influence on the tendency to misuse assets. When individuals feel pressured, either by job demands, economic pressures, or other factors, their likelihood of committing asset misuse increases. This pressure creates conditions in which individuals feel compelled to find a way out of their problems, which often leads to actions that violate ethics or the law. Second, opportunity or chance is also an important factor that contributes to asset misuse. The greater the opportunity available for individuals or groups to commit misuse without being detected, the more likely they are to do so. In the context of a company, this opportunity can arise from weaknesses in the supervisory system, lack of internal control, or laxity in company policies. When individuals feel there is a gap in the system, they may be tempted to take advantage of it. Third, rationalization plays a role in forming individual justifications for committing asset misuse. Rationalization allows individuals or groups to feel that their actions are acceptable or reasonable, even though they actually violate the rules. High levels of rationalization make perpetrators feel comfortable committing misuse, because they can convince themselves that the action is justified. Overall, these three factors—pressure, opportunity, and rationalization—worked simultaneously and contributed to the increase in asset misappropriation in the Mechanical Department of PT XYZ. The combination of these three factors creates an environment in which such acts are more likely to occur, especially in the absence of adequate preventive measures.

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