

The Effect of Training and the Implementation of Occupational Health and Safety (OHS) Systems on Employee Productivity at PT. PP. London Sumatra Indonesia Tbk Branch Office Medan

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ABSTRACT

The purpose of this research was to determine the influence of training and occupational health and safety (OHS) on employee productivity at PT. PP. London Sumatra Indonesia Tbk Medan Branch Office. Type of this research is a quantitative research that was analyzed with multiple linear regression with SPSS Statistics 22. The data source is primary and secondary collected by using some methods: observation, interview, questionnaire, and documentation. The populations in this research is 115 person, while the samples amounted 54 correspondents which is obtained with the Slovin formula. The result of this research, based on partially and simultaneous test, proved that the training and occupational health and safety (OHS) have a significant influence on employee productivity at PT. PP. London Sumatra Indonesia Tbk Medan Branch Office.

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1. Introduction

Every company always strives so that employees can achieve and improve their quality to provide maximum work productivity. A good level of employee productivity will have a positive influence on the production and operational activities of the company both at present and in the future. Productivity is a comparison between the results of work with the materials, time and energy used in producing goods or services using existing sources effectively and efficiently, but still maintaining the quality of the goods or services produced. [3]

For companies, employee productivity is very important as a measure of success in running a business because the higher the employee's work productivity, the company's profits will increase. Employee productivity is influenced by several factors, including training and employee welfare. [1]

Training is a process to improve employee competence and as a powerful means of overcoming a future business that is full of challenges and experiences rapid changes. As the technological advances and increasing competition, job training have greater benefit because every employee is required to be able to work effectively, efficiently, with good quality and quantity of work. Companies need to carry out continuous and planned training for each of their employees, both old employees and new employees, to achieve their goals. [34]

Increasing industrialization cannot be separated from the increase in modern technology. As we accept technological improvements and changes, we will also have to accept the side effects of these technologies. Therefore, apart from being given training, employees need to be given welfare in the form of occupational health and safety which will create a sense of calm and security while working. Occupational health and safety is one of effort to create a workplace that is safe, healthy, free from environmental pollution, so that it can protect and be free from work accidents, in the end it can increase work efficiency and productivity. [13] Protection of health and safety is the right for workers to get the welfare of life and to increase national production and productivity.

If there are many accidents, there will be many employees who suffer, attendance increases, production decreases, and medical costs will increase. These will all cause losses for employees and the company, because the possibility of employees being forced to stop working because of disability and the company losing employees. For this reason, occupational health and safety must be understood and applied by companies



and employees involved with good counseling and guidance so that they realize the importance of work safety for themselves and for the company. The employee's occupational health and safety program is must formulated based on legal regulations, based on fairness and is guided by the company's capabilities.

Based on the background of the problem, the researcher is interested in researching employee productivity which is influenced by training and the application of occupational health and safety with the title "The Effect of Training and the Implementation of Occupational Health and Safety (OHS) Systems on Employee Productivity at PT. PP. London Sumatra Indonesia Tbk Branch Office Medan".

2. Research Method

In this research, data were obtained by several methods as follows:

- Observation
- Interview
- Questionnaire
- Documentary Studies

The population in this research were all employees of PT. PP. London Sumatra Indonesia Tbk Medan Branch Office, amounting to 115 people. While the determination of the sample is calculated using the Slovin formula with an error rate of 10% and the resulting sample is 54 people.

3. Result of Analysis

a. Instrument Test

a. Validity Test

The validity test is used by correlating the total factor score with the total score. If the correlation of each factor (r count) is positive and the magnitude is 0.3 and above, then the factor is a strong construct so it can be concluded that the instrument has good construction validity. [32]

Table 1.
Validity Test

No.	Variable	r count	Information
1	Training (X_1)		
	$X_{1.1}$, 482	Valid
	$X_{1.2}$, 644	Valid
	$X_{1.3}$, 599	Valid
	$X_{1.4}$, 775	Valid
	$X_{1.5}$, 775	Valid
	$X_{1.6}$, 631	Valid
	$X_{1.7}$, 889	Valid
	$X_{1.8}$, 927	Valid
	$X_{1.9}$, 656	Valid
	$X_{1.10}$, 423	Valid
2	Occupational Health and Safety (X_2)		
	$X_{2.1}$, 709	Valid
	$X_{2.2}$, 850	Valid
	$X_{2.3}$, 434	Valid
	$X_{2.4}$, 762	Valid
	$X_{2.5}$, 827	Valid
	$X_{2.6}$, 659	Valid
	$X_{2.7}$, 755	Valid
	$X_{2.8}$, 564	Valid
	$X_{2.9}$, 723	Valid
	$X_{2.10}$, 392	Valid
3	Employee Productivity (Y)		
	$Y.1$, 485	Valid
	$Y.2$, 533	Valid
	$Y.3$, 585	Valid
	$Y.4$, 745	Valid
	$Y.5$, 868	Valid
	$Y.6$, 881	Valid
	$Y.7$, 897	Valid
	$Y.8$, 730	Valid
	$Y.9$, 748	Valid
	$Y.10$, 572	Valid

Source: Primary data processed, 2020

The table above shows that r count in all statements in each variable has a value greater than 0,3 so that it is stated valid.

b. Reliability Test

Table 2.
Reliability Test

Variable	Cronbach Alpha	Information
Training (X ₁)	,911	Reliable
Occupational Health and Safety (X ₂)	,908	Reliable
Employee Productivity (Y)	,920	Reliable

Source: Primary data processed, 2020

The results of reliability test are in the table above show that the three variables have a coefficient of alpha (α) > 0.6 so it can be said that the questionnaire compiled is reliable or reliable as a data collection tool in this research.

b. Classical Assumption Test

a. Normality Test

The result of Kolmogorov-Smirnov tests stated that the Asymp. value Sig. (2-tailed) is 0.169 > 0.05 so that the assumption of normality is fulfilled.

b. Multicollinearity Test

Based on the multicollinearity test with SPSS 22 resulted the VIF value of the two independent variables is 7.202 < 10, meaning that there is no multicollinearity between the independent variables in the regression model of this research.

c. Heteroscedasticity Test

The results of the heteroscedasticity test stated that the significant value of variable X₁ was 0.632 > 0.05 and variable X was 0.704 > 0.05 so that there was no heteroscedasticity.

3.3 Multiple Linear Regression Test

Multiple linear regression analysis aims to measure the strength of the relationship between two or more variables, it also shows the direction of the relationship between the dependent variable and the independent variable. This research used multiple linear regression equations because it has more than one independent variable. Following are the results of data processing using SPSS 22:

Table 3.
Multiple Linear Regression Test

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	Beta
(Constant)	0.592	2.677	
1 Training (X ₁)	0.458	0.153	0.455
Occupational Health and Safety (X ₂)	0.520	0.165	0.477

a. Dependent Variable: Employee Productivity (Y)

Source: Primary data processed, 2020

The regression table above resulted equation form:

$$Y = 0.592 + 0.458X_1 + 0.520X_2$$

This equation explains that:

- 1) The variables of training and occupational health and safety have a positive coefficient direction on employee productivity
- 2) The training coefficient gives a value of 0.458, which means that if training is done frequently, employee productivity will increase
- 3) The coefficient of occupational health and safety gives a value of 0.520 which means that if occupational health and safety are properly implemented, employee productivity will increase.

3.4 Hypothesis Test

Hypothesis testing is done to answer the hypotheses that have been made. This hypothesis testing consists of testing the hypothesis partially and simultaneously testing the hypothesis.

a. Partial Test (t test)

In a previous research by Gaddafi (2016) entitled "The Effect of Training on Employee Productivity of CV. Sinar Utama Group Pusat in Samarinda " t test results obtained that the value of sig. t count



0.034 <alpha 0.05, meaning that the training variable (X) partially has a significant effect on the employee productivity variable (Y). Then in Wahyuni et al's (2018) research entitled "The Effect of Occupational Health and Safety (OHS) on Employee Productivity at PT. Kutai Timber Indonesia " got that sig. t count of 0.00 <0.005 means that the variable occupational health and safety has a significant effect on employee productivity variables (Y).

Table 4.
Partial test (t test)

Coefficients		
Model	T	Sig.
(Constant)	0.221	0.826
1 Training (X ₁)	3,005	0.004
Occupational Health and Safety (X ₂)	3,144	0.003

a. Dependent Variable: Employee Productivity (Y)

Source: Primary data processed, 2020

From the results of data processing above, it can be seen that the training variable (X₁) shows the t value of (3.005) > t table (2.007) and a significant value (0.004) <0.05, meaning that training has a significant effect on the work productivity of the employees of PT. PP. London Sumatra Indonesia Tbk Medan Branch Office.

Then in the occupational health and safety (OHS) (X₂) variable, the t value is (3.144) > t table (2.007) and a significant value (0.003) <0.05, so it is proven that the application of the occupational health and safety system has an effect significant to the work productivity of the employees of PT. PP. London Sumatra Indonesia Tbk Medan Branch Office. Therefore, hypothesis 1 (H₁) and (H₂) are accepted.

b. Simultaneous Test (F test)

Table 5.
Simultaneous Test (F test)

ANOVA		
Model	F	Sig.
1 Regression	131,283	,000b
Residual		
Total		

a. Dependent Variable: Employee Productivity (Y)

b. Predictors: (Constant), Occupational Health and safety (X₂), Training (X₁)

Source: Primary data processed, 2020

From the results of the data processing above, it can be seen that F count (131,283) > F table (3.18) and a significant value (0,000) <0.05, so that the variables of training and occupational health and safety (OHS) together or simultaneously have a positive effect and significant to the variable work productivity of employees of PT. PP. London Sumatra Indonesia Tbk Medan Branch Office, therefore the statement of hypothesis 3 (H₃) is accepted.

c. Coefficient of Determination (R²)

Table 6.
Coefficient of Determination

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,915a	,837	,831	1,58003

a. Predictors: (Constant), Occupational Health and Safety (X₂), Training (X₁)

Source: Primary data processed, 2020

Based on the table above, it is obtained that the R square value is 0.837, meaning that training and occupational health and safety have an effect of 83.7% on the work productivity of the employees of PT. PP. London Sumatra Indonesia Tbk Medan Branch Office, while the remaining 16.3% is influenced by other variables not discussed in this research.

3.5 Effective Contribution (SE) and Relative Contribution (SR)

Table 7. SE and SR Correlations

		(Y)	(X ₁)	(X ₂)
Pearson Correlation	Employee Productivity (Y)	1,000	, 898	, 899
	Training (X ₁)	, 898	1,000	, 928
	Occupational Health and Safety (X ₂)	, 899	, 928	1,000
Sig. (1-tailed)	Employee Productivity (Y)	.	, 000	, 000
	Training (X ₁)	, 000	.	, 000
	Occupational Health and Safety (X ₂)	, 000	, 000	.
N	Employee Productivity (Y)	54	54	54
	Training (X ₁)	54	54	54
	Occupational Health and Safety (X ₂)	54	54	54

Source: Primary data processed, 2020

Table 8. Summary of Analysis Results

Variable	R square	SE (%)	SR (%)
X ₁	83.7	40.9	48.83
X ₂		42.8	51.17
Total		83.7	100

Source: Primary data processed, 2020

According to the results of the above calculations, it is known that the effective contribution (SE) of X₁ variable to Y variable is 40.9%, while SE for X₂ variable to Y variable is 42.8%. This means that the influence of X₂ variable on Y variable is more dominant than the effect of X₁ variable on Y variable so that in this research occupational health and safety (OHS) (X₂) has a greater influence on employee productivity (Y) than the effect of training (X₁) on employee productivity (Y).

Furthermore, the calculation of the relative contribution (SR) shows that the X₁ variable has an SR of 48.83% for Y variable while X₂ variable has an SR of 51.17% for Y variable. This means that X₂ variable has a more dominant influence on Y variable compared to X₁ variable on Y variable.

Based on the calculation of the effective contribution (SE) and the relative contribution (SR), it is found that the X₂ variable has a greater percentage of Y variable than X₁ variable to Y variable. So in this research it can be said that the occupational health and safety (OHS) variable is the most influential variable on the employee productivity variable of PT PP London Sumatra Indonesia Tbk.

4. Conclusion

The conclusion of the research are following:

- Training has a significant effect on the employee productivity of PT. PP. London Sumatra Indonesia Tbk Medan Branch Office. The results of this research are in match with the theory in Sutrisno's book (2016: 103) that training is one of the factors that affect employee productivity. Training is intended to equip employees with the right skills and ways to use work equipment. Training is needed not only as a complement but also to provide the basics of knowledge. Because by being given training, it means that employees learn to do something properly and precisely, and minimize or leave mistakes that have been made.
- Occupational health and safety (OHS) has a significant effect on the employee productivity of PT. PP. London Sumatra Indonesia Tbk Medan Branch Office. This is in line with the theory put forward by Irzal (2016: 1) that occupational health and safety is one form of effort to create a safe, healthy, free from environmental pollution, so that it can protect and be free from work accidents. Likewise, Rejeki (2016: 11) stated that the purpose of occupational health and safety is to protect workers for their safety rights in traveling for life welfare and increase national production and productivity, and maintain production sources so that they can be used safely and efficiently.
- Based on the results of the F test, it is proven that training and occupational health and safety (OHS) simultaneously have a significant effect on the employee productivity of PT. PP. London Sumatra Indonesia Tbk Medan Branch Office. This is match with the six indicators of employee productivity proposed by Sutrisno (2016: 104): having the ability to carry out tasks, trying to improve the results achieved, working enthusiasm to make today better than yesterday, increasing the ability to work with

self-development, trying to improve quality of work and improve efficiency. And to fulfill the six indicators, training and protection are needed for employees.

- d. Based on the calculation of the effective contribution (SE) and the relative contribution (SR), it is found that the variable X_2 has a greater percentage of variable Y than variable X_1 to variable Y. So in this research it can be said that the occupational health and safety variable (OHS) is the most influential on the variable employee productivity of PT PP London Sumatra Indonesia Tbk Medan Branch Office.

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