



Analysis of Motivation, Work Environment, Competence and Discipline on Employee Performance of PDAM Tirtanadi Sunggal Branch Medan

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ABSTRACT

The purpose of this study is to assess the impact of motivation, work environment, competence and discipline on employee performance at the PDAM Tirtanadi Sunggal Medan Branch. This study employs multiple linear regression analysis, census method, and associative methodology with a sample of 70 employees. SPSS Version 23 was used to process the data. The findings indicate that while competence and discipline have no substantial impact on employee performance, work environment and motivation do. All factors simultaneously impact employee performance, but discipline in relation to working hours remains a concern. Motivation and the non-physical work environment play a significant part in this

INTRODUCTION

Organizations are formed to achieve certain goals, and the sustainability of the organization is highly dependent on the quality and quantity of its human resources (HR). Supervision and motivation of employee performance are essential to optimally utilize HR. Lack of attention or motivation from leaders can affect employee performance. Leaders play a crucial role in determining the quality of the work environment through coordination and supervision of activities and facilities. Personnel management includes recruitment, selection, development, use, and maintenance of HR.

According to Fahmi (2018), performance is the result achieved by an organization in a certain period, both profit-oriented and non-profit. Good employee performance facilitates the achievement of company goals, while poor performance hinders the achievement of goals and expected results.

According to the report (<https://medan.tribunnews.com>), Ahmad from Paya Geli Gang Abadi Village, Sunggal District, Deli Serdang Regency, expressed difficulty in getting water from PDAM Tirtanadi. Residents hope that PDAM Tirtanadi will immediately repair the water flow to overcome the shortage of clean water. If this problem continues, it shows that the performance of PDAM Tirtanadi employees is less than optimal. To improve performance, employees need motivation to be more enthusiastic. Motivation is a drive that influences a person's actions, and the decline in employee morale can be seen from employees who only work as best they can. Incentives still make employees less motivated to improve the quality of their work. Employees also feel comfortable because of their status as permanent employees and mature age, which causes work enthusiasm to stagnate. In addition, the leadership style of superiors is considered not in accordance with employee expectations.

Based on global phenomena, many workers experience stress due to competition with co-workers, this also happens at PDAM Tirtanadi. Employee relationships are tarnished by fierce rivalry and boss expectations to deliver quality work to the public, which makes workers anxious. For example, when a flood occurs, employees are required to immediately deal with the situation, even though environmental conditions are not supportive, but leaders still pressure them to resolve it quickly, thus adding pressure to employees.

According to Sutrisno & Zuhri (2019), competence is an ability that includes skills, knowledge, and work attitudes needed to carry out tasks according to job requirements. High competence will improve employee performance, while low competence will result in low performance.

Work discipline is an important aspect in a company that ensures employees follow the rules, so that the company can operate safely and achieve its goals. Discipline in management encourages employees to act according to the rules, form a systematic work character, and comply with the rules. With discipline, employees do not easily postpone work, which is important to accelerate the achievement of success.

Based on observations, some employees are not disciplined in their work, some ask for permission to go out for personal matters during working

hours and return only to do attendance. This lack of discipline has an impact on service, where ideally employees should control the flow of water to customers according to company standards. However, in reality, employees do not follow procedures, such as not checking the flow of water to customers' homes. Customers complain about water problems that are often blocked, smelly, and pipe leaks, but have difficulty getting definite information because employees are difficult to contact, the office phone is always busy, and they are difficult to meet in the office. Customers also often wait a long time because employees are late to come to the office.

LITERATURE REVIEW

Theory of Performance and Development

This theory, developed by Rahman et al. (2017), states that: (1) future achievement is influenced by the interaction between current performance levels and time spent on the job; (2) performance is influenced by task-related efficiency and personal abilities, while work time is influenced by motivation, knowledge, beliefs, incentives, and the environment; (3) abilities, motivation, knowledge, and beliefs are influenced by heredity and past environmental factors.

Employee performance

Performance, according to Fahmi (2018), is the outcome profit or non profit that a company achieves over a specific time frame. Performance is directly tied to the organization's strategic goals, customer satisfaction, and economic contribution, according to Armstrong and Baron, as cited by Fahmi (2018). As a result, performance can be defined as the outcome of worker efforts toward accomplishing organizational objectives within a specific time frame.

Motivation

According to Nurjaya (2021), motivation is the force that propels an individual inside an organization to allocate knowledge, abilities, time, and effort to tasks and responsibilities in order to meet objectives and meet deadlines.

Non-Physical Work Environment

According to Rahmawati et al. (2021), there are physical, psychological, and social elements of the workplace that have an impact on how well workers perform their jobs. One key element that enhances worker performance is the workplace.

Competence

According to Rahmat (2019), competence is an individual characteristic related to effective performance in a particular work situation. Competence, which is inherent in personality, can predict performance in various situations and is related to behavior and performance.

Discipline

Agustini (2019) defines work discipline as compliance with company rules and norms, which aims to increase employee commitment in achieving organizational goals.

METHODS

It is a quantitative associative research design. Associative analysis, according to Sugiyono (2017), seeks to ascertain whether a hypothesis is accepted or rejected by examining the influence and relationship between two or more variables using statistical testing. According to Sugiyono (2016), quantitative research employs the positivist philosophy, uses instruments to gather data from a certain population or sample, and statistically analyzes the data to test the hypothesis. This study includes independent variables such as Motivation, Non-Physical Work Environment, Competence, Discipline, and the dependent variable is Employee Performance.

RESULTS

This analysis will present data from the questionnaires that have been distributed, with a total of 70 respondents. Here are the details of each respondent's profile:

Table 1. Respondent Profile

Respondent Characteristics	Amount	Presentation
Age (Years)	20-30 Years	21 62.8%
	30-40 Years	28 23.5%
	40-50 Years	16 13.7%
	>50 Years	5 -
	Amount	70 100%
Gender	Man	46 62.8%
	Woman	24 37.2%
	Amount	70 100%
Last education	SENIOR HIGH SCHOOL	22 7.9%
	Diploma	26 78.4%
	S1	22 11.8%
	Amount	70 100%
Length of work	< 5 Years	38 55 %
	>5 Years	32 45%
	Amount	70 100%
Position	Machinery & Electricity	12 1%
	Management	21 43%
	Personnel	7 56%
	Supervision	14 -
	Quality Control	16
	Amount	70 100%

Table 2. Validity Test

Variables	Statement Items	r-count	r-table	Information
Motivation (X1)	X1.1	0.751	0.235	Valid
	X1.2	0.750	0.235	Valid
	X1.3	0.755	0.235	Valid
	X1.4	0.717	0.235	Valid
	X1.5	0.748	0.235	Valid
Work Environment (X2)	X2.1	0.705	0.235	Valid
	X2.2	0.703	0.235	Valid
	X2.3	0.849	0.235	Valid
	X2.4	0.714	0.235	Valid
	X2.5	0.812	0.235	Valid
	X2.6	0.800	0.235	Valid
Competence (X3)	X3.1	0.753	0.235	Valid
	X3.2	0.569	0.235	Valid
	X3.3	0.707	0.235	Valid
	X3.4	0.690	0.235	Valid
	X3.5	0.827	0.235	Valid
	X3.6	0.792	0.235	Valid
Discipline (X4)	X4.1	0.569	0.235	Valid
	X4.2	0.675	0.235	Valid
	X4.3	0.769	0.235	Valid
	X4.4	0.751	0.235	Valid
	X4.5	0.864	0.235	Valid
	X4.6	0.783	0.235	Valid
Employee Performance (Y)	Y1	0.892	0.235	Valid
	Y2	0.735	0.235	Valid
	Y3	0.943	0.235	Valid
	Y4	0.930	0.235	Valid
	Y5	0.769	0.235	Valid

The validation test results from SPSS processing for 70 respondents at PDAM Tirtanadi are displayed in Table 2. Based on the total number of respondents, the r-table value in this study is 0. When the r-table is less than the r-count, data is deemed valid; when the r-table is more than the r-count, data is deemed invalid.

Table 3. Reliability Test

NO	Variables	Cronbach Alpha	Reliable Standard	Information
1	Motivation	0.784	0.60	Reliable
2	Work environment	0.835	0.60	Reliable
3	Competence	0.820	0.60	Reliable
4	Discipline	0.831	0.60	Reliable
5	Employee Performance	0.914	0.60	Reliable

Table 3 displays the reliability test results for each study variable, demonstrating the applicability of each variable.

Table 4. Descriptive Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Motivation	70	18	25	22.44	2,406
Work environment	70	22	30	27.80	2,350
Competence	70	21	30	28.50	2,027
Discipline	70	22	30	28.47	1,991
Employee Performance	70	17	25	23.03	2,173
Valid N (listwise)	70				

Table 4 shows that the motivation variable consists of 70 data with a minimum value of 18, a maximum of 25, an average of 22.44, and a standard deviation of 2.406. The work environment variable has 70 data with a minimum value of 22, a maximum of 30, an average of 27.80, and a standard deviation of 2.350. The competency variable includes 70 data with a minimum value of 21, a maximum of 30, an average of 28.50, and a standard deviation of 2.027. The discipline variable also consists of 70 data with a minimum value of 22, a maximum of 30, an average of 28.47, and a standard deviation of 1.991. The employee performance variable includes 70 data with a minimum value of 17, a maximum of 25, an average of 23.03, and a standard deviation of 2.173.

Classical Assumption Test

Normality Test

The purpose of the normality test, according to Ghozali (2013), is to ascertain whether the variables in the data have a normal distribution.

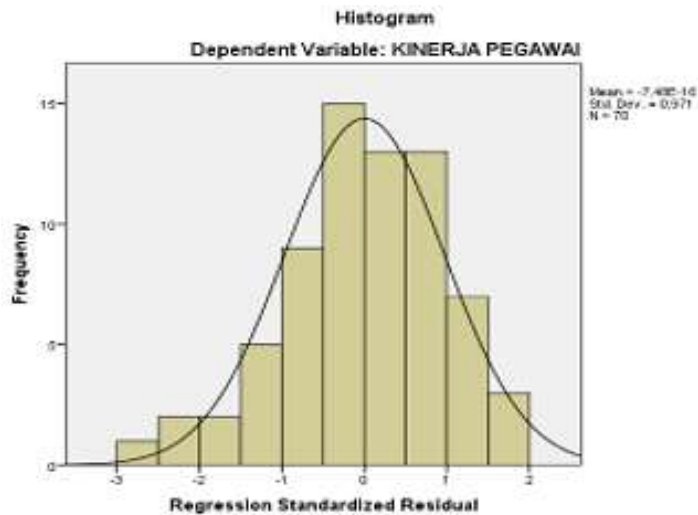


Figure 1. Histogram

Since the data are distributed along the diagonal line on the histogram graph, the histogram test results demonstrate a normal distribution and the regression model satisfies the assumption of normalcy. Kolmogorov-Smirnov (KS) test with a probability value of 0.05 and residual plots are used for testing (Yudhiana, 2016).

Table 5. Normality Test

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		70
Normal Parameters ^{a,b}	Mean	,0000000
	Std. Deviation	1,70820176
Most Extreme Differences	Absolute	,089
	Positive	,030
	Negative	-,089
Test Statistics		,089
Asymp. Sig. (2-tailed)		,200 ^{c,d}
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		
d. This is a lower bound of the true significance.		

A Kolmogorov-Smirnov computation is utilized to verify if the data is normally distributed. A 2-tailed asymptotic significance value of larger than 0.05 indicates that the data are regularly distributed. The data can be regarded as normal because the Kolmogorov-Smirnov computation using SPSS yielded a value of 0.200, which is greater than 0.05.

Multicollinearity Test

Table 6. Multicollinearity Test

Coefficients ^a							
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	4,759	3,777		1,260	,212		
Motivation	,273	,111	,302	2,462	,016	,629	1,589
Work environment	,340	,109	,367	3,127	,003	,689	1,451
Competence	,071	,159	,067	,449	,655	,432	2,313
Discipline	,023	,161	,021	,144	,886	,438	2,285

A. Dependent Variable: Employee Performance

The test in Table 6 shows that there is no multicollinearity in the data because all VIF values are less than 10 and the tolerance value is greater than 0.1.

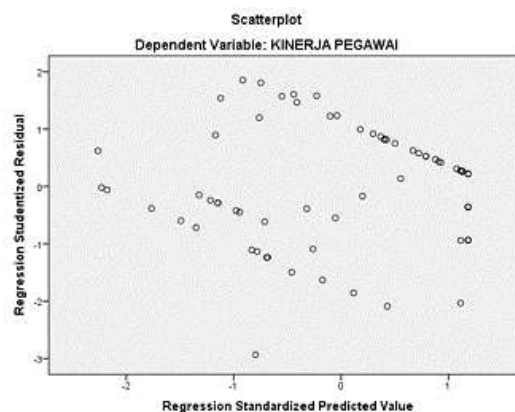


Figure 2. Heteroscedasticity Test

The scatter-plot graph shows points spread randomly without any particular pattern and around point 0, indicating the absence of heteroscedasticity problems.

Table 7. Multiple Linear Regression Analysis Test

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4,759	3,777		1,260	,212
	Motivation	,273	,111	,302	2,462	,016
	Work environment	,340	,109	,367	3,127	,003
	Competence	,071	,159	,067	,449	,655
	Discipline	,023	,161	,021	,144	,886

a. Dependent Variable: Employee Performance

Table 7 displays the coefficient values for the independent variables (Motivation, Work Environment, Competence, and Discipline) on Employee Performance, based on the correlation results obtained:

$$Y = 4,759 + 0,273X_1 + 0.340X_2 + 0.071X_3 + 0.023X_4 + e$$

In this section, you must provide us with each step taken to accomplish your studies. You must not put too much the result of descriptive statistics here; on the other hand, it should be summarized in an easier to read table or graphs. You must not forget the numbers for every table and chart presented in your paper.

The equation's statement makes sense in the following ways:

- The constant value of 4.759 indicates that employee performance at PDAM Tirtanadi Sunggal will rise in the absence of influences from motivation, the work environment, competence, and discipline.
- Employee performance at PDAM Tirtanadi Sunggal will drop by 0.273 if motivation increases by one unit, with other factors being constant, according to the regression coefficient for motivation (X1).
- The work environment's regression coefficient (X2) is 0.340, meaning that for every unit rise in the work environment, employee performance will drop by 0.340.
- The competency (X3) regression coefficient is 0.071, meaning that, while all other variables stay constant, employee performance at PDAM Tirtanadi Sunggal will drop by 0.071 for every unit increase in competency.
- Employee performance at PDAM Tirtanadi Sunggal will drop by 0.023 if discipline increases by one unit, according to the regression coefficient for discipline (X4), which is 0.023.

Table 8. Partial T-test

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	4,759	3,777		1,260	,212
	Motivation	,273	,111	,302	2,462	,016
	Work environment	,340	,109	,367	3,127	,003
	Competence	,071	,159	,067	,449	,655
	Discipline	,023	,161	,021	,144	,886

a. Dependent Variable: Employee Performance

The partial significance test results for each research variable are displayed in Table 8, and the t-table value ($df = n - k - 1$ or $70 - 4 - 1 = 65$) is 1.66864.

- a. The t-count and t-sig for the motivation variable (X1) are 2.462 and 0.016, respectively. H_a is accepted while H_o is denied because motivation has a considerable impact on employee performance, as seen by $t\text{-count} > t\text{-table}$ ($2.462 > 1.66864$) and $t\text{-sig} < 0.05$ ($0.016 < 0.05$).
- b. The t-count and t-sig for the work environment variable (X2) are 3.127 and 0.003, respectively. H_a is approved while H_o is rejected because the work environment has a significant positive effect on employee performance, as evidenced by $t\text{-count} > t\text{-table}$ ($3.127 > 1.66864$) and $t\text{-sig} < 0.05$ ($0.003 < 0.05$).
- c. The t-count and t-sig for the competency variable (X3) are 0.449 and 0.655, respectively. Competency does not significantly affect employee performance because $t\text{-count} < t\text{-table}$ ($0.449 < 1.66864$) and $t\text{-sig} > 0.05$ ($0.655 > 0.05$). For this reason, H_o is approved while H_a is refused.
- d. The t-count and t-sig for the discipline variable (X4) are 0.144 and 0.886, respectively. Discipline does not significantly affect employee performance because $t\text{-count} < t\text{-table}$ ($0.144 < 1.66864$) and $t\text{-sig} > 0.05$ ($0.886 > 0.05$). For this reason, H_o is approved while H_a is refused.

Table 9. Simultaneous F Test

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	124,604	4	31,151	10,057	,000b
	Residual	201,339	65	3,098		
	Total	325,943	69			
A. Dependent Variable: Employee Performance						
B. Predictors: (Constant), Discipline, Work Environment, Motivation, Competence						

The F-count is 10.057 with t-sig 0.000 in Table 9, and the F-table value is 2.51. H_a is accepted and H_o is denied because it can be stated that motivation, work environment, competence, and discipline all concurrently have a significant impact on employee performance because the t-sig is less than 0.05 ($0.000 < 0.05$) and the F-count is more than the F-table ($10.057 > 2.51$).

Table 10. Determination Test

Model Summaryb

Model	R	R Square	Adjusted R Square	Std. Error Of The Estimate
1	,618a	,382	,344	1,760

A. Predictors: (Constant), Discipline, Work Environment, Motivation, Competence

B. Dependent Variable: Employee Performance

The coefficient of determination (R^2) value, or 38.2%, is displayed in Table 1.10. This R^2 value shows that 38.2% of the dependent variable can be explained by the model that was employed, while 61.8% is determined by additional factors that were not considered in this investigation.

DISCUSSION

1. The Influence of Motivation on Employee Performance

T-count for motivation is 2.462, and t-sig is 0.016. Given that t-count > t-table ($2.462 > 1.66864$) and t-sig < 0.05 ($0.016 < 0.05$), employee performance is clearly impacted by motivation. This demonstrates how improved performance is correlated with strong motivation. This result is in line with Supriatin's research (2023), which claims that PDAM Tirtanadi Sunggal Branch employees' performance is impacted by motivation.

2. The Influence of the Work Environment on Employee Performance

The workplace environment a t-sig of 0.003 and a t-count of 3.127. The work environment has a favorable and substantial effect on employee performance since t-count > t-table ($3.127 > 1.66864$) and t-sig < 0.05 ($0.003 < 0.05$). According to Marlius's (2022) research on the impact of a non-physical work environment on employee performance, there is evidence that a positive work environment enhances employee performance.

3. The Influence of Competence on Employee Performance

T-count and t-sig for competence are 0.449 and 0.655, respectively. Competence has no discernible impact on worker performance with a t-count < t-table ($0.449 < 1.66864$) and t-sig > 0.05 ($0.655 > 0.05$). This demonstrates that performance in this environment is not much impacted by competence, despite its importance, which is in line with Salvono's findings (2023).

4. The Influence of Discipline on Employee Performance

T-count is 0.144 and t-sig is 0.886 in discipline. Discipline has no discernible impact on employee performance because t-count < t-table ($0.144 < 1.66864$) and t-sig > 0.05 ($0.886 > 0.05$). In spite of issues with work schedule management, Cece Wijaya and Tabrosyi Rusyan (1992) explain that this has no bearing on output.

5. The Influence of Motivation, Work Environment, Competence and Discipline on Employee Performance

F-table is 2.51, t-sig is 0.000, and F-count is 10.057 according to the computation findings. Employee performance is significantly impacted by motivation, work environment, competence, and discipline all at the same time, as indicated by F-count > F-table ($10.057 > 2.51$) and t-sig < 0.05 ($0.000 < 0.05$). With a coefficient of determination (R²) of 0.382, independent variables account for 38.2% of the variation in employee performance, while external factors account for 61.8% of the variation.

CONCLUSIONS AND RECOMMENDATIONS

The results of the study show that motivation and work environment have an influence on employee performance, while competence and discipline do not have a significant influence on employee performance.

FURTHER STUDY

It is recommended to add other variables, such as the physical work environment, in further research.

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