



RESEARCH ARTICLE

# Analysis of Work Engagement, Organizational Culture and Loyalty to Employee Performance with Sustainability Strategy as Intervening Variables at PT Pelindo Multi Terminal

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## ARTICLE INFO

### Article history

Received

Revised

Accepted

### Keywords

Work Engagement, Organizational Culture, Work Loyalty, Employee Performance, Sustainability Strategy

## ABSTRACT

This study aims to analyze the influence of work engagement, organizational culture, and work loyalty on employee performance with sustainability strategy as an intervening variable at PT Pelindo Multi Terminal Belawan. The design of this study uses a quantitative method with a descriptive approach. The research population is all permanent employees totaling 170 people. The sample was determined using the Slovin formula with an error rate of 10%, so that a sample of 63 respondents was obtained. The sampling technique used is probability sampling with a simple random sampling approach. The data collection technique was carried out through a questionnaire based on the Likert scale. The collected data was analyzed using Structural Equation Modeling based on Partial Least Square (SEM-PLS) with SmartPLS software. The results of the study show that work loyalty, followed by organizational culture, has also been proven to have a significant effect on employee performance. Organizational culture and work engagement have proven to have a positive and significant influence on sustainability strategies, showing that strong organizational values and high employee involvement are able to encourage the implementation of green port initiatives at PT Pelindo Multi Terminal. However, research found that work engagement had no significant effect on employee performance directly, and work loyalty had no significant effect on sustainability strategy. The most important finding is that sustainability strategies do not have a significant effect on employee performance and are not able to play a role as an effective intervening variable in mediating the influence of organizational culture, work loyalty, and work engagement on employee performance.

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## Introduction

Competition in the business world in the midst of the era of free trade, every company must be able to face increasingly fierce and fierce competition. Companies must compete at the national and international levels, so companies are required to improve the quality of products produced through company performance (Kholik et al., 2022). Fierce competition between regional ports, rising

international service standards, and demands for optimal operational efficiency require companies to have high-quality human resources and be fully committed to organizational goals.

Employee performance is the result of work achieved by a person to achieve these goals (Kustya & Nugraheni, 2021). According to (Hasibuan, 2021) performance is the result of work achieved by a person in carrying out his duties, which is based on skills, experience, seriousness, and time. According to (Silaen et al., 2021) employee performance is the result of work achieved by a person in performing a task or the level of success of a person during a certain period in carrying out tasks. According to (Mangkunegara, 2017) performance is the result of work in terms of quality and quantity achieved by an employee in carrying out his duties in accordance with the responsibilities given to him. Employee performance also refers to the tasks that have been achieved and can consider whether the work results produced by human resources or employees meet the requirements determined by the company and in accordance with their field of work (Mangkunegara, 2020). Employees who have optimal performance will be able to make maximum contributions in supporting the company's vision to become the leading terminal operator in Indonesia. Although it is expected by all parties that employee performance can be optimal, the reality is that there are still employees in the field whose performance has not been maximized (Nasution & Rizky, 2024).

Performance is influenced by individual factors, organizational factors and psychological factors (Gibson, 1996). The concept that discusses the positive psychological side of human relations with their work is engagement (Bakker et al., 2007) in (Kustya & Nugraheni, 2021). Work engagement has become a topic that is getting more and more attention in the human resource management literature. Employee involvement is a psychological related to positive, persistent and pervasive work characterized by passion, dedication and absorption to work and organization (Chaerunissa & Pancasasti, 2021). (Noviardy, 2020) said that Employee Engagement is an employee's work attachment to the company, employee engagement is also often called work engagement. The word employee means employee, while Engagement means attachment. The aspect of organizational engagement is defined as the positive attitude that employees have towards the organization and its values. (Nienaber & Martins, 2020) The definition of employee engagement is the conscious behavior of employees who voluntarily do their best for their work, both physically, psychologically, and emotionally to achieve the success of the company. (Robbins et al., 2018) revealed that work involvement is employees who have high work involvement in their work characterized by employees having high concern for their work, a feeling of psychological attachment to the work done and strong belief in their ability to complete their work. Employees who have a high level of work engagement tend to show great enthusiasm, strong commitment, and focus in carrying out their tasks. If employees have work engagement, they will have better mental and psychotic health and have positive emotions. Not only that, employees who have work engagement, they also have a good commitment to the company and minimize the possibility of quitting the company (Wardani & Werinussa, 2021).

Many studies that discuss the influence of work engagement and leadership have been conducted and have received different research results. Previous research that has been conducted (Chairuddin et al., 2015) shows that work engagement has a significant influence on employee performance and also research from (Breevaart et al., 2015) shows that work engagement has a positive influence on employee performance. In contrast to research from (Bakker et al., 2012) showing that work engagement is a necessary condition but not enough to improve performance for the first time. As well as research from (Gorgievski et al., 2014) explains that work engagement has a negative effect on employee performance.

In general, organizational culture is understood as the foundation of an organization, if the foundation made is not strong enough, then no matter how good a foundation building is, it is not strong enough to support it (Sukatiningsih, 2017). Organizational culture is the result of the process of fusing the cultural style and behavior of each individual that was previously brought into a new norm and philosophy, which has the energy and pride of the group in facing certain things and goals (Edison et al., 2018). In an organization, culture is a reflection of the way the organization is seen or perceived by others (Rosvita et al., 2017) in (Indah et al., 2025). According to Sutrisno in (Saranga,

2022), organizational culture is defined as a set of values, beliefs, assumptions, or norms that have been in effect for a long time, agreed upon, and followed by the members of an organization as a guideline for behavior and solving organizational problems. According to (Fahmi, 2017) "Organizational culture is the result of the process of fusing the cultural style and behavior of each individual that was previously brought into a new norm and philosophy, which has the energy and pride of the group in facing something and certain goals". Work culture is an abstract force, but it is able to move employees in the company to make it a habit. Whether they realize it or not, all employees have practiced this habit in their daily work, and have created a culture that serves as a reference for carrying out activities in the company (Malau & Kholik, 2025). According to Robbins and Coulter (2010) in (Anwar, 2016) organizational culture is the values, principles, traditions and ways of working that are shared by the members of the organization and influence the way they act. The right organizational culture can be a catalyst for increased employee work engagement, because it creates a sense of belonging and meaning in work which will ultimately have the impact of creating a conducive work environment, increasing employee motivation, and encouraging behavior that is in line with organizational goals.

Research conducted by (Abadiyah & Purwanto, 2016), (Samsuriadi & Sudjono, 2018), and (Nurhaida & Susilastri, ) shows the influence of organizational culture on employee performance. In contrast to the research conducted by (Girsang, 2019), and (Paramita et al., 2020), it shows that organizational culture results do not have a significant effect on performance.

In addition to employee work involvement factors and organizational culture, another factor that affects performance is job loyalty. Loyalty is a form of employee loyalty at work. Loyalty is a form of employee devotion to the company. (Hasibuan, 2021) states that employee work loyalty is the diversity of roles and members in using their thoughts and time to achieve organizational goals. According to (Sutrisno, 2015) loyalty is the employee's effort in defending the company, by showing that the employee plays an active role in his company. (Robbins et al., 2018) stated that loyalty is the determination and ability of individuals to obey, implement, and practice regulations with full awareness and an attitude of responsibility. Loyalty has a loyal root word derived from the old French word loyalty.

By having an attitude of loyalty, employees take part in providing the best for the company, employees are responsible for the work given because of the love and sense of belonging to their work. Therefore, every employee is required to always be involved in their work and have high loyalty in the company. This is aimed at maximizing the company's goals (Windraguna, 2024). Employee loyalty is an attitude and behavior that shows a long-term commitment to the organization, which is reflected in the desire to stay employed in the organization, support the organization's goals, and show high dedication in carrying out tasks. In the context of a competitive labor market, employee loyalty is a valuable asset that can reduce turnover, improve operational continuity, and maintain the knowledge and experience that has accumulated in the organization.

Sustainable development is one of the global agendas promoted by the United Nations (UN) through the Sustainable Development Goals (Kholik & Yusri, 2025). The concept of sustainability has become a key paradigm in the modern business world, which not only focuses on the economic aspect, but also considers the social and environmental impact of the company's operations. Business sustainability is an integral component of a company's long-term success. This strategy aims to integrate economic aspects, environmental conservation, occupational health and safety (K3), human resource development (HR), community empowerment, and corporate governance into all business activities in a balanced and sustainable manner (Timah.com, 2025). Sustainability strategies include efforts to create long-term value through responsible business practices, sustainable innovation, and positive contributions to society and the environment. Sustainability strategies are becoming increasingly relevant considering the impact of port operations on the environment and the surrounding community. The implementation of an effective sustainability strategy requires the full support of all employees, which requires high work engagement, a supportive organizational culture, and strong employee loyalty.

The port industry has a role in supporting Indonesia's national economy as the world's largest maritime and archipelagic country. As a gateway to international trade, ports are the backbone of the global supply chain that connects Indonesia with the world market. PT Pelindo Multi Terminal, as one of the subsidiaries of PT Pelabuhan Indonesia (Persero) or IPC, has a great responsibility in managing strategic terminals that support the smooth flow of goods and services in Indonesia. PT Pelindo Multi Terminal has a vision to become a leading terminal operator that provides high-quality and sustainable services. To achieve this vision, companies need employees who are not only technically competent, but also have a strong commitment to the values of sustainability and excellence. This research will help companies understand how to create a work ecosystem that can support the achievement of this vision through the optimization of human capital factors.

Based on the description above, the author is interested in conducting a research entitled "Analysis of Work Engagement, Organizational Culture and Loyalty to Employee Performance with Sustainability Strategy as an Intervening Variable at PT Pelindo Multi Terminal" ..

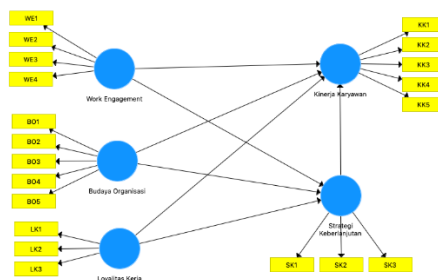
## Method

The design of this study uses a quantitative method with a descriptive approach, namely research that aims to describe and analyze the cause-and-effect relationship between the variables studied (Sugiyono, 2019). The independent variables in this study are work engagement, organizational culture, and work loyalty, while sustainability strategy plays a role as an intervening variable and employee performance as a dependent variable. The research was carried out at PT Pelindo Multi Terminal Belawan which is located at Ring Road Port No.1, Belawan II, Medan Kota Belawan, North Sumatra, for five months from June to October 2025. The research population is all permanent employees totaling 170 people. The sample was determined using the Slovin formula with an error rate of 10%, so that a sample of 63 respondents was obtained. The sampling technique used is probability sampling with a simple random sampling approach, which provides equal opportunities for all members of the population, and is carried out incidentally according to the suitability of the subject as a data source (Sugiyono, 2017).

The data collection technique was carried out through a questionnaire based on the Likert scale which was compiled based on the indicators of each research variable, equipped with documentation and literature studies to strengthen the theoretical foundation. The collected data was analyzed using Structural Equation Modeling based on Partial Least Square (SEM-PLS) with SmartPLS software, through the measurement model testing stage (outer model) which included convergent validity, discriminant validity, and construct reliability; then structural model testing (inner model) includes R-square evaluation, predictive relevance ( $Q^2$ ), and path significance through bootstrapping tests to determine the direct and indirect relationships between variables.

## Results and Discussion

Data analysis was carried out using Structural Equation Modelling (SEM) through a variance-based approach (VB-SEM), with the Partial Least Square path modeling (PLS-SEM) method. PLS-SEM is an alternative SEM technique in which the data used is not normally multivariate (Alfa, et. al., 2017). PLS-SEM aims to test the predictive relationship between the contractor by seeing if there is a relationship or influence between the contracts. Data processing uses Microsoft Excel 2010 software and SmartPLS 3.2.8 (Partial Least Square). Here is a picture of the PLS model that will be tested by the researchers:



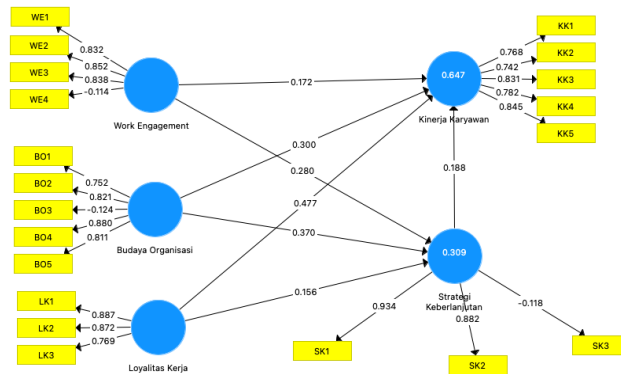
**Figure 1. Research Model**

Source: Data processed by researchers using SmartPLS, 2025

Based on Figure 1, the SEM-PLS test results are carried out by looking at the results of the measurement model (Outer Model) and the results of the structural model (Inner Model) of the model being studied.

**Measurement Model Analysis (outer model)**

The measurement model (outer model) explains the relationship between latent variables and manifest variables or explains the relationship between indicators and latent variables. The measurement model (outer model) is carried out to provide certainty that the measurements used are valid and reliable. The following are the results of the calculation of the entire model using SmartPLS, which are as follows:



**Figure 2. Outer Model**

Source: Data processed by researchers using SmartPLS, 2025

Based on figure 2. above, after several calculations on SmartPLS, there is an indicator that has an outer loading value of  $\leq 0.7$ . So that the indicator must be eliminated or deleted to recalculate with the following eliminated indicators WE4, BO3, and SK3.

**Convergent Validity**

The purpose of the analysis is to measure how much correlation there is between the construct and the latent variable. The value of convergent validity is a standardized loading factor value that describes the correlation between latent variables and their indicators. A loading factor value of  $>0.7$  means that the indicator is valid in measuring its construct, so it can be said to be ideal, but in the early stages of development research, the scale of measuring the loading factor value of 0.5 to 0.6 can be considered quite adequate (Chin, 1998) in (Ghozali & Latan, 2015).

**Table 1. Outer Loading Value After Elimination**

	Organizational Culture	Employee Performance	Loyalty	Sustainability Strategy	Work Engagement
BO1	0,753				
BO2	0,821				
BO4	0,88				
BO5	0,811				
KK1		0,767			
KK2		0,743			
KK3		0,831			
KK4		0,783			
KK5		0,844			
LK1			0,887		
LK2			0,872		
LK3			0,769		
SK1				0,934	
SK2				0,882	
WE2					0,858

WE3	0,837
WE1	0,842

Source: Data processed by researchers using SmartPLS, 2025

Based on the results of the convergent validity test in Table 1, all indicators on the variables of organizational culture, employee performance, work loyalty, sustainability strategy, and work engagement have an outer loading value above 0.70, which indicates that each indicator has met the criteria for convergent validity. Thus, all indicators remaining after elimination were declared feasible and able to represent their constructs well in the research model.

### Discriminant Validity

Discriminant validity is the value of the cross loading factor. This value aims to find out whether the construct has adequate discriminators, the trick is to compare the loading value of the intended construct must be greater than the loading value with other constructs. Another way is to use the root value of the AVE, the root value of AVE must be higher than the correlation between the variables and the other variables or the value of AVE must have a value higher than the square of the correlation between the variables.

**Table 2. Cross Loading Value**

	Organizational Culture	Employee Performance	Loyalty	Sustainability Strategy	Work Engagement
BO1	0,753	0,295	0,12	0,284	-0,094
BO2	0,821	0,475	0,222	0,453	0,03
BO4	0,88	0,484	0,259	0,382	0,102
BO5	0,811	0,421	0,313	0,24	0,055
KK1	0,329	0,767	0,499	0,531	0,266
KK2	0,27	0,743	0,409	0,192	0,337
KK3	0,411	0,831	0,595	0,375	0,296
KK4	0,482	0,783	0,515	0,362	0,247
KK5	0,533	0,844	0,62	0,593	0,392
LK1	0,155	0,626	0,887	0,295	0,203
LK2	0,332	0,618	0,872	0,317	0,313
LK3	0,233	0,441	0,769	0,247	0,226
SK1	0,433	0,542	0,274	0,934	0,397
SK2	0,338	0,423	0,361	0,882	0,179
WE2	-0,001	0,291	0,249	0,257	0,858
WE3	0,024	0,333	0,225	0,354	0,837
WE1	0,077	0,358	0,274	0,217	0,842

Source: Data processed by researchers using SmartPLS, 2025

Based on the results of cross loading in Table 2, all indicators have the highest loading values in their respective constructs compared to other constructs, which shows that each indicator is able to distinguish itself clearly from other constructs. Thus, the criteria for discriminant validity have been met, so that all indicators are declared valid for use in the research model.

### Composite Reliability

The data is said to have high reliability or the data is acceptable if the data has a composite reliability of  $>0.7$ , while if the composite reliability is  $>0.8$ , it means very satisfactory. Meanwhile, composite reliability in explanatory research with a value of  $0.6$  is still acceptable (Ghozali and Latan, 2015).

**Tabel 3. Composite Reliability**

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Organizational Culture	0,836	0,86	0,889	0,668
Employee Performance	0,855	0,871	0,895	0,631

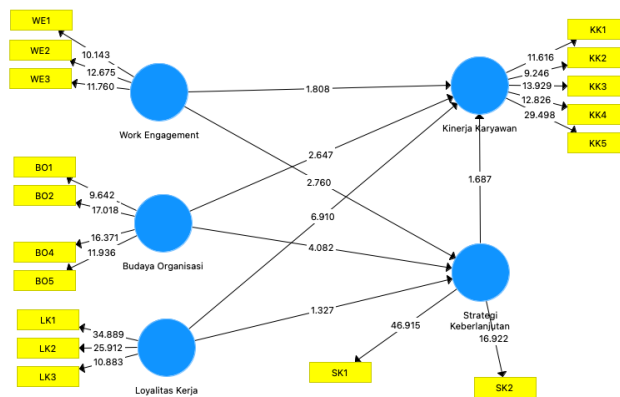
Loyalty	0,799	0,822	0,881	0,712
Sustainability Strategy	0,792	0,834	0,904	0,825
Work Engagement	0,802	0,808	0,883	0,715

Source: Data processed by researchers using SmartPLS, 2025

Based on the results of the reliability test in Table 3, all research variables had a Composite Reliability value above 0.70 and Cronbach's Alpha value above 0.70, so that each construct was declared reliable. In addition, the AVE value of the entire variable is also above 0.50, which means that each construct is able to explain more than 50% of the variance of its indicators so that it meets the criteria for overall convergent validity.

**Structural Model Analysis (Inner Model)**

Structural model analysis (Inner Model) is a specification of the relationship between latent variables based on substantive theory. The inner model aims to ensure that the structure built is robust and accurate. This study has three exogenous latent variables, namely family ownership, company growth and CSR disclosure, and there is one endogenous variable, namely company value. The analysis of the inner model is seen from several indicators, namely:



**Figure 3. Inner Model**

Source: Data processed by researchers using SmartPLS, 2025

**Coefficient of determination (R2)**

Coefficient determination (R2) is the overall measure for a structural model. The interpretation of the R2 value is the magnitude of the variability of the endogenous variable that can be explained by the exogenous variable. The change in the value of R- 53 Square is used as an assessment of whether the influence of a particular independent latent variable on the dependent latent variable has a substantial influence. The classification of the R2 criteria, namely the R-square value of 0.67 (strong), 0.33 (moderate), and 0.19 (weak) Chin, (1998) in (Ghozali and Latan, 2015).

**Table 4. Coefficient Determination (R<sup>2</sup>)**

	R Square	R Square Adjusted
Employee Performance	0,648	0,623
Sustainability Strategy	0,305	0,269

Source: Data processed by researchers using SmartPLS, 2025

Based on the results of the determination coefficient in Table 3, the R Square value of employee performance of 0.648 shows that the variables of work engagement, organizational culture, work loyalty, and sustainability strategy are able to explain 64.8% of the variation in employee performance, while the rest is influenced by other factors outside the model. Furthermore, the R Square value of the sustainability strategy of 0.305 indicates that the independent variables in the study were able to explain 30.5% of the variation in the sustainability strategy, while 69.5% were influenced by other variables outside the study model.

### Predictive Relevance (Q<sup>2</sup>)

Predictive Relevance (Q<sup>2</sup>) or known as Stone-Geisser's aims to validate the model. Measurements are suitable if endogenous latent contractions have an effective measurement model. The range of the magnitude of the value of Q<sup>2</sup> is  $0 < Q^2 < 1$ , if the predictive relevance value is closer to 1, then it is said that the model is getting better and shows that the exogenous laten contract is suitable as an explanatory variable that can predict the endogenous contract.

The calculation of Q Square is done with the formula:

$$Q^2 = 1 - (1-R1^2) (1-R2^2) \dots (1-Rp^2)$$

$$Q^2 = 1 - (1-0,648) \times (1-0,305)$$

$$Q^2 = 1 - (0,352) \times (0,695)$$

$$Q^2 = 1 - 0,245$$

$$Q^2 = 0,755$$

Based on the results of the Q-Square calculation, a Q<sup>2</sup> value of 0.755 was obtained, which shows that the model has excellent predictive relevance. This value indicates that the research model is able to explain around 75.5% of the overall data variation, so that the structural model is considered relevant and has strong predictive capabilities for the phenomenon being studied.

### Pengujian Hypothesis

In hypothesis testing, it can be seen from the t-statistical value and the probability value. In PLS, a non-parametric bootstrapping procedure is used to test for coefficient significance (Hair, et. al. 2014), because in PLS it is not assumed that the data is normally distributed. According to (Ghozali and Latan, 2015) in conducting testing using statistical values, for alpha 5% the statistical value used is 1.96. To determine the criteria for acceptance or rejection of a hypothesis, namely accepted (Ha) and rejected (Ho) when the t-statistic > 1.96. So, the coefficient value of the structural model can be said to be significant if the value of the t-table > is 1.96 (1.96 is a t-table value with a 95% confidence level), while for the acceptance or rejection criterion that uses probability, Ha is accepted if the p value < 0.05.

**Tabel 4. Path Coefficients**

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/ STDEV )	P Values
Organizational Culture -> Employee Performance	0,303	0,320	0,114	2,647	0,008
Organizational Culture -> Sustainability Strategy	0,375	0,381	0,092	4,082	0,000
Loyalty -> Employee Performance	0,474	0,472	0,069	6,910	0,000
Loyalty -> Sustainability Strategy	0,156	0,146	0,117	1,327	0,185
Sustainability Strategy -> Employee Performance	0,188	0,171	0,111	1,687	0,092
Work Engagement -> Employee Performance	0,175	0,189	0,097	1,808	0,071
Work Engagement -> Sustainability Strategy	0,272	0,281	0,098	2,760	0,006

Source: Data processed by researchers using SmartPLS, 2025

The things of testing with bootstrapping of PLS analysis are as follows:

**Hypothesis 1: The Influence of Organizational Culture on Employee Performance**

The test results show that organizational culture has a positive and significant effect on the performance of PT Pelindo Multi Terminal employees. This is evidenced by the path coefficient value of 0.303, t-statistic of 2.647, and p-value of 0.008 which is smaller than 0.05. That is, the first hypothesis is accepted. A good organizational culture can be a driver for employees to work more productively and achieve the targets set by the company.

**Hypothesis 2: The Influence of Organizational Culture on Sustainability Strategy**

Organizational culture has been proven to have a positive and significant influence on sustainability strategies, with a path coefficient of 0.375, a t-statistic of 4.082, and a p-value of 0.000. These results show that the second hypothesis is accepted with a very strong degree of significance. A well-established organizational culture is able to support and strengthen the implementation of the company's sustainability strategy.

**Hypothesis 3: The Effect of Job Loyalty on Employee Performance**

Work loyalty has been proven to have a positive and very significant effect on employee performance, with the highest path coefficient of 0.474, t-statistic of 6.910, and p-value of 0.000. The third hypothesis is accepted and shows the strongest influence compared to other variables. These results confirm that employees who have high loyalty to those characterized by strong commitment, a sense of belonging to the company, and a desire to remain contributing will perform better.

**Hypothesis 4: The Influence of Work Loyalty on Sustainability Strategies**

In contrast to the previous hypothesis, job loyalty has no significant effect on sustainability strategies. This is shown by a path coefficient of 0.156, a t-statistic of 1.327, and a p-value of 0.185 greater than 0.05, so the fourth hypothesis is rejected. The findings reveal that even though employees have high loyalty to the company, it does not automatically make them actively involved in supporting sustainability strategies.

**Hypothesis 5: The Influence of Sustainability Strategies on Employee Performance**

The test results showed that the sustainability strategy had no significant effect on employee performance, with a path coefficient of 0.188, a t-statistic of 1.687, and a p-value of 0.092 greater than 0.05. Although the p-value is close to the threshold of significance, the fifth hypothesis remains rejected. These findings indicate that the implementation of sustainability strategies at PT Pelindo Multi Terminal has not been able to directly improve employee performance.

**Hypothesis 6: The Effect of Work Engagement on Employee Performance**

Work engagement had no significant effect on employee performance, with a path coefficient of 0.175, a t-statistic of 1.808, and a p-value of 0.071 which was slightly above 0.05. Although close to significance, the sixth hypothesis is statistically rejected. These results show that employees' levels of engagement and enthusiasm in their work are not yet strong enough to directly improve employee performance.

**Hypothesis 7: The Influence of Work Engagement on Sustainability Strategies**

Work engagement has been proven to have a positive and significant effect on sustainability strategies, with a path coefficient of 0.272, a t-statistic of 2.760, and a p-value of 0.006 which is well below 0.05. The seventh hypothesis is accepted, which means employees who have a high level of engagement will feel engaged, excited, and focused in their work and are more likely to support and actively participate in the company's sustainability programs.

**Tabel 5. Specific Indirect Effects**

Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ((O/STDEV))	P Values
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Organizational Culture -> Sustainability Strategy -> Employee Performance	0,071	0,063	0,044	1,589	0,113
Loyalty -> Sustainability Strategy -> Employee Performance	0,029	0,028	0,032	0,911	0,363
Work Engagement -> Sustainability Strategy -> Employee Performance	0,051	0,05	0,04	1,276	0,202

Source: Data processed by researchers using SmartPLS, 2025

### **Hypothesis 8: The Role of Sustainability Strategy in Mediating the Influence of Organizational Culture on Employee Performance**

The test results show that sustainability strategies are not able to significantly mediate the influence of organizational culture on employee performance. This is evidenced by the value of the indirect path coefficient of 0.071, the t-statistic of 1.589, and the p-value of 0.113 which is greater than 0.05, so the hypothesis is rejected. These findings indicate that although organizational culture has a strong influence on sustainability strategies, it has not been effective in bridging or strengthening the influence of organizational culture on improving employee performance.

### **Hypothesis 9: The Role of Sustainability Strategy in Mediating the Influence of Work Loyalty on Employee Performance**

Sustainability strategies do not play a significant intervening variable in the relationship between work loyalty and employee performance. The test results showed an indirect path coefficient of 0.029, a t-statistic of 0.911, and a p-value of 0.363 which was far above 0.05, so the hypothesis was rejected. These findings explain that employee work loyalty cannot be improved by having an impact on performance through the implementation of sustainability strategies. This is consistent with previous findings that show that neither work loyalty has a significant effect on sustainability strategy, nor does sustainability strategy have a significant effect on employee performance, so this mediation channel is not effectively formed at PT Pelindo Multi Terminal.

### **Hypothesis 10: The Role of Sustainability Strategy in Mediating the Influence of Work Engagement on Employee Performance**

The test results showed that sustainability strategies did not successfully mediate the effect of work engagement on employee performance significantly. This is shown by an indirect path coefficient of 0.051, a t-statistic of 1.276, and a p-value of 0.202 greater than 0.05, so the hypothesis is rejected. These findings reveal that although work engagement has a significant effect on sustainability strategies, sustainability strategies have not been able to become an effective bridge to convert employee engagement into performance improvement.

## **Discussion**

The results of this study provide a comprehensive overview of the dynamics of factors that affect employee performance at PT Pelindo Multi Terminal, a company engaged in port and logistics services. The most significant findings showed that job loyalty was the strongest predictor of employee performance with a path coefficient of 0.474, indicating that in the context of a port industry that demands operational consistency and high reliability, loyal employees tend to be more committed to carrying out critical tasks such as cargo handling, vessel coordination, and terminal services that operate 24/7. Organizational culture has also been proven to have a significant effect on employee performance (0.303) and sustainability strategy (0.375), showing that organizational values such as safety culture, punctuality in cargo handling, and excellent service culture have been well embedded in PT Pelindo Multi Terminal. Work engagement also contributes significantly to sustainability strategies (0.272), which is relevant considering that the port industry is currently facing global pressure to implement green port initiatives such as the use of electric rubber tyred gantry (e-RTG), shore power for docking ships, and carbon emission management.

However, this study found surprising results that sustainability strategies have no significant effect on employee performance and are not able to play a role as an effective intervening variable. This phenomenon can be explained because in the context of port terminal operations, employee performance is more measured through operational technical indicators such as container moves per hour (CMPH), vessel turnaround time, and truck turnaround time, while contributions to sustainability programs have not been integrated in the employee's individual Key Performance Indicator (KPI) system. The benefits of sustainability strategies such as energy efficiency or emission reduction are indirect and long-term, so employees have not felt the direct impact on the ease of work or the achievement of their daily targets. To optimize the role of sustainability strategy, PT Pelindo Multi Terminal needs to integrate sustainability indicators into individual performance assessment systems, strengthen socialization on the importance of sustainability in the context of terminal operations, create quick wins that can be felt by employees such as improving air quality in the work area, and develop a special recognition and reward system for employees who contribute to the achievement of sustainability targets company.

### **Conclusions and Recommendations**

Based on the research findings, it can be concluded that organizational culture plays an important role in improving employee performance at PT Pelindo Multi Terminal. Strengthening organizational values, work norms, and a conducive work climate has been proven to encourage productivity and the achievement of port operational targets. In addition, organizational culture has a positive and significant effect on the company's sustainability strategy, indicating that a strong culture serves as a fundamental foundation in supporting the implementation of green port initiatives and various sustainability programs.

On the other hand, work loyalty has a positive and significant effect on employee performance and represents the most dominant influencing factor, confirming that high levels of employee commitment and dedication directly contribute to optimal performance in carrying out complex terminal operations that require high reliability. However, work loyalty does not have a significant effect on the sustainability strategy, indicating that employee loyalty to the company does not automatically encourage active participation in environmental and social sustainability agendas.

Furthermore, the sustainability strategy does not show a significant effect on employee performance, suggesting that the existing implementation of sustainability programs has not been able to directly improve daily work productivity. Work engagement also does not have a significant effect on employee performance, indicating that employee involvement and enthusiasm alone are insufficient to drive performance improvement without the support of enabling factors such as reward systems, adequate equipment availability, and managerial support.

Nevertheless, work engagement has a positive and significant effect on the sustainability strategy, demonstrating that employees with high levels of engagement tend to better understand and support sustainability programs, including emission reduction, waste management, and the utilization of environmentally friendly technologies.

The mediation test results also show that the sustainability strategy is unable to mediate the effects of organizational culture, work loyalty, and work engagement on employee performance. This confirms that these three variables are more effective in influencing performance directly rather than through the sustainability strategy pathway.

Based on these findings, PT Pelindo Multi Terminal is advised to prioritize strengthening employee loyalty through the implementation of employee retention programs, clear career development pathways, and competitive compensation systems, given that loyalty is the most dominant factor in enhancing performance. The company also needs to integrate sustainability indicators into the individual Key Performance Indicator (KPI) system, so that employee contributions to green port initiatives—such as the use of electric rubber tyred gantry equipment, emission reduction, and waste management—become part of performance assessments that affect reward and promotion systems.

In addition, management should strengthen socialization and training programs that explain the direct relationship between sustainability practices and operational efficiency, create quick wins that can be directly experienced by employees, and develop special recognition systems such as sustainability ambassador programs or green incentive schemes. The reinforcement of organizational culture that emphasizes service excellence, safety culture, and operational efficiency should be continuously maintained, accompanied by efforts to transform work engagement into tangible performance improvements through the provision of adequate handling equipment, reliable information technology systems, and consistent managerial support

## References

- Anwar, Y. (2016). Pengaruh Kepemimpinan Transformasional, Kompetensi, Kompensasi dan Komitmen terhadap Budaya Organisasi serta Implikasinya pada Kinerja Dosen. *Kontigensi*, 4(2), 104–115.
- Chaerunissa, E., & Pancasasti, R. (2021). Pengaruh Employee Engagement Dan Commitment Organization Terhadap Kinerja Pegawai Melalui Kepuasan Kerja Pegawai Sebagai Variabel Intervening (Studi pada Departemen Operasi PT Cogindo DayaBersama PLTU Pelabuhan Ratu). *Jurnal Riset Bisnis Dan Manajemen Tirtayasa (JRBMT)*, 5(2), 126–146. <https://doi.org/DOI: http://dx.doi.org/10.48181/jrbmt.v5i2.13080>
- Edison, E., Anwar, Y., & Komariyah, I. (2018). *Manajemen Sumber Daya Manusia: Strategi dan Perubahan dalam Rangka Meningkatkan Kinerja Pegawai dan Organisasi* (Cetakan Ke3 ed.). Alfabeta.
- Fahmi, I. (2017). *Manajemen Sumber Daya Manusia (Teori dan Aplikasi)*. Cetakan Kedua. Alfabeta.
- Ghozali, I., & Latan, H. (2015). *Partial Least Squares Konsep Teknik dan Aplikasi dengan Program Smart PLS 3.0*. Universitas Diponegoro Semarang.
- Hasibuan. (2021). *Manajemen SDM. Edisi Revisi, Cetakan Ketiga Belas*. Bumi Aksara.
- Indah, N. P., Rizky, M. C., & Anwar, Y. (2025). The Influence Of Leadership, Organizational Culture, Work Discipline, And Compensation On The Performance Of Employees Of The Park And Hygiene Unit (Tamsih) Of Panca Budi Medan. *Jurnal Ilmiah Ekonomi Dan Bisnis*, 13(4), 3245– 3258.
- Kholik, K., Sudirman, I., & Arifin, Y. (2022). The Role of Leadership on Sustainable Improvement in Improving Product Quality in the Division of PT North Sumatra Coal Inalum. *International Journal of Health, Economics, and Social Sciences*, 4(1), 48–56.
- Kholik, K., & Yusri, M. (2025). Challenges of Human Resource Management Towards Optimizing Public Service Performance in Realizing Sustainable Development at the Population and Civil Registration Service of Medan City. *International Journal of Health, Economics, and Social Sciences (IJHESS)*, 7(1), 449~454.
- Kustya, N. D., & Nugraheni, R. (2021). Analisis Pengaruh Work Engagement Dan Kepemimpinan Terhadap Kinerja Karyawan Melalui Komitmen Organisasional Sebagai Variabel Intervening (Studi Pada Kantor Pusat PDAM Tirta Moedal Kota Semarang). *Diponegoro Journal of Management*, 9(2), 1–13.
- Malau, G. A., & Kholik, K. (2025). Analisis Motivasi Kerja, Lingkungan Kerja dan Budaya Kerja Terhadap Kinerja Pegawai Dinas Perhubungan Kota Medan. *Jurnal Public Corner Fisip Universitas Wiraraja*, 20(1), 36–64.
- Mangkunegara, A. P. (2017). *Manajemen Sumber Daya Manusia Perusahaan*. Remaja Rosdakarya.
- Mangkunegara, A. P. (2020). *Manajemen Sumber Daya Manusia Instansi. Edisi XIV*. PT Remaja Rosdakarya.

- Nasution, M. . I. K., & Rizky, M. . C. (2024). Pengaruh Kepemimpinan, Komunikasi Dan Beban Kerja Terhadap Kinerja Asn Dengan Motivasi Sebagai Variabel Intervening Pada Dinas Kependudukan Dan Pencatatan Sipil Kabupaten Labuhan Batu Selatan. *MANEGGIO: Jurnal Ilmiah Magister Manajemen*, 7(2), 172–190.
- Nienaber, H., & Martins, N. (2020). Exploratory Study: Determine Which Dimensions Enhance The Levels Of Employee Engagement To Improve Organisational Effectiveness. *TQM Journal*, 32(3), 475–495.
- Noviardy, A. (2020). Pengaruh Employee Engagement dan Komitmen Organisasi Terhadap Kinerja Karyawan di Bidang Perkebunan Kelapa Sawit (Studi Empiris Pada PT Perkebunan Nusantara VII Pabrik Karet Beringin, Sumatera Selatan). *Journal Management, Business, and Accounting*, 19(3).
- Robbins, Stephen, P., & Judget, T. A. (2018). *Perilaku Organisasi. Organizational Behavior* ( Buku 1, Edisi Ke-12). Salemba Empat.
- Saranga, R. (2022). Pengaruh Employee Engagement, Work-Life Balance Dan Budaya Organisasi Terhadap Kinerja Karyawan Dengan Kepuasan Kerja Sebagai Variabel Intervening (Studi Kasus PT Prasetia Dwidharma Kantor Makassar). Universitas Hasanuddin Makassar.
- Silaen, N. R., Syamsuransyah, Chairunnisah, R., Sari, M. R., & Mahriani, E. (2021). *Kinerja Karyawan* (Edisi 1, Cetakan Pertama). Widina Bhakti Persada.
- Sukatiningsih. (2017). Analisis Pengaruh Budaya Organisasi Dan Keterlibatan Kerja Terhadap Loyalitas Anggota Dalam Meningkatkan Kinerja Pada Suar Indonesia Di Kediri. *Jurnal Revitalisasi Jurnal Ilmu Manajemen*, 6(2), 92–102.
- Sutrisno, E. (2015). *Manajemen Sumber Daya Manusia*. Kencana Prenada Media Group.
- Timah.com. (2025). Strategi Keberlanjutan. Timah.Com. <https://timah.com/blog/keberlanjutan/strategi-keberlanjutan.html>
- Wardani, L. M. I., & Werinussa, J. O. A. (2021). *Job Insecurity, Grit, And Work Engagement: Di Masa Pandemi Covid-19*. Penerbit NEM.
- Windraguna, B. (2024). Pengaruh Keterlibatan Kerja Dan Loyalitas Karyawan Terhadap Kinerja Karyawan Rumah Sakit Mesra Kecamatan Siak Hulu Kabupaten Kampar. Universitas Islam Negeri Sultan Syarif Kasim Riau Pekanbaru.