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Analysis of the Effect of Compensation, Organizational Culture, Work Stress on Employee Productivity in the Administration Section of the Environmental Polytechnic of Medan

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Abstract: This research was conducted to explain the partial or simultaneous influence of compensation variables, organizational culture, and work stress on employee productivity in the environmental administration section of the Medan State Polytechnic. The total population used was 82 respondents consisting of administrative employees working at the Medan State Polytechnic who were taken using a questionnaire which was used as a data collection method in this study. This study uses multiple linear regression analysis. The results of the analysis show that there is a simultaneous significant effect between the three variables, and a partially significant influence between the compensation variable and organizational culture on productivity, and the work stress variable has no effect on employee productivity in the environmental administration section of the Medan State Polytechnic.

Keywords: compensation; organizational culture; work stress; productivity

I. Introduction

The success of an institution or organization is determined by two factors, namely human resources, employees or labor and supporting facilities and infrastructure or work facilities. Of these two factors, human resources or employees are more important than supporting facilities and infrastructure. No matter how sophisticated and complete the supporting facilities owned by a work organization are, without adequate resources, both in number (quantity) and capabilities (quality), then the organization cannot succeed in realizing the vision, mission and goals of the organization. (Budiono & Erlyna, 2015). The quality of human resources or employees is measured by the employee's performance (performance) or productivity.

With regard to productivity, employees need to be compensated in order to remain productive and profitable for employees (Yamoah, 2013). Compensation is the company's remuneration for employees so that employee performance is in accordance with the wishes of the organization. In addition to compensation, organizational culture contained in a company also affects the productivity that occurs in a company. One more thing that affects productivity is work stress. Emm, Halkos, & Bousinokis (2010) argues that job stress can be defined as an unpleasant emotional situation that we face when the conditions (work related or not) cannot be overcome in our ability to solve them.

Administrative productivity that occurs in the Medan State Polytechnic is considered to be still less than optimal based on the Pre-Survey conducted to 32 correspondent employees at the Medan State Polytechnic. The results of the pre-survey questionnaire recapitulation on productivity show that currently the administration is less motivated to get the best results at work and considers work targets unimportant. This is due to the lack of appreciation or appreciation received from the leadership for the achievement of the good

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work. There is no appreciation or appreciation for administrations who have high loyalty in their work, and there is no punishment given to administrations who neglect their duties. This causes the administrative motivation to be loyal and do their work on time to decrease. Compensation factors, organizational culture, and work stress can be factors that make productivity less than optimal.

II. Review of Literature

Productivity is the ability of a set of economic resources to produce something which is also interpreted as a sacrifice (input) with income (output). (Suroyo, 2016). Many factors affect work productivity, both related to the workforce and related to the company environment and government policies as a whole (Sayogo, 2020). Employees will work productively or not depending on motivation, job satisfaction, stress level, physical condition of the job, compensation system, job design, and other economic, technical and behavioral aspects. Many factors affect work productivity, both related to the workforce and related to the company environment and government policies as a whole. Employees will work productively or not depending on motivation, job satisfaction, stress level, physical condition of the job, compensation system, job design, and other economic, technical and behavioral aspects. (Ruler & Kusumayadi, 2019).

Productivity in our context is viewed as the instrument for continuous progress, and of constant improvement of activities. It is seen as rate of output per unit of input. Hence, higher productivity connotes achieving the same volume of output with less factor inputs. Thus, increased productivity could result from the reduction in the use of resources, reduction in cost, use of better method or improvement in factor capabilities, particularly labour (Orji, 2020).

An employee is every person who works by selling his energy (physical and mental) to a company and getting remuneration in accordance with regulations or agreements. The amount of remuneration has been determined and known beforehand, so that employees definitely know the amount of remuneration/compensation they will receive. This compensation will be used by the employee and his family to meet their needs (Son, 2021). If the remuneration received by the employee is greater, it means that his position is higher, his status is better, and the fulfillment of needs he enjoys is increasing. Thus, work productivity is also getting better(Jermias & Yigit, 2019). This is where the importance of compensation for employees as a sales force (physical and mental). Compensation is an expense and expense for the company. The company expects that the compensation paid will get a higher work performance reward from the employees. So, the value of employee performance must be greater than the compensation paid by the company, so that the company gets a profit and the continuity of the company is guaranteed(Purnomo, 2018),

An institution or institution is very important to develop an organizational culture. The basis of organizational culture is made on organizational policies, communication rules among members of the organization in the organizational environment(Permadi, 2017). Organizational culture can also be a characteristic of the organization and must have the participation of leaders and members of the organization(Diamond, 2021). Organizational culture as shared values and norms that exist in an organization and teaches workers who come, organizational culture as a cognitive framework consisting of attitudes, values, behavioral norms and expectations that are shared by members of the organization(Zulfani et al., 2021).

Employees always face various forms of concerns and problems. Some difficulties occur outside of work, but other difficulties are work related. In many cases, it can affect work performance, so it should be a concern of management. What is meant is the stress that arises on company employees. Employee stress arises because job satisfaction does not materialize

from their work. Employee stress needs to be addressed as early as possible by the leadership so that things that are detrimental to the company can be overcome. Job stress is a feeling of pressure experienced by employees in dealing with work. This work stress can be seen from the syndrome, including unstable emotions, feeling uneasy, being alone, having trouble sleeping, smoking excessively, not being able to relax, being anxious, tense, nervous, (Amelia, 2019).

III. Research Methods

Conceptually that compensation (X1), Organizational Culture(X2), and work stress (X3) affect the productivity (Y) of employees in the Environmental Administration Section of the Medan State Polytechnic, either simultaneously or partially.

The population in this study were employees in the administration department who worked at the Medan State Polytechnic, amounting to 104 people. While the determination of the number of samples using the Slovin formula. So based on this formula, the number of samples to be taken is 82 people.

The data collection technique used in this research is to use a questionnaire with a Liker scale consisting of 5 alternative answers, namely:

Strongly Agree (SS) given a score of 5 Agree (S) given a score of 4

Disagree (KS) is given a score of 3 Disagree (TS) is given a score of 2

Strongly Disagree (STS) was given a score of 1.

After testing the validity, reliability and classical assumption tests (Data Normality Test, Heteroscedasticity Test, and Multicollinearity Test), then the following analysis is carried out.

3.1. Multiple Regression Analysis

To find parameters and constants as well as F-count and t-count values, computer assistance will be used with SPSS version 25.00 for windows program. Regression test was used to determine the magnitude of the effect of Compensation (X1), and Organizational Culture (X2), and Work Stress (X3), on Employee Productivity (Y) in the Environmental Administration of Medan State Polytechnic. The regression equation is as follows:

Y = a + b1X1 + b2X2 + b3X3 + e

Where:

Y = Productivity

X1 = Compensation

X2 = Organizational Culture X3 = Job Stress

b1 = Regression coefficient of Compensation

b2 = Regression coefficient of Organizational culture

b3 = Regression coefficient of Job stress

a = Constant = Error Rate (standard error) = 0.05 (5%)

3.2. Hypothesis testing

F test was conducted to see whether the independent variable; Compensation (X1), organizational culture (X2) and work stress (X3) together on employee productivity in the environmental administration section of the Medan State Polytechnic. The F test (simultaneous test) is to test whether there is an effect of the independent variable Compensation (X1), organizational culture (X2) and work stress (X3) simultaneously (simultaneously) on the dependent variable Productivity (Y).

If the F test is obtained the value of Fcount > Ftable will be continued with the t test. The t-test aims to see partially the effect of the independent variables Compensation (X1), organizational culture (X2), and work stress (X3) on employee productivity in the

environmental administration section of the Medan State Polytechnic. -t test (Partial Test) which is to test whether there is an effect of the independent variable (X) partially on the dependent variable (Y).

3.3. Coefficient of Determination Analysis

The coefficient of determination (R2) means measuring how far the model's ability to explain variations in the dependent variable is. The small value of R2 means that the ability of the independent variable in explaining the dependent variable is very limited. The value of R2 which is close to 1 means the ability of the independent variable to provide all the information needed to predict the variation of the dependent variable simultaneously.

IV. Result and Discussion

4.1. Validity Test

Validity test is used to measure the validity or validity of a questionnaire. The instrument used in the form of a questionnaire that was tested on 82 respondents of administrative staff at the Medan State Polytechnic. This validity test is carried out by comparing the values of rount and rtable for each of the existing statement items. If the value of rount > rtable, then the item of the instrument is said to be valid. The method used in testing the validity of using the product moment correlation approach with the provisions of the validity of the instrument if rount > rtable at N = 82. So that the r table value is 0.286. Validity test results can be seen from the following table:

Table 1.Compensation Instrument Validity Test (X1), Organizational Culture (X2), Work Stress (X3) and Productivity (Y)

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No Question	r-count (X1)	r-count (X2)	r-count (X3)	r-count (Y)	r table
1	0.299	0.557	0.300	0.395	0.286
2	0.877	0.654	0.312	0.642	0.286
3	0.853	0.426	0.474	0.473	0.286
4	0.819	0.590	0.370	0.481	0.286
5	0.348	0.654	0.603	0.642	0.286
6	0.856	0.532	0.609	0.629	0.286
7	0.706	0.557	0.489	0.629	0.286
8	0.306	0.489	0.636	0.367	0.286

Based on appendix table 2, the validity test conducted on the variables of compensation, organizational culture, and work stress can be seen that all components of statements in these variables are valid. It can be seen in the table above that the variables have rount > rtable. The above instrument is declared valid because it has met the requirements of rount > rtable 0.286, so it can be concluded that the instruments of compensation, organizational culture, and work stress, and productivity can be used for research purposes.

4.2. Reliability Test

The results of the validity test of the compensation variable (X1), organizational culture (X2), and work stress (X3)) on the productivity (Y) of employees in the environmental administration section of the Medan State Polytechnic can be seen as follows:

Table 2.Compensation Instrument Reliability Test (X1), Organizational Culture (X2), Work Stress (X3) and Productivity (Y)

	\ /	,
Variable	Cronbach's Alpha	Description
Compensation	0.801	Reliable
Organizational culture	0.681	Reliable
Work Stress	0.675	Reliable
Productivity	0.764	Reliable

In tables 2 the results of the reliability test for each variable using the Cronbach's Alpha technique, it can be seen that the Cronbach's Alpha value is > 0.6, for the compensation variable the Cronbach's Alpha value is 0.801, while for the organizational culture variable it is 0.681, then work stress is 0.675 and for productivity of 0.764. So, the instruments of the four variables are declared reliable because they meet the requirements of Cronbach's Alpha value > 0.6.

4.3. Linearity Test

The linearity test was carried out by looking for the regression line equation for the compensation variable (X1), organizational culture (X2), work stress (X3), on the productivity variable (Y). Based on the regression line that has been made, then the significance of the regression line coefficient and its linearity is tested by using a test for linearity at a significance level of 0.05. The criterion in the linearity test is that two variables are said to have a linear relationship if their significance (linearity) is more than 0.05.

Table 3. Linearity Test Results

			Sum of Squares	df	Mean Square	F	Sig.
		(Combined)	189.04	73	2.59	0.55	0.913
Unstandardized	Between	linearity	0	1	0	0	1,000
Residual * Unstandardized	Groups	Deviation from Linearity	189.04	72	2,626	0.56	0.908
Predicted Value		Within Groups	37,667	8	4.708		
		Total	226,706	81			

Based on the results of the linearity test between compensation variables, organizational culture, work stress and productivity variables in Table 4 above, it is known that the linearity significance value is 1,000. That is, the significance value is more than 0.05 so it can be concluded that there is a linear relationship between the two variables.

4.4. Multicollinearity Test

Multicollinearity test is needed to determine whether there are variables that have similarities between independent variables in a regression model. If there is a correlation, it is stated that the regression model has multicollinearity problems. The multicollinearity test was carried out by looking at the tolerance value and the Variance Inflation Factor (VIF) value. If the value of VIF < 10 means that there is no multicollinearity, whereas if the value of VIF> 10 means that there is multicollinearity.

Table 4. Multicollinearity Test Results

			Unstand	dardized	Standardized			Collin	nearity
Nr. 1.1	Coe	fficients	Coefficients	т	Si~	Sta	tistics		
		Model	В	Std. Error	Beta	1	Sig.	Tolerance	VIF
		(Constant)	14.76	3.66		4.032	0		
	1	TOTAL_X1	0.191	0.079	0.217	2.428	0.02	0.975	1.03
	1	TOTAL_X2	0.507	0.079	0.573	6.427	0	0.977	1.02
		TOTAL_X3	-0.027	0.065	-0.037	-0.42	0.68	0.977	1.03

Based on the results of the multicollinearity test in table 5, it can be said that there is no multicollinearity, because the VIF value is < 10, compensation (X1) is 1.03, organizational culture (X2) is 1.02 and work stress (X3) is 1.03. So it can be concluded that in this study there was no multicollinearity because the VIF value was < 10.

4.5. Heteroscedasticity Test

The heteroscedasticity test has a purpose as a tester of whether a regression model has an inequality of variance from the residuals from one observation to another observation, if it remains, it is called homoscedasticity and if it is different it is called heteroscedasticity. A good regression model is homoscedasticity or there is no heteroscedasticity. This study was to test the presence or absence of heteroscedasticity using the Glejser test. If the significant value is <0.05, then there is heteroscedasticity, if on the contrary the significant value is > 0.05, then there is no heteroscedasticity.

Table 5. Heteroscedasticity Test Results

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Model		Unstandardized		Standardized		
		Coefficients		Coefficients	t	Sig.
			Std. Error	Beta		
	(Constant)	1.193	2.418		0.493	0.62
1	TOTAL_X1	0.003	0.043	0.007	0.058	0.95
1	TOTAL_X2	0.031	0.052	0.067	0.593	0.56
	TOTAL_X3	-0.05	0.052	-0.103	-0.9	0.37

Based on the results of the heteroscedasticity test in table 6 above, it can be said that the three independent variables, namely compensation (X1), organizational culture (X2), and work stress (X3) have a significance value of more than 0.05 so that it can be concluded that there is no heteroscedasticity problem in regression model in this study.

4.6. Multiple Linear Regression Test Results

To see the regression equation between compensation (X1), organizational culture (X2) and work stress (X3) on productivity (Y) can be seen

Table 6. Result of Linear Regression Equation

		Unstandardized		Standardized		
		Coefficients	Coefficients	t	Sig.	
		В	Std. Error	Beta		
1	(Constant)	14,758	3.660		4.032	0.000
	TOTAL_X1	0.191	0.079	0.217	2.428	0.018
	TOTAL_X2	0.507	0.079	0.573	6.427	0.000
	TOTAL_X3	-0.027	0.065	-0.037	-,417	0.678

- Based on Tables 6, the linear regression equation obtained is Y = 14.758 + 0.191X1 + 0.507X2 0.027X3 meaning the numbers in the above equation are as follows:
- a. The value of the compensation variable regression coefficient is positive, namely 0.191. This can be interpreted that for every one increase in the compensation score, it will increase productivity by 0.027.
- b. The regression coefficient value of the organizational culture variable is positive, namely 0.507. This means that each increase in one unit of organizational culture will increase productivity by 0.432.
 - c. The regression coefficient value of the work stress variable is negative, namely -0.027. This means that every increase in work stress will reduce productivity by 0.027.

4.7. Determination Test

Based on the results in table 8, the determination value or the strength of the influence of compensation (X1), organizational culture (X2), and work stress (X3) on the productivity (Y) of employees in the environmental administration section of the Medan State Polytechnic is 0.394 or 39.4%, while 60.6% (100% - 39.4%) is influenced by other variables.

Table 7. Coefficient of Determination

M	odel	R	R Square	Adjusted R Square	Std. Error of the Estimate
	1	.628a	0.394	0.371	1,705

a. F Uji Test

Based on the results in table 9, the Fcount value of 16.92 is greater than Ftable 2.72 and a significance value of 0.00 < 0.05, it can be said that the three independent variables tested are Compensation (X1), Organizational Culture (X2) and Stress Work (X3) has an influence on administrative productivity in the Medan State Polytechnic.

Table 9. Coefficient of Determination

	Model	Sum of Squares	df	Mean Square	F	Sig.
	Regression	147,489	3	49,163	16.92	.000b
1	Residual	226,706	78	2,906		
	Total	374,195	81			

b. T Test

Based on the results in table 7, the tcount value is 2.428 which is greater than ttable 1.991 and the significance value is 0.01 <0.05, it can be said that the compensation variable (X1) has an influence on employee productivity in the environmental administration section of the Medan State Polytechnic. The organizational culture value has a tcount of 6.427 which is greater than ttable of 1.991 and a significance value of 0.00 <0.05. It can be said that the organizational culture variable (X2) has an influence on employee productivity in the environmental administration section of the Medan State Polytechnic, while for work stress has a tcount value of -0.417 which is smaller than ttable 1.991 and a significance value of 0.67

> 0,

V. Conclusion

From the results of data analysis and discussion above, several conclusions can be drawn, including: Compensation has a positive and significant effect on employee productivity in the environmental administration section of the Medan State Polytechnic. The provision of appropriate compensation and continues to increase will increase the work productivity of administrative employees at the Medan State Polytechnic. Organizational culture also has a positive and significant influence on employee productivity in the environmental administration section of the Medan State Polytechnic, the application of a good culture at the Medan State Polytechnic will increase productivity in the organization. Work stress has a negative and insignificant effect on employee productivity in the administration section of the Medan State Polytechnic.

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