



# The Effect of Education and Length of Work on Employee Performance with Organizational Culture as an Intervening Variable in the Office Directors of PT. Perkebunan III Medan

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## ABSTRACT

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### Keywords:

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This study aims to analyze the effect of education on organizational culture, the effect of length of service on organizational culture, the effect of education on employee performance, the effect of length of service on employee performance, the influence of organizational culture on employee performance, the indirect effect of education on employee performance through organizational culture and the indirect effect of length of service on employee performance through organizational culture at the Office of the Board of Directors of PT. Plantation III Medan. The population in this study were all employees of the Office of the Board of Directors of PT. Plantation III Medan totaling 75 people. Based on the Slovin formula, a sample of 43 people was obtained where the sampling technique used simple random sampling. The variables used in this study are independent variables and dependent variables. In this study the independent variables were education (X1) and length of work (X2). The dependent variable is employee performance (Y), while the intervening variable is organizational culture (Z). Data analysis used multiple linear regression test and path analysis. The results showed that education and length of work had a significant effect on organizational culture. Education and length of work have a significant effect on employee performance, while organizational culture has no significant effect on employee performance. Education has a significant effect on employee performance through organizational culture. Length of work has no significant effect on employee performance through organizational culture at the Office of the Board of Directors of PT.

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## 1. Introduction

In an organization, human resources are a very important factor to make activities within the organization run. Companies are no longer regional but global and comprehensive, so they need qualified human resources in order to achieve success, where the key to success from competition lies in the quality of human resources, where all activities in the company's activities will not run without human support and management. Human resources are the most valuable company assets that must be managed properly. Human resources are the most important part that has a big role in the company because human resources are a very important part in managing, organize and move the wheels of the company to achieve goals. The development of a company is very dependent on the quality of human resources owned by the company, so that the quality of human resources is the main factor needed by the company as a first step to achieving goals. Quality human resources are human resources who understand science and have the ability and skills in a field.

Improving the quality of human resources will further improve employee performance which can be seen from the quality of work of an employee, level of honesty, initiative and initiative in making new ideas in carrying out work, employee attitudes towards work in (like or dislike, accept or reject), cooperation and reliability, knowledge and responsibility, utilization of time and effective use of time. From these various indicators, it shows that performance standards are a form of quality or benchmark that shows the amount and



quality of work that must be produced by employees including: knowledge, skills, placement systems and units of experience variation, practical abilities, qualifications, work results, and development.

Some of the factors that can improve performance are education and length of work. To carry out activities within a company, adequate education is needed in order to maximize the performance possessed by employees, so that they can carry out every activity within the company. Increasing employee education can improve employee performance so that the quality of human resources is getting better.

Apart from the level of education, performance can occur through work experience gained from long working in a company. Mar'ati and Sri (2010) explained that the length of work shows how long the workforce has devoted themselves to the company, and how the company's relationship with its workforce is. With the existence of a period of service can establish a better cooperative relationship between the company and its employees so as to increase a sense of responsibility, a sense of belonging, courage and introspection in the context of the company's continuity, employees will do a good job so as to achieve high work productivity.

Culture has the power to influence change in organizations. Culture can influence who is promoted and what decisions are used. The work culture is also very strong and potential, everyone knows the company's goals and works to achieve them. Seeing this impact, culture also has a big influence on the performance of employees. Sedarmayanti (2017:132) employee performance is influenced by several factors including organizational culture, organizational culture is formed from subjective perceptions of organizational members towards innovation values, risk tolerance, pressure on teams, and people's support. This overall perception will shape the culture or personality of the organization. Furthermore, organizational culture will affect employee performance and satisfaction, support or not support.

Organizational culture can be a key factor in the company's success, but it can also be a major factor in the company's failure. This culture is different for each company, there are companies that have a strong culture and there are organizations that have a weak culture. In this case, the culture that exists within the company PT. Perkebunan Nusantara III is not so good, where many employees do not work fully, some are less responsible, less disciplined, less skilled, trapped and depressed in bureaucratic commands, have no initiative, wait for orders from above, creativity is hindered, less energetic, lacking productive, and ultimately less service to the community. Organizational culture is important, because it provides a framework related to the behavior of company employees. If the organizational culture is strong, employees who work for the company consider the rules are no longer a binding obligation, but have become a necessity. Organizational culture is very important for the advancement of the company as it impacts on employee commitment and retention as well. If a company's culture is flexible, it will provide employees with a work environment where they can work easily and independently without feeling overwhelmed. If employees understand organizational culture properly so that there may be an increase in their performance, the reason is that employee performance is the foundation of an organization. If a company's culture is flexible, it will provide employees with a work environment where they can work easily and independently without feeling overwhelmed. If employees understand organizational culture properly so that there may be an increase in their performance, the reason is that employee performance is the foundation of an organization. If a company's culture is flexible, it will provide employees with a work environment where they can work easily and independently without feeling overwhelmed. If employees understand organizational culture properly so that there may be an increase in their performance, the reason is that employee performance is the foundation of an organization.

Various business organizations also come with their heritage culture to influence the organization's operations. Sedarmayanti (2017: 75), defines organizational culture as a belief, attitude and value that is generally owned, which arises in the organization, put forward more simply, culture is a way of doing things here.

## **2. Methods**

### **2.1 Research Place**

The research will be conducted at the Office of the Board of Directors of PT. Plantation III Medan which is located at Jl. Sei Batang Hari No. 2 Terrain.

### **2.2 Population and Sample**

The population in this study were all employees of the Office of the Board of Directors of PT. Plantation III Medan, totaling 146 people. According to Kasmadi and Sunariah (2013: 66) stated that the sampling

technique used simple random sampling. The size of the sample is determined using the Slovin formula as follows:

$$n = \frac{N}{1+N(e)^2}$$

Description: n = size or number of samples.

N = total population.

e = allowable error rate (10%)

In this study, the sample percent allowance of inaccuracy due to sampling error that can still be allowed is 10% (because the population is small). From these data, the number of samples that can be known through calculations are as follows:

$$\begin{aligned} n &= \frac{N}{1+N(e)^2} \\ &= \frac{75}{1+75(0,10)^2} \\ &= 42.85 \\ N &= 43 \end{aligned}$$

So, to facilitate sampling, the researcher took 43 company employees to serve as research respondents.

### 2.3 Research variable

The variables used in this study are independent variables and dependent variables. In this study the independent variables were education (X1) and length of work (X2). The dependent variable is employee performance (Y), while the intervening variable is organizational culture (Z).

### 2.4 Data analysis method

Data analysis was performed using multiple linear regression test and path analysis. Multiple linear regression analysis is used with the intention of predicting how the condition (increase and decrease) of the dependent variable will be, if two or more independent variables as predictor factors are manipulated (increase in value).

#### a. Stage 1 regression analysis

The first stage 1 regression analysis was used to determine the effect of education and length of work on organizational culture. The regression equation is as follows:

$$Z = a + b_1X_1 + b_2X_2 + e$$

Information :

Z : Organizational Culture

A : Constant

X1, X2 : Independent (education and length of work)

b1, b2 : Regression coefficient

e : Error

#### b. Stage 2 regression analysis

This second stage of regression analysis is to determine the effect of education and length of work on employee performance. The regression equation is as follows:

$$Y = + b_1X_1 + b_2X_2 + e$$

Information :

Y : Employee performance

A : Constant

X1, X2 : Independent (education and length of work)

b1, b2 : Regression coefficient

e : Error

#### c. Regression analysis stage 3

This third stage of regression analysis is to determine the effect of organizational culture on employee performance. The regression equation is as follows:

$$Y = + b_1Z + e$$

Information :

Y : Employee performance

A : Constant

Z : Organizational Culture

b1 : Regression coefficient

Hypothesis tests carried out are:

### 2.5 Test Statistics t

The t-test basically shows how far the influence of an individual explanatory variable in nature explains the variation of the dependent variable (Sugiyono, 2018: 85). The degree of significance used is 0.05. If the significant value is less than the degree of confidence, then we accept the alternative hypothesis, which states that an independent variable partially affects the dependent variable.

### 2.6 F Statistic Test

The F test is used to test the independent variables together on the dependent variable. In addition, with this F test, it can also be seen whether the linear regression model used is correct or not (Sugiyono, 2018: 86). The degree of confidence used is 0.05. If the calculated F value is greater than the F value according to the table, then the alternative hypothesis is that all independent variables simultaneously have a significant effect on the dependent variable.

### 2.7 Determinant Test

The coefficient of determination ( $R^2$ ) essentially measures how far the model's ability to explain variations in the dependent variable is.

$$KD = r^2 \times 100\%$$

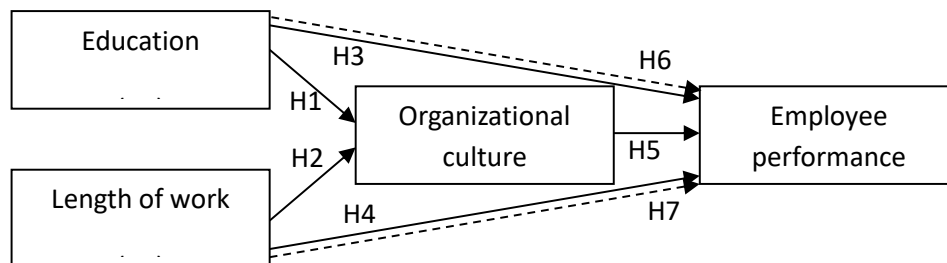
Information:

KD = Coefficient of Determination

R = Correlation Coefficient

### 2.8 Path Analysis

Path analysis is a technique developed from multiple linear regression. This technique is used to test the magnitude of the contribution shown by the path coefficients on each path diagram of the causal relationship between the variables X1, X2 and X3 on Y and their impact on Z. Path analysis is a technique for analyzing causal relationships that occur in regression. doubled if the independent variable affects the dependent variable not only directly but also indirectly. The path analysis diagram can be seen in the following figure:



**Fig 1.** Outcome Diagram

## 3. Results and Analysis

Analysis of the effect of education and length of work on employee performance through the intervening variable of organizational culture.

### 3.1 Regression Model 1

The analysis for the stage 1 regression model is used to determine the magnitude of the influence of the education variable and length of work on the organizational culture variable. The following is the sub-structure equation:

$$Z = a + b_1X_1 + b_2X_2$$

Where :

Z = Organizational culture

a = Constant

$b_1, b_2$  = Regression coefficient  $X_1, X_2$

$X_1$  = Education

$X_2$  = Length of work

The results of the multiple linear regression of the effect of education and length of work on organizational culture can be seen in Table 1.

**Table 1**  
Multiple Linear Regression Results  
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.653a	0.388	0.358	2.4952

a. Predictors : (Constant), Length of work, Education

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1(Constant)	11,148	3.817		2,921	0.006
Education	0.176	0.071	0.333	2,489	0.017
Length of work	0.468	0.150	0.415	3.109	0.003

a. Dependent Variable : Organizational Culture

**a. t test (Partial)**

Based on the regression results, the education variable has a p-value of 0.017, which is smaller than 5%. Then  $H_a$  is accepted and  $H_0$  is rejected, which means that there is a partial influence between education variables on organizational culture variables, thus the first hypothesis is accepted.

The results of the regression on the long working variable have a p-value of 0.003 which is smaller than 5%. So  $H_a$  is accepted and  $H_0$  is rejected, this shows that there is an influence between the length of work variable on the organizational culture variable partially, thus the second hypothesis is accepted.

**b. Coefficient of Determination**

To see the magnitude of the influence of the independent variables of education and length of work in the organization on the intervening variable of organizational culture, the coefficient of determination ( $R^2$ ) was used. The results of the research analysis show that the influence of work discipline and organizational culture on organizational commitment is seen from the  $R^2$  value of 0.388. This shows that simultaneously the independent variables of education and length of work have an influence of 38.80% on the organizational culture variable. While the rest is influenced by other variables outside the variable education and length of work by 61.20%.

**3.2 Regression Model 2**

The analysis for stage 2 regression model is used to determine the influence of the independent variables of education, length of work and organizational culture on the dependent variable of employee performance. The following is the sub-structure equation:

$$Y = a + b_1X_1 + b_2X_2 + b_3Z_3$$

Y = Employee Performance Variable

B = Regression Coefficient

X1 = Education Variable

X2 = Working Length Variable

Z = Organizational Culture Variable

The results of multiple linear regression of the effect of education, length of work and organizational culture on employee performance can be seen in Table 2.

**Table 2**  
Multiple Linear Regression Results  
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.731a	0.535	0.499	2.4974

a. Predictors : (Constant), Length of work, Education

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1(Constant)	7.064	4.208		1,679	0.101
Education	0.165	0.076	0.276	2.176	0.036

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Length of work	0.449	0.168	0.352	2,676	0.011
Organizational culture	0.317	0.158	0.280	2005	0.052

a. Dependent Variable : Employee Performance

**a. t test (Partial)**

From the results of the above analysis, education Sig < 0.05 (0.036 < 0.05) and t arithmetic > t table (2.175 > 1.681 ) Then H0 is rejected which means there is a positive influence between education variables on employee performance variables partially, thus the third hypothesis accepted.

Variable organizational culture Sig < 0.05 (0.011 < 0.05) and t count > t.table (2,676 > 1,681 ) Then H0 is rejected, which means that there is a positive influence between the length of work variable on the employee performance variable partially, thus the fourth hypothesis is accepted.

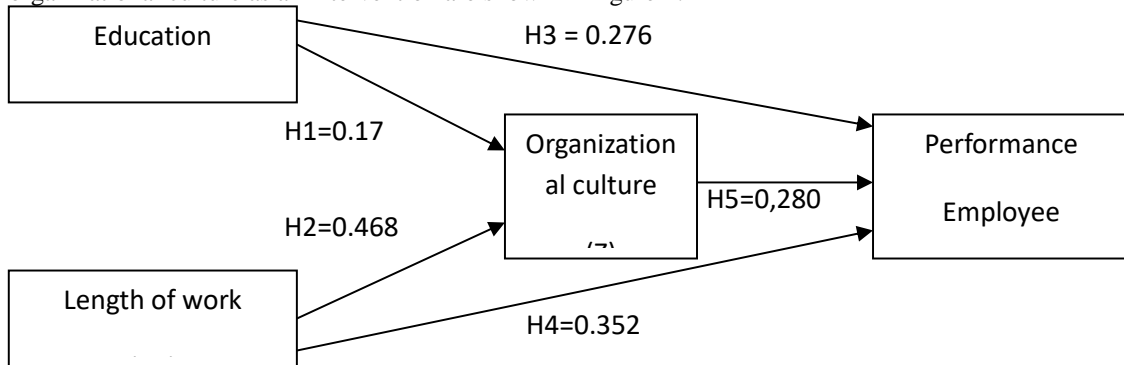
Organizational culture variable Sig > 0.05 (0.052 < 0.05) and t count > t.table (2,005 > 1,681 ) it means that the influence of organizational commitment variable on the performance variable is partially but not significant,

**b. Coefficient of Determination**

To see the magnitude of the influence of the independent variables of education, length of work and organizational culture on the dependent variable of employee performance, the coefficient of determination (R<sup>2</sup>) is used. From the results of the analysis of the influence of work discipline, organizational culture and organizational commitment on employee performance, the R<sup>2</sup> value is 0.535. This shows simultaneously the independent variables of education, length of education and organizational culture have an influence of 53.50% on employee performance, while the rest is influenced by other variables outside of education, length of work and organizational culture of 46.50%.

**3.3 Path Analysis (Path)**

Path analysis is used to analyze the relationship between variables with the aim of knowing the indirect effect of education and length of work on performance where organizational culture is an intervening variable. The results of the analysis of the path of education and length of work on employee performance with organizational culture as an intervention are shown in Figure 2.



Based on Figure 2 above, it can be explained that the indirect effect of the variable education and length of work on employee performance through organizational culture as an intervening variable.

**The Effect of Educational Variables on Employee Performance Through Organizational Culture** indirect effect

$$(0.17)(0.28) + 0.276 = 0.323$$

**The Effect of Long Working Variables on Employee Performance Through Organizational Culture** indirect effect

$$(0.468)(0.280) + (0.352) = 0.483$$

**3.4 Discussion**

**a. The Effect of Education (X1) on Organizational Culture (Z)**

Education has a positive and significant effect on organizational culture. The results of the evidence have been carried out through overall data analysis where the direct influence between education on organizational culture variables is 0.017. This shows that there is a positive relationship between education and organizational culture, meaning that the higher the education of employees, the higher the organizational culture of employees.



Employees with higher education will increasingly be able to understand the elements that make up organizational culture such as values, beliefs, and habits that apply in the organization. The more employees of the company understand, recognize, animate, and practice these beliefs, values or customs and the higher their level of awareness, the more existent and maintained organizational culture will be. Organizational culture is the belief of every employee in the company in their identity which can ideologically strengthen the existence of the company, both inside as a binder or company node and outward acting as an identity as well as the ability to adapt to various situations and conditions faced by the company in business competition.

**b. The Effect of Length of Work (X2) on Organizational Culture (Z)**

Length of work has a positive and significant effect on organizational culture. The results of the evidence have been carried out through an overall data analysis where the direct effect of length of work on organizational culture variables is 0.468. This indicates that there is a positive relationship between length of work and organizational culture. The longer the employee works in the company, the employee's experience increases which will make the employee more skilled and skilled in completing the work and increasingly familiar with the organizational culture adopted by the company. Habits that have been ingrained continuously make employees have a commitment to work that will give employees the opportunity to accept challenging assignments, greater autonomy and higher promotion opportunities.

**c. Effect of Education (X1) on Employee Performance (Y)**

Education has a positive and significant effect on employee performance. The results of the evidence have been carried out through data analysis as a whole where the direct influence between education on employee performance variables is 0.276. This shows that there is a positive relationship between education and employee performance. This is due to the higher the level of education of an employee, the level of expertise, knowledge and abilities will increase which will improve the performance of the employee. Sedarmayanti (2017:33), that a high level of education supports the achievement of employee performance because low education makes it difficult for employees to absorb various information related to their activities, the higher the education, the more efficient they are at work.

**d. Effect of Length of Work (X2) on Employee Performance (Y)**

Length of work has a positive and significant effect on employee performance. The results of the evidence have been carried out through data analysis as a whole where the direct effect of length of work on employee performance variables is 0.352. This shows that there is a positive relationship between length of work and employee performance. according to Pamungkas et al., (2017) that the longer the working period of an employee, the skills and ability to do work will increase. The experience of a person carrying out work continuously can increase his technical maturity. There are several factors that determine whether an employee is experienced or not and at the same time an indicator of work experience, namely the length of time/age of work, level of knowledge and skills and mastery of work and equipment.

**e. The Influence of Organizational Culture (Z) on Employee Performance (Y)**

Organizational culture has a positive but not significant effect on employee performance. The results of the evidence have been carried out through overall data analysis where the direct influence of organizational culture on employee performance variables is 0.280. This shows that even though the organizational culture is advanced, it does not significantly affect employee performance. So it can be seen that organizational culture has no significant effect on the performance of the employees of the Office of PT. Plantation III Medan. Companies must first be able to provide an understanding of the influence of the formation of organizational culture on each employee before carrying out company performance activities. This research is supported by previous research conducted by Nurhalim et al., (2015) which states that organizational culture has no significant effect on employee performance.

**f. The Effect of Education Through Organizational Culture on Employee Performance**

The education variable has a positive effect on the employee performance variable through the organizational culture variable. The results of the analysis use that the influence of education through organizational culture on employee performance is greater than the direct influence of education on employee performance. In this case, organizational culture is a very precise variable in mediating the relationship between education variables and employee performance. Organizational culture can be a guide in solving problems that exist within the company. Organizational culture is formed by instilling values when employees first join the company. The inculcation of organizational cultural values begins with how the founders of the company create a code of conduct that will be developed within the company. This organizational culture must be developed through a process of socialization to every employee in the company. The company must be able to invite

employees, especially new employees, to make adjustments to the organizational culture that becomes a guide in achieving better company goals.

**g. The Effect of Long Working Time Through Organizational Culture on Employee Performance**

The variable length of work has a positive effect on employee performance variables through organizational culture variables. The results of the analysis use that the effect of length of work through organizational culture on employee performance is compared to the direct influence of length of work on employee performance, this shows that . Organizational culture is important in improving employee performance without having to work for employees in the company. Companies can instill a good organizational culture in new employees, so that it becomes a habit in doing their jobs. according to Robbins (2004:60) states that employees in companies with strong cultures are more committed to their companies than employees in companies with weak cultures. Companies with strong cultures will also use their recruitment efforts and outreach practices to build employee commitment.

#### **4. Conclusion**

- a. Education has a significant effect on organizational culture at the Office of the Board of Directors of PT. Plantation III Medan.
- b. Length of work has a significant effect on organizational culture at the Office of the Board of Directors of PT. Plantation III Medan.
- c. Education has a significant effect on employee performance at the Office of the Board of Directors of PT. Plantation III Medan.
- d. Length of work has a significant effect on employee performance at the Office of the Board of Directors of PT. Plantation III Medan.
- e. Organizational culture has no significant effect on employee performance at the Office of the Board of Directors of PT. Plantation III Medan.
- f. Education has an effect on employee performance through organizational culture by 32.30% at the Office of the Board of Directors of PT. Plantation III Medan.
- g. Length of work has an effect on employee performance through organizational culture of 48.30% at the Office of the Board of Directors of PT. Plantation III Medan.

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