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Work Environment and the Work Discipline, Its Effects on the Employee's Performance

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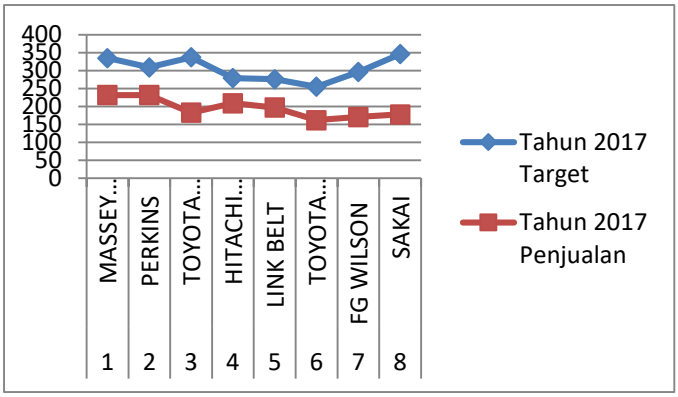
Abstract

PT Traktor Nusantara is a company that is trusted to represent 13 of the world's leading brands to meet the needs of heavy equipment in the fields of Industry, Agriculture, Power Station and Road Construction. Other than that, PT Traktor Nusantara also provides *generator sets* with the Traknus Genset brand. The employee performance of PT. Medan Nusantara Tractor has decreased every year. This is a concern for PT. Nusantara Tractor Medan to improve employee performance. The decline in employee performance was very clear during work, there were some employees who postponed work and administration, left the workplace without prior permission, often seemed unemployed during work hours and did not work on time. The employee attendance rate is also a symptom of a decrease in employee performance. Need to do study related to the problems mentioned above. This study aims to determine and analyze the affect simultaneously between work environment (X1), work discipline (X2) on employee performance (Y) PT. Nusantara Tractor Medan with the number of respondents as many as 35 people. This study uses several techniques in retrieving data namely questionnaires, observation and study documentation. In analyzing the data, this study uses 3 data analysis techniques, namely data quality testing (validity and reliability), classical assumptions testing (normality test, multicollinearity test, and heteroscedasticity test) and hypothesizing (T test, F test, and determinant coefficient). The results of study showed (1) the purpose of data quality, that all questions in the work environment questionnaire (X1), work discipline (X2) on employee performance (Y) were stated valid because each item has a greater r_{count} value than r_{table} value (0.344) and also reliable because it has a reliability value greater than 0.6. (2) testing of classical assumptions, stated that all independent variable data is work environment (X1), work discipline (X2) and and employee performance dependent variable (Y) are stated normal because they have a significance value greater than 0, 05, and also free from multicollinearity and heteroscedasticity does not occur because it has a *tolerance* value greater than 0.1 and the *Variance Inflation Factor (VIF)* value is smaller than 10. (3) in testing the hypothesis, the working environment variable (X1) is not partially affect the performance variable (Y) because it has a significance value greater than 0.05, this also occurs in work discipline variables (X2) which also partially does not affect performance (Y). The two independent variables simultaneously influence the performance of employees because it has a significance value smaller than 0.05 with a magnitude of influence of 81.9%.

Key-word: - Work Environment, Discipline, Motivation, Performance, Variance Inflation Factor

1. Introduction

Support of human resources must be seen from the number and quality of human resources, the number must be proportionate to the existing workload, so there will be no shortage or excess of human resources. Similarly, the quality of human resources must fulfil the suitable qualifications that has been required, so that all assets will be managed by a qualified human resources that are capable of producing the expected level of welfare. The management human resources must be made correctly in accordance with the norms of humanity. If in ancient times human beings or employees were considered as machines that can be done with arbitrarily for the sake of reaching the goals. Humans are not considered as human by the company and even considered as slaves that can be commanded at will. However, at this time in accordance with the human development increasingly noted and even it has been turned into an asset that needs to be heeded. This means that people must be noticed of all his needs and treated as well as possible and as well as human, human resources management should treat employees in accordance with the norms that will give a justice to the human involved. Human treatment that will provide improvements to employees to advance the company. The company also increased a sense of belonging that can improve the performance of employees. Human resource management is carried out by professional management so that expectations can be realized easily. Performance is the result of work and behaviour of work that has been achieved in resolving the tasks and responsibilities provided in a given period. From the above definitions, performance depends on the sense that the result of the working and behavior of a person in a period which can be measured from their ability to complete tasks and responsibilities that are given. PT Traktor Nusantara is a company that is believed to supply the 13 world's leading brands to fulfill the needs of heavy equipment in the fields of industry, agriculture, power generation and road construction. In addition, PT Traktor Nusantara also provides *generator sets* with a brand Traknus Genset. As part of PT Astra International Tbk and Sumitomo Corporations Japan, PT Traktor Nusantara is committed in providing innovative solutions to its customers in a comprehensive manner. Through a portfolio of businesses that include distribution, after-sales service unit (spare parts and repairs), rental units and used equipment, PT Traktor Nusantara along with its subsidiaries, PT Swadaya Harapan Nusantara continuously conduct the best in filling the needs of its customers. This year, the company got reduction of the number of production which is not suitable to the target.



One of factors that affects aperformance is the support organization which is one of the organization supports is Work environment and The discipline of work. Every company needs to pay attention to the needs of the employees by the comfortable work environment, the improvement of discipline. According to Budianto & Katini (2015; 109) work environment has a considerable contribution in the improved performance. Work environment leads to several aspects include management, organizational structure, and the description of work, freedom, the physical environment, such as the availability of places of worship, the quite comfortable rooms for work, good ventilation, security, appropriate working hours and meaningful tasks. Variations in environmental conditions are relative simple in temperature, noise, lighting, or the quality of the region that could encourage meaningful effects against the attitude and performance of employees. Besides that, the draft notice the number of working rooms, setting or layout and the level of personal power is provided, those affect performance and employee satisfaction levels. Davis (as cited in Sukadi, 2016; 6) declared a work discipline as implementation of management to strengthen the guidelines which is considered closely dependencies with the performance. The statement is supported by the opinion of Malthis and Jackson that work discipline is closely related to the behavior of the employees and in touch on performance. Based on the background above, the authors are interested in creating a

research with the title of the **Work Environment and Work Discipline, Its Affects on the Employee Performance.**

2. Methodology

Place and Time

This research was carried out in December 2018 until February 2019. This research implemented in PT. Tractor Nusantara Medan JL. Raya Tanjung Morawa km. 9.5, Bangun Mulia, Medan Amplas, Medan, North Sumatra 20149. There were 35 employees and all of them became the sample in this research.

Research Design

This research used quantitative research, in which the procedures used in this study was the correlation research (Sinulingga, 2011; 26). The meaning of correlation of the research was to look at the influence between the free variables (X) with a bound variable (Y), namely the work environment (X1), the discipline of work (X2) and Performance (variable Y).

Operational Definition

The operational definition of this study are:

No	Variable	Definition	Indicator	Scale
1	Work Environment	Sedarmayati in 2007 (as cited in Budianto and Katini, 2015) mentioned that internal work environment is a whole tool gadgets and materials at hand, work environment where a person works, the method works as well as setting in both as individuals and as a group.	Sedarmayati in 2007 (as cited in Budianto and Katini, 2015). a. Lighting b. Noise c. Air Humidity d. Air Temperature	Likert
2	The Discipline of Work	According to Singodimedjo in 2002 (as cited in Sutrisno, 2016) that the discipline of work is the attitude of willingness and readiness of a person to fulfill and comply with the norms surrounding regulations, good working discipline will quickly reach the company's goal.	According to Singodimedjo in 2002 (as cited in Sutrisno, 2016) a. Compensation Contributing Factors b. Leaders Example Factors c. Regulatory Factors d. Leadership Assertive Factor in Decision Making e. Supervision Factor f. Attention To Employees Factor	Likert
4	Performance	According to Gomes (as cited in Askolani and Ressi, 2014) "Performance is the outcomes resulting from the functioning of a particular job or activity for a given period".	According to Gomes (as cited in Askolani and Ressi, 2014) a. *Quantity of work* b. *Quality of work* c. *Job knowledge* d. *Creativeness* e. *Cooperation* f. *Dependability* g. *Initiative* h. *Personal qualities*	Likert

Technique of Collecting Data

Technique of collecting data is more dominant to primary data, this research aims to uncover the facts about the variables examined. This research used several methods, namely: questionnaires, observation, and research documentation.

Techniques of Data Analysis

Data Quality Test

One of the main problems in research activities, especially social psychology is a way of gaining an accurate and objective data. This becomes very important, this means the conclusions of research will only be credible if it is based on information that also can be trusted (Azwar, 2003).

The Validity of the Measuring Instrument

The validity is limited by the level of ability of a tool to uncover something that was subjected to principal measurement done with the tools. A tool called valid if the tool is capable of measuring anything that want to be measured, or in other words it has statutes and accuracy in performing the functions of measuring (Azwar, 2004).

Reliability

Reliability means as far the results of a measurement has benefiting, realibility, regularity, consistency, stability that can be trusted. (Azwar in Munir 2015) mention that the results of measurement can be reliable when measurement in recent times against the same subject obtained results are relatively the same. Reliability analysis of the measuring instrument using the Alpha formula (in Arikunto, 2006).

A Classic Assumption Test

Normality Test

According to Haslinda and Jamal (2016) normality test is done to see if the residual value is normally distributed or not. To better ascertain whether residual data is normally distributed or not, then statistical tests conducted in this study i.e. the histogram graph and normal graph probability plot. The shape of the histogram graph below shows that the data was distributed normal because of the shape of the normal graph and not deviated to the right or to the left.

Multicollinearity Test

According to Ghozali (as cited in Haslinda and Jamal, 2016) Multicollinearity test was used to determine whether there is a connection or correlation between independent variables. Multikolinieritas states relations between independent variables. There should not be correlation between the independent variable (Detection or no multicollinearity in the regression models can be seen from the magnitudes of VIF (*Variance Inflation Factor*) in good regression models and *tolerance*. Non regression of multicollinearity if large value < 10 and VIF values tolerance >0.10.

Heteroscedasticity Test

According to Ghozali (as cited in Haslinda and Jamal, 2016) heteroscedasticity test is done to find out if there is a regression model equations or difference of the residual variance of one observation to another observation. If the residual variance of one other observation to observation are constant, it is called homocedasticity and if they are different called heteroscedasticity. The regression model is homocedasticity. Detection of no heteroscedasticity can be seen from the least or no specific pattern on the scatterplot graph. If there is a certain pattern, then it is indicated heteroscedasticity. But if there is no obvious pattern and dots spread above and below the 0 on the y-axis, then it is not the case of heteroscedasticity.

Hypothesis Test

T-Test

According to Haslinda and Jamal, (2016) t-test basically used to find out the level of significant regression coefficients. If a significant regression coefficient that shows how far the influence of one independent variable (*explanatory*) individually explain the dependent variable. To test the hypothesis: Ho coefficient = 0. So, the step used to test the hypothesis with the t-test is as follows:

a. Define Ho and Ha
   HO: $\beta1 = \beta2 = \beta3 = 0$ (there is no significant effects between the independent variable and the dependent variable) Ha: $\beta1\ \beta2\ \beta3 \neq \neq \neq 0$ (there is significant influence between the independent variable and the dependent variable)
b. Specify the *Level of Significance* that is used by 5% or $(\alpha) = 0.05$
c. Determine the value of t (t count) see the value t count and compare it with the t table.
d. Determine the criteria of acceptance and rejection of Ho as follows: If significance < 0.05 then Ho is rejected If the significance of > 0.05 then Ho is accepted

F Test

According to Santoso (as cited in Haslinda and Jamal, 2016) regression models of significant Test or called an F test, that is, testing against the independent variables simultaneously (simultaneous) aimed to find out if all the independent variables are jointly can have an effect on the dependent variable. The F-test is done to see the influence of the variables X1, X2 and X3 variable overall against the variable Y. to test hypothesis: Ho: b = 0, then the steps that will be used to test the hypothesis with the F test is as the follows:

a. Define Ho and Ha Ho: E1 = 0 (there is no significant effects between the independent variable and the dependent variable) Ha: 11 ≠ 0 (there is significant influence between the independent variable and the dependent variable)
b. Specify the Level of Significance Level of Significance that is used by 5% or (α) = 0.05
c. See the value of F (F count)
   See F count by looking at the output (table anova) comparing with 22 and SPSS F table.
d. Determine the criteria of acceptance and rejection of Ho, by seeing the level of probability: If Significance < 0.05 then Ho is rejected. If the significance of > 0.05 then Ho is accepted.

Determination Coefficient Test

According to Haslinda and Jamal (2016) the coefficient of determination (R2) essentially measures how much the ability of the model in explaining the variation of variables is bound. The value of the coefficient of determination is between zero and one. The right value of R2 means the ability of independent variables in explaining the variation in the dependent variable is very limited. A value that approximates the one means of independent variables provides almost all of the information needed to predict the variation in the dependent variable.

3. Result and Discussion

To obtain a proof of the hypothesis, then analysis and testing data must be done. There are several steps that are guaranteed to get the proof of such hypotheses are:

Validity of a Work Environment Variables (X1)

There are several phases in testing the validity, they were:

a. The determination of the value of n (number of Respondents)
   In this research, the value of n (number of Respondents) was 35 People
b. Determination of *Degree of Freedom* Value (Df)
   To find out the value of the *Degree of Freedom* (Df) using the formula Df = n – 2. In this study, the value of Df = 35 – 2 = 33
c. Determination of the values α
   This research used a value of α = 5%
d. The determination of the value of r_{table} through table r *product moment*
   Through the tables r *product moment*, the value of r_{table} on this research was 0.344.

Based on the steps that have been made, then the work environments variable, all grains are declared valid.

Validity of the Work Discipline (Variable X2)

There are several phases in testing the validity of, they were:

a. The determination of the value of n (number of Respondents)
   In this study, the value of n (number of Respondents) was 35 People
b. Determination of Value of *Degree of Freedom* (Df)
   To find out the value of the *Degree of Freedom* (Df) using the formula Df = n – 2. In this study, the value of Df = 35 – 2 = 33
c. Determination of the values α
   This research used a value of α = 5
d. The determination of the value of r_{table} through table r *product moment*
   Through the tables r *product moment*, the value of r_{table} on this research was 0.344.

Based on the steps that have been made, then the variable work discipline, all grains are declared valid.

Validity of the Performance Variables (Y)

There are several phases in testing the validity of, they are:

a. The determination of the value of n (number of Respondents)
   In this study, the value of n (number of Respondents) was 35 People
b. Determination of Value of *Degree of Freedom* (Df)

To find out the value of the *Degree of Freedom* (Df) using the formula Df = n – 2. In this study, the value of Df = 35 – 2 = 33

c. Determination of the values α
   This research used a value of α = 5%
d. The determination of the value of r_{table} through table r *product moment*
   Through the tables r *product moment*, the value of r_{table} on this research was 0.344.

Based on the steps that have been made, then the variable work environments, all grains are declared valid.

Reliability Test of Work Environment Variables (X1)

From the results of the calculations through the *Software SPSS version 20*, then it was gotten the value of reliability for variable work environments (X1) was reliable and noted 0.752.

Reliability Test of Variable Work Discipline (X2)

From the results of the calculations through the *Software SPSS version 20*, then the value of variable for reliability work disciplines (X2) was reliable and noted 0.752.

Reliability Test of Variables Employees' Performance (Y)

From the results of the calculations through the *Software SPSS version 20*, then the value of variable for the reliability of performance of the employees (Y) was reliable and noted 0.752.

Normality Test

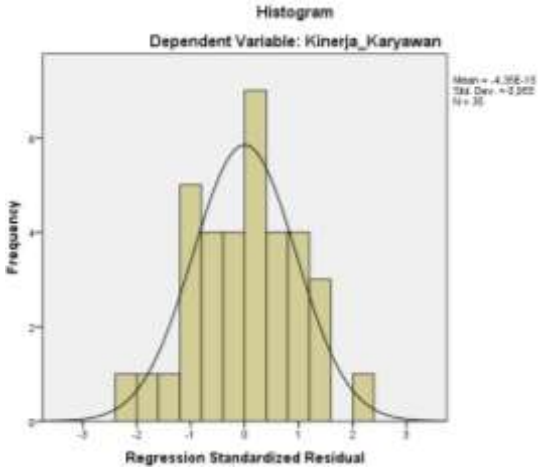
Normality test was done through the data average *kolmogorov – smirnor* to all the variables by using the *Software SPSS version 20.*

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		35
Normal Parameters[a,b]	Mean	0E-7
	Std. Deviation	3,16993203
Most Extreme Differences	Absolute	,066
	Positive	,048
	Negative	-,066
Kolmogorov-Smirnov Z		,389
Asymp. Sig. (2-tailed)		,998

a. Test distribution is Normal.
b. Calculated from data.

From the results of the calculation, it was obtained a value of *Significance* was 0.998. This value was greater than 0.05 which means data was normal. Besides doing a test with *Kolmogorov Smirnov*, the test also done by raising histigram and P-Plots through *the Software SPSS version 20.* As can be seen in the figure below.



Hypothesis Test

The Correlation Analysis

Analysis of the correlation is the analysis to measure the degree of relationship between free variables with variables bound. The result of correlation test is as follows:

a. Work Environment Variables (X1) has the significant value 0 < 0.05 and value of r_{count} (0.745) > r_{table} (0.344). This means that there is a significant correlation between the variable work environments (X1) and employee performance variables (Y).

b. Variable Work Discipline (X 2) has the significant value 0 < 0.05 and value of r_{count} (0.832) > r_{table} (0.344). This means that there is a significant correlation between the variables work discipline (X 2) and performance variables (Y).

T-Test

T-test was conducted to know the influence of each variable against free variables with bound variables. Criteria in conducting T-test is by comparing the value $t_{calculate}$ and value $t_{table.}$. On this research with a number of respondents (n) = 35, it was obtained a value of *degree of freedom (df)* = n-2 = 33. and use α = 5%, then the value t_{table} of 2.035. Based on the value of significance, if the value of significance smaller than 0.05 so Ho is accepted, if the value is greater than 0.05 significance then Ho is accepted. Based on a comparison of t_{count} with the $t_{table,}$ if $t > t_{count\ table}$, then Ho was rejected, when in $t_{count} < t_{table,}$ then Ho accepted. Following are the free variables of T test results against bound variables.

Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	(Constant)	-4,069	7,283		-,559	,580
	Work Environment	,135	,084	,178	1,606	,118
	Work Discipline	,460	,307	,212	1,499	,144

a. Dependent Variable: Work Performance

Multiple Linear Regressi Test

This test is used to assess how things are going (downs) the dependent variable, when two or more independent variables as predictors of manipulated factors.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-4,069	7,283		-,559	,580
Work Environment	0,135	0,084	0,178	1,606	,118
Work Discipline	0,460	0,307	0,212	1,499	,144

From the table above, the value a = -4.069, b1 = 0.135, b2 = 0.46, b3 = 0.555. Then multiple linear equations regression in this research are as follows:

Y =-4.069 + 0, 135X1 + 0, 460X2 + 0, 555X3.

F Test

The F-test is done to find out the influence of free variables are simultaneously against bound variables. Criteria in conducting a test to compare the value of F is $F_{calculate\ the}$ value $F_{table.}$. When $F_{count} < F_{tables,}$ then Ho is accepted, but if $F > F_{calculate\ the\ table}$ then Ho is rejected based on the significant value, if the significant value is smaller than 0.05 so Ho is rejected, when a value greater than 0.05 then Ho is accepted. Following are the results of the Test F free variable against variables bound.

Model		**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
1	Regression	1729,095	2	576,365	52,297	,000[b]
	Residual	341,648	31	11,021		
	Total	2070,743	34			

a. Dependent Variable: Kinerja_Karyawan

b. Predictors: (Constant), Lingkungan_Kerja, Disiplin_Kerja

From the results of the data processing, it was obtained that the significant value was 0.0. it was smaller than 0.05 and based on the value of F_{count} was greater than the 52.297 F_{table} of 2.9. The analysis of these two, then Ho was rejected, meaning that there were free variables simultaneously affecting bound variables. To improve the performance of the employees of PT. Traktor Nusantara, then it also should be improved the work environment, and work discipline.

Determination Coefficient Test

To find out how big the work environment and work discipline affect the performance of the employees of PT. Traktor Nusantara Medan, it needs to be calculated the value of the *adjusted R Square* through the *Software SPSS version 20*. Following are the results of the calculation of the value of the *adjusted R Square* through the *Software SPSS version 20*.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,914[a]	,835	,819	3,31977

a. Predictors: (Constant), work environment, work discipline

b. Dependent Variable: work performance

The value of the *Adjusted R Square* in the table above of 0.819 or 81.9%. These conditions explain that 81.9% work environments and work discipline variables had the effect significantly to the performance of the employees of PT. Traktor Nusantara Medan. The rest of 18.1% was affected by other variables not examined in this study. This means that some of the many factors supporting the performance of the employees of PT. Traktor Nusantara Medan, work environment and work disciplined affect the performance of the most that was 81.9%.

3. Conclusions

From the results of research and discussion above, it can be concluded that the work environment and work discipline influence the performance of employees at PT. Traktor Nusantara Medan.

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