The Effect of the Work Environment on Employee Performance at Bandung Metal and Machine Center Center in Bandung

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ABSTRACT

The purpose of this research is to know how big is Variable Independent influence against Variable Dependent towards in the Metal Industries Development Center Bandung. The research method is descriptive and verification research method. Questionnaires spread with data analyzes through validity, reliability, data normality, simple linear regression analyzes, coefficient of correlation, hypothesis test and coefficient of determination are used as techniques to collect the data. The result of coefficient of determination calculation indicates that the presentation of Variable Independent influence against Variable Dependent is positively influential enough against Variable Dependent in the Metal Industries Development Center Bandung. The result of hypothesis test shows that Variable Independent is positively influential and significant against Variable Dependent towards in the Metal Industries Development Center Bandung.

Keywords

Introduction

In an organization, in carrying out activities to achieve its goals, it has several factors that are interrelated and influential. One of these factors is very important which is used to drive other factors, namely human resources. Therefore, organizations are required to manage and optimize human resources. Human resource management is an acknowledgment of the importance of the human element in providing maximum contribution to the company itself (Noordiansah, 2013).

In order to achieve company goals, an increase in employee performance is required. Various things can affect employee performance, one of which is the work environment. The work environment means all tools and materials faced by the surrounding environment where a person works, their work methods, as well as their work arrangements both as individuals and as groups (Sedarmayanti, 2011). The work environment is the environment around employees so that it needs to be considered in order to be able to have a good impact. Meanwhile, according to Sedarmayanti (2011), the work environment is broadly divided into two, namely the physical work environment and the non-physical work environment.

The physical work environment is all conditions in the workplace that will affect employees, either directly or indirectly. Some of the factors that can affect the physical work environment include lighting, temperature, humidity, air circulation, noise, mechanical vibrations, odors, color layout, decoration, music, and security. The physical work environment in a company is a working condition to provide a comfortable atmosphere and work situation for employees in achieving the goals desired by a company. Poor working conditions have the potential to cause employees to fall ill, get stress easily, have difficulty concentrating and decrease work productivity. If the work space is uncomfortable, hot, inadequate air circulation, the work space is too dense, the work environment is not clean, noisy, it will have an impact on the work comfort of employees (Mahardiani, 2013; Saudi, 2018).

Apart from the physical work environment, there is also a non-physical work environment. Non-physical work environment is all conditions that occur related to work relationships, both with superiors and with fellow colleagues, or with subordinates. Non-physical work environment is an environment that cannot be ignored. Companies should reflect working conditions that support each other, the conditions created should be kinship, good communication and self-control (Wulan, 2011).

Unhealthy work environment conditions can cause employees to be easily stressed, not enthusiastic to work, arrive late, and vice versa, if the work environment is healthy, employees will certainly be enthusiastic at work, not easily sick, easy to concentrate, so work becomes fast. finished according to the target. The work environment itself has two dimensions, namely a physical dimension (room coloring, lighting, cleanliness, spatial planning, etc.) and a non-physical dimension (employee welfare, work atmosphere, employee relations, etc.). The organization must be able to provide these two dimensions in good condition so as to enable employees to continue to work productively and cooperate with employees and leaders to achieve organizational goals.

The Center for Metals and Machinery is one of the research and development institutions (R & D) and technical implementing units under the Industrial Policy, Climate and Quality Research Agency (BPKIMI) of the Ministry of Industry, which is tasked with increasing mastery of metal and machine technology. In carrying out its main duties and functions, BBLM also coordinates and collaborates with the related technical directorates that handle the metal and machine industry such as the Directorate General of Manufacturing Industry Base, Directorate General.

Leading Industry Based on High Technology and Directorate General of Small and Medium Industry, Ministry of Industry. Facing the current era of globalization that demands high employee productivity, there are still many obstacles in the field that can hinder the vision of the Center for Machinery and Metal (BBLM).

Based on the results of the survey that has been carried out, the working environment at the Center for Machinery and Metal (BBLM) has supported employees to work comfortably, it can be seen from the facilities and infrastructure such as the design of employee workspaces and very adequate air conditioning. well-maintained facilities available to support R&D (research and development) such as workshop building facilities and infrastructure, office machines and equipment, regular maintenance so as to facilitate technical services, and also to support the

implementation of R&D activities, data and information availability is indispensable for produce quality R&D. Library facilities without the support of complete literature, international journals, industrial databases and other online data access are weaknesses in access to information to support R&D development in accordance with the needs of the industrial sector.

Non-physical working conditions found at the Bandung Metal & Machinery Center are from the work environment created in communicating and building interpersonal relationships. Employees do not have close communication relationships with fellow employees because they are only focused on doing company / agency tasks without trying to get to know other employees to make it easier to work. This non-physical work environment condition is also shown by the relationship between the leader and the employees of the Bandung Metal & Machinery Center in leading his subordinates to work together in the company / agency as well as the communication relationship between subordinates and the leader in conveying work aspirations for the progress of the company.

Researchers also want to know the extent to which the physical and non-physical work environments of these companies / agencies play an important role in influencing the performance of employees at the Bandung Metal & Machinery Center. According to Byars and Rue (in Harsuko 2011), performance is the degree of preparation of tasks that govern one's work. So, performance is the willingness of a person or group of people to carry out activities or improve them according to their responsibilities with the expected results. To ensure that the source (input) is used effectively and efficiently in order to achieve company / agency goals, it is necessary to measure management performance. Performance that can be measured is the performance of a person or group of people in the organization.

At first the performance of the entire organization, then the organizational units, and finally the performance of the individuals in it (Swasto, 2011). The target of R&D results that are ready to be applied to the BBLM strategic planning document from 2015-2016 is 1 R&D result each.

Meanwhile, the R & D outcome targets that are ready to be applied to the performance agreement document from 2016-2019 are 2,2,2,1 R & D results, respectively. There are 2 R & D results that are ready to be implemented in 2016 and FY 2017, 3 R & D results in FY 2018, while in FY 2019 there are 1 R & D results. The comparison of the targets and achievements of R&D results that are ready to be applied in the 2016-2019 FY when seen in the graph can be seen in Figure 1.
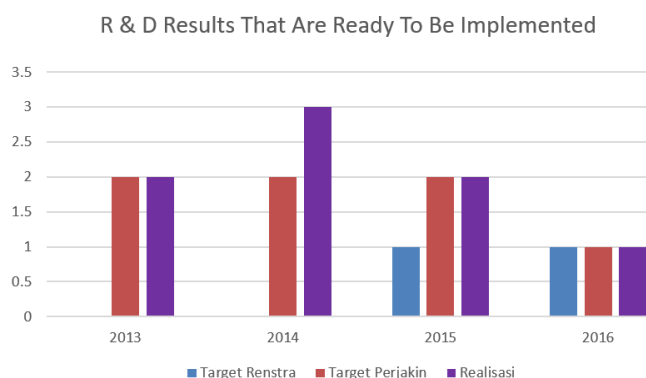

Figure 1. Comparison of achievements to amounts of research and development results ready for implementation 2016-2019
Source: Bandung Metal & Machinery Center

Based on the comparison chart of the achievements of the number of R & D results that are ready to be implemented in 2013-2016, it can be seen that the achievements of the number of R & D results that are ready to be applied have met the target, even in 2014 exceeding the target. In 2016, there was a decrease in the target from 2 to 1 R & D results.

Literature Review

- Human Resource Management is a science that studies how to empower employees in companies, create jobs, work groups, develop capable employees, identify an approach to be able to develop employee performance and reward them for their efforts and work (Bohlarander & Snell, 2013).
- Human Resource Management Function The human resource management function is very broad, this is due to the duties and responsibilities of human resource management to manage human elements as effectively as possible in order to have a satisfying workforce. According to Hasibuan,

followed by Aswandi (2013), the functions of human resources include managerial and operational functions.

- Work Environment is the entire work facilities and infrastructure around employees who are doing work which can affect the implementation of work. This work environment includes workplaces, work aid facilities, cleanliness, lighting, tranquility, as well as work relationships between the people in the place (Sutrisno, 2010). Types of Work Environment: Physical working environment, all physical conditions that exist around the workplace that can affect employees either directly or indirectly and Non-physical working environment, all conditions that occur related to work relationships, both relationships with superiors and relationships with colleagues, or relationships with subordinates
- Employee performance, performance is the result of the work function / activity of a person or group in an organization which is influenced by various factors to achieve organizational goals within a certain period of time (Tika, 2014).
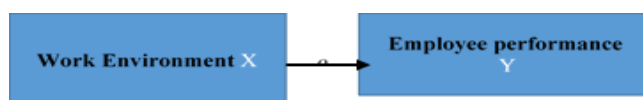
Framework and Hypothesis

Figure 2. Multiple linear regression of influence between research variables

Hypothesis

H1: The work environment has no positive effect on employee performance.
H2: The work environment has a positive effect on employee performance.

Methodology

Use of this quantitative method to describe the object of research and research variables in the form of descriptive data, while the verification method is used to examine the causality of variables in the form of Work Environment Affects Employee Performance, a sample of 145, this study uses a sampling technique census.

Hypothesis testing with Multiple Linear Regression.

Results and Discussion

Simple Linear Regression Analysis

Table 1. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6,765	2,489		2,718	,007
	work environment	,991	,054	,839	18,414	,000

a. Dependent Variable: employee performance Y

Based on Table 1, it shows that the constant value is 6.765 and the regression coefficient X is 0.991, meaning that where the work environment is considered constant and there is no change, the employee performance will increase by 6.765. The regression coefficient X is 0.991. it means that if the work environment increases, the employee's performance will increase by 0.991.

Correlation Coefficient

The correlation coefficient is useful for measuring the strength of the relationship between two or more variables with certain scales. In this study, the relationship in question is the relationship between the Work Environment (X1) and Employee Performance (Y).

Based on the results of data processing using SPSS 20.00, the following correlation results were obtained:

Table 2. Correlations

		Work Environment (X)	Employee Performance (Y)
work environment (X)	Pearson Correlation	1	,839[**]
	Sig. (2-tailed)		,000
	N	145	145
employee performance (Y)	Pearson Correlation	,839[**]	1
	Sig. (2-tailed)	,000	
	N	145	145

**. Correlation is significant at the 0.01 level (2-tailed).

Based on Table 2, it can be seen that the level of the relationship between work environment variables and employee performance is 0.839. The result of the correlation between X and Y = 0.839 shows the level of the relationship between the work environment and employee performance is very strong, because it is in the interval> 0.75 - 0.99.

Model Feasibility Test (F Test)

Testing is done by comparing the value of the F table with the F count. The results of the F test in the study can be seen in Table 3:

Table 3. Model feasibility test

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6903,636	1	6903,636	339,091	,000[b]
	Residual	2911,371	143	20,359		
	Total	9815,007	144			

a. Dependent Variable: employee performance _Y
b. Predictors: (Constant), work environment _X

Based on the results of Table 3, the significance value of the regression model is 0,000, this value is smaller than the significance level of 0.05 (5%), which is 0,000 <0.05. Besides that, it can also be seen from the comparison between Fcount and Ftable which shows the Fcount value of 339.091 while Ftable is 3.93. From these results, it can be seen that Fcount> Ftable, namely 339.091> 3.93.

In other words, H0 is rejected and H1 is accepted. So based on the test above, it can be stated the validity (significant) of the hypothesis put forward by the author, namely "The Work Environment has a positive effect on Employee Performance".
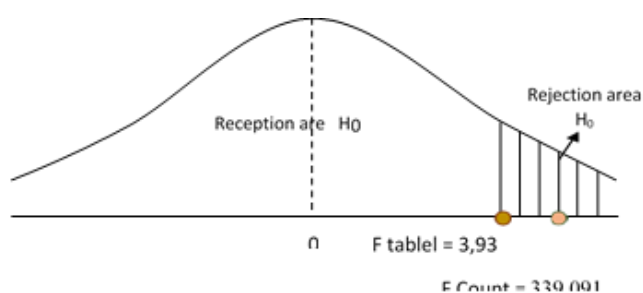

Figure 3. Curves of rejection and acceptance of h0 work environment on employee performance

Analysis of the coefficient of determination

The coefficient of determination is between 0-1. The small value of R^2 means that the ability of the independent variable to explain the variation in the dependent variable is very limited. On the other hand, if the value is close to 1, it means that the independent variable provides almost all the information needed to predict the dependent variable. Following are the test results of the coefficient of determination:

Table 4. Test results of the determination coefficient analysis

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,839[a]	,703	,701	4,512

a. Predictors: (Constant), work environment
b. Dependent Variable: employee performance

From the results of Table 4, the coefficient of determination is 0.703, which means that the influence of the independent variable on the dependent variable is 70.3%. Meanwhile, 29.7% or the rest is influenced by other variables not examined.

Conclusion

Conclusion

1. The application of the working environment at the Bandung Metal and Machinery Center is good. The highest statement is that "Air conditioning devices (AC, fans, etc.) are very supportive in order to keep working productively". The lowest statement is found in the statement "Good communication with my fellow colleagues really supports me to have a high level of productivity at work". However, encouragement from companies to employees to achieve the expected performance is still not effective.

2. Employee performance at the Bandung Metal and Machinery Center can be said to be high. The highest statement that "if there is a mistake in work, I immediately correct and correct my work again.". The lowest statement is found in the statement "I come and go home from work in accordance with the predetermined working hours."

3. The work environment has quite a positive effect on employee performance at the Bandung Metal and Machinery Center. This can be seen from the results of the determination coefficient analysis which obtained results of 70.3%.

Suggestions

1. For the Bandung Metal and Machinery Center to be able to improve employee performance,

the company should prefer a better approach in paying attention to the work environment, for example paying attention to the work environment gradually, or in other ways. This is because in this study it is known that the work environment can improve employee performance.

2. Employees should carry out their work optimally and more thoroughly so that there are no mistakes in doing work so that the work can be completed on time. In addition, leaders should be able to provide opportunities for employees to be involved in decision making so that employee creativity can develop and employees do not feel disadvantaged by the decisions that have been taken.

3. A company has various components that work and depend on each other in order to achieve the goals set by the company. A component that can unite all employees in achieving common goals is a good work environment.

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