



Effect of Occupational Health Safety and Rewards on Employee Performance and Work Motivation as Intervening Variables at PT Pertamina Geothermal Energy Area Sibayak

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Abstract. These days, human resources are a vital role needed as a company asset to survive in the current business competition. Human resources as employees cannot be separated from problems related to occupational health and safety in the company as by ensuring occupational health safety, companies can foster morale and comfort of their employees. This study aims to determine whether the elements of occupational health and safety and rewards have an influence on employee performance and whether motivation is able to mediate occupational health safety and rewards for employee performance to be better. The population of this research was all employees of supporting service workers who work in a geothermal management business company. The data obtained were primary data through questionnaires distributed to employees in the company using the Likert scale method. This type of research was causal associative research with data analysis techniques used descriptive analysis and path analysis. The sampling technique was saturated sampling, which was collected from all 32 workers as samples. The results of the effect of occupational health safety and appreciation on employee performance through work motivation show a direct influence value of 0.782 and an indirect effect of 0.672. Based on the results of the study, it can be said that the direct effect is greater than the indirect effect ($0.782 > 0.672$). So that there is no significant effect of the Occupational Health Safety and Rewards variables on employee performance through work motivation. Based on these results, increasing the company's commitment to occupational health and safety to carry out K3 procedures in order to comply with company regulations on an ongoing basis is needed.

Keywords: Occupational health safety · Rewards · Motivation · Employee performance

1 Introduction

The evolution of the industry, as well as the appearance of various new production techniques, has prompted businesses to increase their human resources' knowledge and abilities in order to manufacture high-quality products. Human resources cannot be separated

from occupational health and safety problems in the company; ensuring occupational health and safety can foster morale and comfort for employees.

In this study, the authors conducted a study at the company PT Pertamina Geothermal Energy (PGE). The company is one of the state-owned subsidiaries of PT Pertamina (Persero) incorporated in the Power & New Renewable Energy sub-holding and other renewable energy businesses led by PT. Pertamina Power Indonesia (PPI). This company engages in the geothermal sector under the Ministry of Energy and Mineral Resources, Director General of New Renewable Energy and Energy Conservation, which has a high level of occupational risk. Therefore, it is consistent in preventing workplace accidents and occupational diseases relevant to K3 laws and regulations standards in Indonesia.

One of them is by implementing a K3 system called Sustainability Pertamina Expectations for HSSE Management Excellence (SUPREME) as the basis for implementing the principles of the HSSE management system with the concept of risk-based, process-oriented & generative culture, not least especially in one of PGE's work areas, the Sibayak Area which is located in Berastagi area, North Sumatra Province, where this research was conducted.

Table 1 exhibits that the number of recorded accidents that affect K3 performance for the last 5 years in the PT PGE work area were 19 accidents, with the fatality category of 2 accident in 2018, with the major accident category resulting in 6 lost working days, and 11 times in the RWDC & MTC category. Then events that were not recorded in the company's K3 performance assessment were the first aid, near-miss work & HIPO categories with 56 accidents. The accident statistics data should be the basis for increasing awareness and learning from bad experiences that occur so that it positively impacts the safety and health of employees, affects the smooth operation of a safe and comfortable work environment, and improves employee performance.

It can be seen that the number of employees during 2018–2020 in the company has decreased gradually in the absence of additional replacement workers or maintaining the formation of the number of workers according to the needs of the company's operational activities. This is due to the non-operation of the geothermal power plant belonging to

Table 1. PT. PGE Work Accident Statistics

TRIR	2016	2017	2018	2019	2020	Total
Fatalities	0	0	2	0	0	2
Lost time injuries (LTI)	2	2	2	1	0	6
Restricted work days cases (RWDC)	1	0	1	0	0	1
Medical Treatment Case (MTC)	1	4	3	1	1	10
First aid	9	2	5	1	1	18
Near miss	21	9	7	0	1	38
HiPO	0	0	0	0	0	0
Recordable incident	4	6	6	2	1	19
Non recordable incident	30	11	12	1	2	56

the second party (PT. Dizamatra Powerindo), which is already absolute, so it has an impact on the operations of PT. PGE as a producer of geothermal steam energy in the Sibayak Area. This causes some workers who are no longer productive according to the age limit of their working period (post-employment) not to be replaced/regenerated.

The implementation of K3 is deemed necessary to look more deeply from the side of workers' motivation towards fulfilling the K3 program commitments that have been implemented by the company so that later it can also affect employee performance. Employee performance is the process of aligning organizational goals with measuring employee skills, competency needs, development plans and delivering results [1].

Rewards, according to Huselid [2] are viewed as a system that can contribute to performance by connecting employees' interests to those of teams and organizations, hence enhancing effort and performance. In the management control system related to the provision of rewards to employees for satisfactory results, it is hoped that employees will become more qualified and motivated employees to improve the quality of performance and create continuity of company operations. If the Occupational Health and Safety has been met, it will motivate employees to work with all their abilities and enthusiasm to improve performance. The reason for researching K3 and rewards effects employee performance with work motivation as an intervening variable in PT Pertamina Geothermal Energy Sibayak area can be concluded from the description above.

2 Research Methods

This study is causal associative research, which aims to determine the relationship between two or more variables. This study took place at PT Pertamina Geothermal Energy, the Sibayak Area. The samples taken in this study were 32 outsourced employees/TKJP PGE Area Sibayak with relatively the same level.

Data collection in this study was carried out by distributing questionnaires to respondents using the Likert scale method and then data collection was carried out with structured question guidance. Furthermore, data analysis was carried out with descriptive analysis to display and present the data. Path analysis was performed using quantitative data analysis techniques to examine the effect of occupational health safety (X1), reward (X2), and work motivation (Z) variables on employee performance (Y).

3 Results and Discussion

The results of the descriptive analysis show an average of 1.97, which is in the high category. The best assessment is on the occupational health safety variable with an average score of 1.64, while the lowest assessment is on the reward variable with an average score of 2.16. Following the questionnaire assessment instrument, the lower the score obtained, the better the assessment given by the respondent.

3.1 Model 1 Regression Analysis

The strength of the association between the independent variables, namely occupational health safety (X1) and rewards (X2), and the dependent variable, namely employee performance, was determined using regression analysis model one (Y).

From the hypothesis 1 testing results, it can be concluded that the results of the partial t-test show that the work safety variable (X_1) obtained a Sig t-value of $0.051 \geq 0.05$ from the alpha value (α), then H_0 is accepted and H_1 is rejected (Table 2). Thus, there is no significant effect between occupational health and safety variables on employee performance partially.

From the hypothesis 2 testing results, it can be concluded that the research results show that the t-test partially or individually that the reward variable (X_2) obtains a Sig t-value of $0.005 < 0.05$ from the alpha value (α), then H_0 is rejected and H_2 is accepted. Thus, there is a significant effect between the rewards variable on employee performance partially.

3.2 Model 2 Regression Analysis

The strength of the association between the independent variables, occupational health safety (X_1) and rewards (X_2), and the intervening variable, work motivation, was determined using regression analysis model two (Z).

From the hypothesis 3 testing results, it can be concluded that the research results show that the t-test partially or individually that the occupational health safety variable (X_1) obtains a Sig t value of $0.118 > 0.05$ from the alpha value (α), then H_0 is accepted and H_3 is rejected. As a result, there is no substantial relationship between job motivation and occupational health and safety characteristics (Table 3).

From the hypothesis 4 testing results, it can be concluded that the research results from the t-test partially or individually show that the reward variable (X_2) obtains a Sig

Table 2. Results of Model 1 t-test

Var.	Standardized Beta Coefficients	T-count	Sig.	Note:
X1	0.315	2.036	.051	No Sig.
X2	0.467	3.015	.005	Sig.
Dependent variable				Y

Table 3. Results of Model 2 t-test

Var	Standardized Beta Coefficients	t-count	Sig.	Note:
X1	0.159	1.613	.118	No Sig.
X2	0.797	8.076	.000	Sig.
Dependent variable				Z
R-Squared				0.777
Adjusted R-Squared				0.762
F-count				50.593
F-table				3.320

t value of $0.000 < 0.05$ from the alpha value (α), then H_0 is rejected and H_4 is accepted. Thus, there is a significant influence between the reward variables on work motivation.

3.3 Model 3 Regression Analysis

Regression analysis model 3 was used to determine the strength of the relationship between the intervening variable, namely work motivation (Z) to the dependent variable, namely employee performance (Y).

The research results from the t-test partially or separately reveal that the work motivation variable (Z) acquires a Sig t-value of $0.000 < 0.05$ from the alpha value (α), then H_0 is rejected and H_5 is accepted, according to the hypothesis 5 testing results (Table 4). As a result, job motivation variables have a major impact on employee performance.

3.4 Coefficient of Determination Test (R^2)

The coefficient of determination is used to determine how much the independent variable influences the dependent variable. This is a number that ranges from 0 to 1. A value around 1 indicates that the independent variable (X) has almost all of the information required to predict the dependent variable (Y).

The Adjusted R-Squared value is 0.414, based on the coefficient of determination data in Table 5. This suggests that the independent factors in this study have a 41.4% ability to effect the dependent variable, while the remaining 58.6% is explained by variables other than the independent variables.

3.5 Path Analysis

The effect of intervening variables was investigated using the route analysis method. Path analysis is a subset of multiple linear regression analysis, in which regression analysis is used to measure the quality of a relationship between preset variables (Fig. 1).

Table 4. Results of Model 3 t-test

Var.	Standardized Beta Coefficients	T-count	Sig.	Note:
Z	0.703	5.419	0.000	Sig.
Dependent variable				Y

Table 5. Coefficient of Determination Test (R^2)

Model	R	R-Squared	Adjusted R-Squared
1	0.672	0.452	0.414

a. Predictors: (Constant), VARIABLE_X1, VARIABLE_X2

b. Dependent Variable: VARIABLE_Y

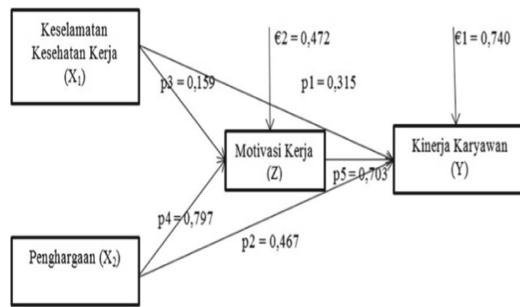


Fig. 1. Path Analysis Drawing

The employee performance variable (Y) has a direct influence of 0.315 on the occupational health safety variable (X1). The employee performance variable (Y) has a direct influence of 0.467 on the reward variable (X2). The work motivation variable (Z) has a direct influence of 0.159 on the occupational health safety variable (X1). The work incentive variable (Z) has a direct influence of 0.797 on the reward variable (X2). Employee performance is directly influenced by the work motivation variable (Z) 0.703.

The direct influence of occupational health safety on employee performance via work motivation is known to be 0.315, whereas the indirect effect of the occupational health safety variable on employee performance through work motivation is known to be the multiplication of the beta value (occupational health safety on work motivation) with a beta value of $0.159 \times 0.703 = 0.112$ (work motivation on employee performance). According to the aforementioned calculation, the direct effect is 0.315 and the indirect effect is 0.112, indicating that the indirect effect is smaller than the direct effect, implying that occupational health safety indirectly through employee performance has no meaningful effect on work motivation. The direct effect of rewards on employee performance through work motivation is known to be 0.467, while the indirect effect of rewards on employee performance through work motivation is known to be $0.797 \times 0.703 = 0.560$, which is the multiplication of the beta values (rewards on work motivation) and beta values (work motivation on employee performance). Based on the aforementioned calculation, the direct effect is 0.467 and the indirect effect is 0.560, indicating that the indirect effect is bigger than the direct effect, implying that occupational health safety has a considerable impact on work motivation indirectly through employee performance.

The effect of Occupational Health and Safety and Rewards on employee performance through work motivation, directly and indirectly, has the following calculation:

$$\text{Direct effect} = 0.315 + 0.467 = 0.782$$

$$\text{Indirect effect} = 0.112 + 0.560 = 0.672$$

Based on the above calculation, it can be said that the direct effect is greater than the indirect effect $0.782 > 0.672$. Then H_0 is accepted and H_6 is rejected, so there is no significant effect of the Occupational Health and Safety variable on employee performance through work motivation.

3.6 Effect of Occupational Health and Safety and Rewards on Performance

The hypothesis states that there is a significant influence between the occupational health and safety variables (X_1) and the reward variable (X_2) on the performance variable (Y) simultaneously and can be accepted based on the results of the statistical analysis of the study using linear regression analysis. Because the test probability value in table 4.20 is 0.000 with a 0.05 error rate, it may be argued that the independent variable's probability value has a substantial effect on the dependent variable. The study's findings also show that the independent variables evaluated can have a 41.4% effect on the dependent variable, with the rest influenced by independent variables that aren't looked at.

Damayanti [3] Occupational health safety implemented by the company is able to increase enthusiasm or work enthusiasm, prevent occupational diseases, and can provide knowledge about the correct use of tools and machines and know the work process in the company area, so that by providing occupational safety and health programs provide incentives to employees to work optimally.

Employee performance in carrying out work activities can be maximized and increased if employees feel safe and get protection from various work accidents, thus, it can be interpreted that occupational health and safety are important factors in improving employee performance. Employees who pay attention to occupational health and safety, as well as rewards are given to employees in complying with company regulations, will have a good impact on the performance of these employees.

3.7 Effect of Occupational Health and Safety and Rewards on Work Motivation

The results of the statistical analysis of the study used linear regression analysis, the hypothesis states that there is a significant influence between the occupational health and safety (X_1) variables and the reward variable (X_2) on the work motivation variable (Y) as an intervening variable simultaneously and can be accepted. In this case, the test probability value of 0.000 at an error rate of 0.05 can be concluded that the probability value of the independent variable being studied has a significant effect on the intervening variable.

According to Hernilawati [4] employees who are guaranteed occupational safety and health will work more optimally, and will have an impact on the products produced. Implementation of safe action and unsafe action that can cause work accidents in the company area, as one example, as a form of employee motivation in carrying out occupational health and safety is a condition where employees get used to following the actions of colleagues when at work, employees prefer to work comfortably with do not use Personal Protective Equipment (PPE) which should be mandatory for use, because they follow colleagues who do not wear PPE. This greatly affects the safe conditions of employees who do not prioritize work safety because of the influence of co-workers.

The evaluation carried out in these conditions provides knowledge of occupational health and safety and provides ongoing rewards to employees who always apply reasonable standard procedures to encourage employee motivation to carry out work properly and prevent potential accidents from occurring in the work environment.

3.8 The Effect of Motivation on Performance

The hypothesis asserts that there is a strong influence between the motivation variable (Z) and the performance variable (Y) simultaneously and can be accepted based on the results of statistical analysis of study using linear regression analysis. The test probability value of 0.000 at an error rate of 0.05 indicates that the probability value of the intervening variable being tested has a considerable effect on the dependent variable in this circumstance.

The results show that the questionnaire results related to motivation by the respondents have a positive influence on the company. So motivation can encourage employees to do work optimally because they believe that if the company successfully achieves its goals and objectives, employees' personal interests will be well maintained. Motivation in work relates to how people drive to work and the desire to work by optimally providing the ability and expertise to achieve organizational goals.

In accordance with the results of research [5], it shows that work motivation plays an important role for employees to support their performance. TKJP employee performance PT. Pertamina Geothermal Energy Sibayak Area can be said to be unfavorable where there is a decrease in the value of employee performance every year along with a decrease in work productivity with the non-operation of geothermal power plants (PLTP), this can actually improve an employee performance and can create a company image.

3.9 Effect of Occupational Health and Safety and Rewards on Performance Through Work Motivation

The direct and indirect effects of occupational health and safety and rewards on employee performance via work motivation were calculated to have a direct influence value of 0.782 and an indirect effect of 0.672, respectively. The direct effect is larger than the indirect effect ($0.782 > 0.672$), demonstrating that workplace health, safety, and rewards variables have no substantial impact on employee performance via work motivation.

In the variables studied, the main objective is how employees can carry out work activities to maximize the resulting performance to achieve high productivity and profitability for the company. This is one of the management techniques used by the company to create a good work environment. According to Soehatman [6] Risk management includes the entire process to identify hazards, conduct risk assessments, determine risk control methods and monitor the results. So that occupational health safety, rewards, and work motivation are ways of controlling risk for companies so that they continue to strive to maintain optimal employee performance.

4 Conclusion

The effects of occupational health and safety (K3) on employee performance demonstrate that there is no significant effect between the occupational health and safety factors on employee performance somewhat, according to the findings of this study. Employee performance and rewards indicate a significant relationship between the rewards variable and employee performance. The effect of occupational health and safety on work motivation demonstrates that there is no significant relationship between these variables and

job motivation. The influence of rewards on work motivation reveals that the incentive variable has a considerable impact on work motivation. The impact of job motivation on employee performance reveals a strong link between motivation and performance. The influence of occupational health and safety and rewards on employee performance via work motivation demonstrates that neither variable has a substantial effect on employee performance through work motivation.

The results of this study show that to improve the performance of outsourcing/TKJP employees, PT. Pertamina Geothermal Energy Sibayak area needs to carry out management strategies including programs, regulations, and matters relating to occupational health safety and rewards, because the results of research through simultaneous testing obtained that both variables have a significant effect on employee performance together. Leaders and management need to take various approaches to employees to emphasize the value of loyalty to the organization such as giving rewards that can be done to improve employee performance. Moreover, management needs carry out tighter and better supervision to improve employee timeliness in completing tasks and targets. Employee performance has been shown to be significantly influenced by work motivation, so it needs to be used as a guide for the problems that exist in the field. In addition, work demotivation may decrease employee performance and the number of workers every year. It is necessary to do a management strategy and breakthroughs to increase work motivation to increase employee performance.

Based on the conclusions that have been obtained, the researchers suggest the following: It is necessary to increase the company's commitment to occupational health and safety to carry out procedures and K3 programs in the work environment. Occupational health safety, which is known to have an insignificant effect on employee performance, must also be considered by the company to encourage employee performance by providing good facilities for the continuity of employees at work. It is necessary to develop a program to increase employee knowledge in occupational health and safety management to support awareness of high-risk work at PT. Pertamina Geothermal Energy Sibayak area.

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