

The Effect of Work Discipline on Employee Productivity

Friska Juliana Hutauruk¹, Rahim Matondang², Sugiharto Pujanggoro³

^{1,2,3} Magister Teknik Industri, Universitas Sumatera Utara, Indonesia

Abstract. The workforce has an important role in increasing production at PT. XYZ. The contribution of labor is interpreted into the resulting productivity. Therefore, it is important to know what variables can affect labor productivity. In this study using work discipline variables to see its effect on employee productivity. The results obtained that work discipline has a positive and significant effect on employee productivity, which is 66.70% and 33.30% possibility of being influenced by other variables not included in this case.

Keyword: Workface, Employee Productivity, Work Discipline

Abstrak. Tenaga kerja memiliki peran penting dalam meningkatkan produksi di PT. XYZ. Kontribusi tenaga kerja dimaknai ke dalam produktivitas yang dihasilkan. Oleh karena itu, penting untuk mengetahui variabel apa saja yang dapat mempengaruhi produktivitas tenaga kerja. Dalam penelitian ini menggunakan variabel disiplin kerja untuk melihat pengaruhnya terhadap produktivitas kerja karyawan. Hasil penelitian diperoleh bahwa disiplin kerja berpengaruh positif dan signifikan terhadap produktivitas kerja karyawan, yaitu sebesar 66,70% dan 33,30% kemungkinan dipengaruhi oleh variabel lain yang tidak termasuk dalam kasus ini.

Kata Kunci: Tenaga Kerja, Produktivitas Tenaga Kerja, Disiplin Kerja

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1. Introduction

Productivity is a vital component of a company. It is said to be vital because productivity is the main factor determining the company's stability. Productivity in theory focuses on the comparison between outputs produced with any input that becomes a production resource. One of them is the workforce. The costs incurred become part of the input to produce the desired output by each organization [8]. This also applies to PT. XYZ. PT. XYZ is a logistics company that is quite large and has many competitors. The resulting performance or productivity is certainly at stake for the good name of the company. PT. XYZ itself targets a productivity level of 95%-100%. However, of all the costs that have been spent not in accordance with the desired results. As in January the productivity of this organization was 87.10% or Rp. 0.87/Rp. This value means that everyone rupiah of the value of the labor used would get an output of Rp. 0.87

*Corresponding author at: Jl. Almamater, USU, Medan, 20155, Indonesia

E-mail address: friskajuliana@student.usu.ac.id

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[8]. Therefore, it is necessary to conduct research in order to find out what factors may affect labor productivity at PT. XYZ. It is known that during field observations it was found that some employees did not wear a complete uniform while working. According to [9] the incomplete use of uniforms is a violation of work discipline in a company. In addition, from a theoretical search, the variable that is thought to have a considerable influence on labor productivity at PT XYZ is work discipline [1] [2] [5] [7] [9].

2. Methods

The research location is at PT. XYZ Medan, North Sumatra. The total workforce is 76 people. It will take a long time to conduct interviews with the entire workforce and to avoid snowball, it is simplified by taking several people to be used as samples from a representative population. The sample used in the study was determined by a sampling technique, namely probability sampling. This technique is divided into 3 types and the research uses Simple Random Sampling. This type of sampling technique is carried out randomly regardless of the level in the population. Because the population in this study is known, the Yamane formula is used to calculate the number of samples [6]. And the number of samples used in this study is shown in Formula's (1)

$$N = \frac{n}{1+n(e)^2} = \frac{76}{1+76(0,05)^2} = 64 \text{ orang} \quad (1)$$

Which N = Sample; n = Population; e= error = 0,05.

Next is the validity and reliability testing to see the validity and consistency of the questionnaire instrument. Furthermore, when all the data is collected, it is continued with the classical assumption test (normality test, heterocodastisity test and multicollinearity test). Then the data is tested for hypotheses using the coefficient of determination test, t test and F test. Each data analysis process uses SPSS version 23 software [3] [6].

3. Theory

- Employee Productivity

Labor productivity is the ability of workers to produce products. The output of labor is the result of production work. And the input of labor is the required production time. Production and Productivity are two different things. Production itself is a component of any productivity effort, in addition to quality and output [8].

- Work Discipline

Work discipline is an operative management activity when applying the standards of a company. Work discipline is the main thing in determining optimal target achievement. The purpose of discipline is not based on the provision of punishment, but can be in the

form of training to improve and shape character and attitudes in accordance with organizational standards [4] [5] [7].

- Relationship between Work Discipline and Productivity

Based on previous research, the amount of labor productivity is influenced by work discipline. This influence is positive and significant [1] [2] [4] [5] [7] [9].

4. Indicator

- Work Discipline Indicator

The indicators used in this study for work discipline are attendance, attitude, responsibility and norms [1] [2] [9].

- Employee Productivity

The indicators used in this study for labor productivity are ability, improving quality, increasing targets achieved, and efficiency [5] [9] [10].

5. Results and Discussions

- Validity Test and Reliability Test

This test is very important to do before proceeding to the data processing stage. This test aims to test how the feasibility of the existing questionnaire instruments in the study. This type of validity test is carried out using Pearson's correlation theory. And the results obtained are all questions on each variable are declared valid with a significance of 0.000 and $r_{count} > r_{table}$ 0.2461. To see the level of reliability based on the Cronbach alpha theory, a reliability test was carried out. The value of determined in the study was 0.8. And it was found that the questionnaire instrument used was reliable because its reliable test value was 0.901 on the work discipline variable and 0.917 on the labor productivity variable. So that the data collected deserves to be processed further.

- Normality Test

This type of testing is intended to test the data used (variable x and variable y) are normally distributed or not. It is said to be normal if the significance level value is > 0.05 . The normality test is carried out by histogram analysis and Normal Probably Plot.

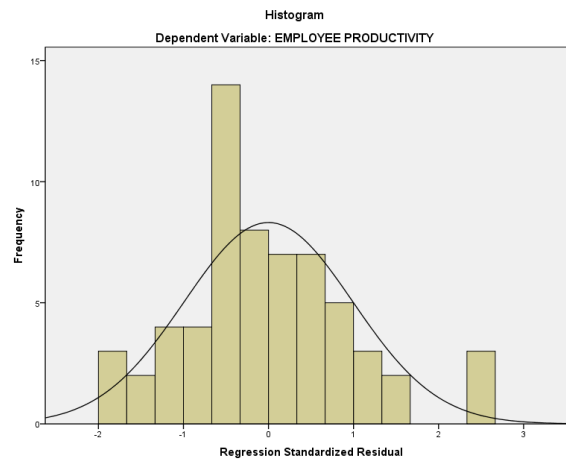


Figure 1 Histogram Normality Test- Employee Productivity

Based on Figure 1, it can be seen that the histogram of the normality test on the labor productivity variable data is described as having a line shaped like a bell and having a balanced convexity in the middle so that it can be said that the data is normally distributed.

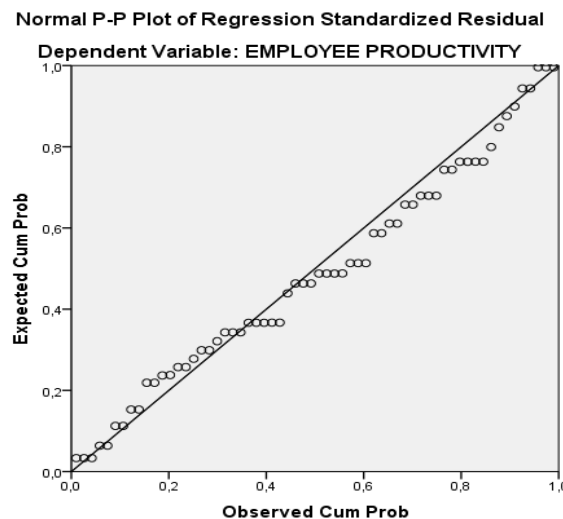


Figure 2 Normal PP Plot Normality Test- Employee Productivity

Figure 2 indicates that the data distribution tends to follow a linear or diagonal line. So, it can be stated that the research data is normally distributed.

- Heteroskedasticities Test

The test is to test whether there is a difference in variance from the residual value in the observation period to another observation period. A good regression model is when it is free from heteroscedasticity. And this test uses scatterplot and glejser test.

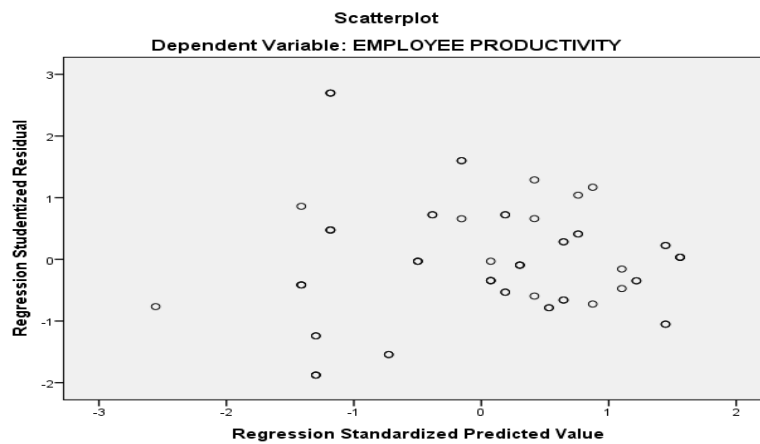


Figure 3 Scatterplot of Heteroskedastisitas Test Employee Productivity

Figure 3 represents that there is a random distribution of data and does not form a pattern so that the regression model of this study is free from heteroscedasticity. However, to be more convincing, the results of the Glejser test were also obtained from the SPSS version 23, namely a significance value of 0.994 or greater than the absolute residual value of 0.05. And it is proven that there is no heteroscedasticity in this regression model.

- **Multicollinearities Test**

Detecting the existence of correlation between independent variables in the regression model is the main task of this test. The regression model of this study is said to be good because there is no correlation between the independent variables. And this is indicated by the results of multicollinearity calculations with a VIF value = 1 (or less than 10) and a tolerance value = 1 (or 0.10).

- **Simple Linear Regression**

The aim is to examine the effect of work discipline (X) on labor productivity (Y) using a simple linear regression model. And the results obtained from this test with the help of SPSS version 23 software can be seen in Table 1.

Table 1 Coefficient ^a Simple Regression Test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	3,912	2,219		1,763	,083
WORK DISCIPLINE	,600	,047	,855	12,745	,000

a. Dependent Variable: EMPLOYEE PRODUCTIVITY

Based on table 1, the simple regression equation that connects the variables is $Y = 3.912 + 0.60X + e$. So, it can be interpreted that for every one unit increase in the work discipline variable, the labor productivity variable will increase by 0.60. And conversely the value of the coefficient $C = 3.912$ means that when productivity has not been affected ($X = 0$) then the productivity of the workforce has not changed at all.

- Hypothesis Test

This test is divided into t test. The t value obtained is 12, 745 or greater than the t table 1.99962 with a significance value of <0.05 . The t value obtained indicates that there is a positive and significant effect of work discipline on labor productivity. That is, that H_0 is accepted then H_a is accepted.

- Determination Coefficient R^2

After the hypothesis is accepted, it is necessary to know the magnitude of the impact of the variable x in influencing y. And with the help of SPSS software, it is found that 73% of work discipline affects labor productivity. And the remaining 27% are influenced by factors and are not discussed or tested in this study.

With the increase in work discipline, it is expected to be able to improve the ability, quality, morale, achieved targets and efficiency. And all of this will then increase the productivity of the workforce. If productivity increases, of course, the amount of production of PT. XYZ will also increase. Because productivity is a reflection of an organization. The results of this study which show that there is a positive and strong influence between work discipline and labor productivity are in line with previous research [1] [2] [4] [5] [7] [9].

6. Conclusion

From this research, it can be concluded that work discipline has a strong and positive influence on labor productivity of PT. XYZ is 73%. With the remaining 27% possibly influenced by other factors.

REFERENCES

- [1] M. Ikbal, "Pengaruh Penerapan Disiplin dan Motivasi Kerja Terhadap Produktivitas Kerja Karyawan pada PTPN IV Unit Usaha Sosa," USU Press, Medan, 2020.
- [2] T. Handoko dan H. D. Waluyo, "Pengaruh Disiplin Kerja dan Pemberian Insentif Terhadap Kinerja Karyawan PT. Nusantara Card Semesta (Studi Kasus Karyawan Divisi Sales & Marketing Jakarta)," *Jurnal Administrasi Bisnis*, vol. 6, no. 1, pp. 31-38, 2017.
- [3] G. Pramesti, *Statistika Lengkap Secara Teori dan Aplikasi dengan SPSS 23*, Jakarta: PT

- Elex Media Komputindo, 2016.
- [4] Cleopatra, “Pengaruh Disiplin Kerja Terhadap Kinerja Karyawan Pada Pabrik Kerupuk Naga Mas Pematangsiantar,” *Sulranist*, vol. 3, no. 1, pp. 1-7, 2015.
- [5] E. P. Astuti dan N. Amalah, “Effect of Work Discipline on employee performance in the Office of Public Appraisal Services Herly, Ariawan and Partners,” *Pinis Discretion Review*, vol. 1, no. 2, pp. 39-46, 2018.
- [6] P. D. Sugiyono, *Metode Penelitian Kuantitatif, Kualitatif & Kombinasi (Mixed Methods) Edisi Revisi*, Bandung: Alfabeta, 2020.
- [7] A. & O. T. Mangkunegara, “Effect of Work Discipline, Work Motivation, and Job Satisfaction on Employee Organizational Commitmen In The Company (Case Study In PT. Dada Indonesia),” *Universal Journal of Management*, vol. 3, no. 8, pp. 318-328, 2015.
- [8] S. Sinulingga, *Manajemen dan Rekayasa Produktivitas*, Medan: USU PRESS, 2019.
- [9] A. Sugiarto, “Pengaruh Insentif dan Disiplin Kerja Terhadap Produktivitas Kerja Karyawan Pada PT. Infomedia Nusantara,” *JESYA*, vol. 4, no. 2, pp. 2614-3259, 2021.
- [10] D. Salvatore, *Introduction To International Economics*, New York: Wiley & Sons, Incorporated, John, 2011.