Analysis of the Effect of Work Discipline on Employee Performance with Motivation as a Mediation Variable at PT Pelindo Regional 1 Dumai Branch

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Abstract

This study aims to analyze the influence of Work Discipline on Employee Performance, the influence of Work Discipline on Motivation, the influence of Motivation on Employee Performance, and the role of Motivation as a mediating variable between Work Discipline and Employee Performance. This study uses a quantitative approach with the Structural Equation Modeling (SEM) method based on Partial Least Square (PLS) using SmartPLS 4.1.1.2 software. The number of samples in this study was 33 respondents who were permanent employees. The results of the study indicate that Work Discipline has a positive and significant effect on Employee Performance, Work Discipline has a positive and significant effect on Motivation, and Motivation has a positive and significant effect on Employee Performance. In addition, Motivation is proven to be able to significantly mediate the influence of Work Discipline on Employee Performance. This finding indicates that increasing work discipline not only has a direct effect on performance, but also indirectly through increasing employee motivation. The implications of this study emphasize the importance of implementing consistent work discipline and strengthening internal motivation as a strategy in improving employee performance optimally and sustainably.

Keywords: Compensation, Competence, Performance

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2nd International Conference on Islamic Community Studies (ICICS)
Theme: History of Malay Civilisation and Islamic Human Capacity and Halal Hub in the Globalization Era
https://proceeding.pancabudi.ac.id/index.php/ICIE/index

Introduction

The quality of employee performance is a key indicator of organizational success, particularly in the public service sector, which demands speed and accuracy of service (Setiawan & Tricahyadinata, 2024). In the context of PT Pelindo Regional 1 Dumai Branch, employee performance plays a strategic role because loading and unloading activities and ship services are the main pillars of the smooth flow of maritime logistics in western Indonesia. However, initial observations indicate that there are still obstacles to achieving optimal performance, such as delays in work completion, ship queues due to slow service responses, and increasing complaints from service users, reflecting the inconsistency of employee performance with expected service standards (Herawati & Permana, 2022).

Work discipline is a fundamental factor influencing employee performance, particularly in port environments with rotating work systems, high time pressure, and significant operational risks. Discipline relates not only to adherence to working hours but also to adherence to standard operating procedures (SOPs), responsibility, and professional ethics (Nasution & Ritonga, 2023). Observations at PT Pelindo Regional 1 Dumai Branch revealed variations in employee discipline levels, such as late shift changes and negligence in the use of personal protective equipment, which have the potential to reduce operational effectiveness and service quality.

In addition to work discipline, work motivation also plays a crucial role in encouraging employees to achieve optimal performance, especially under stressful working conditions. Differences in motivation levels between employees impact team productivity imbalances, particularly on certain shifts that tend to exhibit lower motivation (Sucipto & Rauf, 2020). However, previous research has shown inconsistent findings regarding the role of motivation in the relationship between discipline and performance (Rizky & Maksum, 2020; Setiawan & Tricahyadinata, 2024). Therefore, this study positions motivation as a mediating variable to analyze the influence of work discipline on employee performance at PT Pelindo Regional 1, Dumai Branch.

Literature review Performance

Mangkunegara (2022) defines performance as "the quality and quantity of work results achieved by an employee in carrying out their duties in accordance with the responsibilities assigned to them." Meanwhile, Kasmir (2018) defines performance as the work results and behaviors achieved in completing assigned tasks and responsibilities within a specific period.

Kasmir (2018) stated that there are several indicators that can be used to measure employee performance, namely: Work Quality, Work Quantity, Time Period, Cost Effectiveness.

Work Discipline

Sutrisno (2016) Work Discipline is a person's behavior that is in accordance with existing regulations, procedures or discipline is an attitude, behavior, and actions that are in accordance with organizational regulations, both written and unwritten, that is what is meant by discipline. (According to Sutrisno, 2016), it consists of: Obeying time rules, Obeying company regulations, Obeying rules of behavior at work, Obeying other regulations in the company.

Motivation

Afandi (2018) Motivation is a desire that arises from within a person or individual because they are inspired, encouraged, and driven to carry out activities with sincerity, joy, and earnestness so that the results of the activities they do get good and quality results. According to Afandi (2018) there are several competency indicators, namely: Rewards, Working conditions, Work facilities, Work performance, Recognition from superiors, The work itself.

Research Hypothesis

Based on this framework of thought, the hypothesis in this study is formulated as follows:

H1: Work discipline has a positive and significant effect on motivation at PT Pelindo Regional 1 Dumai Branch.

H2: Motivation has a positive and significant effect on performance at PT Pelindo Regional 1 Dumai Branch.

H3: Work discipline has a positive and significant effect on performance at PT Pelindo Regional 1 Dumai Branch.

H4: Work discipline has a positive and significant effect on performance through motivation as an intervening variable at PT Pelindo Regional 1 Dumai Branch.

Research methodology

This study uses a quantitative method with an explanatory research approach that aims to explain the causal relationship between the variables of Work Discipline, Motivation, and Employee Performance. This approach is used to test hypotheses that have been formulated based on theories that support the relationship between these variables. According to Sugiyono (2019), quantitative research is deductive and oriented towards testing theories through objective measurements of numerical data obtained from research respondents. The population in this study were all 33 permanent employees of PT Pelindo Regional 1 Dumai Branch. The entire population was used as a research sample using a census sampling technique to ensure more accurate, comprehensive, and free from potential sample selection bias. The respondents were permanent employees who had levels of work discipline, motivation, and performance that could be measured through validated research instruments. According to Hair et al. (2019), this sample size met the minimum requirements for multivariate analysis such as Structural Equation Modeling (SEM). Therefore, data analysis in this study was conducted using SEM based on Partial Least Square (PLS) using SmartPLS software version 4.1.1.2. Based on the views of Ghozali and Latan (2015), the PLS-SEM method has advantages in processing data with a relatively small sample size and complex models, and does not require a normal data distribution. This approach is also capable of estimating the relationship between latent variables with high accuracy. Therefore, the use of the PLS-SEM method is considered appropriate in this study because it is predictive, flexible, and suitable for testing theoretical models and development research that emphasizes the analysis of causal relationships between variables.

Research result Outer Model Analysis

Measurement model testing (outer model) is conducted to determine the relationship between latent variables and their constituent indicators (manifest variables). The main objective of this testing is to ensure that each indicator accurately and consistently represents the construct. The testing process encompasses three main aspects: convergent validity, discriminant validity, and construct reliability. Convergent validity is used to assess the extent to which indicators within a variable have a high level of correlation, while discriminant validity ensures that each construct is clearly distinct from other constructs. Meanwhile, reliability testing is conducted to measure the internal consistency of each indicator in measuring the same construct, ensuring reliable analysis results and good validity within the research model.

Convergent Validity

Convergent validity in a measurement model with reflective indicators is used to assess the extent to which each indicator is able to consistently represent the construct it measures. This value can be seen from the correlation between the indicator score and the latent construct score. In general, an indicator is considered reliable if it has a loading factor value above 0.70,

indicating that the indicator has a strong contribution to the construct it represents. However, in the initial research stage of instrument development, loading values between 0.50 and 0.60 were still acceptable because they were considered to adequately represent the measured variable. Based on the outer loading results, all indicators in this study showed loading values above 0.70 and were significant, thus it can be concluded that all indicators meet the requirements for convergent validity. Furthermore, the structural model (inner model) that describes the relationships between the latent variables in this study is presented in Figure 1:

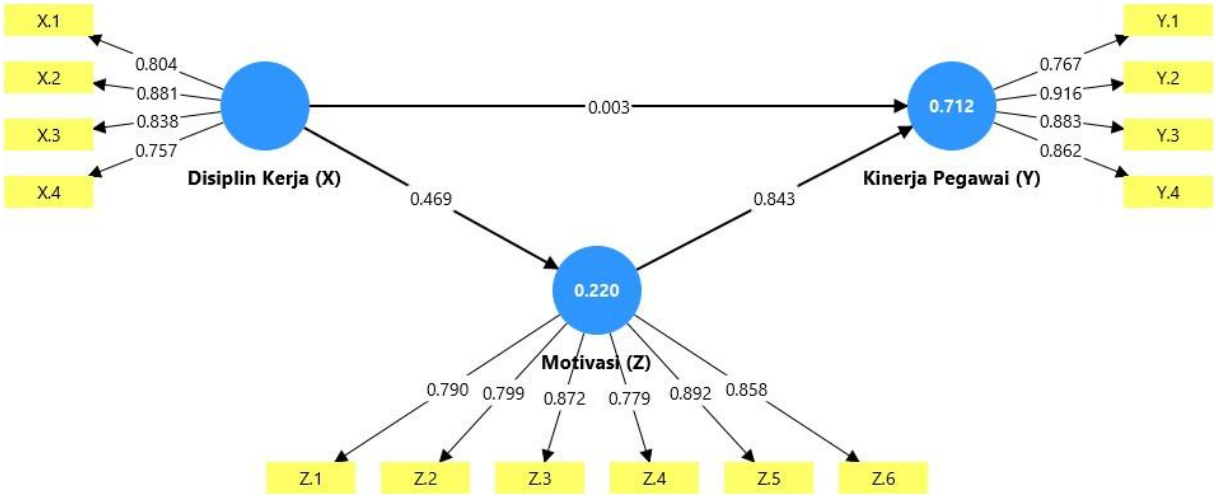

Figure 2. Outer Model

Source: SmartPLS 4.1.1.2 data processing, 2025

The Smart PLS output for loading factors gives the results in the following table: Outer Loadings

Table 1. Outer Loadings

	Work Discipline (X)	Employee Performance (Y)	Motivation (Z)
X.1	**0.804**		
X.2	**0.881**		
X.3	**0.838**		
X.4	**0.757**		
Y.1		**0.767**	
Y.2		**0.916**	
Y.3		**0.883**	
Y.4		**0.862**	
Z.1			**0.790**
Z.2			**0.799**
Z.3			**0.872**
Z.4			**0.779**
Z.5			**0.892**
Z.6			**0.858**

Source: Smart PLS 4.1.1.2, 2025

Table 1 shows that the assessment showed a loading factor result of >0.07, meaning all indicators are valid, so the number of indicators now is 14 indicators. After the loading factor is valid, further research can be conducted. This means that all indicators are valid indicators to measure the construct.

Discriminant Validity

This section presents the results of the discriminant validity test, which aims to ensure that each indicator only measures the construct it is supposed to measure and does not have a high correlation with other constructs. The discriminant validity test is conducted using the cross-loading value, namely the correlation between the indicator and each latent construct in the model. An indicator is declared to meet the discriminant validity criteria if the cross-loading value for the original construct is higher than the cross-loading value for other constructs. The analysis results show that all indicators in this study have the highest cross-loading value for the construct they measure, so it can be concluded that all indicators have met the discriminant validity criteria and are able to clearly differentiate each variable:

Table 2. Cross Loading

	Work Discipline (X)	Employee Performance (Y)	Motivation (Z)
X.1	**0.804**	0.420	0.389
X.2	**0.881**	0.240	0.413
X.3	**0.838**	0.406	0.430
X.4	**0.757**	0.117	0.247
Y.1	0.365	**0.767**	0.639
Y.2	0.260	**0.916**	0.710
Y.3	0.284	**0.883**	0.803
Y.4	0.465	**0.862**	0.731
Z.1	0.364	0.656	**0.790**
Z.2	0.517	0.594	**0.799**
Z.3	0.301	0.755	**0.872**
Z.4	0.243	0.583	**0.779**
Z.5	0.367	0.799	**0.892**
Z.6	0.512	0.789	**0.858**

Source: Smart PLS 4.1.1.2, 2025

Table 2 shows that each indicator has the highest cross-loading value on the construct to which it belongs compared to other constructs. This applies to all indicators in the variables Work Discipline (X), Employee Performance (Y), and Motivation (Z). Thus, it can be concluded that all indicators have met the criteria for discriminant validity, as they are able to accurately represent their respective constructs.

Composite reliability

The next test is the composite reliability of the indicator block that measures the construct. A construct is said to be reliable if the composite reliability value is above 0.60, and the Cronbach's alpha value of the indicator block that measures the construct. A construct is said to

be reliable if the Cronbach's alpha value is above 0.7. The following table shows the loading values for the research variable constructs generated from running the Smart PLS program:

Table 3. Construct Reliability and Validity

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Work Discipline (X)	0.844	0.870	0.892	0.675
Employee Performance (Y)	0.880	0.887	0.918	0.737
Motivation (Z)	0.911	0.920	0.931	0.694

Source: Smart PLS 4.1.1.2, 2025

Table 3 shows that the Average Variance Extracted (AVE) values for each variable, namely Work Discipline (0.675), Employee Performance (0.737), and Motivation (0.694), are all above the minimum value of 0.50. This indicates that each construct has a good ability to explain the variance of its indicators, so it can be stated that all variables have met the convergent validity criteria. Furthermore, the composite reliability (rho_c) values for the variables Work Discipline (0.892), Employee Performance (0.918), and Motivation (0.931) also all exceed the minimum limit of 0.70, which means each variable has very good and consistent composite reliability. In addition, the Cronbach's Alpha values for the variables Work Discipline (0.844), Employee Performance (0.880), and Motivation (0.911) have also exceeded the minimum limit of 0.70, so it can be concluded that the entire research instrument has high internal reliability. Thus, the indicators used in this study are declared valid and reliable in forming the constructs of Work Discipline, Employee Performance, and Motivation.

Fornell-Larcker Criterion

The Fornell-Larcker Criterion ensures that each construct in the SEM-PLS model measures a distinct concept, does not overlap, and has strong discriminant validity. This is crucial for ensuring the theoretical and empirical validity of the research model.

Table 4. Fornell-Larcker Criterion Test

	Work Discipline (X)	Employee Performance (Y)	Motivation (Z)
Work Discipline (X)	0.821		
Employee Performance (Y)	0.398	0.859	
Motivation (Z)	0.469	0.844	0.833

The correlation results between latent variables show that the diagonal value (bold) represents the root of the Average Variance Extracted (AVE) in the table, which is greater than the correlation values between other variables in the same row or column. This indicates that each construct has good discriminant validity, in accordance with the Fornell–Larcker criteria.

Inner Model Analysis

The Inner Model aims to examine the influence of direct and indirect relationships between the variables used and to test hypotheses based on the significance of the values obtained. The stages of analysis carried out in evaluating the structural model are seen from several indicators, namely:

Coefficient of Determination (R2)

Based on the data processing that has been carried out using the SmartPLS 4.1.1.2 program, the R Square value is obtained as follows:

Table 5. R Square Results

	R-square	Adjusted R-square
Employee Performance (Y)	0.712	0.693
Motivation (Z)	0.220	0.195

Source: Smart PLS 4.1.1.2, 2025

Table 5 above shows that the R-Square value for the Employee Performance (Y) variable is 0.712. This value explains that 71.2% of the variation in Employee Performance can be explained by the independent variables in the model, namely Work Discipline and Motivation. While the remaining 28.8% is explained by other factors outside this research model. Furthermore, the R-Square value for the Motivation (Z) variable is 0.220, which means that 22.0% of the variation in Motivation can be explained by the Work Discipline variable, while the remaining 78.0% is influenced by other variables not included in this research model. Thus, the model has a strong predictive ability on Employee Performance, but is relatively moderate in explaining variations in Motivation.

Hypothesis Testing

Based on the results of the SEM path analysis using SmartPLS version 4.1.1.2, internal testing was conducted to determine the relationship between constructs. The T-statistic and probability values indicate how well the hypothesis was tested. If the T-statistic value is greater than the Ttable value, it indicates that the hypothesis is accepted. This hypothesis test includes direct and indirect effect testing.

Table 7. Direct Effect

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Work Discipline (X) -> Employee Performance (Y)	0.398	0.426	0.116	3,431	0.001
Work Discipline (X) -> Motivation (Z)	0.469	0.489	0.110	4,259	0,000
Motivation (Z) -> Employee Performance (Y)	0.843	0.843	0.082	10,309	0,000

Source: Smart PLS 4.1.1.2, 2025

Based on the table above, Work Discipline has a positive and significant effect on Employee Performance with an original sample value of 0.398 and P values of 0.001 < 0.05. Work Discipline also has a positive and significant effect on Motivation with an original sample

value of 0.469 and P values of 0.000 < 0.05. Furthermore, Motivation has a positive and significant effect on Employee Performance with an original sample value of 0.843 and P values of 0.000 < 0.05.

Table 8. Indirect Effect

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Work Discipline (X) -> Motivation (Z) -> Employee Performance (Y)	0.395	0.412	0.102	3,873	0,000

Source: Smart PLS 4.1.1.2, 2025

Based on the table above, it shows that Work Discipline (X) has a direct effect on Employee Performance (Y) through Motivation (Z) and has a significant effect, with an original sample value of 0.395 and P values of 0.000 < 0.05. This means that Motivation (Z) is able to mediate the effect of Work Discipline on Employee Performance, so that the higher the work discipline, the higher the motivation, which ultimately has a positive impact on improving employee performance.

Conclusion The Influence of Work Discipline on Employee Performance

The analysis results show that Work Discipline has a positive and significant effect on Employee Performance with an original sample value of 0.398 and P values of 0.001 < 0.05. This means that the higher the work discipline an employee has, the better the performance they produce. This finding proves that discipline is an important factor in improving employee performance, because with good work discipline, employees are able to carry out tasks on time, consistently, and in accordance with applicable regulations.

The Influence of Work Discipline on Motivation

Work discipline has also been shown to have a positive and significant effect on motivation, with an original sample value of 0.469 and a P value of 0.000 < 0.05. These results indicate that the better the work discipline implemented, the higher the employee's work motivation. Consistent work discipline creates an orderly and responsible work environment, thereby fostering work enthusiasm and internal motivation for employees to perform better.

The Influence of Motivation on Employee Performance

Motivation has a positive and significant influence on employee performance, with an original sample value of 0.843 and a P value of 0.000 < 0.05. This indicates that the higher the motivation of employees, the better their performance. Motivated employees tend to have high work enthusiasm, are diligent in completing tasks, and are results-oriented, thus directly impacting increased productivity and work quality.

The Influence of Work Discipline on Employee Performance through Motivation

In addition to its direct influence, Work Discipline also influences Employee Performance through Motivation as a mediating variable with an original sample value of 0.395 and P values of 0.000 < 0.05. This indicates that work discipline not only has a direct impact on performance but also increases employee motivation, which ultimately strengthens its influence on performance. Thus, motivation plays a significant role as a mediating variable in the relationship between work discipline and employee performance.

Recommendation

Based on research findings showing that work discipline has a positive and significant impact on employee performance, organizations are advised to strengthen their monitoring systems and implement consistent work rules. Work discipline needs to be instilled through the enforcement of rules, punctuality, and responsibility in carrying out tasks. The implementation of fair and transparent rewards and punishments will help foster employee awareness and commitment to maintaining discipline. By improving work discipline, employee performance can be maintained optimally and sustainably.

The next recommendation, because work discipline has also been shown to have a positive and significant impact on motivation, is that organizations need to create a conducive work environment that rewards disciplined behavior. Management can provide appreciation, rewards, or special recognition for employees who demonstrate high levels of discipline. Furthermore, it is important to cultivate a work culture that supports intrinsic motivation, such as providing challenging responsibilities, career opportunities, and open communication between leaders and subordinates.

Furthermore, because motivation significantly influences employee performance, organizations are advised to continuously pay attention to factors that drive work motivation. Leaders need to understand employee needs, both material and psychological, and provide positive feedback on work achievements. Implementing morale-boosting activities such as team building, motivational training, and awarding work achievements can increase employees' internal drive to work more productively and with higher quality.

Furthermore, the research findings also indicate that work discipline influences employee performance through motivation as a mediating variable. This underscores the importance of motivation in strengthening the influence of discipline on work outcomes. Therefore, organizations are advised to integrate discipline improvement programs with motivational strategies, such as through inspirational leadership training, a work culture based on role models, and a reward system for disciplined and high-achieving employees. Thus, increased motivation will strengthen the positive effect of work discipline on employee performance, ultimately contributing to the effective and sustainable achievement of organizational goals.

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