



The influence of work motivation on employee performance (Case study at PT Pertamina International Refinery RU III Plaju)



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Abstract

This study aims to analyze the effect of work motivation on employee performance at PT Kilang Pertamina Internasional RU III Plaju, the largest oil processing company in Indonesia that faces competitive challenges in the global energy industry. Work motivation is identified as one of the main factors that influence the success of employees in carrying out their duties and responsibilities, and directly impacts the achievement of company goals. This research method uses primary data obtained through questionnaires filled out by 148 company employees, then processed with a Likert scale and statistical analysis. The results showed that work motivation has a significant influence on employee performance, with a correlation coefficient of 0.773. With good motivation, employees tend to be more productive, focused, and committed to work, thus supporting the achievement of organizational goals.

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1 Introduction

Competition between companies is getting tighter in the current era of globalization, so every company is required to have strong competitive abilities. The success of a company is highly dependent on the quality of its human resources. This is because the main key to the company's success lies not only in technological excellence and the availability of funds but also in the quality of people who are important factors (Carnevale & Hatak, 2020; Hayton, 2005). The success of the organization in managing human resources effectively determines the achievement of organizational goals. Therefore, every organization continues to strive to improve employee performance so that the goals that have been set can be achieved (Kusumaningrum et al., 2024).

Employee performance has a close relationship with work motivation, which is one of the main factors that influence the success of individuals in carrying out their duties and responsibilities (Jiang et al., 2012). Motivation is an internal and external drive that encourages a person to be willing to optimally mobilize their abilities, energy, and time in completing various activities that are part of their responsibilities. Performance is one of the factors that influence the success of a company. Good performance is a step towards achieving individual goals. Employee performance is the ultimate goal and is a way for various managers to ensure that employee activities and the resulting output are by organizational goals (Budur & Poturak, 2021). Performance is a result achieved by employees in their work according to certain criteria that apply to a job (Robbins & Judge, 2019). Good performance is a step towards achieving organizational goals therefore, performance is also a determining means of achieving organizational goals so it is necessary to strive to improve employee performance (Santya & Dewi, 2022).

With good motivation, employees tend to be more focused, productive, and committed to their work, so that organizational goals can be achieved more effectively (Putri et al., 2024). According to Dani et al. (2022), motivation is defined as a process that explains the intensity, direction, and persistence of an individual to achieve his or her goals. Intensity refers to the level of effort one expends, while direction ensures that the effort is aligned with the desired goal. Perseverance, on the other hand, reflects the extent to which a person continues to put in effort in the face of challenges until achieving the expected results. Thus, motivation is not just about encouraging a person to act, but also influencing how a person acts and how consistent he or she is in achieving the goals that have been set. Work motivation is the basis for an organization to develop both government agencies and private agencies, none other than because of the desire to realize goals and efforts carried out jointly, systematically, and planned (Taghipour & Dejban, 2013; Arshadi, 2010). According to McClelland (2018), motivation is a potential energy reserve that a person has to be able to use and release which depends on the strength of the drive and the opportunities that exist where this energy will be utilized by employees due to the strength of motives and basic needs, expectations, and incentive values.

As a company engaged in the complex and challenging energy industry, PT Kilang Pertamina Internasional Refinery RU III Plaju relies heavily on the high work motivation of each employee to support its operational sustainability. PT Kilang Pertamina International Refinery Unit III Plaju (PT KPI RU III Plaju) is one of the largest oil processing units in Indonesia operating under PT Pertamina (Persero). Located in Palembang and Banyuasin, South Sumatra, the refinery has a long history dating back to 1904, when it was established by the Dutch Shell company, followed by the construction of the Sungai Gerong Refinery by Stanvac in 1926. The Plaju refinery has been an important part of Pertamina's journey, from the PT Pertamina era to today's world-class energy company (Pertamina, 2024).

With a production capacity of more than 80 million barrels per *stream day* (MBSD), the refinery plays a strategic role in supplying 60% of the energy needs in southern Sumatra. In addition to producing fuel such as Peralite, Solar, and Avtur, Kilang Plaju also produces LPG, Polytam, and environmentally friendly refrigerants such as Musicool MC-22. Kilang Plaju's reputation is strengthened by various national and international awards for operational innovation, contribution to the environment, and community empowerment (Apridhani, 2023).

Table 1
Performance Assessment Data of PT KPI RU III Plaju Year 2023

No.	Score	Number of People
1	1 - 3	3
2	4	10
3	5	508
4	6	217

Rozi, F., Widiyanti, M., Yusuf, M., & Hadjri, M. I. (2024). The influence of work motivation on employee performance: Case study at PT Pertamina International Refinery RU III Plaju. *International Research Journal of Management, IT and Social Sciences*, 11(6), 264–271. <https://doi.org/10.21744/irjmis.v11n6.2480>

No.	Score	Number of People
5	7	130
6	8	0
Total		868

Source: PT KPI RU III Plaju, 2024

Data in Table 1. above that there are no employees who can have a performance score of 8. Based on the data in the table above, shows that the higher the score, the better the value. The value of employees with a performance score of 7 is still fairly small or 15% of the total population. Performance appraisal is carried out by the head of the function per section unit per year. The data above shows that employee performance is not optimal because there are still many employees who get small scores.

In facing various challenges in the energy industry, employee motivation is a key factor in operational success. Good work motivation encourages employees to give their best performance, increase productivity, and maintain refinery operational efficiency. Conversely, low work motivation can have a negative impact on individual and team performance, potentially disrupting the smooth operation of the company (Zahara, 2018). Therefore, maintaining and improving employee motivation is a top priority for PT Kilang Pertamina Internasional RU III Plaju to ensure the sustainability and success of the company in the midst of global competition.

Based on the focus of this research, the main objective is to analyze the extent to which work motivation affects employee productivity and operational efficiency at PT Kilang Pertamina Internasional RU III Plaju. This research will specifically examine various work motivation factors, such as incentives, work environment, and employee satisfaction, and their impact on achieving company targets. The results of this research are expected to make a significant contribution to the company's management in designing policies and programs that can increase employee motivation, strengthen team performance, and maintain the sustainability of refinery operations amid increasingly fierce competition in the energy industry (Stoerber et al., 2013).

2 Materials and Methods

This study uses qualitative data in the form of a questionnaire statement which is quantified by the use of a Likert scale which is shown to measure the attitudes, opinions, and perceptions of a person or group of people about social phenomena (Sugiyono, 2019) . The type of data used in this study is primary data. According to Sugiyono (2019), primary data is a data source that directly provides data to data collectors. The population in this study were all employees at PT Pertamina International RU III Plaju Refinery, totaling 868 employees in 2024. The type of data used in this research is primary data. Primary data collection techniques were obtained directly through filling out questionnaires by employees of PT Pertamina International Refinery RU III Plaju. To obtain data and information from employees of PT Pertamina International Refinery RU III Plaju who are all respondents in this study totaling 148 employees.

In this study, the results obtained from the answers to the questionnaire using the Likert scale are ordinal data. In order for the data to be analyzed statistically, the data must be converted to Intervals. The method used is the *method of successive* (MSI), which is a scaling method to raise the ordinal measurement scale to the interval measurement scale (Sedarmayanti, 2017).

3 Results and Discussions

Table 2
Normality Test Results
One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residuals
N		148
Normal Parameters	Mean	.0000000
	Std. Deviation	.59001895
Most Extreme Difference	Absolute	.100
	Positive	.058
	Negative	-.100
Kolmogrov-Smirnov Z		.100
Asymp. Sig. (2-tailed)		.114

Data Source: Processed from Questionnaire, 2024

Based on the normality test results in the table, show that the data is normally distributed. This is indicated by the *Kolmogorov-Smirnov* test which shows results that have a significance level of 0.114 which is above 0.05.

Multicollinearity Test Results

The multicollinearity test aims to test whether the regression model found a correlation between independent variables. To find out whether multicollinearity occurs, it can be seen from the VIF and *tolerance* values contained in each variable as in Table 3 below:

Table 3
Multicollinearity Test Results Table

Test Of Multicollinearity	VIF	Cutt Off	Description
Work Motivation	1,728	< 10	No Multicollinearity
Work Discipline	1,403	< 10	No Multicollinearity

Data Source: Processed from Questionnaire, 2024

Based on the results from the table, shows that there is no multicollinearity between the independent variables because it shows the VIF value is less than 10. Thus, in this model, there is no multicollinearity problem.

Heteroscedasticity Test Results

The heteroscedasticity test aims to test whether, in the regression model, there is an inequality of variance and residuals from one observation to another. In this test, researchers used the Scatterplot test. The basis for the heteroscedasticity test is:

- 1) If there is a certain pattern, such as the existing points forming a certain regular pattern (wavy, widening then narrowing), it indicates heteroscedasticity has occurred.
- 2) If there is no clear pattern, and the dots spread above and below the number 0 on the Y axis, then there is no heteroscedasticity.

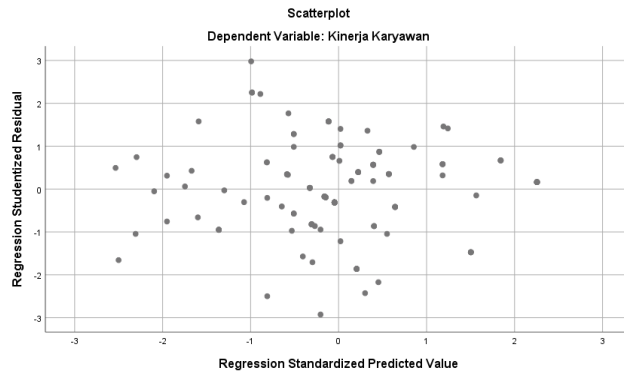


Figure 1. Heteroscedasticity Test Results
Data Source: Processed from Questionnaire, 2024

Based on the figure, it shows that there is no heteroscedasticity, because the data distribution does not form a certain line or there is no clear pattern, and the points spread above and below zero on the Y axis.

Research Analysis Results

Multiple Linear Regression Analysis Results

Multiple linear regression analysis was conducted to determine the effect of work motivation variables (X1) and work discipline (X2) on employee performance (Y). Based on the test results obtained as follows:

Table 4
Table of Multiple Linear Regression Analysis Results

Model	Coefficients		
		Unstandardized Coefficients	Standardized Coefficients
1		B	Std. Error
	Constant	.787	.208
	Work Motivation	.460	.061
			Beta
			.474

Data Source: Processed from Questionnaire, 2024

Based on Table 4, the results of multiple linear regression analysis can be expressed with the following equation:

$$Y = 0,787 + 0,460X_1 + 0,406X_2 + e$$

- 1) The constant value of 0.787 indicates the amount of employee performance is 0.764. If the work motivation variable (X1) and work discipline (X2) are 0 (zero).
- 2) The regression coefficient value of the work motivation variable of 0.460 means that if work motivation is given, it will further improve employee performance at PT Kilang Pertamina Internasional RU III Plaju. With this value and the regression coefficient value of 0.460, this shows that there is a positive influence between work motivation on employee performance at PT Pertamina International RU III Plaju Refinery.

Results of Correlation Coefficient (r) and Coefficient of Determination (R²)

Based on the research that has been conducted, the results of the correlation coefficient (r) and the coefficient of determination (R²) in this study can be seen in the table as follows:

Table 5
Table of Correlation Coefficient Test Results (r) and Coefficient of Determination (R^2)
Model Summary^b

Model	r	R Square	Adjusted R Square	Std. Error of the Estimate
1	.773	.597	.592	.594074

Data Source: Processed from Questionnaire, 2024

Based on the table, it can be seen that the correlation coefficient (r) between the independent variable and the dependent variable is 0.773 or 77.8%. This shows that the correlation or relationship between the independent variable and the dependent variable has a strong level of relationship (in the range of 0.60 - 0.79). The coefficient of determination (R^2) of 0.597 indicates that the independent variables, namely work motivation (X1) and work discipline (X2) can explain the dependent variable, namely employee performance (Y) by 59.7%, while the remaining 40.3% is explained by other factors that are not included in this study.

Hypothesis Test Results

F Test results

The F test in this study was conducted to identify whether the regression equation model was feasible or not feasible to use to explain the effect of the independent variables on the dependent variable. Based on the test results and data processing, the test results are as follows:

Table 6
Table of F Test Results

Model		ANNOVA ^b				
		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	75.959	2	37.980	107.614	.000
	Residuals	51.174	145	.353		
	Total	127.133	147			

Data Source: Processed from Questionnaire, 2024

Based on the results in the table, a significance value of 0.000 is obtained because the significance value of 0.000 < 0.05, it can be said that the linear regression model obtained is feasible to be used to explain the effect of work motivation and work discipline on employee performance at PT Pertamina International RU III Plaju Refinery.

Results of the t-test

The t-test aims to determine how far the influence of the independent variables individually on the dependent variable. This study with a significance of 5% or $\alpha = 0.05$. The results of the t-test can be seen in the table as follows:

Table 7
Results of the t-test

Model	Variables	Coefficients			Sig.
		B	t_{tabel}	t_{hitung}	
1	Work Motivation	.460	1.976	7.588	.000

Data Source: Processed from Questionnaire, 2024

Based on the table, the value of the *degree of freedom* (df) = $n-k = 148-3 = 145$ and 0.05, the t_{tabel} value for this research data is 1.976. The results of the analysis can be explained as follows, the t_{hitung} value of the work motivation variable (X1) is 7.588 and the significance value is 0.000, the $t_{\text{hitung}} > t_{\text{tabel}}$ value is (7.588 > 1.976) or the value (Sig.) 0.000 < 0.05. This means that work motivation has a significant effect on employee performance at PT Pertamina International RU III Plaju Refinery. This proves that the first hypothesis of work motivation has a positive and significant effect can be accepted.

The effect of work motivation on employee performance at PT Pertamina International Refinery RU III Plaju

Work motivation has a huge influence on employee performance because motivation is the main driver in efforts to achieve optimal results in the workplace (Eliyana & Ma'arif, 2019; Karatepe, 2013). One theory that explains the relationship between motivation and performance is the *expectancy* theory proposed by Victor Vroom. This theory states that individual performance is not only influenced by motivation alone but also influenced by the abilities possessed by the individual (Jufrizen, 2021).

Highly motivated employees will feel more confident that the effort they put in will result in good performance, which in turn will give them the rewards they desire. Conversely, if an employee feels that the effort they put in will not produce the results they expect, then their motivation tends to decrease and impact their performance. Therefore, company management needs to create a work environment that can increase employee motivation, such as providing clear rewards, self-development opportunities, and a fair and transparent reward system (Werner, 2002; Shah & Goldstein, 2006). With high motivation, employees will be more eager to give their best in their work, which ultimately contributes to improving overall performance (Wuwungan et al., 2020).

Based on respondents' responses to the indicator I enjoy working with others rather than working alone, it shows the lowest value. It is suspected that some employees at PT Kilang Pertamina Internasional RU III Plaju said they were not too comfortable working with their current team. The formation of a work team that has not supported each other or there is a less harmonious relationship between fellow employees which results in some employees preferring to work individually rather than working in teams. The role of superiors is also very necessary to contribute and support all employees to form a solid work team to provide performance following company expectations.

Respondents' responses to the indicator I will provide good work for the company show the highest score. This shows that the employees of PT Kilang Pertamina Internasional RU III Plaju will provide good work results under the company's targets and expectations. Employees of PT Kilang Pertamina Internasional RU III Plaju have provided good work results by providing work results and being able to achieve the targets set by the company.

4 Conclusion

Based on the research and analysis conducted, it is concluded that work motivation has a positive and significant effect on employee performance at PT Kilang Pertamina Internasional RU III Plaju. High work motivation increases employee productivity and operational efficiency. Therefore, the company is advised to continue developing policies that support increased motivation, such as fair rewards, a conducive work environment, and self-development opportunities. This is important to ensure sustainability and operational success amidst intense competition in the energy industry.

Conflict of interest statement

The authors declared that they have no competing interests.

Statement of authorship

The authors have a responsibility for the conception and design of the study. The authors have approved the final article.

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