

ANALYSIS OF EDUCATION, WORK MOTIVATION, WORK DISCIPLINE ON EMPLOYEE PRODUCTIVITY OF PANCA BUDI DEVELOPMENT UNIVERSITY MEDAN

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Abstract:

The aim of this research is to find out whether education, work motivation and work discipline partially and simultaneously have a positive and significant effect on employee work productivity at the Panca Budi Development University, Medan. The data collection technique in this research was carried out using a questionnaire by distributing a list of statements to 58 respondents using SPSS Version 25.0. From the partial test results, the Education variable produces a t value of $0.125 < t_{table} 1.674$ with a significance value of $0.901 > 0.05$. This means that, partially, there is no significant influence of education on work productivity. The Work Motivation variable has a value of $t_{count} 9,000 > t_{table} 1.67$ with a significance of $0.000 < 0.05$. This means that partially there is a positive and significant influence of work motivation on work productivity. The Work Discipline variable has a value of $t_{count} 2,783 > t_{table} 1.67$ with a significance of $0.000 < 0.007$. This means that partially there is a positive and significant influence of Work Discipline on Work Productivity. The results of the F test produce a F_{count} value of $27,339 > F_{table} 2.54$ with a significant probability of $0.000 < 0.05$. So, in the regression model it can be said that education, work motivation and work discipline simultaneously and significantly influence work productivity. The R_{square} value is 60.3% of the variation in employee work productivity which can be explained by the independent variables Education, Work Motivation and Work Discipline, while the remainder ($100\% - 60.3\% = 39.7\%$) can be explained by other independent variables.

INTRODUCTION

The current world conditions require companies to be able to produce greater work, but by using human resources, money, time, place and other resources for longer. A country's standard of living depends on the ability of human resources to be productive. Indonesia is the country that has the largest number of Human Resources in ASEAN. Currently, Indonesia is listed as a country with a productivity position per worker below the average labor productivity level of the six largest ASEAN countries. It is required to

be able to increase human resource capacity in order to compete globally. According to (Haryo & W, 2018), all company demands in maintaining and managing quality human resources are increasingly urgent due to the changing environmental dynamics. Productivity issues are an important issue for companies to maintain consistency in the face of increasingly fierce competition. An organization needs the support of HR management capabilities that can create and motivate employees to work more productively. To increase the productivity of human resources, it is not enough to just work harder, but what is more appropriate is to work smarter.

According to (Tohardi, 2011) in (Sutrisno, 2016), work productivity is a mental attitude that always looks for improvements to what already exists and the belief that someone can do a job better every day than the day before. According to Kusrianto in (Sutrisno, 2017), work productivity is a comparison between the results achieved and the participation of the workforce per unit of time. (Claudia & I Wayan Suana, 2018), said that it can be said to be productive if these resources have high work productivity and can achieve predetermined goals or targets and can be responsible for completing tasks on time.

Company management must pay attention to employee productivity, because productivity is one indicator to regulate the level of employee performance efficiency. Currently, a country's standard of living depends on the ability of Human Resources to be productive. Thus, the quality of human resources is the most important thing to be able to create a country with productive resources. Various things can be done to create quality human resources. Education is an indicator that can be taken to create quality resources. Employee productivity is an important factor that is continuously improved to realize the company's stated goals.

Therefore, employees are company assets that have a vital role so it is necessary to pay attention to the educational background level of each employee because a person's level of education will influence their mindset, attitudes and behavior which will influence their contribution to the world of work in the future with the hope that the higher a person's education will be. So more the level of productivity is also high. According to (Marihot TE Hariandja, 2017) in (Nuruni, 2014), said that an employee's level of education can increase a company's competitiveness and improve company performance. According to Lestari in (Wirawan, 2019), the level of education is a person's activity in developing abilities. Attitudes and forms of behavior are good for future life, whether through a particular organization or not. The National Education System states that education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble morals and skills needed by themselves, society and the nation. and country (Undang-Undang Republik Indonesia Nomor 20, 2003).

Apart from the importance of education for employees in order to improve personal quality and work productivity, motivation is also needed so that employees are

encouraged to do their work well and are willing to continue to improve the results they have achieved so that they get better so that it will have an impact on work productivity. Work motivation is an important factor for work productivity because no matter how high a person's education is, if a person does not have motivation either from within or outside themselves, then productivity will not be realized if there are no factors that move a person to do things better. According to (Afandi, 2018) states that motivation is a desire that arises in a person or individual because he is inspired, encouraged and encouraged to carry out activities with sincerity, joy and sincerity so that the results of the activities carried out are good and of good quality. According to (Sedarmayanti, 2017) Motivation is a force that encourages a person to carry out an action or not which is essentially positive or negative internally and externally. Work motivation is something that creates encouragement or enthusiasm for work or encourages work enthusiasm, while according to (Hasibuan, 2017) states that motivation is the provision of driving force that creates a person's enthusiasm so that they want to work together, work effectively and integrate with all their efforts to achieve satisfaction.

The high level of productivity of a company can be seen from the discipline of its employees in obeying the regulations set by the company. Efforts made by companies to increase employee discipline are by providing punishment as a sanction when they violate established regulations. According to (Sinambela, 2019), good discipline is reflected in the extent of a person's responsibility for the tasks assigned to him. Therefore, regulations are needed to create good order in the office or workplace. (Ansory & Indrasari, 2018) states that "discipline is a feeling of obedience to work that is responsible". The discipline in question is closely related to authority. If the holder of authority does not act properly, then discipline will be lost. Meanwhile, according to (Gibson, 2013) in (Agustini, 2019), defines discipline as the use of some form of punishment or sanction if an employee disobeys.

The author conducted research at the Panca Budi Development University, Medan. The author found several problems related to the importance of understanding one's own work. The Human Resources Bureau Unit is a vital unit for the University which helps and supports the achievement of the University's goals, especially in the field of personnel and teaching staff. In accordance with its function, this unit does not only play a role in the administration of personnel and educational staff, but is much broader regarding planning, management and development of employees at the University. One of the programs managed by the Human Resources Bureau to improve employee quality.

RESEARCH METHODS

Research Approach

The type of research used in this research is quantitative research with a descriptive approach. Quantitative research methods are a type of research whose specifications are systematic, planned and clearly structured from the beginning to the creation of the research design.

Population and Sample

According to (Sugiyono, 2013), population is a generalized area consisting of objects/subjects that have certain qualities and characteristics, determined by researchers to be studied and then conclusions drawn. Thus, the population in this study is Orientation Employees, Contract Employees and Permanent Employees at Panca Budi Development University.

According to (Sugiyono, 2013), the sample is part of the number and characteristics of the population. As for the sample in this study, the author used the Proportionate Stratified Random Sampling technique, this technique was used because the population was not homogeneous, referring to opinions (Sugiyono, 2016) that: "Proportiantie Stratified Random Sampling is used if the population has members or elements that are not homogeneous and are proportionally stratified." The strata referred to in this research are Permanent Employees, Contract Employees and Orientation Employees at the Panca Budi Development University, Medan. The number of samples was determined based on calculations from the Slovin formula with a tolerable error rate of 10% with a significance of 90%. So the research sample was 58 people.

Data analysis technique

1. Classic assumption test

After the data has been tested and declared valid and reliable, the next stage is:

a. Normality test

According to (Sugiyono, 2016), states that the normality test "aims to test whether in a regression, the dependent variable, independent variable or both have a normal or close to normal distribution.

b. Multicollinearity Test

According to (Sugiyono, 2016), states that "The Multicollinearity Test aims to test whether the regression model finds a correlation between the independent variables. If a correlation occurs then it is said that there is a multicollinearity problem.

c. Heteroscedasticity Test

According to (Sugiyono, 2016), states "The Heteroscedasticity Test aims to test whether the regression model has unequal variances in the residuals from one observation to another.

2. Multiple linear regression

Multiple linear regression analysis is used to determine the effect of education, work motivation and work discipline on employee productivity, using the following formula:

$$Y = \alpha + B_1X_1 + B_2X_2 + B_3X_3 + e$$

Information :

Y = Productivity (Dependent variable)

X₁ = Education (Independent variable)

- x_2 = Work Motivation (Independent variable)
- X_3 = Work Discipline (Independent variable) α = Constant
- B = Multiple regression coefficient (Multiple regression)
- e = Error term (Error rate)

3. Hypothesis testing

a. Simultaneous Test (F Test)

According to (Sugiyono, 2016), "The F test is used to test whether the independent variable has a simultaneous partial influence on the dependent variable."

b. Partial Test (t Test)

According to (Sugiyono, 2018), states that "The t test is used to test hypotheses when researchers analyze partial regression (an independent variable with a dependent variable).

c. Coefficient of Determination

According to (Sugiyono, 2018), defining the coefficient of multiple determination R-Square (R^2) is to see how variations in the value of the dependent variable are influenced by variations in the value of the independent variable. A small R^2 value means that the ability of the independent variables to explain variations in the dependent variable is very limited. A value close to one means that the independent variables provide almost all the information needed to predict variations in the dependent variable.

RESULTS AND DISCUSSION

Classic assumption test

The classical assumption test aims to find out whether the results of the regression estimates carried out are really suitable for use or not. The data obtained from the questionnaire results will then be tested using the classic assumption test as follows:

a. Data Normality Test

The aim of the normality test is to determine whether confounding or residual variables have a normal distribution, (Ghozali, 2013).

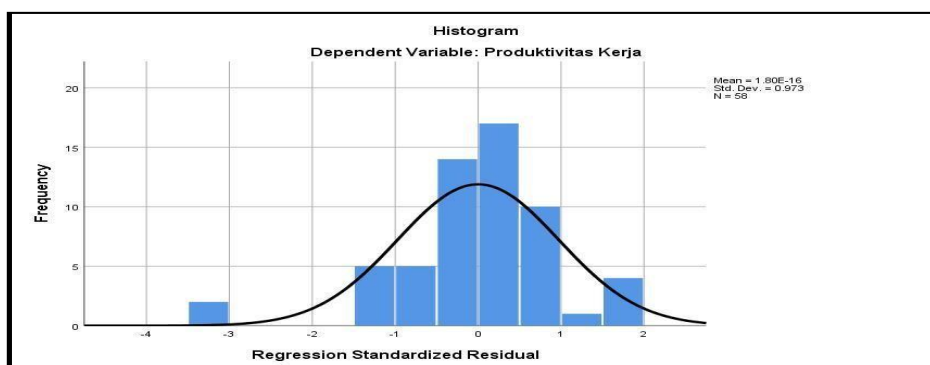


Figure 1. Histogram graph

Source: SPSS Processing Results Ver. 25.0, 2023

The results of the data normality test show that the data is normally distributed, where the histogram image has a line forming a bell and has a balanced convexity in the middle.

b. Multicollinearity Test

The multicollinearity test aims to test whether in the regression model a correlation is found between the independent variables. This test was carried out by looking at the tolerance and variance inflation factor (VIF) values from the analysis results using SPSS. If the tolerance value is > 0.1 or VIF < 10, it is said that multicollinearity does not occur. The multicollinearity test of the questionnaire results that have been distributed to respondents can be seen in the following table:

Table 1. Multicollinearity Test

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	15.909	11.688		1.361	.179		
	Pendidikan	-.036	.258	-.012	-.139	.890	.956	1.046
	Motivasi Kerja	.796	.099	.732	8.068	.000	.894	1.119
	Disiplin Kerja	.181	.144	.116	1.257	.214	.858	1.166

a. Dependent Variable: Produktivitas Kerja

Source: SPSS Processing Results Ver. 25.0, 2023

The results of the multicollinearity test show that the tolerance and VIF values in the table above show that all variables in this study do not experience multicollinearity. This can be seen in the tolerance value which has a value of more than 0.1. Meanwhile, the VIF value for each variable has a value of less than 10.

c. Stereoscedasticity Test

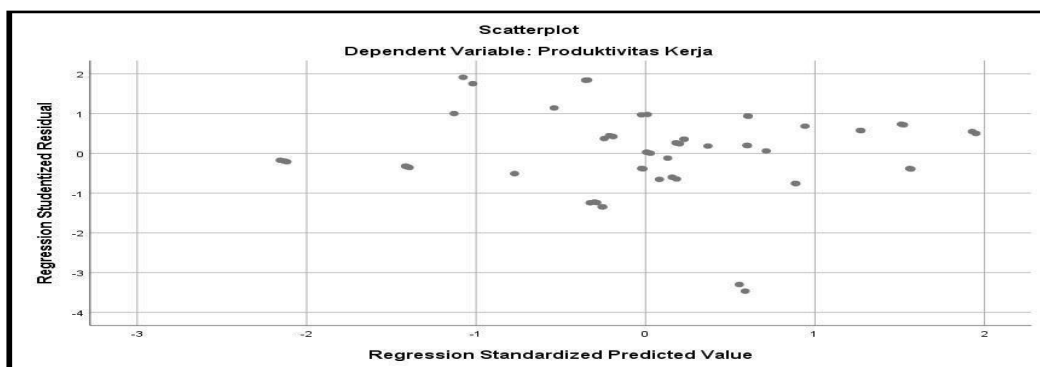


Figure 2. Heteroscedasticity Test Scatterplot
Source: SPSS Processing Results Ver. 25.0, 2023

From the Scatterplot image above, it shows that the points produced by each variable of education, work motivation, work discipline and work productivity have been distributed randomly and irregularly and do not form a particular pattern or trend line. Some of the results of this test show that this regression model is free from heteroscedasticity problems, meaning that the variables that will be tested in this research are homoscedastic.

Multiple linear regression

The technique used in this research is Multiple Linear Regression. Regression analysis is an analysis carried out to measure the magnitude of the influence of the independent variable on the dependent variable. This regression calculation uses SPSS version 25.0. The formula used in multiple linear regression uses the equation:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + \epsilon$$

From processing questionnaire data using the SPSS ver. 25.0 then the results are obtained in the following table:

Table 2. Multiple Linear Regression Test Results

		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	15.909	11.688		1.361	.179
	X1	-.036	.258	-.012	-.139	.890
	X2	.796	.099	.732	8.068	.000
	X3	.181	.144	.116	1.257	.214

a. Dependent Variable: Y

Source: SPSS Processing Results Ver. 25.0, 2023

Based on the calculation results table using SPSS ver. 25.0, then the linear regression equation obtained can be written, namely:

$$Y = 15,909 + (-0.36)X_1 + 0.796X_2 + 0.181X_3.$$

The value of education (X1) on work productivity (Y) of (-0.36), the value of work motivation (X2) on work productivity (Y) of 0.796 and the value of work discipline (X3) on work productivity (Y) of 0.181. So we get an explanation of the regression equation, as follows:

- a. The education variable has the opposite direction, so it can be concluded that employee education at the Panca Budi Development University in Medan has no influence on increasing employee work productivity.

- b. The work motivation and work discipline variables have a positive direction, so it can be concluded that if work motivation and work discipline are increased by one unit, the work productivity of employees at Panca Budi Development University will increase by 15,909.

Hypothesis testing

Hypothesis testing aims to determine the influence of each (partial) and together (simultaneous) independent variable (X) on the dependent variable (Y).

a. Partial Significant Test (t Test)

The partial test (t) is intended to see how much influence an independent variable individually has on the dependent variable with a significance level of 5%. The basis for decision making is if the sig value. < 0.05 or tcount > ttable, then there is an influence between variable X on variable Y. However, if the value of sig. > 0.05 or tcount < ttable, then there is no influence between variable 25.0 then the results obtained are as in the table below:

Table 3. Results of Partial Influence Test

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	15.909	11.688		1.361	.179
	X1	-.036	.258	-.012	-.139	.890
	X2	.796	.099	.732	8.068	.000
	X3	.181	.144	.116	1.257	.214

a. Dependent Variable: Y

Source: SPSS Processing Results Ver. 25.0, 2023

The calculated t value for the education variable is 125 < 1.67 (Df = nk=58-4 = 54 α5%) then the sig value. 0.901 > 0.05. So it can be concluded that Ha is rejected and Ho is accepted, meaning that education does not significantly affect work productivity.

The calculated t value for the work motivation variable is 9,000 > 1.67 (Df = n- k = 58-4 = 54 α5%) then the sig value. 0.000 < 0.05. So it can be concluded that Ha is accepted and Ho is rejected, meaning that work motivation significantly influences work productivity.

The calculated t value for the work discipline variable is 2,783 > 1.67 (Df = n- k = 58-4 = 54 α5%) then the sig value. 0.007 < 0.05. So it can be concluded that Ha is accepted

and H_0 is rejected, meaning that work discipline significantly influences work productivity.

b. Simultaneous Significant Test (F Test)

The F test aims to test simultaneously (simultaneously) between the independent variable and the dependent variable. The test criteria are:

Accept H_0 (reject H_1), if $F_{count} < F_{table}$ or $sig\ F > \alpha\ 5\%$

Reject H_0 (accept H_1), if $F_{count} > F_{table}$ or $sig\ F < \alpha\ 5\%$

From processing questionnaire data using SPSS ver. 25.0 then the results obtained are as in the table below:

Table 4. Simultaneous Effect Test Results

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3841.413	3	1280.471	27.339	.000 ^b
	Residual	2529.208	54	46.837		
	Total	6370.621	57			

a. Dependent Variable: Produktivitas Kerja
 b. Predictors: (Constant), Disiplin Kerja, Pendidikan, Motivasi Kerja

Source: SPSS Processing Results Ver. 25.0, 2023

Based on table 4., it is known that the probability value $sig.\ 0.000 < \alpha\ 0.05\%$, then H_a is accepted and H_0 is rejected. The results of the F test show that education, work motivation and work discipline simultaneously significantly influence employee productivity at Panca Budi Development University.

c. Coefficient of Determination

Determination analysis is used to determine the percentage of variation in the influence of the independent variable on the dependent variable. From processing the questionnaire using SPSS ver. 25.0 then the following results are obtained:

Table 5. Coefficient of Determination Test Results

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.777 ^a	.603	.581	6.844

a. Predictors: (Constant), Disiplin Kerja, Pendidikan, Motivasi Kerja

Source: SPSS Processing Results Ver. 25.0, 2023

In multiple linear regression, the determination test is more appropriate by using the value in the R square column of 0.603 to see the magnitude of the influence of the independent variable on the dependent by calculating the coefficient of determination = $R^2 \times 100\%$ so that the coefficient of determination is 60.3%. This means that 60.3% of the variation in employee work productivity can be explained by education, work motivation and work discipline, while the remaining 39.7% is influenced by other variables not studied.

CONCLUSION

1. Employee education at Panca Budi Development University is quite in line with the employee's current work placement. However, it would be good if employees were aware of improving their own quality, one of which is by improving the education of employees who have an educational background at high school or postgraduate level. Even though this research does not have a positive and significant influence, at least employees can upgrade themselves to a higher level. better.
2. Work motivation of employees at Panca Budi Development University can be further improved so that the productivity desired by the agency can be achieved. Based on the research results, leaders are expected to be able to provide trust to subordinates and tier decisions according to position level, so that there are decisions that can be taken by middle and low levels. Prioritize etiquette in communication so that aims and objectives can be conveyed well and a comfortable work environment is created. In this case, work comfort can be built if leaders and subordinates provide mutual support to each other and are optimistic in giving confidence to subordinates to be able to work according to their respective competencies.
3. The work discipline of employees at Panca Budi Development University is quite good, which is supported by the effectiveness of the regulations implemented which has been able to increase employee discipline. It can only be improved further by time management at work and employees being able to complete work according to the standards and time set.
4. For future researchers, it is hoped that they can re-examine the variables of education, work motivation and work discipline as well as other variables outside these variables in order to obtain more varied results that can describe what things can influence work productivity and be more careful in making questionnaire so that the questions created can be considered valid and reliable.

REFERENCES

- Afandi, P. (2018). *Manajemen Sumber Daya Manusia (Teori, Konsep dan Indikator)*. Zanafa Publishing.
- Agustini, F. (2019). *Strategi Manajemen Sumber Daya Manusia*. UISU Press.
- Ansory, A. F., & Indrasari. (2018). *Manajemen Sumber Daya Manusia. Edisi Revisi*. Indonesia Pustaka.

- Claudia, N. P. C., & I Wayan Suana. (2018). Pengaruh Kompensasi, Motivasi, Disiplin Kerja Terhadap Produktivitas Kerja Karyawan Divisi Sales di Honda Denpasar Agung. *E-Jurnal Manajemen Unud*, 7(10), 5379–5406.
- Ghozali, I. (2013). *Aplikasi Analisis Multivariate dengan Program IBM SPSS 21 Update PLS Regresi*. Badan Penerbit Universitas Diponegoro.
- Gibson, J. L. (2013). *Manajemen Sumber Daya Manusia, Edisi Keempat*. Erlangga.
- Haryo, B. D., & W, H. D. (2018). Pengaruh Pelatihan Kerja, Motivasi Kerja dan Lingkungan Kerja terhadap Produktivitas Kerja Karyawa PT Metec Semarang. *Diponegoro Journal of Management*, 1(6).
- Hasibuan, M. (2017). *Manajemen Sumber Daya Manusia, Edisi Revisi*. Bumi Aksara.
- Marihot T. E. Hariandja. (2017). *Manajemen Sumber Daya Manusia*. PT Grasindo Multi Sentosa.
- Nuruni, T. (2014). *Pengaruh Tingkat Pendidikan Dan Pengalaman Kerja Terhadap Kinerja Guru PAI SD Negeri Di Kecamatan Sidoharjo Kabupaten Sragen*. Pascasarjana Institut Agama Islam Negeri Surakarta.
- Sedarmayanti. (2017). *Manajemen Sumber daya Manusia, Reformasi Birokrasi dan Manajemen Pegawai Negeri Sipil*. Refika Aditama.
- Sinambela, L. P. (2019). *Manajemen Kinerja Pengelolaan, Pengukuran, Dan Implikasi Kinerja*. PT Raja Grafindo Persada.
- Sugiyono. (2013). *Metode Penelitian Kuantitatif, Kualitatif dan R&D*. Alfabeta.
- Sugiyono. (2016). *Metode Penelitian Kuantitatif, Kualitatif dan R&D*. CV Alfabeta.
- Sugiyono. (2018). *Metode Penelitian Pendidikan (Pendekatan Kuantitatif, Kualitatif, dan R&D)*. CV Alfabeta.
- Sutrisno. (2017). *Manajemen Keuangan Teori, Konsep dan Aplikasi*. Ekonesia.
- Sutrisno, E. (2016). *Manajemen Sumber Daya Manusia. Cetakan ke-8*. Prenada Media Group.
- Tohardi, A. (2011). *Pemahaman Praktis Manajemen Sumber Daya Manusia*. Mandar Maju.
- Undang-Undang Republik Indonesia Nomor 20. (2003). *Tentang Sistem Pendidikan Nasional*.
- Wirawan. (2019). *Evaluasi Kinerja Sumber Daya Manusia*. Salemba Empat.