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The effect of occupational health and safety, work environment and discipline on employee performance in a consumer goods company

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Abstract. Employee performance can be the supporting factor of company performance. However, employee performance can be affected by several factors. Employees can have optimal performance if they feel safe, have good working environment and have discipline. The purposes of this research are to analyze the effect of occupational health and safety, work environment and discipline on the employee performance in PPIC Thermo section in a consumer goods company and to find the dominant variable which primarily affects employee performance. This research was conducted by taking data from 47 respondents. The data were collected using questionnaire. The techniques in data analysis is multiple linear regression with SPSS software. The result shows that occupational health and safety, work environment and discipline are simultaneously significant to the employee performance. Discipline holds the dominant factor which affects employee performance.

1. Introduction

Human resources are important part in an organization. Company as an organization can increase their organizational performance if there is a good relation between company and their employee. Employees are important resource in a company which contribute to every company's activity. If there is an obstacle when they are working, it can affect their performance. Job performance is a work achieved by a person in carrying out the tasks assigned to him based on skills, experience, and sincerity and time [1].

Job performance in PPIC Thermo section in this company can be known based on the accuracy, amount of inventory availability that is based on stock opname. The amount of stock opname can indicate the similarity between the last stock and stock opname. Based on data stock opname, the differences between last stock and stock opname can be depicted and it indicates whether the employee performance is in good condition or not.

Job performance can be affected by several factors. While working, it is important for the employee to feel safe and comfortable with their working environment. The feeling of safety and comfort in a work place can be affected if there are health and safety insurance. Besides health and safety, there are other factors which can affect job performance. Author of [2] said that job performance can be known from several factors; one of them is discipline. Employees' discipline level can be indicated from their attendance data.



This study aims to analyze the effect of occupational health and safety, work environment and discipline to the employee performance and to find the dominant variable which primarily affects employee performance.

2. Research Framework

2.1 Job Performance

Work performance is a work achieved by a person in carrying out the tasks assigned to him based on his skills, experience, and sincerity and time [1]. In this study, the researcher used four indicators in the variable of work performance, i.e. job quality, job quantity, work attitude and work interest.

2.2 Occupational Health and Safety

Under occupational safety legislation no.1 of 1970 Article 2, occupational safety protection covers all aspects of hazardous work of any workplace, whether on land, in the soil, on the surface of water, in water or in the air within the jurisdiction of the Republic of Indonesia. By this regulation, then every worker in various fields of work is expected to be given guaranteed protection for safety in carrying out his work. There are five indicators in occupational safety and health variables, which are knowledge of occupational safety and health, health conditions, occupational health and safety, completeness of work equipment and the availability of protective equipment.

2.3 Work Environment

Work environment is the physical environment in which employees' works affect their performance, safety, and quality of work life. Illumination, noise and vibration, temperature, humidity, and air quality are work-environment factors under the control of the organization and the operations manager. The manager must approach them as controllable [3]. The indicators in this variable are workplace conditions, job security, peer relation, and relationship between superiors and subordinates.

2.4 Discipline

Discipline is the awareness and willingness of a person to comply with all corporate rules and prevailing social norms. Consciousness is the attitude of a person who voluntarily obeys all rules and is aware of his duties and responsibilities. Therefore, the employee will obey or do all the work well, not under coercion. Willingness is an attitude, behavior and action of a person in accordance with company regulations, whether written or not [1]. In this study, the researcher used indicators of compliance with regulations, adherence to working hours, compliance in the use of office facilities and infrastructure and work according to procedures.

2.5 Research Hypothesis

Author of [4] examined the effect of work environment and work discipline on the work performance. The result of the research is that work environment and work discipline, respectively, have significant effects on work performance; and of these two variables, work discipline is the most dominant influence. Furthermore, author of [5] found that occupational health and safety have a significant effect to the job performance, while author of [6] found that occupational health and safety have a significant effect, directly and indirectly, through motivation variable to employee performance. Based on these arguments, the hypotheses that can be prepared are as follows:

H₁ : Occupational health and safety, work environment and discipline has simultaneous partial effect on the employee performance.

H₂ : Occupational health and safety have dominant effect on employee performance.

The theoretical framework of this research is given in Figure 1.

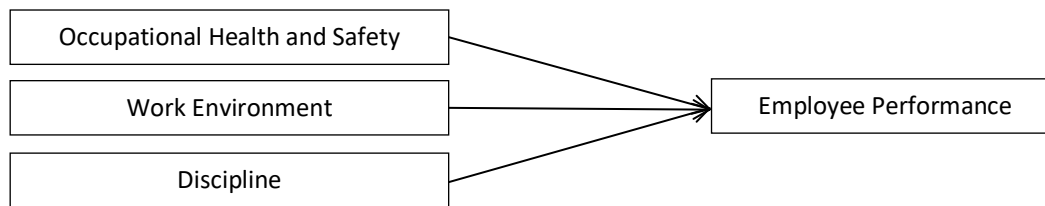


Figure 1. The Theoretical Framework.

3. Research Methodology

This study used survey method and surveyed all employees in PPIC Thermo section as respondents. Forty-seven employees took part as respondents. All respondents answered all thirty-five questions. There are 11 questions for occupational health and safety variable, 8 questions for work environment variable, 8 questions for discipline variable and 8 questions for employee performance. Each question describes the indicators that exist on each variable. Every question provides several choices that respondents have to response. Five-points Likert was used for this questionnaire.

Variables used in this study are independent variable and dependent variable. Dependent variable is employee performance, while the independent variable consists of occupational health and safety, work environment and discipline. Questionnaire that had been collected then processed with SPSS software to analyze the instrument test that consists of validity and reliability analysis. After that, multiple linear regressions were used to analyze data.

4. Results

4.1 Validity test

Validity test was conducted by using Pearson product moment correlation. From thirty-five questions, one question was not valid. This question was deleted and not included in the next analysis.

4.2 Reliability test

Reliability test was conducted to measure whether an instrument is reliable enough to be used as data collection tool by testing the score between items using Cronbach's alpha. After analyzed, all variables were declared reliable because all Cronbach's alpha were greater than 0.6.

4.3 Multiple Linear Regressions

After the data were analyzed with SPSS software, the results can be seen in the table below:

Table 1. The Resume of Results Multiple Linear Analysis.

Variable	Unstandardized Coefficients B	t	Sig	Note
Occupational Health and Safety	0.231	2.274	0.028	Significant
Work Environment	0.241	2.302	0.026	Significant
Discipline	0.285	2.311	0.026	Significant
Coefficient Determination (R ²)	= 0.734			
F	= 39.494			
F Sig	= 0.000			

From the table above, it can be described that:

- Simultaneous hypothesis analysis (F test)
This analysis is to describe if there is an effect of all independent variables on the dependent variable. Based on the results of regression model analysis, the value of F is 39.494. This value is greater than the value of F table (2.821). Therefore, each independent variable is simultaneously significant at $p < 0.05$.
- Partial hypothesis analysis (t test)
The analysis of partial regression model is used to identify if there is an effect of every independent variable on the dependent variable. The results are presented in this table below:

Table 2. The Results of Partial hypothesis analysis (t test).

Variable	t	Sig
Occupational Health and Safety	2.274	0.028
Work Environment	2.302	0.026
Discipline	2.311	0.026

With t table 2.012, t value of every variable is greater than the value of t table. Thus, every independent variable significantly affects employee performance at $p < 0.05$.

- Dominant test
To determine one independent variable that has the dominant effect on the dependent variable, comparison of standardized coefficients among all independent variables was carried out. Independent variable is said to have dominant effect on the dependent variable if it has the greatest standardized coefficient. The comparison of all standardized coefficients of all independent variables is presented in the table below:

Table 3. The Resume of Standardized Coefficients of all Independent Variables

Variable	Standardized Coefficients
Discipline	0.330
Occupational Health and Safety	0.308
Work Environment	0.296

From this table, discipline is the independent variable which has the greatest standardized coefficient among the other independent variables. This dominant test did not match the second hypothesis. It shows that employee performance is more affected by discipline factor than the other independent variables in this study. Standardized coefficients have positive value; it means that the higher the level of discipline, the higher the performance of employee.

5. Conclusion

After analysis with multiple linear regressions, occupational health and safety, work environment and discipline have simultaneous partial effect on the employee performance. From the dominant test, it can be seen that discipline has a dominant effect on employee performance. Upgrading employee performance can be done by improving their level of discipline in addition to making sure that they get health and safety insurance in their work place and have a good working environment (including their relationship with their peer, superior and subordinates). Good employee performance can better support company performance.

6. References

- [1] Hasibuan M 2011 *Human Resources Management* (Jakarta-Bumi Aksara)
- [2] Simamora H 2004 *Human Resources Management* (Yogyakarta-Penerbit Andi)
- [3] Heizer J and Render B 2012 *Operations Management book1*, 9th editions
- [4] Nurhaida 2010 *The Effect of Work Environment and Discipline to Employee Performance Kopertis I Nanggroe Aceh Darussalam North Sumatera* (Graduated Thesis of Graduated School of University of North Sumatera Medan)
- [5] Husni 2011 *The Analyze of Occupational Helath and Safety and Work Environment to Employee Performance of PT Indonesia Asahan Aluminium (Inalum) Kuala Tanjung* (Graduated Thesis of University of North Sumatera Medan)
- [6] Paramita C and Wijayanto A 2012 The Effect of Occupational Health and Safety to Employee Performance of PT. PLN (Persero) APJ Semarang *Journal of Business Administration* **1** (1)