Analysis of the Effect of Compensation on Employee Performance With Competence as an Intervening Variable at PT Pelindo Regional 1 Dumai Branch

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Abstract
This study aims to analyze the effect of compensation on employee performance, the effect of compensation on competence, the effect of competence on employee performance, and the role of competence as a mediating variable between compensation 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 compensation has a positive and significant effect on employee performance, compensation has a positive and significant effect on competence, and competence has a positive and significant effect on employee performance. In addition, competence is proven to be able to significantly mediate the effect of compensation on employee performance. This finding indicates that providing appropriate compensation not only improves performance directly, but also indirectly through improving employee competence. The implications of this study emphasize the importance of implementing a performance-based compensation system and competency development as a strategy to improve employee performance optimally and sustainably.

Keywords: Compensation, Competence, Performance

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Introduction

In the era of globalization and digital transformation, the logistics and port sector faces increasingly fierce competitive pressures, demanding efficiency and superior operational performance. PT Pelindo Regional 1, Dumai Branch, as the manager of maritime logistics flows in Sumatra, is required to increase employee productivity, in line with Indonesia's low ranking of 63rd out of 139 countries in the 2023 Logistics Performance Index. The quality and competence of the workforce are crucial indicators for improving port sector performance.

Compensation plays a crucial role in motivating employees, but its effectiveness often depends on competency levels. Previous research, such as that of Saleh and Hasanuddin (2024) and Fadillah et al. (2023), shows that compensation has a positive effect on performance, but this effect is strengthened when mediated by competency. This means that compensation alone is insufficient if it is not balanced with individual abilities and skills.

However, research on the relationship between compensation, competency, and performance in the context of state-owned port services enterprises, particularly in the Sumatra region, is still limited. A study by Rustandi et al. (2023) confirmed that in semi-public organizations with complex and procedural tasks, competency variables have a stronger mediating role. Therefore, contextual research is needed to examine the influence of compensation and competency on employee performance in port operational environments such as PT Pelindo.

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.

Compensation

Hasibuan (2020) defines compensation as all income in the form of money, goods, directly or indirectly received by employees in return for services provided to the company. Furthermore, (According to Sedarmayanti, 2019), compensation is everything employees receive as a form of remuneration for their work. Compensation indicators (According to Hasibuan, 2020) include: Insurance, Salary, Bonuses, and Allowances.

Competence

Faturrahman (2024) states that competence is a person's ability to carry out their duties or work well, supported by appropriate skills and knowledge. According to Wibowo (2021), competence is the ability to carry out or perform a job or task based on skills and knowledge and supported by the work attitude required by the job. According to Faturrahman (2024), there are several competency indicators, namely: Job knowledge, Technical skills, Results orientation.

Research Hypothesis

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

H1: Compensation has a positive and significant effect on performance at PT Pelindo Regional 1 Dumai Branch.

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

H3: Competence has a positive and significant effect on performance at PT Pelindo Regional 1 Dumai Branch.
H4: Compensation has a positive and significant effect on performance with competence 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 competency, compensation, and employee performance variables. This approach is used to test hypotheses formulated based on existing theories. According to Sugiyono (2019), quantitative research is deductive and relies on objective measurements of numerical data. The population of this study included all 33 permanent employees of PT Pelindo Regional 1 Dumai Branch, where the entire population was sampled (saturated sample) to ensure more accurate research results and free from sample selection bias. The respondents were permanent employees who received regular compensation and possessed professional competencies formed from work experience. According to Hair et al. (2019), this sample size met the minimum requirements for multivariate analysis such as Structural Equation Modeling (SEM). Data analysis was performed using SEM based on Partial Least Square (PLS) using SmartPLS software version 4.1.1.2. According to Ghozali and Latan (2015), the PLS-SEM method has advantages in processing data with small sample sizes and complex models, and it does not require the assumption of a normal distribution. Therefore, this approach is considered appropriate for this study because it is predictive and suitable for both exploratory research and theoretical model development.

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:

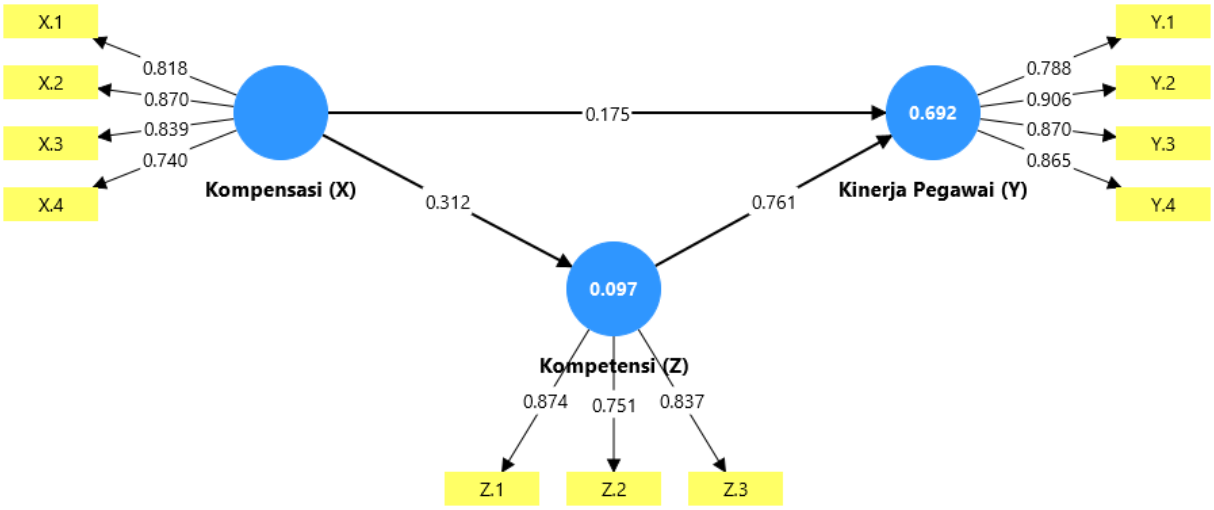

Figure 1. Outer Model

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

	Employee Performance (Y)	Compensation (X)	Competence (Z)
X.1		**0.818**	
X.2		**0.870**	
X.3		**0.839**	
X.4		**0.740**	
Y.1	**0.788**		
Y.2	**0.906**		
Y.3	**0.870**		
Y.4	**0.865**		
Z.1			**0.874**
Z.2			**0.751**
Z.3			**0.837**

Source: Smart PLS4.1.1.2, 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 18 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

	Employee Performance (Y)	Compensation (X)	Competence (Z)
X.1	0.418	**0.818**	0.282
X.2	0.242	**0.870**	0.257
X.3	0.412	**0.839**	0.277
X.4	0.120	**0.740**	0.140
Y.1	**0.788**	0.372	0.714
Y.2	**0.906**	0.274	0.693
Y.3	**0.870**	0.297	0.742
Y.4	**0.865**	0.472	0.640
Z.1	0.725	0.215	**0.874**
Z.2	0.502	0.244	**0.751**
Z.3	0.748	0.308	**0.837**

Source: Smart PLS4.1.1.2, 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 Compensation, Competence, and Employee Performance variables. Therefore, it can be concluded that all indicators have met the criteria for discriminant validity, as they accurately represent their respective constructs.

Composite reliability

The next stage is to test the construct's reliability using Composite Reliability and Cronbach's Alpha values. A construct is considered reliable if the composite reliability value exceeds 0.60 and the Cronbach's Alpha value is above 0.70. The analysis results using SmartPLS show that all constructs have reliability values that meet these criteria, so it can be concluded that all indicators have good consistency and stability in measuring the research variables:

Table 3. Construct Reliability and Validity

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Employee Performance (Y)	0.880	0.880	0.918	0.737
Compensation (X)	0.844	0.882	0.890	0.670
Competence (Z)	0.763	0.786	0.862	0.677

Source: Smart PLS4.1.1.2, 2025

Table 3 shows that the Average Variance Extracted (AVE) values for each variable, namely Compensation (0.670), Competence (0.677), and Employee Performance (0.737), 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

Compensation (0.890), Competence (0.862), and Employee Performance (0.918) variables 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 Compensation (0.844), Competence (0.763), and Employee Performance (0.880) variables 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 Employee Compensation, Competence, and Performance.

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

	Employee Performance (Y)	Compensation (X)	Competence (Z)
Employee Performance (Y)	0.858		
Compensation (X)	0.412	0.818	
Competence (Z)	0.815	0.312	0.823

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 data processing that has been carried out using the SmartPLS program4.1.1.2The R Square value obtained is as follows:

Table 5. R Square Results

	R-square	Adjusted R-square
Employee Performance (Y)	0.692	0.672
Competence (Z)	0.097	0.068

Source: Smart PLS4.1.1.2, 2025

Table 5 above shows that the R-Square value for the Employee Performance (Y) variable is 0.692. This value explains that 69.2% of the variation in Employee Performance can be explained by the independent variables in the model, namely Compensation and Competence. While the remaining 30.8% is explained by other factors outside this research model. Furthermore, the R-Square value for the Competence (Z) variable is 0.097, which means that 9.7% of the variation in Competence can be explained by the Compensation variable, while the remaining 90.3% 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 low in explaining variations in Competence.

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 T-table value, it indicates that the hypothesis is accepted. This hypothesis test includes direct and indirect effect testing.

Table 6. Direct Effect

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Compensation (X) -> Employee Performance (Y)	0.412	0.445	0.123	3,345	0.001
Compensation (X) -> Competence (Z)	0.312	0.344	0.136	2,289	0.022
Competence (Z) -> Employee Performance (Y)	0.761	0.765	0.081	9,420	0,000

Source: Smart PLS4.1.1.2, 2025

Based on the table above, Compensation has a positive and significant effect on Employee Performance with an original sample value of 0.412 and P values of 0.001 < 0.05. Compensation also has a positive and significant effect on Competence with an original sample value of 0.312 and P values of 0.022 < 0.05. Furthermore, Competence has a positive and significant effect on Employee Performance with an original sample value of 0.761 and P values of 0.000 < 0.05.

Table 7. Indirect Effect

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Compensation (X) -> Competence (Z) -> Employee Performance (Y)	0.237	0.262	0.108	2,195	0.028

Source: Smart PLS4.1.1.2, 2025

Based on the table above, it shows that Compensation (X) has a direct effect on Employee Performance (Y) through Competence (Z) and has a significant effect, with an original sample value of 0.237 and P values of 0.028 < 0.05. This means that Competence (Z) is able to mediate the effect of Compensation on Employee Performance, so that the better the compensation given, the more it will increase competence, which ultimately has a positive impact on improving employee performance.

Conclusion

The Effect of Compensation on Performance

The analysis results show that compensation has a positive and significant effect on employee performance, with an original sample value of 0.412 and a P value of 0.001 < 0.05. This means that the better the compensation provided, the higher the employee performance. This finding proves that compensation is a crucial factor in motivating employees to work more optimally, thus directly impacting performance improvement.

The Influence of Compensation on Competence

Compensation was also shown to have a positive and significant effect on competency, with an original sample value of 0.312 and a P value of 0.022 < 0.05. These results indicate that providing adequate compensation can encourage employees to improve their abilities and skills. With good compensation, employees are more motivated to develop themselves through training, education, and professional development.

The influence of competence on performance

Competence has a positive and significant influence on employee performance, with a p-value of 0.761 for the original sample and a p-value of 0.000 < 0.05. This indicates that employees with high competence are able to produce better performance. Competence encompasses knowledge, skills, and work attitudes that support effective task implementation, thus becoming an important determinant in performance achievement.

The Influence of Compensation on Performance through Competence

In addition to its direct effect, compensation has also been shown to influence employee performance through competence as a mediating variable with an original sample value of 0.237 and P values of 0.028 < 0.05. This indicates that compensation not only has a direct impact on performance but also increases employee competence, which ultimately strengthens its influence on performance. Thus, competence plays a significant mediating role in the relationship between compensation and employee performance.

Recommendation

Based on research findings showing that compensation has a positive and significant impact on employee performance, organizations are advised to design a more strategic and performance-oriented compensation system. Compensation should be provided fairly, proportionally, and in accordance with employee workload and responsibilities. Implementing performance-based compensation and providing measurable incentives will increase employee motivation and commitment to achieving organizational goals more optimally.

The next recommendation, because compensation has also been shown to significantly impact employee competency, is that companies should utilize compensation as a tool to support human resource capacity development. Organizations should provide training incentives, self-development-based rewards, and support for continuing education such as certifications or workshops. This strategy not only improves employees' technical and non-technical competencies but also fosters a culture of continuous learning within the organization.

Furthermore, competency has been shown to have a direct and mediating effect on the relationship between compensation and performance, thus organizations are advised to implement competency-based HRM. This model can be integrated through periodic competency evaluations, the development of job competency standards, and the implementation of mentoring and coaching programs. By increasing employee competency, the influence of compensation on performance will become stronger and more effective, supporting the sustainable achievement of organizational goals.

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