



The Effect of Leadership Style, Work Environment, Work Motivation, Work Discipline on Employee Performance at pt. Perkebunan Nusantara IV Regional I

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Abstract

As an agricultural country, Indonesia places the plantation sector as one of the main pillars of the national economy. This is reflected in the contribution of PT. Perkebunan Nusantara IV Regional I which produces superior commodities such as palm oil, rubber, and coffee along with various derivative products. In order to maintain competitiveness and ensure business continuity, the company implements an integrated management system as well as key performance indicators (KPIs). Nevertheless, the company still faces challenges in maintaining and improving employee performance. Employee performance is a very important aspect because it is influenced by various factors, including leadership style, work environment, work motivation, and work discipline. Participatory leadership, a conducive and comfortable work environment, adequate motivation levels, and optimal work discipline are believed to be able to encourage increased productivity and overall employee performance at PT. Perkebunan Nusantara IV Regional I. This study applies a quantitative approach and was conducted at PT. Perkebunan Nusantara IV Regional I, Medan City, from March to September 2026. The study population includes all 150 permanent employees. Sampling was conducted using a non-probability sampling method through a purposive sampling approach. The sample size was determined based on the Slovin formula with a 5% error rate, resulting in 109 respondents, of which 30 were used as validity test instruments. The results of the study indicate that, partially and simultaneously, leadership style, work environment, work motivation, and work discipline have a positive and significant effect on employee performance. This is evidenced by the results of the t-test and F-test with a significance level below 0.05. These findings confirm that optimal management of these four variables is crucial in efforts to improve employee performance.

Keywords: Leadership Style, Work Environment, Work Motivation, Work Discipline, Performance

1. Introduction

Indonesia has long been known as a country reliant on the agricultural sector due to its abundant natural resources. The agricultural sector, particularly plantations, plays a strategic role in supporting the national economy. Mainstay commodities such as palm oil, rubber, and coffee provide significant foreign exchange earnings for the country. This contribution also comes from state-owned plantation companies, one of which is PT. Perkebunan Nusantara IV Regional I. This company manages the production of palm oil, natural rubber, and coffee as its primary commodities, while also developing various derivative products, including organic fertilizer and other processed products. With systematic and quality-oriented management, the company is able to market its products internationally and contribute to increasing state revenue. To maintain its competitiveness, the company implements an integrated management system that emphasizes efficiency, quality improvement, and business sustainability.

The use of key performance indicators serves as an evaluation tool to measure work effectiveness, maximize human resource potential, and encourage optimal technology utilization. Furthermore, sustainability principles are also applied to ensure plantation activities remain in line with global standards. However, increasingly fierce industrial competition demands that companies continuously maintain the quality of their employees' performance. Factors such as leadership, work atmosphere, motivation, and level of discipline play a big role in determining these achievements. Employee performance essentially reflects an individual's work results in carrying out their assigned responsibilities. For companies, this aspect is a crucial indicator because it directly relates to the achievement of organizational targets. High or low performance is influenced by various internal and external factors, including leadership styles, work environment conditions, motivational drives, and discipline in complying with work regulations. Therefore, a comprehensive study is necessary so that companies can design appropriate strategies to increase productivity sustainably. Leadership can be understood as how a leader influences, directs, and guides subordinates to achieve common goals. An open approach and involving employees in the decision-making process tends to create a more positive work environment. When communication is two-way and employees feel involved, they are more motivated and encouraged to contribute their best.

The work environment also plays a crucial role because it encompasses all the physical and non-physical conditions experienced by employees while working. Adequate facilities, a safe atmosphere, and attention to occupational health and safety can increase comfort and productivity. Conversely, limited resources or a lack of attention to employee well-being can potentially reduce employee morale and performance. Work motivation is the drive that drives someone to achieve the best results. This drive can arise from within or be influenced by external factors such as rewards, development opportunities, and recognition for achievement. If these needs are not met, morale can decline and risk increasing employee turnover. Meanwhile, work discipline indicates the extent to which employees comply with established rules and standards. A good level of discipline will foster an orderly and productive work culture. However, if violations persist or attendance rates are low, this can hinder the achievement of company goals. Therefore, consistent supervision and strict enforcement of rules are crucial steps to maintain performance stability.

2. Method

This study uses a quantitative approach. The instrument used in this study is a simple random questionnaire conducted by the author himself where the author will conduct that is in accordance with the topic of the problem discussed. Based on the slovin formula, there are 109 employees as sample in this study.

3. Literature Review

3.1. Theory of the Influence of Leadership Style on Employee Performance

According to Emron Edison (2021), leadership style can be defined as the way a leader behaves and acts to influence team members so that predetermined goals can be achieved. Meanwhile, Kartono (2016) ^[11] explains that leadership style is a pattern of behavior displayed by a leader when

influencing others, as understood and perceived by his subordinates. Similarly, Malayu S. P. Hasibuan (2017:170) states that leadership style is an approach or method used by a leader to influence subordinates to raise work enthusiasm, create satisfaction, and encourage high productivity to achieve organizational goals optimally.

3.2. Theory of the Influence of Work Environment on Employee Performance

According to Afandi (2018) ^[3], the work environment encompasses all conditions surrounding employees that could potentially impact the performance of their duties and responsibilities, such as air conditioning, adequate lighting, and other supporting facilities. Furthermore, Joni and Hikmah (2024) state that efforts to create good working conditions and boost work enthusiasm will have a positive impact on improving employee performance. Meanwhile, Sihalolo (2024) ^[17] explains that an uncomfortable work environment can reduce employee performance and hinder the achievement of targets, resulting in a less effective and efficient work system.

3.3. Theory of the Influence of Work Motivation on Employee Performance

According to Malayu S. P. Hasibuan (2016) ^[9], motivation can be defined as the encouragement or energy given to a person, fostering work enthusiasm, a willingness to cooperate, and a willingness to exert maximum effort to achieve certain satisfactions. Furthermore, Kasmir (2018) ^[12] explains that motivation is a driving factor that influences individual behavior, encouraging them to work diligently to achieve optimal results. Meanwhile, Supriyadi (2021) ^[20] states that work motivation is a drive that originates from within and outside the employee, capable of inspiring enthusiasm, willpower, and strong determination to make the best contribution to achieving organizational goals.

3.4. Theory of the Influence of Work Discipline on Employee Performance

According to Agustini (2019:89) ^[4], work discipline can be defined as an attitude of obedience and compliance with applicable company rules and norms, which aims to strengthen employees' commitment to achieving organizational goals. Furthermore, Malayu S. P. Hasibuan (2018:193) explains that discipline is a crucial operational function in Human Resource Management, because the better the level of employee discipline, the higher the chance of achieving work performance. Meanwhile, Lijan Poltak Sinambela (2016:334) ^[18] states that discipline is a process of addressing performance issues, in which managers are tasked with identifying and communicating various obstacles faced by employees.

4. Results and Discussion

4.1. Results

This analysis is used to explain the data of the 5 variables (1 dependent and 4 independents) used in the study. Descriptive statistics used include the minimum maximum value of the mean and standard deviation. The results of descriptive statistics in this study are presented in the table below.

Table 1 below shows the results of descriptive statistical data processing consisting of 109 samples and 5 variables, namely Leadership Style Work Environment, Work Motivation, Work Discipline and Employee Performance. The following

is a description of the descriptive statistics of each variable:

1. The Leadership Style variable has a sample size of 109 respondents, with value of mean 19.91, a median value of 21.00, a modus value of 23 and a standard deviation value of 4.632.
2. The Work Environment variable has a sample size of 109 respondents, with value of mean 27.30, a median value of 29.00, a modus value of 30 and a standard deviation value of 4.986.
3. The Work Motivation variable has a sample size of 109 respondents, with value of mean 20.50, a median value of 21.00, a modus value of 24 and a standard deviation value of 3.753.
4. The Work Discipline variable has a sample size of 109 respondents, with value of mean 22.62, a median value of 23.00, a modus value of 25 and a standard deviation value of 2.854.
5. The Employee Performance variable has a sample size of 109 respondents, with value of mean 21.41, a median value of 21.00, a modus value of 21 and a standard deviation value of 3.547.

Table 1: Descriptive Statistical Test Results

Descriptive Statistics					
	N	Mean	Median	Modus	Std. Deviation
Leadership Style	109	19.91	21.00	23	4.632
Work Environment	109	27.30	29.00	30	4.986
Work Motivation	109	20.50	21.00	24	3.753
Work Discipline	109	22.62	23.00	25	2.854
Employee performance	109	21.41	21.00	21	3.547
Valid N (listwise)	109				

Table 2: Coefficient of Determination (R²)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.765	0.585	0.569	2.329

Source: Data Processing Result, 2025

1. **Predictors:** (Constant), Work Discipline, Work Environment, Work Motivation, Leadership Style
2. **Dependent Variable:** Performance

Table 3: Simultaneous Hypothesis Testing (F-Test)

Model	Source	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	794.210	4	198.552	36.599	0.000
	Residual	564.213	104	5.425		
	Total	1358.422	108			

Source: Data Processing Result, 2025

1. **Dependent Variable:** Performance
2. **Predictors:** (Constant), Work Discipline, Work Environment, Work Motivation, Leadership Style

Table 4: Partial Hypothesis Testing (t-Test)

Model	Variable	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.544	2.177		0.709	0.480		
	Leadership Style	0.308	0.073	0.402	4.240	0.000	0.443	2.256
	Work Environment	0.160	0.053	0.225	3.029	0.003	0.726	1.377
	Work Motivation	0.223	0.084	0.236	2.643	0.009	0.500	2.000
	Work Discipline	0.212	0.086	0.171	2.472	0.015	0.839	1.191

Source: Data Processing Result, 2025

Dependent Variable: Performance

5. Discussion

The correlation value (R), also known as the relationship (R), between the independent variable and the dependent variable is shown in Table 2 above, with the adjusted R square value = 0.569. In other words, the dependent variable is influenced 56.9% by the independent variable. This shows that only 56.9% of the independent variable can explain how the dependent variable changes, while the other 43.1% is due to additional variables such as motivation, team work, discipline, and additional variability not used by the researcher in this study.

6. Conclusion

According to the research conducted where the result shown in Table 3 and Table 4, it can be concluded such as:

1. The calculated t value for the Leadership Style variable

- (X1) shows that the calculated t value (4.240) > t table (1.983) with a significance level of 0.000 < 0.05 so it can be concluded that there is a significant partial influence between Leadership Style and Employee Performance.
2. The calculated t value for the Work Environment variable (X2) shows that the calculated t value (3.029) is > t table (1.983) with a significance level of 0.003 < 0.05, so it can be concluded that there is a significant partial influence between the Work Environment and Employee Performance.
3. The calculated t value for the Work Motivation variable (X3) shows that the calculated t value (2.643) > t table (1.983) with a significance level of 0.009 < 0.05 so it can be concluded that there is a significant partial influence between Work Motivation and Employee Performance.
4. The calculated t value for the Work Discipline variable

(X4) shows that the calculated t value (2.472) > t table (1.983) with a significance level of $0.015 < 0.05$ so it can be concluded that there is a significant partial influence between Work Discipline and Employee Performance.

5. The Ftable value (2.46) and significant $\alpha = 5\%$ (0.05) are Fcount (36.599) and sig.a (0.000a) so that the results prove that simultaneously Leadership Style, Work Environment, Work Motivation, and Work Discipline have a positive and significant effect on Employee Performance.

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