

Effect of Work Environment, Work Motivation and Turnover Intention on the Performance of Project Engineer Employees Pt. Greatwall Drilling Asia Pacific

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Abstract:- The decline in employee performance so that the resulting work results are less than optimal, is the beginning of a phenomenon in a company. This study aims to measure the influence of work environment, motivation and turnover on employee performance at PT. GREATWALL DRILLING ASIA PACIFIC. The data analysis used is multiple linear regression analysis. This type of research is quantitative. The sample subjects in this study were 65 employees of PT. GREATWALL DRILLING ASIA PACIFIC. The results of multiple linear regression analysis show that partially and simultaneously environment work, motivation, turnover and employee performance have significant effect toward employee performance

Keywords:- Environment Work, Motivation , Turnover and Employee Performance.

I. INTRODUCTION

➤ Background

Employee is source vital force for a organization or company Source power man is brain from executor from a organization . Without the presence of HR, then vision and mission company no will can realized . How no , because it is HR themselves who form and plan a organization or company that . Besides from that , HR has share big for progress something organization , depending on from quality

and capability a the company . Every project engineer crew of PT. Greatwall Drilling Asia Pacific , prosecuted for have good performance and productivity and professionalism that can _ considered on standard , because they given distant wages more big .

Company often experience obstacles with a number of permission operational company related not enough existence concern to employee project . So that HR problems often occur because the turtle work same Among company and employees that alone . HR performance will experience enhancement if they motivated for do more thing _ good . Risk level very high work environment _ work often effect on employee turnover (crew). Work in the neighborhood drilling oil and gas , has very big risk and need level very high focus , if employee no motivated with ok then _ level loss the company will the more high , because for emit cost operational .

PT. Greatwall Drilling Asia Pacific is a Chinese state-owned company on the move in the oil and gas industry (mining) Greatwall Drilling Company or often called GWDC, with drilling service oil and gas that has been investigated by the Indonesian government geology agency . For project drilling , GWDC has a number of projects outside Jakarta such as Sumatra, Kalimantan and East Nusa Tenggara.

Table 1. Pre -Survey Data on Engineer Complaints of PT. Greatwall Drilling Asia Pacific

No	Complaint Employee	Agree	NotAgree
ENVIRONMENT WORK			
1	The work ethic of Chinese foreign workers is very high and sometimes cause pressure work which very tall, so that cause discomfort at work. Chinese foreign workers think that this is reasonable, because life is hard and needy struggle	22	13
2	Very high risk work environment considered reasonable, because all <i>project crews</i> have experienced and used to with risk the.	0	35
MOTIVATION WORK			
1	Company give the place stay (<i>basecamp</i>) worthy for para worker (<i>crew project engineers</i>)	21	14
2	Wages /wages which big enough for motivate employee in work	7	28
3	BPJS Health and Employment, will be given if employee has undergo time training 3 month. Thing This is for the sake of company efficiency if the employee resign or not working according to the qualifications	0	35

4	The company will provide airfare accommodation for project workers who will be assigned to other islands, However not included cost from home to airport	0	35
5	The company plans to use protection BPJS corporate, so that family workernot covered. The company takes things into account the because felt more effective and efficient	0	35
TURNOVER INTENTION			
1	Turnover which tall is reasonable because seen from aspect performance rated by company	3	32
2	Company recruit employee which already domedical check up with a fee charged to each each project crew	0	35
PERFORMANCE EMPLOYEE			
1	Lump sum work wages and no overtime count pero'clock. Overtime will be counted if it exceeds 12 hours in accordance with work schedule which has determined	23	12
2	Implementation o'clock work exceed 12 o'clock because employeerequired to complete the work before down Duty and must do briefing as well as handoverfor night or day shift	32	3
3	Oil and gas drilling jobs are demanding worker must with performance which good and focus which tall as well as able to work under pressure	14	21

Source : Pre- survey results on 35 project crews of PT. Greatwall Drilling Asia Pacific

From the results of Table 1 it occurs problems on the variables studied Writer that on the variable Environment Work , Motivation Work , Turnover Intention and Employee Performance at PT. Greatwall Drilling Asia Pacific.

Table 2 Data Incentive Employee Project Site PT. Greatwall Drilling Asia Pacific.

No	Incentive	Rewards	Position	Information
1	THR	I Salary Month	Whole Employee	Based on Count proportional
2	BPJS		Whole Employee	given after Graduated time training 3 months

Employee contracted with agreement lump sum payroll (count round) and hal the already including tax (nett), hal this of course considered profitable , because employee no need burdened with quantity piece tax (PPH21). However, the project crew is required for could complete problem before down task (break) return to the basecamp that has provided by the project . This thing no Becomes problem big for most of the project crew, because they of course already trained and accustomed with attitude professional work as well used to for sued have ethos high work _ although part from worker project (engineer) no agree because considered time less rest _ enough can impact bad on result performance. Level risk great job _ so that need very high focus , like case

with motivate employees help for guard stabilization level concentration employee in work .

Company often consider that with give big pay _ to the project engineer crew will help they complete Duty with good , but in reality although wages from some crew engineers can get wages until hundreds million per month them still not yet feel motivated with fine , because still there is a number of complaint to company , because they have not quite enough very big answer to smooth project and team including convenience environment and relationship to fellow employee project .

Table 3 Data Accident Work Operational (major) Drilling Period Oil Year 2019

No	Time Incident	Accident	Information
1	March	slipping pipe iron drilling at will delivered to location drilling	Incident not causing 1 crew injured project. Incident caused because road to drilling not enough existence lighting
2	June	The fall of some pipes core drilling yang currently in put in on tower drilling	The incident was not cause death and injuries to the crew project, because of the incident the occur moment crew project is taking a break eat night. The cause is the tool fastener which used miss from the panel
3	September	core drilling tools broken in point drilling and cause pipe drilling fall almost about crew project	Accident caused crew project (driller) l forget to change tools which new

Source : Sutanto Ngadapdap (HSE Supervisor) PT. Greatwall Drilling Asia Pacific

PT. Greatwall Drilling Asia Pacific has experience some categorized incidents _ as "major" incident or large which requires EBTKE from Ministry of Energy and Mineral Resources down hand for investigate problem that. Project has get letter warning from EBTKE Ministry of Energy and

Mineral Resources and almost no could tolerated because accident the can causing a lot death and serious injury . _ Accident the happen because project environment that is in the mountains and must through steep chasm _ for until going to point drilling , other than from that , a lot there is

complaints and problems employees who cause decline performance so that result in accident . Based on problem that , researcher interested for do study this .

II. THEORETICAL REVIEW

Mangkunegara (2016), defines employee performance as the result in quality and quantity achieved by an employee in carrying out his duties in accordance with the responsibilities given to him. According to Rivai and Sagala (2010), performance is a real behavior that is displayed by everyone as work performance produced by employees according to their role in the company. The same thing is also stated by Bangun (2012) that performance is the result of work achieved by someone based on job requirements. One way that can be used to see the company's development is by looking at the results of the performance appraisal. The purpose of conducting performance appraisals in general is to provide feedback to employees in an effort to improve the appearance of their work and in order to increase organizational productivity. Furthermore, the purpose of conducting a job appraisal specifically is related to various policies towards employees such as for promotion purposes, salary increases, and training.

Given that each individual in the company comes from various different backgrounds, it is very important for the company to see what the needs and expectations of its employees are, what talents and skills they have, and how the employee plans in the future. Motivation according to Colquitt, LePine and Wesson (2016) is strength energy that comes from from in and from outside self employees who generate related business _ with work , and determine direction , intensity , and persistence . Schermerhorn (2016:351) states that motivation could give significant contribution _ to profession because motivation is strength impetus that will realize something behavior To use reach destination company that alone . Employees who feel satisfied tend motivated for do her job with more good . Research conducted by P. Edi Sumantri (2016) factors motivation work and environment work organization take effect significant to performance employees . Motivation work is influencing factor _ more big to performance employees . Motivation Becomes more factors _ urgent in influence performance employees, and need emphasized importance supporting facilities / tools _ profession employees .

Substitution employee is something phenomenon urgent in life organization or company . come out employee naturally is something things that are not desired by the organization or company . because _ that , company must can minimize turnover intention rate for avoid less impact _ good for company. According to William H. Mobley (2016) defines turnover intention as: results evaluation individual about continuation relationship with company where he work however not yet realized in action real . according to study Afatania Pandu Asmara (2017) about the effect of turnover intention on performance employees .

III. RESEARCH METHODS

➤ *Type of Research Design*

Analysis descriptive is method used _ for describe or analyze something results study but no used for make more conclusions _ wide . Later , the calculation of statistical data descriptive on research this will calculated through SPSS version 25 software.

Validity test used for measure legitimate or is it valid something questionnaire . Something questionnaire is said to be valid if questions on the questionnaire capable for disclose something that will measured by questionnaire that . Whereas Test reliability is tool for measure something questionnaire which is indicator from variable or construct .

Data normality test is carried out with using the Kolmogorov-Smirnov Normality Test, basic taking decision conducted based on probability . Multicollinearity test aim for test what is regression model found existence correlation between variable free (independent) . Good regression model indicators _ is no existence correlation between _ independent variable .

According to Danang Sunyoto (2016) Heterocedasticity is in equality regression Home need to be tested about same or no variant of residuals from one observation _ with another observation . Analysis Multiple linear regression (multiple random analysis) is a multivariate technique that is often used in study business , use more from one variable free for explain variance in variable tied .

➤ *Research Approach and Sample*

Research process this started with activity identify problem where to _ used as location study i.e. 2 projects drilling oil and gas PT . Gratwall Driling Asia Pacific which has Indonesia's head quarter and takes whole population as many as 65 project engineers of PT. Greatwall Drilling Asia Pacific.

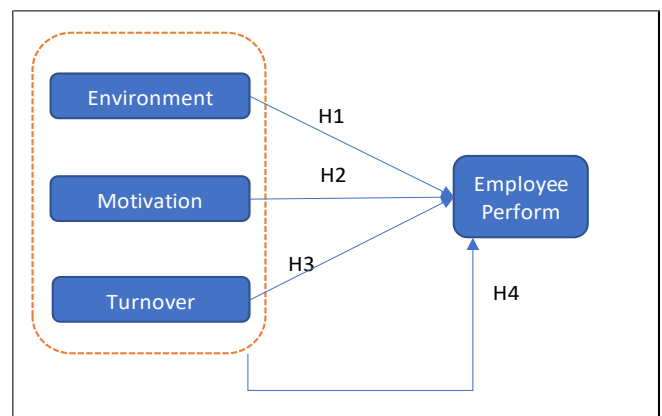


Fig 1. Research Framework
Source: Primary Data, 2022

X₁ = Environment Work
X₂ = Motivation
Y = Turnover Intention

IV. RESEARCH RESULTS AND DISCUSSION

➤ *Data Analysis Results*

Validity test in study this use level trust by 99% in level significant 1% where $df = n - 2$. Value of n in study this is 65, so that obtained Mark $df = 63$, where in study this Mark table with 5% significance i.e. of 0.244. Validity test results from every indicators consisting of of 33 questions represented by the average value of each dimension for every tested variables _ using SPSS 25.0 program is shown in table as following .

Table 4 Test the Validity of Work Environment Variables

Indicator	r Count	r Table	Information
L1	0.705		Valid
L2	0855		Valid
L3	0.832		Valid
L4	0.8	0.244	Valid
L5	0.817		Valid
L6	0.789		Valid
L7	0.662		Valid
L8	0.725		Valid

Source: Processed data (2020)

The results of the validity test for the work environment variable in Table 4 show that the calculated r value is between 0.662 - 0.855, so it can be stated that the Work Environment Variable has an r arithmetic value greater than the r table, namely 0.244 so that it is declared valid and can be used in further statistical tests.

Table 5 Test the Validity of Motivation Variables

Indicator	r Count	r Table	Information
M1	0.744		Valid
M2	0.778		Valid
M3	0.63		Valid
M4	0.864		Valid
M5	0.575		Valid
M6	0.538	0.244	Valid
M7	0.542		Valid
M8	0.595		Valid

Source: Processed data (2020)

In Table 5 the calculated r value shows a value between 0.538 - 0.864. So it can be stated that the motivation variable has a calculated r value that is greater than the r table, which is 0.244. All indicators on the Motivation variable are declared valid and can be used in further statistical tests.

Table 6 Turnover Intention Validity Test

Indicator	r Count	r Table	Information
T1	0.844		Valid
T2	0.745		Valid
T3	0.809		Valid
T4	0.664		Valid
T5	0.818		Valid
T6	0.775	0.244	Valid

Source: Processed data (2020)

Table 6 shows the calculated r test values are between 0.664 - 0.844. All statements on the turnover variable are declared valid because they have a calculated r value greater than r table, namely 0.244. So that all indicators on the Work Discipline variable are valid.

Table 7 Employee Performance Validity Test

Indicator	r Count	r Table	Information
K1	0.54		Valid
K2	0.438		Valid
K3	0.508		Valid
K4	0.607	0.244	Valid
K5	0.551		Valid
K6	0.651		Valid
K7	0.449		Valid
K8	0.435		Valid
K9	0.465		Valid
K10	0.408		Valid
K11	0.422		Valid

Source: Processed data (2020)

Table 7 shows that the calculated r value is between 0.408 - 0.651 so it can be stated that the Employee Performance variable is valid.

For the instrument in the form of a questionnaire, the reliability index is declared reliable if the r alpha obtained has a value of more than 0.6. The results of the reliability test for the variables in this study are shown in the following table.

Table 8 Results Test Reliability

Variable	Cronbach's Alpha	Standard	Information
Environment work	0.885	0.60	Reliable
Motivation	0.893	0.60	Reliable
Turnover	0.766	0.60	Reliable
Performance Employee	0.893	0.60	Reliable

Source: Processed data (2020)

The results of the reliability test on the research variables showed that all variables had Cronbach's alpha values greater than 0.6. The Work Environment variable has a cronbach's alpha value of 0.885, the Motivation variable has a cronbach's alpha value of 0.893, the turnover variable has a cronbach's alpha value of 0.766 and the Employee Performance variable has a cronbach's alpha value of 0.894. This shows that the research variables are declared reliable.

Table 9 Normality Test Table
One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		65
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	.32130830
Most Extreme Differences	Absolute	.077
	Positive	.077
	Negative	-.071
Test Statistic		.077
Asymp. Sig. (2-tailed)		.200 ^{c,d}

Source: Processed data (2020)

The results of the normality test showed a normal distribution of residuals. This is in accordance with the theory which states that a significant value is more than 0.05, so the residuals are said to be normally distributed with a significant value of 0.200. Normality test with probability plot is presented in graphical form as follows.

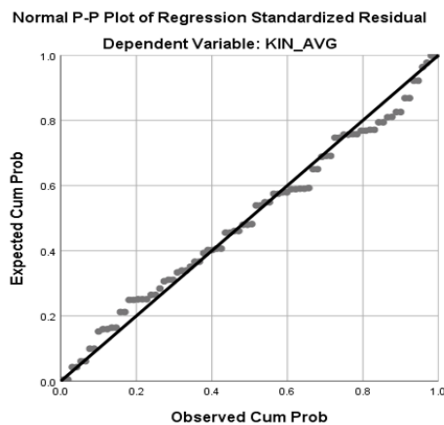
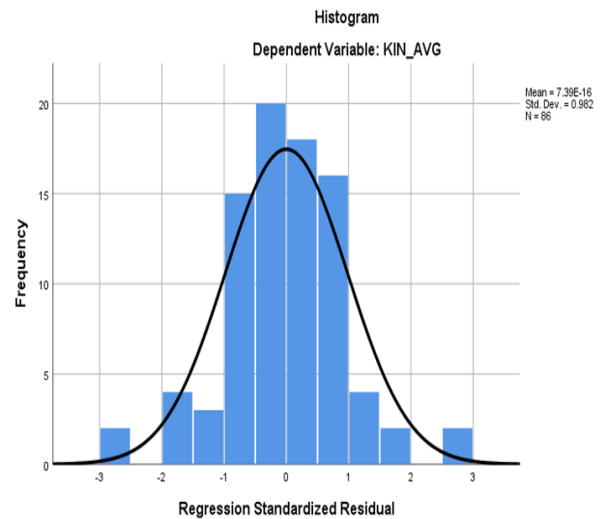
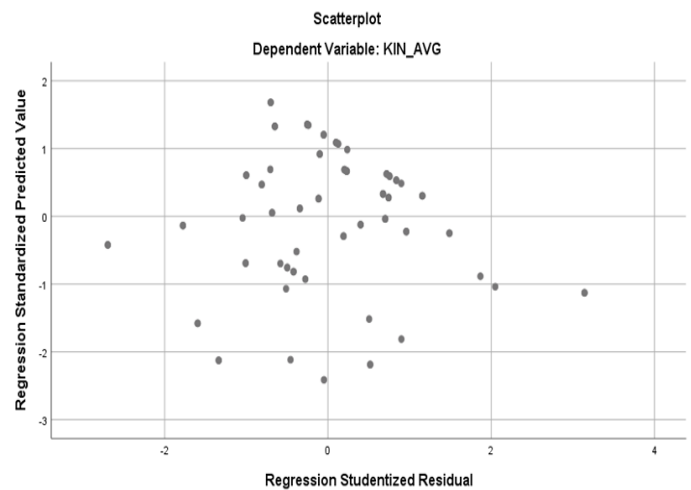


Fig 2 Results of PP Plot Residual Normality Test

Figure 2, the normal PP plot graph above shows that the distribution of unstandardized residuals follows and spreads around the diagonal line. So it can be concluded that it fulfills the assumption of normality.



Source: Processed data (2020)
Fig 3 Histogram Graph Results



Source: Processed data (2020)
Fig 4 Graph of Heteroscedasticity Test Results

The heteroscedasticity test shows that there are points that spread or are around the number 0. The spread of these points does not form a certain pattern, so it can be said that the data is homogeneous or there are no symptoms of heteroscedasticity.

Table 10 Multiple Linear Regression Test

	Model	Unstandardized Coefficient		Standardized Coefficient	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,420	.534		2.660	.009
	Environment Work	.348	.098	.238	3.543	.001
	Motivation	.357	.085	.386	4.187	.000
	Turnover	.684	.134	.473	5.107	.000

Source: Processed data (2020)

$$Y = (1,420) + 0.348 X1 + 0.357 X2 + 0.684 X3$$

➤ The regression equation formed above can be interpreted as follows:

The calculation results show that the value of a (constant) is 1.420. This can be interpreted if the three variables are equal to zero, the constant is a variable whose data value is fixed and cannot be changed. The value of the regression coefficient of the Work Environment Variable (X1) is positive, that is (0.348). This can be interpreted that if the competence is getting better with the assumption that other variables are fixed, then the employee's performance will increase. coefficient sig. at the level of 0.023 or less than = 5% or 0.05, it means that there is a significant effect.

The value of the motivation coefficient is positive, that is (0.357). This can be interpreted that the motivation is getting better with the assumption that other variables are fixed, then the employee's performance will increase. coefficient sig. at the level of 0.002 or less than = 5% or 0.05, it means that there is a significant effect.

Turnover coefficient value is positive, that is (0.684). This can be interpreted that the better the compensation with the assumption that other variables remain, then the employee's performance will increase. coefficient sig. at the level of 0.001 or less than = 5% or 0.05, it means that there is a significant effect.

Table 11 Coefficient Test Determination

Model	R	R Square	AdjustedR Square	Std. Error of the Estimate
0.859 ^a	0.793	0.725	.57298	

a) Predictor: (Constant), Competence , Motivation , Compensation

b) Dependent Variable: Performance
Source : Processed data author (2020)

Coefficient value determination or R Square is 0.725 or 72.5%. This thing could interpreted that there is donations made _ by together by variable Environment work , motivation and turnover on employee performance by 72.5%. The coefficient value that reaches 0.725 means that each variable have close relationship. Whereas remainder from Mark coefficient that is 27.5% influenced by other variables that are not researched in study this .

Table 12 T Test Table

	Model	Unstandardized Coefficient		Standardized Coefficient	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,420	.534		2.660	.009
	Environment Work	.348	.098	.238	3.543	.001
	Motivation	.357	.085	.386	4.187	.000
	Turnover	.684	.134	.473	5.107	.000

Variable Environment Work have Mark significance of 0.001. Significant Value $t < 5\%$ ($0.001 < 0.05$). With thereby testing hypothesis accepted. This thing show that Competence take effect significant on Employee Performance. As for big influence Variable Environment Work is of 0.348 or 34.8%.

Variable Motivation have Mark 0.000 significance . Significant Value $t < 5\%$ ($0.000 < 0.05$). With thereby testing hypothesis accepted . This thing show that Motivation take effect significant on Employee Performance . As for big influence variable Motivation is of 0.357 or 35.7%.

turnover variable has Mark 0.000 significance . Significant Value $t < 5\%$ ($0.001 < 0.05$). With thereby testing hypothesis accepted . This thing show that Compensation take effect significant on Employee Performance . As for big influence turnover variable is of 0.684 or 68.4%.

Table 13 Simultaneous Test

Model		Sum of Squares	df	mean Square	F	Sig.
1	Regression	16.052	3	5.351	47,704	.000
	Residual	9.197	82	.112		
	Total	25,249	85			

a. Dependent Variable: KIN_AVG

b. Predictors: (Constant), KPS_AVG, KPT_AVG, MOT_AVG

Source : Processed data (2020)

N value F- count of 62,748 > F- table of 2.82 ($df_1 = 4 - 1 = 3$, $df_2 = 65 - 4 = 61$ with Mark significant $0.000 < \alpha = 0.05$. Because F - count 26.023 > F- table 2.76 and the value of significant $0.000 < \alpha = 0.05$, then H_0 is rejected and H_1 is accepted , this is prove that Variable Environment Work (X1), Motivation (X2), and Turnover (X3) together _ _ take effect significant on Employee Performance (Y). Because F - count 47.704 > F- table 2.76, then H_0 is rejected and H_1 is accepted , this is prove that Variable Environment Work (X1), Motivation (X2), and Turnover (X3) together take effect significant and positive on Employee Performance (Y).

Table 14 Analysis Results Matrix Correlation Between Dimension

Variable	Dimension								
	(X)	QuantityOf Work (Y1)	Quality Of Work (Y2)	Job Knowledge (Y3)	Creativene sss (Y4)	Cooperati on (Y5)	Depentability (Y6)	Initiative (Y7)	Personal Quality (Y8)
environment an Work	environment n Work Physical (X _{1.1})	.499**	.256*	.384*	.544**	.262*	.312*	.567**	.271*
	environmentn Work Non Physical (X _{1.2})	.609**	.544**	.635**	.514**	.281*	.317*	.469**	.241*
Motivation	needn achievesi (X _{2.1})	.489**	.295*	.324*	.589**	.275*	.334*	.549**	.255*
	needn For Affiliated (X _{2.2})	.657**	.555**	.500**	.677**	.575**	.520**	.529**	.245*
	needn For power (X _{2.3})	.455**	.774**	.402**	.687**	.675**	.620**	.689**	.375*
Turnover Intention	Thought For Stop (X _{3.1})	.741**	.540**	.468**	.655**	.768* *	.440**	.287*	.461**
	DesireFor diedlkan (X _{3.2})	.635**	.367*	.420**	.675**	.387*	.456**	.367*	.441**
	DesireFor Look for Profession Other (X _{3.3})	.435**	.267*	.520**	.645**	.267*	.421**	.167*	.321**

Source : Processed data (2020)

Environment Work have connection between the closest dimension to the knowledge dimension with Employee Performance variable on dimension Punctuality of $_ 0.635$ (closely). of 0.774 (closely). of 0.774 (closely). Next turnover variable on dimension Thought for stop with Employee Performance variable on the Cooperation dimension has the closest relationship of 0.768 (closely).

Research results show that Competence have influence to performance Employees. This thing means that variable the of course have influence in effort increase performance Employee influenced by competence and already should become attention urgent for leader for achievements quality and quantity already $_ set$ by the organization. The results of the r test show that influence competence to performance Employees of PT. GREATWALL DRILLING ASIA PACIFIC has very strong influence whereas partial test results (t test) show that competence take effect significant positive to performance Employees . Besides it's also in line with research results Yudiningsih et al (2016) , where results study the state that environment work take effect positive and significant to performance employees . Means if environment

work ok then $_ performance$ the employees will Becomes more good.

So could drawn a number of conclusions and suggestions , namely , the Company prepares adequate equipment for support employee in work so that work can resolved with good , appropriate with the smallest mean on the Environment variable Work of 3.30 on the statement Equipment very supportive work for work .

More companies notice decisions made , such as do not let employee make decision alone , more good decision made together so that all plan can appropriate and completed as planned . Companies to be able to keep their employees so they can continue to work for the company, such as paying more attention to benefits or incentivesmore in take note which accepted employee.

A good company is more appropriate to place its employees to work in accordance with the skills or abilities of the employees, so that the work can be completed properly. For further researchers who will conduct research on matters that affect performance, it is suggested that other variables

outside of this research are used, such as organizational climate, organizational culture, leadership style.

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