

Effect of Work Environment and Occupational Health Safety on Work Productivity of PT. Hok Tong Palembang

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Abstract

Since 2017, the work environment and Occupational Safety and Health have been of particular concern at PT. Hok Tong. Increased resource competency and training is the target of the program. Research on the impact of these two factors is done by using primary data collected with Slovin method through questionnaires from a sample of 198 respondents using random sampling techniques to take samples of members from 380 populations. Hypothesis this study stated those work environments (X1) correlation on employee productivity (Y) at PT. Hok Tong are positive and significant and occupational health safety (X2) correlation on employee productivity (Y) at PT. Hok Tong are positive and significant). But by using data analysis, variable work environment (X1) bring positive and significant influence to employee work productivity (Y) but occupational health safety variable (X2) that has negative and insignificant influence between toward employee work productivity (Y). Overall both working environment and occupational health safety variable simultaneously have a significant influence on employee productivity at PT. Hok Tong.

Keyword: Working Environment, Occupational Health Safety, Employee Productivity.

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INTRODUCTION

The industrial world is now growing rapidly including in Indonesia. This certainly has a positive impact on employment. In the industrial world which is full of competition, now it creates various ways for companies to increase productivity. One way that is done is an effort to increase employee productivity. It cannot be denied that, the latest technology is more than supporting productivity, however, the driving force of technology is still human (employee). In accordance with what was stated by Gomes [1] that only human resources are resources that have reasons, feelings, desires, abilities, skills, knowledge, encouragement, strength and work, the only resources that have ratios, feelings and intentions no matter how advanced information technology develops, the availability of capital and adequate material but if it is without human resources, it will be difficult for the organization to achieve its objectives. However good the formulation of the goals and plans of the organization seems to be only futile if the element of human resources is not maintained, if it is abandoned.

There are 380 employees based on December 2018 data, which depend on their lives at PT. Hok

Tong. For this reason, attention needs to be paid to their safety and health because the environment and working conditions will affect the work safety of employees. That is, the work environment must be able to maintain and protect employees from workplace accidents which cover areas such as; offices, factories, warehouses and in the field.

This was also stated by Moekijat [1] that the bad consequences of low morale are: workers appear dissatisfied, irritable, often sick (absent), disagreeable, undisciplined, restless and pessimistic, slow and strike. With the low work spirit with the consequences that will be caused as illustrated above, employees will be unproductive in their work as a result of not achieving the planned organizational goals. Conversely, if employees have high morale, it is expected that employees will show enthusiasm in carrying out their duties and encourage them to work more productively, in order to achieve optimal corporate goals.

Referring of Becker and Huselid [2] theory, which assumes a positive relationship between work environment and productivity, PT. Hok Tong conducts periodic checks and tests on his work environment for

example: testing noise, light intensity, air temperature, and establish the health safety program is an effort to protect employees in the workplace. By protecting employees from workplace safety and health concerns, it is hoped that it will be able to improve the efficiency of the company through increasing employee productivity.

PT. Hok Tong realizes that the risks faced by each work environment vary with each other, depending on the type of work done. The work environment in the office has relatively low risks compared to other places, for example when compared to working in a factory or in the field. Risks at the factory or in the field have a fairly high work risk, even threatening the health and life of workers at all times. Since beginning of 2017, a safety & health program was launched, which until now continues to be developed and implemented.

Literature Review

According to Payaman J. Simanjuntak [3] the factors that influence productivity are:

a. Quality and physical capabilities of employees

The quality and physical abilities of employees are influenced by the level of education, work motivation, work ethic, physical ability, and training.

b. Supporting facilities

Classified into two, namely

- Regarding the work environment, including technology and production, facilities and production equipment used the level of occupational health and safety, the atmosphere in the environment.
- Concerning the welfare of employees reflected in the wage and social security system as well as guaranteed continuity of work.

c. Supra facilities

That is a system that is used by management to maximize and create an optimal work system that will determine the high and low productivity of employees in a company, such as division of labor, functioning of existing management, and others.

According to Carol Lomonaco and Dennis Miller [4], office workers will be satisfied and productive while the conditions of their work environment is greater comfort and control. In addition, the cost of work per worker and the operating costs of the facility will decrease.

When company provides safe and healthy workplace, everyone can continue their work effectively and efficiently. Conversely, when workplace is not organized well and there are many dangers,

damage and absenteeism are unavoidable, resulting in loss of income for workers and reduced productivity for the company.

Kasmir [5] explains that work safety is an overall employee protection activity. This means that companies try to keep employees from getting an accident when running their activities. He also defines that occupational health is to keep employees healthy while working. This means that not to work environment conditions will make employees unhealthy or sick.

In the past, accidents and health problems in the workplace were unavoidable part of production. Along change in time, now there are so many national and international legal standards on occupational safety and health implemented in the workplace. These standards reflect a broad agreement between employers / administrators, workers and the government that may create economic costs for workplace accidents and occupational illness become reduced.

Besides needed continuous attention, effective action on occupational safety and health demands should be a commitment from workers and employers. Employers and workers should show their respect to well-recognized occupational health and safety principles. They must also maintain, follow and continue to evaluate the policies and practices that have been set. The level of commitment can only be established if workers, supervisors, and managers work together to create an occupational health safety system that they understand and believe can increase work productivity.

Working Environment

Company should consider that work environment is a part of the important things to be aware. The work environment does not carry out the production process in a company, but the work environment has a direct impact on workers who carry out the production process. A good work environment encourages employees to improve their performance. In contrast, an inadequate work environment will result in a lack of performance and in turn will reduce work productivity, as Becker and Huselid [2], assume a positive relationship between work environment and productivity.

According to Awan [6], the working environment is literally the environment and all things that affect humans during life are collectively known as the environment. The work environment is an environment where people work together to achieve organizational goals. This means the system, process, structure and all things related to employees and positive or negative on employee performance. It can also be determined as the location where the task is completed. Currently the workplace, it will discuss

physical locations such as construction sites or office buildings. Other factors related to the workplace such as air quality, the level of importance and additional benefits and benefits of work such as the maternity room or unlimited drinks, or adequate parking.

According to Massoudi and Hamdi [7] the work environment has an important role for employees. At present, employees have a large number of work alternatives, so the environment in the workplace is an important factor for receiving and or maintaining employment service. The quality of the workplace can determine the level of employee motivation, performance and productivity.

Therefore, Human Resource Managers need to consider new strategies for selecting and maintaining the best organizations. A great and interesting way to attract employees. However, the quality of the physical workplace also has strong strength in recruiting and retaining talented people. Some factors in the workplace environment can be considered as important as employee participation, productivity, morale, comfort level.

Development means the situational of dynamic change as acceleration to expect the positive impact. One aspect of development is the creation of a conducive working environment where work environment is factors outside of human being in organization. Robbins [8] states that work environment factors such as economic uncertainty, political uncertainty and technological change affect employee behavior, such as productivity, employee absence and turnover.

Occupational Health Safety

All activities to guarantee and protect the safety and health of workers through efforts to prevent workplace accidents and work-related diseases are the goal of the existence of Occupational Health Safety.

According to Choudry [9], the factors identified for productivity include: better coordination between work groups, improved facilities and equipment, better personal relationships between coworkers, extensive work locations, and the use of a more skilled workforce. Five factors as the best way to improve safety are identified: supervisors who promote safe work habits, supervisors who play down hazardous work habits, more security measures for equipment, safety inspections, and improvements in equipment and tools. Considering the relationship between productivity and safety, these steps are set to correlate significantly with increased productivity and safety.

Human behavior is a very important element in improving safety in the workplace and managing and controlling exposure that results in losses. This will lead to effective results in the field of workplace safety. It

was found that awareness of workplace safety and technological support became a significant development of growth. In addition, quantitative research finds that the principles of strong human behavior will lead to an effective workplace and increase productivity that will benefit the organization in the future.

Dessler [10] states that poor safety and the resulting injury and illness actually increase costs, including medical costs, worker compensation, and loss of productivity. A survey of the finance department concluded that for every dollar invested in prevention of injury, employers will get two dollars; 40% say "productivity" is the main benefit of effective workplace safety.

In the industrial world, the use of labor reaches its peak and is concentrated in relatively narrow places or project locations. Coupled with the nature of work that is easily the cause of accidents (elevation, temperature, electric current, transporting heavy objects and others), it is only natural that the project manager or industry includes work safety issues in the first priority. By realizing the importance of occupational safety and health aspects in the implementation of projects, especially in physical implementation, the company / industry / project generally has an organization or field with a special task to deal with work safety issues. The scope of work starts from arranging programs, making procedures and supervising, and making reports on implementation in the field. In order to develop an effective and efficient Occupational Health Safety Program, accurate and timely information is needed to support the planning process and determine the next steps of policy.

Work Productivity

According to Umoh and Torbira [11], there is a tendency to analyze industrial accidents separately from productivity. This is the wrong approach. Industrial accidents affect production and reduce the productivity of workers and organizations. Accidents do not only reduce productivity, it also contributes to production costs. These costs can be categorized as direct and indirect costs. Direct costs can be in the form of medical costs, compensation / insurance costs, death benefits, loss of wages and so on. While indirect costs can include loss of time, damage to machinery and equipment, replacement of injured employees.

Duru and Shimawua [12] state that human efforts in organizations are very necessary. This is a complex phenomenon for managers to understand. Thus, it is believed that every behavior is a directed goal. So, for an organization or individual to be involved in any productive endeavor, it must have fundamental factors including individuals in that direction. Therefore, the influence of the work environment in achieving the targets set for the organization must be in adequate conditions. Therefore,

the nature of the office emphasizes the things that affect worker productivity.

Economists usually define productivity as "output ratio" compared to "physical input". This is usually associated with the industries as a whole in the sectors in an economy.

Productivity is an expression of how efficiently and effectively goods and services are produced. Thus, its main characteristic is that it is expressed in physical or economic units based on measurements carried out at different levels at the overall economic level, namely branches of companies, factories and economic actors.

Prokopenko [13] stated productivity is a comprehensive measure of how organizations meet the following criteria:

- Objective: The level of achievement.
- Efficiency: Has the resources used been used correctly and correctly
- Effectiveness: Has the work used the right and appropriate resources
- Comparable: Is productivity recorded regularly

Test Methods

Research on the impact of these two factors is done by using primary data collected through questionnaires from a sample of 198 respondents using random sampling techniques to take samples of members of the population.

From the results of validity tests that have been done, it turns out that the work environment variable (X_1), occupational health safety (X_2) and work productivity (Y) are all valid, with r -table values of 0.138 with a significance level of 5%. While the reliability test was conducted to find out whether the indicators or questionnaires used could be relied upon as a variable measurement tool to determine the work environment (X_1), occupational health safety (X_2) and work productivity (Y) were considered reliable in Cronbach's Alpha > 0.6.

DATA ANALYSIS

From the results of the questionnaire collected, the sample turned out to be dominated by male employees. As per data, male employees are 190 people (97%) while female employees are 5 respondents (3%) of the total sample used are 195 respondents. It can be explained that the most respondents are men because of the mapping of the needs of employees at PT. Hok Tong Palembang requires more male employees to be placed in the factory or field section, while women are also partially positioned in the factory, but the work done is not as heavy as that of men.

From data questioner, employees with aged 20-29 were 27 people (14%), employee ages 30 - 39 were 57 respondents (29%), employee ages 40 - 49 were 73 respondents (38%), employee ages 50 - 59 were 36 respondents (18%) and employee ages > 60 years were 2 respondents (1%). These data explained that the majority of respondents are aged 40 - 49 years, that's considered as productive and mature period in the world of work, so it is able to accept all of its consequences to become an employee.

Based on the study, it can be seen that the education levels of respondents, starting from elementary school were 34 people (17%), junior high school were 41 people (21%), high school were 115 people (59%), Diploma were 1 person (1%), and S1 graduates were 4 people (2%). It can be explained that most respondents are high school educators, this is because many types of work are offered by PT. Hok Tong does not need higher education.

Based on the result of study, it can be seen that the length of work respondents, starting from the length of work <5 years were 43 people (22%), length of work 6-10 years were 33 people (17%), length of work 11-20 years were 94 people (48%), and the length of work > 21 years were 25 people (13%). Most of respondents worked for 11-20 years, and were considered experienced employee.

Table-1: Multicollinearity Test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
Constant	3.118	0.337		9.852	0.000		
Work Environment	0.171	0.066	0.185	2.571	0.011	0.972	1.029
Occupational Health Safety	0.021	0.056	0.027	0.382	0.003	0.744	1.345

In table 1, it can be obtained that tolerance for the work environment and occupational health safety variables are 0.972 and 0.744 while the Variance Inflation Factor (VIF) are 1.029 and 1.345. Multicollinearity testing criteria show that all tolerance

values are determined by 0.10. While the VIF value also shows below the number 10. Then it can be concluded that the variable has met the tolerance requirements and VIF, which means that the

independent variables for the dependent variable do not occur multicollinearity.

To test whether in the regression model there is an inequality of variants from residuals in one observation to another observation, a heteroscedasticity

test is conducted. The heteroscedasticity test in this study uses the Scatter plot method, namely by looking at the patterns of the regression scatter plot. If the points spread with an unclear pattern above and below the number 0 on the Y axis there is no problem with heteroscedasticity. See figure 1.

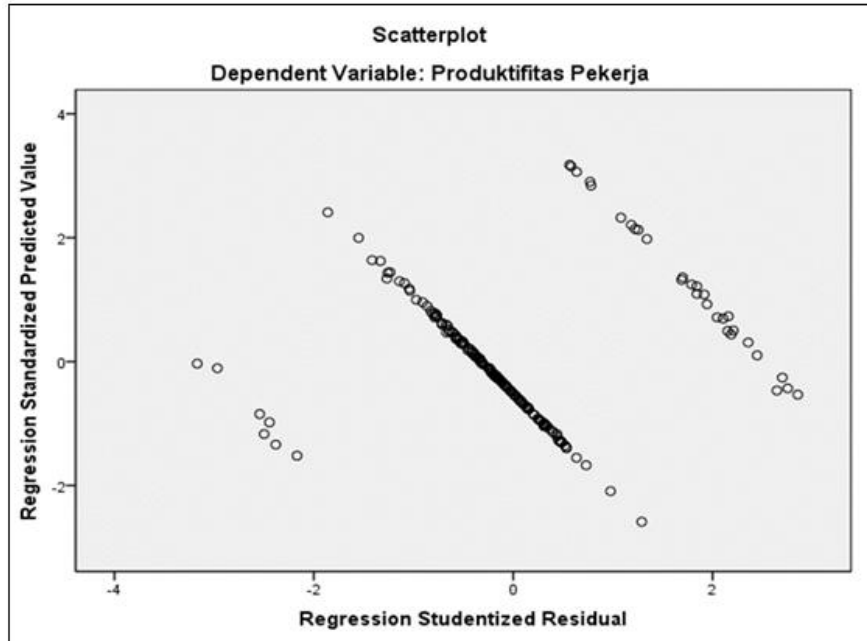


Fig-1: Heteroscedasticity Test

Table-2: Coefficient Determinant

Model	R	R-Square	Adjusted R-Square	Std. Error
1	0.526	0.237	0.105	0.470

Table-3: Reliability Test

Variables	Cronbach's Alpha	Standard Reliability	Remark
Work Environment	0.734	0.60	Reliable
Occupational Health Safety	0.688	0.60	Reliable
Work Productivity	0.776	0.60	Reliable

Table-4: F Table

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.315	2	0.658	3.921	0.001
	Residual	32.203	192	0.168		
	Total	33.518	194			

The first hypothesis (H_1) states that the work environment variable has a positive and significant effect on work productivity at PT. Hok Tong. In Table 1, t-table is (1,960) from the level of significance $df = 195$, it turns out that the t-count of the work environment variable is 2.571 which is bigger than t-table. This data analysis also shows a value of p (0.05) that is bigger than the significance level (0.010), indicating that the regression equation model is significant and means the hypothesis that the work environment has a positive and significant influence on employee productivity is accepted.

The second hypothesis (H_2) states that occupational safety health has a positive and significant effect on work productivity at PT. Hok Tong. In table 1, t-table (1,960) with a significance level of $df = 195$ where it is found t-count of 0.382 smaller than t-table, this indicates that the health safety variable has indeed a negative and insignificant effect. From this data analysis, it can be with a level of significance (0.003) which is smaller than the value of p (0.05), indicating that the regression equation model is positive and significant. And the hypothesis that occupational health

safety has a positive and significant influence on employee productivity is unacceptable.

The value of F arithmetic (3.921) in table 4, which is obtained from the significance level df_1 ($3-1 = 2$) and df_2 ($195-3 = 192$) is greater than the F-table (3,040) where the level of arithmetic significance (0,001) is more small of the critical value ($\alpha = 0.05$) in this study. This test analysis can be concluded that both work environment and occupational health safety have significant influence to employee productivity at PT. Hok Tong.

Data analysis on table 2 also resume that R Square is 0.237. The results showed that work environment and occupational health safety only contribute 23,7% to work productivity, there are 76,3% other variables that may influence to Hok Tong employee productivity.

Referring of Standardized Coefficients Beta analysis in Table 1, variable work environment has a beta coefficient value of 0.185 while the occupational health safety variable is 0.027. Comparing these two independent variables, work environment has the bigger value of Standardized Coefficients Beta and showing that work environment has major influence variable on employee productivity at PT. Hok Tong Palembang.

CONCLUSION

Hypothesis this study, stated that work environment (X_1) and occupational health safety (X_2) correlation on employee productivity (Y) at PT. Hok Tong are positive and significant. But by using data analysis, work environment (X_1) that has positive and significant influence between toward employee work productivity (Y), but evidently only occupational health safety variable (X_2) do not bring positive and significant influence to employee work productivity (Y).

Partially can be seen that the work environment variable (X_2) is the major variable that affecting employee work productivity at PT. Hok Tong Palembang.

Reviewing on this study, some suggestion should pay attention. The next research is suggested to add indicators or other variables that have not been observed or examined. From this research, work environment and occupational health safety only contribute 23,7% to work productivity, there are 76,3% other variables that may influence to Hok Tong employee productivity can be developed.

Finally, facilities and infrastructure of work environment and occupational health safety of

employees that have been considered positive by PT. Hok Tong must always be upgraded to more influence the work productivity of employees, and can be a reference for the management of PT. Hok Tong in decision making.

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