# ANALYSIS OF WORKING ENVIRONMENT'S EFFECT ON WORKING MOTIVATION OF EMPLOYEE'S

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**Abstract**: The company indifferent toward working environment condition will have impact on working motivation of employee. The research objective was to determine the effect of working environment on working motivation of employee either in partial or simultaneous manner. Respondents in this research were permanent employees of PT. PLN (Persero) covering South Sumatra, Jambi and Bengkulu Regions (WS2JB) branch of Palembang with magnitude of 129 employees. Proportional Random Sampling method was applied to select respondents by using Slovin formula so that sample numbers was 56 respondents. Data analysis was conducted by using double regression analysis technique. The results showed that working environment consisting of physical and non-physical working environments had simultaneous significant effect on working motivation of employee with magnitude of 84.216 (sig. 0.000). Non-physical working environment had more dominant effect on working motivation of employee with magnitude of 2.808 (sig. 0.010) than that of physical working environment with magnitude of 1.892 (sig. 0.041). Therefore, working environment had significant effect on working motivation of employee.

*Keywords: Working Environment, Working Motivation*

## 1. INTRODUCTION

Working environment is consisted of outside institutions or powers which have potential to affect organization perfomance. The environment is divided into general environment and specific environment. The general environment is anything outside organization which have potential to affect organization. This environment is consisted of social and technological conditions (Robbins, 2009). The increase or decrease of employee perfomance is highly affected by several factors, either internal factor or external factor which appear within the organization. The working motivation of employee is different between one employee with others. This is not only true for employee that have different duties or levels, but also between employee that have the same jobs. The productivity increment is very important to achieve optimal working perfomance (Sofyan, 2013). Study results of Permansari (2013) showed that working environment had positive significant effect on perfomance which mean better working environment in a company will results in higher perfomance. The good working environment will create good perfomance of employee. The availability of good working environment is very important because conducive working environment had direct effect on increasing of employee perfomance (Bachtiar, 2012).

PLN is one of State Owned Enterprises in field of electricity power business in Indonesia. Healthy condition of working environment is the environment that provides safe feeling from disturbances, either sight disturbance, hearing disturbance or unwanted sounds as well as provide working spirit and working passion. The provision of comfortable working environment will motivate working spirit which in turn increase working motivation of employee (Suprayitno and Sukir, 2007). Results of study from Hadiwijaya (2015) showed that motivation has dominant effect on increasing employee perfomance. The research objective was to determine the effect of working environment which consisted of physical working environment and non-physical working environment on working motivation of employee either in partial or simultaneous manner.

## 2. THEORETICAL BACKGROUND

### Working Environment

Working environment is consisted of outside institutions or powers which have potential to affect organization perfomance. The environment is divided into general environment and specific environment. The general environment is anything outside organization which have potential to affect organization. This environment is consisted of social and technological conditions. The specific environment is a part of environment that directly related to achievement of organization targets. Working environment is anything within environment that can affect individual or group of people either directly or indirectly in conducting their activities (Robbins, 2009).

Working environment is considered as good or proper if human can do activities in optimal, healthy, safety and comfortable manners. The impact of appropriate working environment can only be observed in long period. Moreover, poor working environment requires higher labour force and longer time as well as can not support the achievement of efficient working system design.

Working environment can be divided into two types (Sedarmayanti, 2011) as follows: a). Phsical working environment is physical condition found in surrounding of working site that can affect employee either directly or indirectly. b). Non-phsical working environment is all conditions related to working relationship, either relationship with upper level, relationship with peer workers or relationship with lower level.

### Motivation

Motivation is stimulus either from within or outside of individual which create the eagerness to conduct specific actions. Motivation appears in forms of needs, attention and willing of individual in achieving his objectives or targets. Moreover, motivation is basically has contextual meaning, intensity and direction. In working contex, working motivation is defined as power (energy) from individual that can create persistence level (endurance) and his enthusiasm in conducting activities either from within of individual (intrinsic motivation) or from outside of individual (extrinsic motivation). "The level of motivation strength from individual will determine the performed behaviour quality of individual either in learning contex, working contex or other life contex" (Richarh *in* Hadiwijaya, 2015). "The need hierarchy according to AbrahamMaslow is as follows: a). Physiological Needs, b). Safety and SecurityNeeds, c). Affiliation or Acceptance Needs, d). Esteem or Status Needs and e). SelfActulization" (Hasibuan, 2007).

## 3. THE RESEARCH METHOD

Population in this research were permanent employee of PT. PLN (Persero) covering South Sumatra, Jambi and Bengkulu Regions (WS2JB) branch of Palembang with magnitude of 129 employees. Due to limitation of the writer, this research can not be done for all population, but only part of representative population. Proportional Random Sampling method was applied to select respondents. Sample size determination as part of population is conducted by using Sloven formula approach (Umar, 2009).

$$n = \frac{N}{1 + Ne^2}$$

Where :      n   : sample size
             N   : population size
             e   : Error percentage tolerance due to sampling procedure
For research   N=   129
             e =   10%

and minimum sample size to be taken was:

$$n = \frac{129}{1 + 129(0.1)^2} = 56,33 = 56 \; Sample$$

**Data Compilation Method**
Data compilation in this research was conducted by using questioners which was distributed to respondents to obtain data related to this research. This questioners objective was to obtain data for hypothesis testing. Data compilation was conducted by distributing the questioners to employees of PT. PLN (Persero) covering South Sumatra, Jambi and Bengkulu Regions (WS2JB) branch of Palembang. The respondents were asked to fill in qustioners according to the provided instruction.

**Data Analysis**
Data analysis was conducted by using double regression analysis technique with an objective to determine the effect of one or more independent variables on dependent variable. Calculation was conducted by using statistical application software of SPSS *(Statistics for Product and Service Solution)* Version 20.0. The double regression equation was formulated as follows:

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + e$$

Remarks
Y      : Working Motivation              *a*      : Intercept/constants
$X_1$      : Phyisical Working Environment      β      : regression coefficient of independent variable
$X_2$ :      Non-Physical      Working   *e*      : Error level.
Environment

## 4.   RESULT AND DISCUSSION

**Respondent Characteristics**
Respondents in this research were permanent employee of PT. PLN (Persero) covering South Sumatra, Jambi and Bengkulu Regions (WS2JB) branch of Palembang with magnitude of 56 employees (Table 1).

*Table 1 characteristics of respondents*

| Desciption | Gender | | Age | | | | Service (Year) | | | | Education | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Men | Woment | <25 | 25-35 | 36-45 | >45 | <5 | 5-10 | 10-15 | >15 | SMA | DIII | S1 | S2 |
| **Amount** | 27 | 29 | 12 | 19 | 20 | 5 | 12 | 18 | 21 | 5 | 15 | 14 | 25 | 2 |
| **Percentage** | 48,2 | 51,8 | 21,4 | 33,9 | 35,7 | 8,9 | 21,4 | 32,1 | 37,5 | 8,9 | 26,8 | 25,0 | 44,6 | 3,6 |
| **Total** | 56 | | 56 | | | | 56 | | | | 56 | | | |

Source: personal documentation

Table 2 was provided in order to determine frequency distribution of answers related to the effect of physical working environment on permanent employee of PT. PLN (Persero) covering South Sumatra, Jambi and Bengkulu Regions (WS2JB) branch of Palembang

*Table 2 the frequency distribution of answers (%), physical work environment (X₁)*

| | Information | Strongly Agree | Agree | Less Agree | Disagree | Strongly Disagree |
|---|---|---|---|---|---|---|
| 1. | Working room area provided with cool air make you more competent in conducting your job so that it can be finished on-time | 50.00 | 44.64 | 5.36 | 0.00 | 0.00 |
| 2. | Soft working chair make you feel comfortable so that you can finish your job on-time | 3.57 | 46.43 | 37.50 | 10.71 | 1.79 |
| 3. | Working chair equipped with wheels on its legs make your movement more mobile so that you can ask or communicate with your peers easily which in turn produce close collaboration amongst employees. | 41.07 | 46.43 | 12.50 | 0.00 | 0.00 |
| 4. | Dirty facilities in your working area (table and chair) will make you feel uncomfortable in working so that you can not achieve production level as targeted by the company. | 44.64 | 42.86 | 12.50 | 0.00 | 0.00 |
| 5. | Clean floor in working area will make you feel comfortable in working so that you can achive the production level as targeted by the company. | 57.14 | 42.86 | 0.00 | 0.00 | 0.00 |
| 6. | Dirty facilities in the company (such as canteen, praying room and toilet) will make you feel uncomfortable in working so that you can not achieve production level according to the company standard. | 28.57 | 71.43 | 0.00 | 0.00 | 0.00 |

Source: Personal Documentation

Table 3 showed the frequency distribution of answer related to effect of non-physical working environment on permanent employees of PT. PLN (Persero) covering South Sumatra, Jambi and Bengkulu Regions (WS2JB) branch of Palembang.

*Table 3 the frequency distribution of answers (%), non-physical work environment (X₂)*

| | Information | Strongly Agree | Agree | Less Agree | Disagree | Strongly Disagree |
|---|---|---|---|---|---|---|
| 7. | Stress due to working problems will make you to ask the company to provide training which in turn can improve your working quality | 75.00 | 25.00 | 0.00 | 0.00 | 0.00 |
| 8. | Stress due to difficult working problems will make you feel uncomfortable in working so that you need upper level person that can help you | 3.57 | 69.64 | 26.79 | 0.00 | 0.00 |
| 9. | The relationship between employees and manager will help you in working. | 21.43 | 75.00 | 3.57 | 0.00 | 0.00 |
| 10. | The relationship amongst employees will help you in working. | 53.57 | 44.64 | 1.79 | 0.00 | 0.00 |

Source: Personal Documentation

Table 4 showed showed the frequency distribution of answers related to working motivation from permanent employees of PT. PLN (Persero) covering South Sumatra, Jambi and Bengkulu Regions (WS2JB) branch of Palembang.

291

*Table 4 the frequency distribution of answers (%) working motivation (Y)*

| | Information | Strongly Agree | Agree | Less Agree | Disagree | Strongly Disagree |
|---|---|---|---|---|---|---|
| 1 | The company gives salary/wage according to educational level and working experience | 71.43 | 25.00 | 3.57 | 0.00 | 0.00 |
| 2 | The company gives reward, salary increment, bonus and others every year. | 3.57 | 53.57 | 42.86 | 0.00 | 0.00 |
| 3 | I feel safe working in this company. | 35.71 | 57.14 | 7.14 | 0.00 | 0.00 |
| 4 | Health and old age insurances make you hold out in the company | 50.00 | 48.21 | 1.79 | 0.00 | 0.00 |
| 5 | Facilities and supporting equipments in your working place is very adequate. | 17.86 | 71.43 | 10.71 | 0.00 | 0.00 |
| 6 | Situation of working environment is good and satisfying. | 12.50 | 85.71 | 1.79 | 0.00 | 0.00 |
| 7 | Working relationship amongst employees is good. | 53.57 | 46.43 | 0.00 | 0.00 | 0.00 |
| 8 | I enjoy competition in working. | 26.79 | 58.93 | 14.29 | 0.00 | 0.00 |
| 9 | I can finish the job if I work together with other emloyees | 33.93 | 60.71 | 5.36 | 0.00 | 0.00 |
| 10 | Reward given to employees which have good achievement will create the employee working motivation. | 51.79 | 39.29 | 8.93 | 0.00 | 0.00 |
| 11 | The company give rewards for working achievement in form of bonus/incentive to employees. | 41.07 | 42.86 | 0.00 | 0.00 | 0.00 |

Source: personal documentation

The regression analysis was conducted to determine the effect level of independent variables on dependent variable either in simultaneous way or partial way.

*Tabel 5 descriptive statistics*

| Variabel | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|
| Phyisical Working Environment ($X_1$) | 24,00 | 32,00 | 28,0933 | 2,57787 |
| Non-Physical Working Environment($X_2$) | 37,00 | 50,00 | 44,0267 | 3,39198 |
| Working Motivation(Y) | 27,00 | 34,00 | 30,7467 | 2,24409 |

Source: personal documentation

The Effect of Physical Working Environment Variable ($X_1$) and Non-Physical Working Environment Variable ($X_2$) on Working Motivation. Data used for regression analysis was average value from question items for each variable. Subsequently data was quantified from ordinal scale data into ratio scale data.

*Table 6 regression analysis*

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Definition |
|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | |
| 1 | (Constant) | 23.660 | 4.146 | | 5.465 | 0.000 | |
| | Phyisical Working Environment ($X_1$) | 0.633 | 0.398 | 0.466 | 1.892 | 0.041 | Positive and Significant |
| | Non-Physical Working Environment ($X_2$) | 0.682 | 0.315 | 0.652 | 2.808 | 0.010 | Positive and Significant |

Source: personal documentation

Based on the above table, the regression equation which represent functional relationship between dependent variable and independent variables was as follows:

$$Y = 23{,}660 + 0{,}633\ X_1 + 0{,}682\ X_2$$

The constants value of 22.660 in regression equation showed that Y value will be constant with magnitude of 22.660 without the effect from independent variables. If $X_1$ variable increase by 1 unit, then Y value will increase by magnitude of 0.633. If $X_2$ variable increase by 1 unit, then Y value will increase by magnitude of 0.682.

Based on the above regression line equation, then (a). Regression coefficient of Physical Working Environment ($X_1$) had positive value of 0.633 which mean that Physical Working Environment had positive and significant effects on Working Motivation (Y). In other words, improvement of Physical Working Environment will have effect on working motivation of PLN employees. (b). Regression coefficient of Non-physical Working Environment ($X_2$) had positive value of 0.682 which mean that Non-physical Working Environment had positive and significant effects on Working Motivation (Y) so that improvement of Non-physical Working Environment will have effect on working motivation of PLN employees.

**Correlation and Coefficient of Determination**
Correlation describes the relationship degree between independent variables and dependent variable, whereas Coefficient of Determination is a magnitude which show relationship closeness level between two variables or more expressed in percent unit or how Y variation percentage can be explained by X variation.

*Table 7 result analysis and correlation coefficient of determination model summary*

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson | Definition |
|-------|---|----------|-------------------|----------------------------|---------------|------------|
| 1 | 0.905[a] | 0.828 | 0.808 | 2.30728 | 0.735 | Good |

a. Predictors: (Constant), Physical Work Environment, Non-Physical Work Environment
b. Dependent Variable: working motivation

Source: personal documentation

Based on Table 7, the Adjusted R Square value was 0.828or close to 1 which mean that Physical Working Environment and Non-Physical Working Environment variables were capable to explain almost all variations of Working Motivation variable so that the used regression model was fit or proper. Based on Adjusted R Square value, Physical Working Environment and Non-Physical Working Environment can affect Working Motivation of PLN employees by magnitude of 82.8%.

**Partial Test**
The following is table of regression coefficient which used as a base for partial test.

*Table 8 coefficients*

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------|--|-----------------------------|--|---------------------------|---|------|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 23.660 | 4.146 | | 5.465 | 0.000 |
| | Phyisical Working Environment ($X_1$) | 0.633 | 0.398 | 0.466 | 1.892 | 0.041 |
| | Non-Physical Working Environment ($X_2$) | 0.682 | 0.315 | 0.652 | 2.808 | 0.010 |

a. Dependent VariableWorking Motivation

Source: personal documentation

$t_{table}$is depend on $\alpha$ probability and *degree of freedom (df)*.Where total *df*= sample numbers – variable numbers or *df*= 56 -3 = 53. Therefore, the value of $t_{table\ (\alpha,df)} = t_{(0.05,\ 53)}= 1.67412$ by using $\alpha$=5%.

**1. Partial Test (t-Test) for Variable of Physical Working Environment ($X_1$) :**
Partial test of $X_1$on Y can be interpreted based on probability test of t-statistic (Table 8) with $t_{calculated}$1,892> $t_{Table}$ 1.67412 and sig. 0.041<0.05 which showed that variable of physical working environment had significant effect on working motivation variable. This means that physical working environment had positive and significant effects on working motivation of PLN employee.

**2. Partial Test (t-Test) for Variable of Non-physical Working Environment ($X_2$) :**
Partial test of $X_2$ on Y can be interpreted based on probability test of t-statistic (Table 8) with $t_{calculated}$ 2,808> $t_{Table}$ 1.67412 and sig. 0.010 <0.05 which showed that non-physical working environments had significant effect on working motivation variable. This means that non-physical working environment had positive and significant effects on working motivation of PLN employee.

**Simultaneous Test (F-Test) of the Effect of Independent Variables ($X_1$, $X_2$) on Y:**
Simultaneous hypothesis test was conducted to determine the simultaneous effect of independent variables on dependent variable Y by using F-test.

*Table 9 ANOVA*

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| | Regression | 886.004 | 2 | 453.002 | 84.216 | 0.000[b] |
| 1 | Residual | 196.971 | 37 | 5.324 | | |
| | Total | 1082.975 | 39 | | | |

a. Dependent Variable: Working Motivation
b. Predictors: (Constant), Phyisical Working Environment, Non-Physical Working Environment

Source: Personal Documentation

Table 9 is Analysis of Variance (ANOVA) table. This table describes regression model reliability in term of the effect of independent variables $X_1$and $X_2$ on Y variable. In order to test whether or not the linear model is appropriate, then $F_{Calculated}$ on ANOVA table should be compared with $F_{Table.}$

$F_{Table}$ is depend on $\alpha$ probability and *degree of freedom (df)*. *Degree of freedom (df)* to determine $F_{Table}$ is consisted of *df*numerator (N1) and *df*denumerator (N2) where $df_{N1}$=Numbers of Variabel-1 so that $df_{N1}$=3-1=2 and $df_{N2}$= data sample numbers – variable numbers or $df_{N2}$=56-3=53. $F_{Tabel(N1,N2)}$= F$_{(2,53)}$=3.17 was obtained by using $\alpha$=5%.

The F-test showed that value of $F_{calculated}$ 84.216 >$F_{Table}$ 3.17, whereas significant test had produced sig (P value) = 0.000 < 0.05. This showed that physical and non-physical working environment had simultaneous significant effect on working motivation of PLN employees.

**5. CONCLUSION**

The results showed that working environment consisting of physical and non-physical working environments had simultaneous significant effect on working motivation of employee with magnitude of 84.216 (sig. 0.000). Non-physical working environment had more dominant effect on working motivation of employee with magnitude of 2.808 (sig. 0.010) than that of physical working environment with magnitude of 1.892 (sig. 0.041). Therefore, working environment had significant effect on working motivation of employee.

## ACKNOWLEDGEMENTS

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