

Work Discipline and Physical Work Environment That Affect Employee Performance at Integrated Operating Center Unit - Region 3 (IOC-R3) PT.Telekomunikasi Indonesia

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ABSTRACT

The purpose of this study was to see the effect of Work Discipline and Physical Work Environment on Employee Performance in the Integrated Operation Center regional 3 West Java (IOC-R3 WEST JAVA) PT.Telekomunikasi Indonesia. Sampling using census techniques, where the entire population is used as the research sample. Distribution of questionnaires and get 91 respondents as a sample. The research data analysis was carried out by first testing the research instrument followed by the classical assumption test and ending with multiple linear regression analysis. The results of research on work discipline and physical work environment partially influence the performance of employees of PT. Telkom Indonesia, Integrated Operation Center Regional 3, West Java. Work discipline and physical work environment simultaneously affect the performance of employees in the operational division of PT. Telekomunikasi Indonesia unit IOC-R3 WEST JAVA.

Keywords

Work discipline, work environment, employee performance

Article Received: 18 October 2020, Revised: 3 November 2020, Accepted: 24 December 2020

Introduction

In every company, it is necessary to have an order that regulates how a company's business processes run. This is necessary to maintain the company's continuity in achieving the stated goals.

In this case, a management process is required. According to Hasibuan (2019), Management is "the science and art that regulates the process of utilizing human resources effectively and efficiently to achieve certain goals". In the process, management consists of several elements, namely: man, money, method, machine, materials, and market, abbreviated as 6M.

This "man" (human) element develops into a management science called human resource management. Human resources are the core factor of a company, which regulates all activities based on various company visions and missions. Employees as capital for the company, act as planners, implementers and controllers who always play an active role in realizing the company's goals. Good quality and professional human resources tend to have good performance.

PT Telekomunikasi Indonesia. Tbk (Telkom) is a state-owned company (BUMN) engaged in information and communication technology (ICT) services and telecommunications networks in Indonesia. Telkom Group implements a customer-oriented business strategy and company operations. This transformation will make the Telkom Group organization more lean and agile in adapting to changes in the telecommunications industry which are taking place very rapidly.

West Java Regional 3 Integrated Operation Center (IOC-R3 WESTJAVA) is one of the units that handles disruption handling and service integration at PT. Telkom regional 3 (West Java). In which there are several sub-units including indihome solver, voice solver, Wi-Fi, top priority customer (TPC), fulfillment, manage service operation (MSO), surveillance and First call resolution (FCR).

Authors obtained data on employee performance achievements from the performance manager as follows:

Table 1. Employee performance of PT. Telkom unit IOC-R3

Variables	2018		Year 2019		2020	
	Target	Actual	Target	Actual	Target	Actual
Number of Nuisance Tickets (Q)	4%	4%	4,5%	5,8%	5%	6,2%
Time To Resolved (1 day)	70,25%	76%	70,75%	73,5%	71,25	72%
Repeated Nuisance	5,5 %	5,2%	5,25 %	5,3%	5 %	5,43%

Source: Manager performance

Description: The numbers highlighted in green is above target, highlighted in Red is below target

- actual Number of Nuisance Tickets getting below (<) target, the better
- actual Time to Resolved. the higher above (>) target, the better
- actual Repeat Interference the lower range below (<) the target, the better

From Table 1, it can be concluded that the target has increased every year but the realization has

not been achieved in the last two years in terms of the variable number of disturbances and re-disturbances that exceed the company's target. Therefore, the "time to resolved" term has met the target but decreasing yearly.

The authors have obtained employee discipline data from the human resource manager as shown below:

Table 2. PT.Telkom IOC-R3 unit employee's absence and late attendance record

Year	Number of Employee	Numbers of Late Attendance	Numbers of Absence (With Permission State)	Numbers of Warning Letters
2018	83	15 %	9 %	4%
2019	93	18,9%	12,4%	6%
2020	91	22,8%	18 %	11%

Source: Manager human resource

From Table 2, number of late attendance increases each year, and number of employees requesting permission to not attend the office reaches 18% in 2019. Meanwhile, employees who receive warning letters due to disciplinary matters have increased every year.

Furthermore, to find out the possible causes of the problems in PT. Telekomunikasi Indonesia, the regional integrated operation center unit 3 West Java (IOC-R3 WESTJAVA), based on data from the human resource manager, the researcher conducted a pre-survey by distributing questionnaires to several employees (a total of 30 TOS), receiving results as follows:

Table 3. Factors that affect Unit IOC-R3 West Java employee's performance

Variables	Number of Respondents	Number of Respondent's Answer	Percentage of Respondent's Answers
1 Work Discipline	30	10	33%
2 Organizational Culture	30	7	10%
3 Leadership	30	5	17%
4 Motivation	30	5	17%
5 Physical Working Environment	30	3	23%

Source: Pre-survey

The pre-survey results show that the factors which influence PT.Telekomunikasi Indonesia employee's performance at the regional

integrated operation center unit 3, West Java (IOC-R3 WESTJAVA) is a regarding the work discipline with a percentage of 33% and

environmental variables of 23%. From this conclusion, authors attempt to put “work discipline” and “physical work environment” to be set as variables.

Literature Review

Definition of Work Discipline

Work discipline considered as one of the important HR operative functions. Work discipline essentially grows and emanates from the awareness of the employees themselves. Work discipline that does not originate from within the employee will result in weak discipline and will not last long. This will reflect employee's sense of responsibility for their duties in order to achieve company goals.

According to Singodimedjo in Edy Sutrisno (2016), whom stated "Work discipline is an attitude of a person's willingness and willingness to obey the prevailing regulatory norms around."

Dimensions of Work Discipline

Basically, there are many indicators that affect the employee's work discipline level inside an organization. Singodimejo in Edy Sutrisno (2016), work discipline is divided into four dimensions, including:

1. Obeying the rules of time
2. Obey and loyal to company regulations
3. Compliance the rules of conduct at work
4. Obeying other regulations

Definition of Work Environment

Work environment is an important component for employees in doing their duties. It will influence employee's enthusiasm or morale.

According to Sutrisno (2016), he defines the work environment as the following definition: "The 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, cleaning, lighting, tranquility, as well as working relationships between the people who are there".

It can be concluded that the work environment is a condition at the workplace (physically and non-physically) which give a pleasant impression, secure employees in carrying out duties.

Dimensions of the Work Environment

There are several factors affecting employee's physical work environment (Sedarmayanti, 2017), including:

- a. Air temperature at work.
- b. Air source.
- c. Work Facilities.
- d. Job security.

Definition of Employee Performance

Every organization has activities to determine the level of success of the planned work. These activities can be measured based on an assessment of employees' performances. Based on Mangkunegara (2016), employee performance explained as follow"

"Employee performance (work performance) is the result of work in quality and quantity achieved by an employee in carrying out his duties in accordance with the responsibilities that has been assigned to."

The definition of performance according to the experts, it can be concluded that performance is the motivation of someone whom given support by the organization to achieve the final results of the work displayed from the work process which consists of achievement, performance, and task implementation.

Dimensions of Employee Performance

According to Mangkunegara (2016), the dimensions and performance indicators used as operational variables in research on the influence of employee performance are as follows:

1. Quantity
 - a. Get work done on time
 - b. Doing work with satisfactory results
2. Quality
 - a. Neatness in doing work
 - b. Accuracy in doing work

3. Cooperation

- a. Collaborate with leaders and colleagues
- b. Solidarity in working with other employees

4. Responsibility

- a. Responsibility for work results
- b. Responsibility in using work facilities and infrastructure.
- c. Responsibility when making decisions.

Hypothesis

Hypothesis is a temporary answer to the formulation of a research. It is said temporarily because the answers given are only based on theories, relevant literature and then used as references.

In this case, the hypothesis is as follows:

1. Work Discipline effects partially on employee performance at PT. Indonesian Telecommunication Unit IOC-R3 WESTJAVA.
2. Physical Work Environment partially influences the employees' performances at PT. Indonesian Telecommunication Unit IOC-R3 WESTJAVA.
3. Work discipline and physical work environment simultaneously influence employees' performances at PT. Indonesian Telecommunication Unit IOC-R3 WESTJAVA.

Methodology

In this research, we are using descriptive and verification methods. Through descriptive research, it can be obtained descriptive from the formulation of the first, second, and third problems regarding human resource planning, division of labor and employee performance at PT. Telekomunikasi Indonesia, integrated operation center regional unit 3, West Java (IOC-R3 WESTJAVA).

Meanwhile, verification method used to determine the correlation between two or more variables (Sugiyono, 2017). This method is also used to test the effect or form of a causal relationship from the problem being investigated or proposed in the hypothesis. Research verification aims to answer the fourth problem formulation, namely to

determine how much influence human resource planning of PT. Telekomunikasi Indonesia, the regional integrated operation center unit 3 West Java (IOC-R3 WESTJAVA), both simultaneously and partially.

Arikunto (2013), if the population is less than 100 people, then the total sample is taken as a whole, but if the population is greater than 100 people, 10-15% or 20-25% of the population can be taken.

The whole employee in PT. Telekomunikasi Indonesia is considered as population for this research (in integrated operation center regional unit 3, West Java (IOC-R3 WESTJAVA). Sampling using census techniques, where the entire population is used as the research sample. Distribution of questionnaires and get 91 respondents as a sample. The research data analysis was carried out by first testing the research instrument followed by the classical assumption test and ending with multiple linear regression analysis.

Authors used Likert scale for this research.

Table 4. The weight of the Likert scale answer criteria

Symbol	Description	Numbers
SS	Very Agree	5
S	Agree	4
KS	Less Agree	3
TS	Disagree	2
STS	Totally disagree	1

Results and Discussion

Table 5. Characteristic of research respondents

Sex	Frequency	Percentage
Male	77	85%
Female	14	15%
Total	91	100%
Educational Degree	Frequency	Percentage
High School	15	17%
Diploma	23	25%
Bachelor	53	58%
Total	91	100%
Position	Frequency	Percentage
Solver Indihome	24	26%
Solver Voice	8	9%
Wi-Fi	7	8%

Top Priority	18	20%
Customer (TPC)	8	9%
Fulfilment	8	9%
Manage Service	9	10%
Operation (MSO)	9	10%
Surveillance	9	10%
First Call	9	10%
Resolution (FCR)	91	100%
Total		

Source: Results of primer data processing, 2020

Validity and Reliability Test

This validity test uses Pearson correlation method with the criteria as follow:

If $r\text{-count} < r\text{-table}$ = invalid, whereas if $r\text{-count} > r\text{-table}$ = valid, which means the $r\text{-table}$ value used with a significance of 5% (0.05) and $dk = n - 2 = 91 - 2 = 89$ is 0.206.

The $r\text{-count}$ value is gathered by seeing the correlation between each item and the total score. The results are as follows:

Reliability test can be carried out jointly on all question items by using Cronbach's Alpha test. So, when *Cronbach's Alpha value* was > 0.60 , then it was reliable. The result shown in the table below:

Table 6. Validity and reliability test results

Variable	R-Count	R-Table	Information	Cronbach's Alpha	Information
X1.01	0,619		Valid		Reliable
X1.02	0,677		Valid		
X1.03	0,649	0,206	Valid	0,656	
X1.04	0,653		Valid		
X1.05	0,436		Valid		
X1.06	0,607		Valid		
X2.01	0,751	0,206	Valid	0,834	Reliable
X2.02	0,743		Valid		
X2.03	0,764		Valid		
X2.04	0,807		Valid		
X2.05	0,812		Valid		
Y.01	0,692	0,206	Valid	0,772	Reliable
Y.02	0,768		Valid		
Y.03	0,654		Valid		
Y.04	0,744		Valid		
Y.05	0,662		Valid		
Y.06	0,583		Valid		

Source: Results of data processing, 2020

Classical Assumption Test Results

Before conducting the effect test with multiple linear regression analysis regarding work discipline and physical work environment that affect employee performance in the operational division of PT. Telekomunikasi Indonesia, unit IOC-R3 WESTJAVA, there are several classic assumption tests, namely multicollinearity testing

Multicollinearity Test

In this study, to determine a free regression model of multicollinearity, it is done by examining the tolerance value and Variance Inflation Factor (VIF).

The data has no multicollinearity problem if the VIF (Variance Inflation Factor) number is less than 10 and the tolerance number is more than 0.1. The results are shown in the table below:

Table 7. Multicollinearity test results
Coefficients

	Model	Non Standard Coefficients		Standard Coefficients	t	Sig.	Collinearity Stats	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	7,982	2,616		3,051	,003		
	Work Discipline (X1)	,289	,108	,263	2,669	,009	,787	1,271
	Physical Work Environment (X2)	,456	,112	,402	4,085	,000	,787	1,271

From the multicollinearity test results in Table 7, we found out that the work discipline and the physical work environment variable's tolerance value is 0.787, which is greater than 0.10. Meanwhile, the VIF value obtained is 1.271.

It is concluded that there is no multicollinearity problem in this regression model. Thus, these results meet the prerequisites for multiple linear regression testing.

Multiple Linear Regression Analysis

To determine the effect of work discipline and work environment on employee performance in the operational division of PT. Telekomunikasi Indonesia unit IOC-R3 WESTJAVA, authors used Multiple linear regression analysis which generate results as follow:

Table 8. Multiple linear regression analysis

	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7,982	2,616		3,051	,003
	Work Discipline (X1)	,289	,108	,263	2,669	,009
	Physical Work Environment (X2)	,456	,112	,402	4,085	,000

Source: Results of data processing, 2020

According to the result in Table 8, the following regression model equation is obtained:

$$Y = 7,982 + 0,289X_1 + 0,456X_2$$

From this equation, the regression coefficient value of the work discipline variable (X1) obtained is 0.289 and the Physical Work Environment variable (X2) is 0.456. Both regression coefficient values have positive values. This indicates that those two variables have a positive effect on employee performance in the operational division of PT. Telekomunikasi Indonesia unit IOC-R3 WESTJAVA.

In other words, the better work discipline and physical work environment in the field, the better the employee's performance will be.

Coefficient of Determination (R^2) and Correlation Coefficient (R)

Correlation and Determination coefficients are used to measure the amount of influence the

independent variables ("work discipline" and "physical work environment") regarding the dependent variable.

The coefficient of determination gained by examining the value of R-Square, meanwhile the value of the correlation coefficient is indicated by the value of R.

The results are shown in Table 9:

Table 9. Test results of the determination coefficient and the correlation coefficient

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,573 ^a	,329	,313	2,24395

Source: Results of data processing, 2020

Based on Table 9, the value of R-Square obtained is 0.329 or 32.9%, which means 32.9% of the employees' performance in the operational division of PT. Telekomunikasi Indonesia unit

IOC-R3 WESTJAVA is influenced by work discipline and Physical Work Environment.

Meanwhile, the remaining 67.1% (100% - 32.9%) are affected by variables beyond this research. In

addition, the multiple correlation coefficient value obtained is 0.573 which lies between 0.40 - 0.59 in the medium category. This concluded that the correlation between work discipline and Physical Work Environment is moderate

Table 10. Hypothesis test results with 't' test

		Coefficients ^a			t	Sig.
Model		Unstandardized Coefficients	Standardized Coefficients			
		B	Std. Error	Beta		
1	(Constant)	7,982	2,616		3,051	,003
	Work Discipline (X1)	,289	,108	,263	2,669	,009
	Physical Work Environment (X2)	,456	,112	,402	4,085	,000

According to Table 10, the t-count value for the work discipline variable is 2.669 with a significance level of 0.009 and the t-value for the Physical Work Environment variable is 4.085. This conclude that the t-value of the two independent variables is greater than the t-table value (2.669 and 4.085 > 1.987). On the other side, the significance value of these two independent variables is <0.05 (0.009 and 0.000 < 0.05). Thus, the first hypothesis (H1) which states "Work discipline has a partial effect on employee performance" and the second hypothesis (H2) which states "Physical Work Environment partially affects the employees' performance" achieved.

Simultaneous Hypothesis Testing (Test F)

Simultaneous hypothesis test is used to determine whether independent variables and dependent variables influenced each other by testing them at the 0.05 significance level.

We gathered 91 respondents (n = 91) while the research variables were 3 (k = 3). With a significance of 0.05, the F-table value can be determined using the degree of denominator (df1) = k - 1 and (df2) = n - k. After that, we obtained df1 = 2 and df2 = 88. So that the F-table value can be found using *Microsoft Excel* with the formula *Insert Function*

$$F_{\text{tabel}} = \text{FINV}(\text{probability}; \text{deg_freedom1}; \text{deg_freedom2})$$

$$= \text{FINV}(0,05; 2; 88)$$

$$= 3,100$$

Then, the results of hypothesis testing are presented in Table 11:

Table 11. Hypothesis Test Results with F Test ANOVA^a

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	216,847	2	108,423	21,533	,000 ^b
Residual	443,109	88	5,035		
Total	659,956	90			

According to Table 11, the F-count value of the work discipline and the Physical Work Environment variable is 21.533 with a significance level of 0.000. This shows that the F-count value is greater than the F-table value (21.533 > 3,100) and the significance value achieved is <0.05 (0.000 < 0.05). So then, the third hypothesis (H3) which states "Work discipline and physical work environment simultaneously affect the employees' performance" achieved.

Conclusion

Conclusion

After conducting a research and gaining results from various test, the following conclusions can be drawn:

1. The result achieved by testing the first hypothesis proved that work discipline has partially effecting employee performance in the operational division of PT. Telekomunikasi Indonesia unit IOC-R3 WESTJAVA. This is evidenced by the value of tcount 2.669 > table 1.987 and also prove

that the employee's performance will raise along with employee's work discipline raise.

2. The results of testing the second hypothesis prove that physical work environment partially influences the employees' performance in the operational division of PT. Telekomunikasi Indonesia unit IOC-R3 WESTJAVA. This is also proved by the value of t-count which is $4.085 > t \text{ table } 1.987$. The test results conclude that an employee's physical work environment will raise employee's performance in the operational division of PT. Telekomunikasi Indonesia unit IOC-R3 WESTJAVA.
3. From the third hypothesis test's result, it is proved that work discipline and physical work environment simultaneously affected employees' performance of operational division at PT. Telekomunikasi Indonesia unit IOC-R3 WESTJAVA. This is evidenced by the Fcount value which is $21.533 > F \text{ table } 3,100$. So then the correlation between work discipline and physical work environment on employee performance in the operational division of PT. Telekomunikasi Indonesia unit IOC-R3 WESTJAVA is a moderate correlation.

This data obtained based on the multiple correlation coefficient which has value of 0.573, this value lies between 0.40 - 0.59. In addition, the coefficient of determination (R-Square) obtained is 0.329 or 32.9%, which means 32.9% of the performance of employees in the operational division of PT. Telekomunikasi Indonesia unit IOC-R3 WESTJAVA is influenced by work discipline and physical work environment. While the remaining 67.1% ($100\% - 32.9\%$) is influenced variables that are not in the research.

Suggestions

The suggestions that the author can convey in this study are as follows:

1. In the variable "work discipline", it is found that many employees are late and do not attend the office with permission. Thus, researchers suggest companies to impose reward and punishment for employees.
2. In the variable "physical work environment", the lowest average value of respondents' responses was obtained on the statement "I always participate in the activities organized

by the company". Thus, researchers suggest employees in the operational division of PT. Telekomunikasi Indonesia, the IOC-R3 WESTJAVA unit, is more active in participating in activities organized by the company so that it will also improve the performance of these employees.

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