

***THE EFFECT OF WORK ENGAGEMENT, WORK ENVIRONMENT, WORK DISCIPLINE, AND APPRECIATION ON THE PERFORMANCE OF HEAD OFFICE EMPLOYEES AT PT. PERKEPLANTAN NUSANTARA IV REGIONAL I MEDAN***

**PENGARUH KETERIKATAN KERJA, LINGKUNGAN KERJA, DISIPLIN KERJA, DAN APRESIASI TERHADAP KINERJA KARYAWAN KANTOR PUSAT DI PT. PERKEBUNAN NUSANTARA IV REGIONAL I MEDAN**

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**ABSTRACT**

*This study aims to determine the influence of work engagement, work environment, work discipline, and rewards on employee performance at PTPN IV Regional I Medan. The research method used is a quantitative approach with a causal-associative design. The population for this study consisted of 118 employees, with a sample of 91 respondents determined using the Slovin formula and simple random sampling. Data collection was conducted through questionnaires, interviews, and observations. Data analysis utilized multiple linear regression with the assistance of SPSS software, along with validity and reliability tests, classical assumption tests, the coefficient of determination test, the F-test, and the t-test. The results of the study show that partially the attachment of work engagement and the work environment does not have a significant effect on employee performance. Meanwhile, work discipline and rewards have a positive and significant effect on employee performance. Simultaneously, work attachment, work environment, work discipline, and rewards have a positive and significant effect on employee performance. The results of the determination coefficient showed an Adjusted R Square value of 0.749, which means that 74.9% of the variation in employee performance can be explained by the variables of work attachment, work environment, work discipline, and reward, while the remaining 25.1% is explained by other variables outside the study. The variable of work discipline is the most dominant variable that affects employee performance.*

**Keywords:** *Work Engagement, Work Environment, Work Discipline, Rewards, Employee Performance*

**ABSTRAK**

Penelitian ini bertujuan untuk mengetahui pengaruh keterikatan kerja, lingkungan kerja, disiplin kerja, dan penghargaan terhadap kinerja karyawan di PTPN IV Regional I Medan. Metode penelitian yang digunakan adalah pendekatan kuantitatif dengan desain kausal-asosiatif. Populasi penelitian ini terdiri dari 118 karyawan, dengan sampel sebanyak 91 responden yang ditentukan menggunakan rumus Slovin dan simple random sampling. Pengumpulan data dilakukan melalui kuesioner, wawancara, dan observasi. Analisis data menggunakan regresi linier berganda dengan bantuan perangkat lunak SPSS, beserta uji validitas dan reliabilitas, uji asumsi klasik, uji koefisien determinasi, uji F, dan uji t. Hasil penelitian menunjukkan bahwa secara parsial keterikatan kerja dan lingkungan kerja tidak berpengaruh signifikan terhadap kinerja karyawan. Sementara itu, disiplin kerja dan penghargaan berpengaruh positif dan signifikan terhadap kinerja karyawan. Secara simultan, keterikatan kerja, lingkungan kerja, disiplin kerja, dan penghargaan berpengaruh positif dan signifikan terhadap kinerja karyawan. Hasil koefisien determinasi menunjukkan nilai Adjusted R Square sebesar 0,749, yang berarti sebesar 74,9% variasi kinerja karyawan dapat dijelaskan oleh variabel keterikatan kerja, lingkungan kerja, disiplin kerja, dan penghargaan, sedangkan sisanya sebesar 25,1% dijelaskan oleh variabel lain di luar penelitian. Variabel disiplin kerja merupakan variabel yang paling dominan memengaruhi kinerja karyawan.

**Kata kunci:** Keterikatan Kerja, Lingkungan Kerja, Disiplin Kerja, Penghargaan, Kinerja Karyawan.

## INTRODUCTION

### 1.1 Background of the Problem

Companies such as PTPN IV Region I face difficulties in developing employee performance in the agro-industrial era, especially in maintaining productivity and product quality. Internal factors such as attachment, work environment, work discipline, and rewards are important components that need to be thoroughly researched.

Employee performance is the result of work achieved by individuals in carrying out their duties in accordance with the responsibilities given. Optimal performance is not only influenced by technical ability, but also by internal and external factors inherent in employees and the work environment. Basyid (2024) Employee performance is an employee's mental attitude that shows a deep commitment and passion to complete their responsibilities more diligently, faster, and more effectively. According to Lubis et al., (2023) Employee performance is very important for the successful implementation of work plans and the delivery of superior services to the community. In this context, work discipline is closely related to performance improvement. Discipline that is consistently applied not only reflects an employee's professional attitude and personal integrity, but also fosters an orderly, conducive and productive work environment.

One of the important factors that affect employee performance is work engagement. Employees who have high work engagement tend to show enthusiasm, dedication, and full involvement in their work. Conversely, low work engagement can have an impact on decreased productivity and work quality. Vandiya & Etikariena (2018) Stating that employees with low work commitments can be detrimental to the company, as seen from decreased

performance and lack of productivity. Employees with high work commitment are usually more enthusiastic, loyal, and willing to put more effort into achieving company success. Employee attachment is also seen as an employee's positive attitude towards the company they work for and towards the values that the company adheres to (Ananda Lubis et al., 2019).

In addition, the work environment also has an important role in supporting employee performance. A comfortable, safe, and conducive work environment can increase motivation and work productivity. On the other hand, a less supportive work environment can cause stress and lower employee morale. The work environment determines a person's comfort level at work. According to Arianto (2013), a better working environment will result in progress for the company's performance. A good workplace not only provides adequate workspace, but also creates an environment that supports productivity and mental well-being. Employees will be more motivated to work in a workplace that is safe, clean, socially supportive, and equipped with adequate facilities. Conversely, unfavorable working conditions can lead to stress, fatigue, and a lack of motivation to work. At PTPN IV Region I, the workplace is clean, has good air conditioning, adequate computers, good lighting, and positive relationships between employees.

Another factor that is no less important is work discipline. Work discipline reflects employees' compliance with the rules, procedures, and responsibilities that the company has set. The high level of work discipline will have an impact on increasing work effectiveness and efficiency. According to Saputra et al., (2025) Work discipline is the attitude of a person who is obedient

and obedient to the rules, values, and work norms that exist in a company. Discipline also reflects employees' compliance with the company's rules, procedures, and work ethics.

According to Utami & Mursito (2022) Rewards are a company's way of thanking its employees for what they do for the company. Workers, also called "human resources", are a crucial element in a company. Given the importance of the workforce, companies must give recognition to their employees to motivate them in carrying out their duties. Awards, if given proportionately and based on performance, will increase a sense of appreciation, increase morale, and foster a healthy work environment. Without a strong recognition system, employees tend to feel undervalued, leading to decreased loyalty and performance. Based on these research phenomena and gaps, it is important to conduct further studies on the influence of work engagement, work environment, work discipline, and reward on employee performance. This research is expected to make a theoretical contribution to the development of human resource management science as well as a practical contribution for companies in formulating effective employee performance improvement strategies. Based on this background, I am interested in conducting research on *The Influence of work engagement, Work Environment, Work Discipline and Appreciation on the Performance of Head Office Employees at PT. Nusantara Plantation IV Regional I Medan.*

## 1.2 Literature Review

### 1.2.1 The Theory of the Effect of Work Engagement on Employee Performance

Aji & Nugraha Wijaya (2023) reveals that work engagement is a

favorable psychological state related to the profession, characterized by loyalty, enthusiasm and full involvement, thus allowing employees to show enthusiasm and a great level of commitment to their duties. Employees with high work engagement typically develop their performance holistically because they show a strong passion and commitment to their work. Based on the Job Demands-Resources (JD-R) Theory, this attachment makes employees more focused, enthusiastic, and dedicated in completing tasks. Work engagement is a positive psychological state in which a person feels passionate, dedicated, and immersed in their work. Indicators of work engagement (Widarnandana, 2020):

- 1) *Vigor* is enthusiasm and energy in work
- 2) *Dedication* is a sense of pride and *enthusiasm* for one's work
- 3) *Absorption* is completely immersed and focused on one's work

### 1.2.2 Theory of the Influence of the Work Environment on Employee Performance

Hurun'in & Edho Rian Kurniawan (2023) Stating that the work environment is often related to employees because it is a place where they carry out the work given by the company. Enabling the production and completion of tasks in any environment requires a comfortable environment, the right layout of the workspace for a wide range of tools and devices according to their use, and harmonious relationships among employees to facilitate the production process and the completion of tasks. According to Herzberg's two-factor theory, *hygiene* The workplace is a key component in increasing job satisfaction. If the work environment is uncomfortable, employees may be less motivated and less productive.

Indicators of the working environment (Apriliana, 2021):

- 1) Physical condition of the workplace (lighting, temperature, cleanliness)
- 2) Relationship between employee and boss
- 3) Availability of work facilities
- 4) Overall work atmosphere
- 5) Occupational safety and well-being

### **1.2.3 The Theory of the Influence of Work Discipline on Employee Performance**

Refers to the compliance and obedience of individuals in an organization to predetermined rules and regulations (Feb, 2022). This is considered crucial for the progress of the organization and discipline, especially to encourage workers to apply personal discipline when carrying out their personal or group duties. According to the theory of behaviorism (*Skinner*), Reinforcement can affect disciplined behavior, and consistent discipline will result in stable and effective performance. Work discipline refers to attitudes and behaviors that show loyalty, compliance, and a willingness to responsibly follow the rules, procedures, and work standards that apply within the organization. Indicators of work discipline (Apriliana, 2021):

- 1) Adhere to the work schedule
- 2) comply with the company's regulations
- 3) Be responsible for his work
- 4) complete tasks according to schedule
- 5) Not neglecting the task

### **1.2.4 The Theory of the Influence of Awards on Employee Performance**

Awards are something that companies give to their employees, as a form of recognition for the hard work of their employees. Rewards that are fair and commensurate with achievement will increase employee morale and

loyalty (Rahmah & Avriyanti, 2024). Based on the Theory of Hope (*Expectancy Theory*) from Vroom, when employees are confident that their hard work is rewarded, they will be more motivated to do a good job. Awards can be given by an organization to individuals or groups for contributions, achievements, behaviors, and performance that meet or exceed the organization's standards. Reward indicators (Rahmah & Avriyanti, 2024):

- 1) Fairness in salary distribution
- 2) Bonuses and incentives
- 3) Recognition of achievements
- 4) Non-material praise or rewards
- 5) Opportunities to grow

### **1.2.5 Theory of the Influence of Work Engagement, Work Environment, Work Discipline, and Reward on Employee Performance**

Various factors, both external and internal, can affect worker performance. According to Vandiya & Etikariena (2018) Employees with low levels of work engagement can be detrimental to the company, as can be seen from decreased performance and low productivity. A supportive workplace can ease burdens, energize and support worker well-being (Nabilah et al., 2023)

In addition, work discipline plays an important role in ensuring that work is carried out in accordance with the terms and deadlines that are decided. Employee motivation and commitment to the organization are directly related to high work discipline, which in turn has a good effect on overall work outcomes (Fadzillah et al., 2025). Meanwhile, according to Prabu & Wijayanti (2016) Awards are incentives that companies give to their workers related to the tasks they do, which are intrinsic and extrinsic.

Overall, engagement, environment, as well as work discipline,

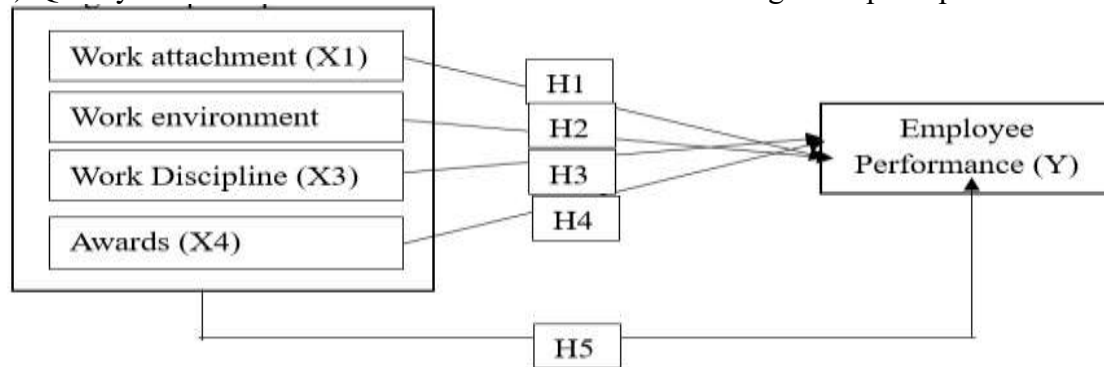
and rewards have a positive impact on employee performance, both individually and collectively. These four variables complement each other in motivating employees to achieve optimal work results. Employee performance indicators according to Saputra et al., (2025) namely:

1) Quality of work

- 2) Quantity of work
- 3) Punctuality
- 4) Cooperative ability
- 5) Work discipline

### 1.3 Conceptual Framework

Through the formulation of the problem above, it can be illustrated with the following concept map:



**Figure 1. 1 Framework Conceptual**

### 1.4 Research Hypothesis

According to Hikmawati (2020) A hypothesis is the researcher's provisional conjecture about the results of the research, based on theoretical-conceptual studies and previous findings.

H1: " Work engagement affects employee performance at PTPN IV Regional I Medan".

H2: "Work environment affects employee performance at PTPN IV Regional I Medan".

H3: "Work discipline affects employee performance at PTPN IV Regional I Medan".

H4: "Awards affect employee performance at PTPN IV Regional I Medan".

H5: "Work engagement, work environment, work discipline, and awards affect employee performance at PTPN IV Regional I Medan".

## RESEARCH METHODOLOGY

### 1.5 Research Methodology

#### 1.5.1 Approaches and Types of Approaches

The study utilizes quantitative methodologies, specifically causal associative design, in which statistical data analysis is used to measure relationships and influences between variables. Noeraini (2016) Quantitative research is a methodology that refers to the philosophy of positivism. In its implementation, samples were randomly assigned. Data is collected with instruments, then the data analysis is carried out quantitatively/statistically. Causal associative research focuses on the causal correlation between two or more variables (Solihin & Kurniawan, 2024).

#### 1.5.2 Data Type

According to Inaugural Draw (2024) Data is classified into 2 types that refer to its source: primary data as well as secondary. Primary data was collected through the distribution of

questionnaires to PTPN IV Region I employees, while secondary data was collected through supporting references, such as documents, journals, books, company annual reports, and other archives related to the study topic.

**1.5.3 Nature of Research**

This study utilizes an explanatory approach to examine the nature of the variables studied and the correlation between the variables.

**1.5.4 Data Analysis Techniques**

In this study, data analysis was carried out to examine the influence of work engagement, work environment, work discipline, and reward on employee performance. The analysis process is carried out with a quantitative

approach with the help of statistical software, such as SPSS.

**1.5.5 Data Collection Techniques**

Data were collected by observation, interviews, and questionnaires.

**1.6 Population and sample**

Noeraini (2016) Population is defined as the scope of generalization, including subjects and objects with special characteristics and qualities. The population in the study consisted of 118 employees. Noeraini (2016) states that a portion of the characteristics and size of the population make up the sample. To obtain samples, the technique set is Simple Random Sampling.

$$n = \frac{N}{1 + Ne^2} = \frac{118}{1 + 118(0,05)^2} = \frac{118}{1 + 0,295} = \frac{118}{1,295} = 91$$

**1.7 Identification and Operational Definition of Research Variables**

**Table 2. 1 Variable Operational Definition**

Variable	Operational Definition	Indicator	Scale
Work Engagement (X1)	Work engagement is a positive psychological condition in which a person feels excited, committed to his or her work	a. Vigor b. Enthusiasm ( <i>dedication</i> ) c. Focus at work ( <i>absorption</i> )	<i>Likert Scale</i> 1-5
Work Environment (X2)	The work environment refers to the overall conditions that affect the way they carry out their duties physically, psychologically, and socially.	a. Physical condition b. Relationship between employees and superiors c. Availability of facilities d. Work atmosphere e. Safety and well-being	<i>Likert Scale</i> 1-5
Work Discipline (X3)	Work discipline refers to a person's attitude and behavior that shows obedience, obedience, and willingness to comply with all the rules and procedures of an organization.	a. Adhere to work schedules b. Comply with company regulations c. Be responsible for assigned tasks d. Not violating duty	<i>Likert Scale</i> 1-5
Awards (X4)	Awards are a form of recognition given by organizations to individuals or groups for contributions, achievements, and	a. Fair in the provision of salaries b. Bonuses and <i>incentives</i> c. Recognition of achievements	<i>Likert Scale</i> 1-5

	performance that meet the standards that have been set.	d. Nonmaterial praise or award	
		e. Opportunities to grow	
Employee Performance (Y)	Employee performance refers to the quality and quantity of work achieved by individuals in carrying out their duties	a. Quality of work b. Quantity of work c. Punctuality d. Cooperative ability e. Work discipline	Likert Scale 1-5

(Source: Primary data processed, 2025)

**1.8 Validity and reliability tests and variable instruments**

**1.8.1 Validity Test**

Squirting (2019) Stating that validity testing is intended to determine whether a questionnaire is accurate or not. The determination criteria in this test are: (a) If  $\geq 0.30$ , it means that the item is rated "Valid". (b) If the  $<$  is 0.30, it means that the item is rated as "not Valid".

**1.8.2 Reliability Test**

Reliability (Purnawijaya, 2019) is run to measure how reliable a questionnaire is in measuring a variable or structure. This test was run with Cronbach's Alpha with the decision parameter that when Cronbach's Alpha  $>$  0.6, the scale is considered reliable.

**1.9 Classic Assumption Test**

**1.9.1 Normality Test**

This test is intended to determine whether the sample is already representative of the population, so that generalization of the findings to the population can be carried out (Sari et al., 2017).

**1.9.2 Multicollinearity Test**

Multicollinearity is identified when a high correlation is generated in two or more variables.

**1.9.3 Heteroscedasticity Test**

A phenomenon in which the residues of an equation vary within a

given data range are called heteroscedasticity (Muchorobin, 2018). One of the many steps in tracing whether heteroscedasticity exists is to examine the diagram *Scatterplot*. If the diagram does not show a particular pattern or is scattered above and below zero on the y-axis, heteroscedasticity does not exist.

**1.10 Research Data Analysis Model**

**1.10.1 Research Model**

The analysis model was carried out with Multiple Linear Regression, with the equation:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Namely:

$Y$  = Employee Performance

$X_1$  = Work Engagement

$X_2$  = Work Environment

$X_3$  = Work Discipline

$X_4$  = Awards

$\beta_0$  = Constant

$\varepsilon$  = Error

$\beta_1 \dots \beta_4$  = Regression Coefficients

**1.10.2 Coefficient of Determination ( $R^2$ )**

Latief et al., (2019) argues that the coefficient of determination ( $R^2$ ) is used to determine the best level of accuracy for regression analysis, as shown by values ranging from 0 to 1. The formula used is:  $KD = R^2 \times 100\%$ . w.

**1.10.3 Simultaneous Hypothesis Testing (Test- F)**

As intended, the F test shows whether all of its independent variables simultaneously affect the dependent

variables. When the value of  $F > 4$  is generated at the level of Sig. 0.05, an alternative hypothesis is accepted.

#### 1.10.4 Partial Hypothesis Testing (T-Test)

April (2017) revealed, this test is carried out by comparing the calculated t-value with the t-value in the table or checking the level of significance (Sig.)

### RESULTS OF RESEARCH AND DISCUSSION

#### 1.11 Research Results

In this study, participants were classified into a number of groups, referring to their age, gender, length of service, and educational background.

#### 1.12 Respondent Profile

##### 1.12.1 Respondent Profiles by Gender

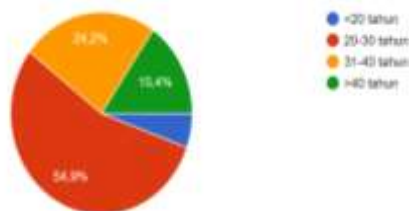


**Figure 3. 1 Gender**

(Source: Primary data processed, 2025)

**Figure 3.1** shows the breakdown by gender. The blue section represents women (54.9%), while the red section represents men (45.1%). This means that women dominate the data.

##### 1.12.2 Respondent Profiles by Age



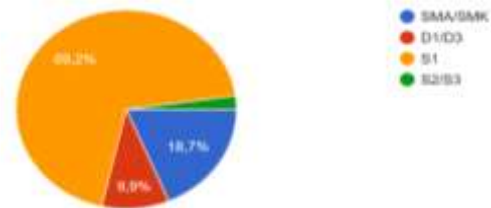
**Figure 3. 2 By Age**

(Source: Primary data processed, 2025)

**Figure 3.2** shows the age distribution. Most of them, namely 54.9%, were in the age range of 20–30 years. Furthermore, 24.2% were 31–40

years old, and 15.4% were over 40 years old. While individuals under the age of 20 make up the smallest group, accounting for about 5%. This means that most of the respondents are 20–30 years old.

##### 1.12.3 Respondent Profiles Based on Educational Background

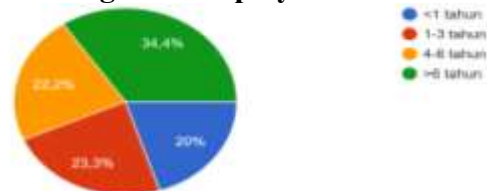


**Figure 3. 3 Background Behind Education**

(Source: Primary data processed, 2025)

**Figure 3.3** shows the level of education. The majority of respondents have a bachelor's degree (69.2%). This is followed by high school/vocational school graduates (18.7%) and those with a diploma (9.9%). Meanwhile, master's and doctoral degree holders are the smallest group with only about 2%.

##### 1.12.4 Respondent Profiles Based on Length of Employment



**Figure 3. 4 Long Time Working**

(Source: Primary data processed, 2025)

**Figure 3.4** shows that the majority of respondents have been working for more than 6 years (34.4%), while the smallest group has been working for less than a year (20%). The rest worked for 1–3 years (23.3%) and 4–6 years (22.2%).

### 1.13 Descriptive Data Analysis

#### 1.13.1 Descriptive Statistics

**Table 3. 1 Descriptive Statistical Test**

Results					
Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Keterikatan Kerja	91	17	30	23.31	3.079
Lingkungan Kerja	91	24	50	40.96	4.524
Disiplin	91	24	50	40.89	4.792
Penghargaan	91	27	50	40.21	4.898
Kinerja Karyawan	91	20	50	41.42	5.099
Valid N (listwise)	91				

(Source: Primary data processed, 2025)

As obtained by descriptive statistical analysis conducted with 91 respondents, Work Engagement resulted in an average of 23.31 with a standard deviation (SD) of 3.079, which shows that this variable is included in the "good" category. The work environment resulted in an average of 40.96 with an SD of 4.524, showing the "good" category. Work discipline has an average of 40.89 with a standard deviation of 4.792, which shows the "good" category. The award has an average of 40.21 with a standard deviation of 4.898, which also shows the "good" category. Employee performance has an average score of 41.42 with a standard deviation of 5.099, which shows that employee performance is in the "good" category.

#### 1.13.2 Validity Test

In order to find out whether the statement submitted is *valid* or not, a validity test is needed with the provision of  $r \text{ count} > r \text{ table}$ .

#### 1. Work Engagement (X1)

Based on the correlation table, all items X1 (X1.1 to X1.6) produce a Pearson correlation to Total X1  $> 0.361$  and a Sig.  $<$  level of 0.05. These findings show that each indicator of Work Engagement is strongly and significantly correlated with the variable total score. Thus, all items in the Work Engagement variable are considered "*valid*" and can be used during the research.

#### 2. Work Environment (X2)

The test results showed that the entire X2 item (X2.1 to X2.10) resulted in a *Pearson correlation* to the Total X2  $> 0.361$  and a Sig.  $<$  level of 0.05. This means that each statement is able to accurately represent the variables of the work environment. So, all indicators in the variables are considered "*valid*".

#### 3. Discipline (X3)

Based on the test results, all items X3 (X3.1 to X3.10) have a Pearson correlation value to the Total X3  $> r \text{ table}$  (0.361) and have a Sig.  $<$  level of 0.05. This discovery shows that all of its items are able to measure employee discipline levels consistently and accurately. Therefore, all Discipline variables (X3) are declared *valid*.

#### 4. Awards (X4)

The correlation results show that each item X4 (X4.1 to X4.10) has a Pearson correlation value to Total X4 that exceeds the  $r$ -value of the table and has a Sig.  $<$  0.05. This means that each indicator shows a significant correlation with the Reward variable. So, all items in the variable are considered "*valid*".

#### 5. Employee Performance (Y)

Based on the correlation table, all items Y (Y1 to Y10) have a Pearson correlation value to Total Y  $> 0.361$  and a Sig.  $<$  level of 0.05. This discovery shows that every statement is able to measure employee performance precisely. Thus, all indicators in the variables are considered "*valid*".

So referring to the validity test of all variables, all items produce a value of  $r$  calculated  $> r \text{ table}$  (0.361) and a Sig. level of  $<$  0.05. Therefore, the entire questionnaire item in this study was declared "*valid*" and can be used as an instrument.

1.13.3 Reliability Test

Table 3. 2 Reliability Test

Variabel	Cronbach's Alpha
Keterikatan Kerja	.786
Lingkungan Kerja	.782
Disiplin	.781
Penghargaan	.776
Kinerja Karyawan	.777

(Source: Primary data processed, 2025)

The reliability test results showed that all the variables produced *Cronbach's Alpha* > 0.70. Work Engagement is 0.786, Work Environment is 0.782, Discipline is 0.781, Recognition is 0.776, and Employee Performance is 0.777. Because all of *Cronbach's Alpha* values > 0.70, it is concluded that the overall instrument is reliable or consistent.

1.14 Classic Assumption Test

1.14.1 Normality Test

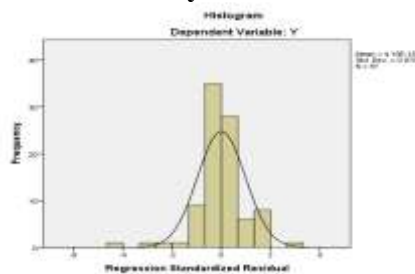


Figure 3. 5 Results Test Normality with Histogram Graph

(Source: Primary data processed, 2025)

As the test histogram shows, the residue data is scattered in a bell-shaped curve and is symmetrical around zero. The histogram bars also follow the normal curve indicated. This finding shows that if the distribution of residual data is considered "normal", it is known that the regression model is sufficient for the assumption of normality.

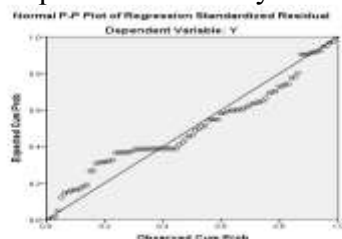


Figure 3. 6 Normality Results with the Probably Plot Method

(Source: Primary data processed, 2025)

Referring to Figure 3.6, *P–P Plot Graph*, the distribution of data points around the diagonal line that follows the direction can be observed. There are no significant deviations from the diagonal line. These findings show that the distribution of residual data is considered normal, which means that the regression model satisfies the assumption of normality.

Table 3. 3 Beach- Sample Kolmogorov-Smirnov Test

One-Sample Kolmogorov-Smirnov Test		
Unstandardized Residual		
N	91	
Normal Parameters <sup>a,b</sup>	Mean	.0000000
	Std. Deviation	2.49627793
Most Extreme Differences	Absolute	.139
	Positive	.095
	Negative	-.139
Kolmogorov-Smirnov Z	1.326	
Asymp. Sig. (2-tailed)	.059	

a. Test distribution is Normal.  
b. Calculated from data.

(Source: Primary data processed, 2025)

Table 3.3 presents the results of the *Kolmogorov–Smirnov one-sample test* on residues (*unstandardized residual*) with a sample size of N = 91. Asymp level. Sig. (2-tailed) is 0.059, > 0.05. Therefore, the distribution of residual data is considered "normal". This means that the normality assumptions in the regression model are met, and further statistical analysis (such as t- and f tests) can be performed.

1.14.2 Multicollinearity Test

Table 3. 4 Multicollinearity

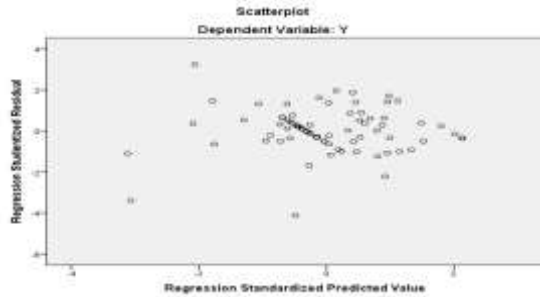
coefficients			
Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	X1	.512	1.951
	X2	.358	2.792
	X3	.386	2.594
	X4	.308	3.246

(Source: Primary data processed, 2025)

Table 3.4 presents the test results based on the Tolerance and VIF values for all of their independent variables. The results show an overall *Tolerance*

value of  $> 0.10$  and an overall VIF value of  $< 10$ . Thus, there is no multicollinearity between independent variables, so each variable can explain employee performance independently and the regression model is suitable for use.

**1.14.3 Heteroscedasticity Test**



**Figure 3. 7 Scatterplot Heteroscedasticity Test**

(Source: Primary data processed, 2025)

**Table 3. 5 Heteroscedasticity**

		Coefficients <sup>a</sup>					
		Unstandardized Coefficients		Standardized Coefficients		t	Sig.
Model		B	Std. Error	Beta			
1	(Constant)	4.377	1.816			2.410	.018
	X1	.002	.084	.003		.019	.985
	X2	.053	.069	.135		.780	.438
	X3	.030	.062	.081		.484	.630
	X4	-.152	.068	-.416		-2.225	.029

a. Dependent Variable: Abs\_RES

(Source: Primary data processed, 2025)

Figure 3.7 and Table 3.5 show the *scatterplot* between the predicted value (*ZPRED*) and the regression remainder (*SRESID*). The distribution of the dots is random, above and below zero, so that it does not show any special shape (lines, fans, or waves). This indicates heteroscedasticity is not identified, which means that the variance of the regression remainder is constant and the regression model meets classical assumptions. The regression model is considered "valid" and can be reliably used for in-depth analysis.

**1.15 Results of Research Data Analysis**

**1.15.1 Multiple Linear Regression Equation Analysis**

**Table 3. 6 Multiple Linear Regression Test**

		Coefficients <sup>a</sup>					
		Unstandardized Coefficients		Standardized Coefficients		t	Sig.
Model		B	Std. Error	Beta			
1	(Constant)	.162	2.636			.061	.951
	X1	-.005	.122	-.003		-.040	.968
	X2	.163	.099	.145		1.641	.104
	X3	.516	.090	.485		5.704	.000
	X4	.338	.099	.325		3.413	.001

a. Dependent Variable: Y

(Source: Primary data processed, 2025)

Based on the results of the analysis, a regression equation was produced: Employee Performance =  $0.162 - 0.005X_1 + 0.163X_2 + 0.516X_3 + 0.338X_4 + e$ . A constant value of 0.162 indicates that work engagement ( $X_1$ ), work environment ( $X_2$ ), discipline ( $X_3$ ), and reward ( $X_4$ ) are all worth "zero", meaning that employee performance is around 0.162. The coefficient for discipline ( $X_3$ ) of 0.516 and reward ( $X_4$ ) of 0.338 are positive and significant, meaning that these two variables affect the improvement of employee performance. This means that the higher the level of discipline and the better the rewards, can result in an increase in employee performance. On the other hand, the work engagement coefficient ( $X_1$ ) of  $-0.005$  and the work environment coefficient ( $X_2$ ) of 0.163 were not significant, so in this study, these two variables did not partially affect employee performance.

**1.15.2 Coefficient of Determination (R)**

**Table 3. 7 Coefficient of Determination**

Model Summary <sup>b</sup>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.872 <sup>a</sup>	.760	.749	2.554

a. Predictors: (Constant), X4, X1, X3, X2

b. Dependent Variable: Y

(Source: Primary data processed, 2025)

Referring to the *Model Summary* table, the *R Square (R<sup>2</sup>)* level is 0.760 and the adjusted *R Square value* is 0.749. This means that 76% of the variation in employee performance (Y) can be explained by the variables of work commitment (X1), work environment (X2), discipline (X3), and recognition (X4). Meanwhile, the remaining 24% were broken down by other factors that were not tested, such as personal motivation, organizational culture, leadership, and other factors. An R level of 0.872 shows that the relationship between all independent variables and employee performance is very strong. So, the regression model is very capable of describing employee performance.

**1.15.3 Simultaneous Hypothesis Testing (F-Test)**

**Table 3. 8 Test F**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1779.306	4	444.826	68.212	.000 <sup>b</sup>
	Residual	560.826	86	6.521		
	Total	2340.132	90			

a. Dependent Variable: Y

b. Predictors: (Constant), X4, X1, X3, X2

(Source: Primary data processed, 2025)

As the ANOVA test (F test) in the table above shows, the *Sum of Squares Regression* is worth 1,779,306, while the *residual Sum of Squares* is worth 560,826, with a total variation of 2,340,132. This shows that the majority of variations in variable Y can be described by independent variables in this study. The degree of freedom (df) for regression is 4, which is balanced by the total of its independent variables, namely work engagement, work environment, work discipline, and rewards. The degree of freedom for residues is 86 and the total degree of freedom is 90. The *Mean Square Regression* value is 444.826, while the *Mean Square Residual* is 6.521. Based on this calculation, the

calculated F value is 68.212 with a Sig. 0.000 level. Because the Sig. level < 0.05 (0.000 < 0.05), it is known that simultaneously, the four independent variables positively and significantly affect employee performance. Therefore, the regression model in this study is considered valid and can be used in describing the influence of independent variables on dependents.

**1.15.4 Partial Hypothesis Testing (T-Test)**

**Table 3. 9 T Test**

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
1	(Constant)	.162	2.636		.061	.951
	X1	-.005	.122	-.003	-.040	.968
	X2	.163	.099	.145	1.641	.104
	X3	5.16	.090	.485	5.704	.000
	X4	.338	.099	.325	3.413	.001

a. Dependent Variable: Y

(Source: Primary data processed, 2025)

The test results showed that the work engagement variable (X<sub>1</sub>) had a calculated t-value of -0.040 with a significance of 0.968 > 0.05, so it did not have a significant effect on employee performance. The work environment variable (X<sub>2</sub>) has a calculated t-value of 1.641 with a significance of 0.104 > 0.05, so it also has no significant effect on employee performance. Meanwhile, the work discipline variable (X<sub>3</sub>) has a calculated t-value of 5.704 with a significance of 0.000 < 0.05, which means that it has a positive and significant effect on employee performance. The reward variable (X<sub>4</sub>) has a t-value of 3.413 with a significance of 0.001 < 0.05, so it also has a positive and significant effect on employee performance.

**1.16 Discussion**

**1.16.1 The Effect of Work Engagement on Employee Performance at PTPN IV Regional I Medan**

Based on the results of the t-test, the work attachment variable had a

significance value of 0.968 ( $> 0.05$ ) with a regression coefficient of  $-0.005$ . This shows that work attachment does not have a significant effect on employee performance at PTPN IV Regional I Medan. Thus, the hypothesis that work attachment affects employee performance is rejected. The results of this study are in line with the research of Permana & Yunus (2022) which states that work attachment does not have a significant effect on employee performance. Although the majority of respondents are in the productive age of 20–30 years and have a bachelor's degree in education, work attachment has not been able to have a real influence on improving employee performance.

#### **1.16.2 The Influence of the Work Environment on Employee Performance at PTPN IV Regional I Medan**

The results of the t-test showed that the work environment had a significance value of 0.104 ( $> 0.05$ ) with a positive regression coefficient of 0.163. This shows that the work environment does not have a significant effect on employee performance. Thus, the hypothesis that the work environment affects employee performance is rejected. The results of this study are in line with the research of Novriani Gultom & Nurmaysaroh (2021) which states that the work environment does not have a significant effect on employee performance. Although based on a descriptive analysis, the work environment is in the good category, this condition has not been able to have a significant influence on improving employee performance at PTPN IV Regional I Medan.

#### **1.16.3 The Influence of Work Discipline on Employee Performance at PTPN IV Regional I Medan**

Based on the regression findings, work discipline produced a Sig. level of 0.000 ( $< 0.05$ ) and a positive coefficient. In fact, in regression equations, discipline has the largest coefficient (0.516). This shows that discipline is the most dominant variable influencing employee performance. These findings are in line with the argument Sabrina Shela Fatimah Zahra & Sungkono (2024) that work discipline positively affects employee performance. The majority of respondents have joined the company for more than 6 years. This means that the length of the working period can foster good discipline habits, so that it directly contributes to improving performance.

#### **1.16.4 The Effect of Awards on Employee Performance at PTPN IV Regional I Medan**

The acquisition of the t-test showed that the award resulted in a Sig. level of 0.001 ( $< 0.05$ ) and a positive regression coefficient of 0.338. This means that incentives produce a positive and significant influence on employee performance. This finding is in line with the argument Ferdinand & Satibi (2021) that the award positively affects the performance of its employees. Based on the descriptive results, the award variable is also included in the "good" category (average 42.13). This shows that the reward system is quite effective and is able to encourage employees to improve their work performance.

### **CONCLUSIONS AND SUGGESTIONS**

Based on the results of the study on the influence of work attachment, work environment, work discipline, and reward on employee performance at

PTPN IV Regional I, it can be concluded that work attachment and work environment do not have a significant effect on employee performance, while work discipline and rewards have a positive and significant effect on employee performance. Simultaneously, work attachment, work environment, work discipline, and rewards have a positive and significant effect on employee performance, with work discipline as the most dominant variable influencing employee performance because it has the largest regression coefficient value.

Based on the results of the study, PTPN IV Regional I is advised to continue to improve employee work attachment through effective employee development and communication programs, maintain and improve the quality of the work environment to remain comfortable and support productivity, enforce work discipline consistently and fairly, and continue to develop a reward system in both financial and non-financial forms to increase employee work motivation. In addition, researchers are further advised to add other variables such as leadership, work motivation, and organizational culture to expand understanding of the factors that affect employee performance.

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