

The Effect of Health, Safety, Security, and Environment (HSSE) on Employee Performance at PT Pelabuhan Indonesia (Persero) Regional 2 Teluk Bayur with Job Satisfaction as an Intervening Variable

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Abstract

This study examines the effect of Health, Safety, Security, and Environment (HSSE) on employee performance at PT Pelabuhan Indonesia (Persero) Regional 2 Teluk Bayur, with job satisfaction as an intervening variable. Using a quantitative approach and the variance-based Structural Equation Modeling Partial Least Squares (SEM-PLS) method, data were collected via questionnaires from 150 permanent employees. The analysis included tests of convergent and discriminant validity, composite reliability, and hypothesis testing through path coefficients and bootstrapping. The findings show that Health and Safety, Security, and Environment each have a significant positive effect on employee performance (T -statistics > 1.96 ; P -values < 0.05). Job satisfaction also significantly influences employee performance and mediates the relationship between Health and Safety and employee performance. However, job satisfaction does not significantly mediate the relationships between Security and employee performance nor between Environment and employee performance. The R^2 value of 0.781 indicates that HSSE and job satisfaction explain 78.1% of the variance in employee performance, with the remainder attributable to factors outside the model. Overall, the results confirm that effective HSSE implementation enhances employee performance both directly and indirectly through increased job satisfaction. The study recommends that organizations strengthen safety culture, adopt technology-based security systems, foster a comfortable and environmentally friendly workplace, and attend to employees' psychological well-being to sustainably improve job satisfaction and productivity.

Keywords: Health; Safety; Security; Environment; Job Satisfaction; Employee Performance.

INTRODUCTION

There has been an increase in cases of work accidents in Indonesia, especially in terms of shipping. According to a report by the National Committee for Transportation Safety (KNKT), the number of shipping accidents increased from 12 cases in 2020 to 19 cases in 2021. In 2022, the number of cases decreased to 13, and until mid-2023, 6 cases were recorded (KNKT, 2023).

This increase in the number of accidents is largely due to human error factors, such as lack of understanding in reading weather conditions and lack of machine maintenance. In addition, ship safety is also a shared responsibility between maritime authorities, shipping companies, and ship crews to ensure that high safety standards are consistently adhered to. In an effort to maintain ship safety, collaboration and coordination between all parties involved are the main keys to preventing accidents and protecting human life and the marine environment (KNKT, 2023).

Employees will feel safe and comfortable at work. This condition is in line with Maslow's Hierarchy of Needs Theory, where the fulfillment of basic needs such as security (safety needs) becomes the foundation before a person can move on to a higher level of need, such as self-actualization related to work performance. On the other hand, Agency Theory developed by (Jensen dan Meckling, 1976) Explains that the relationship between the principal (owner/leader) and the agent (employee). If the HSSE aspect has been met, employees will be more motivated and have a high morale because they feel that their needs and interests are

taken care of. This will reduce conflicts of interest and increase the alignment of goals between employees and the company, which ultimately has a positive effect on performance (Jensen dan Meckling, 1976).

PT Pelabuhan Indonesia (Persero) is a non-listed State-Owned Enterprise (BUMN) with 100% shareholding by the Ministry of SOEs as the representative of the Republic of Indonesia, which was formed through the merger of PT Pelindo I, II, III, and IV based on Government Regulation Number 101 of 2021, with PT Pelabuhan Indonesia II (Persero) as a surviving entity which was later renamed PT Pelabuhan Indonesia (Persero) or Pelindo (Pelindo, 2024b). One of its operational areas is Pelindo Regional 2 which manages strategic ports in the western region of Indonesia, including the Port of Teluk Bayur in West Sumatra which plays an important role in supporting export-import activities and the regional economy (Pelindo, 2024a).

In carrying out high-risk port operations, Pelindo Regional 2 Teluk Bayur faces challenges in maintaining optimal employee performance amid the complexity of loading and unloading activities, some of which are still carried out manually and have the potential to cause work accidents and environmental risks (Akbar et al., 2023). Employee performance is a crucial element in achieving organizational goals, as individual performance directly affects the overall performance of the organization (Mathis et al., 2016; Judge et al., 2022), which in turn is also influenced by employee job satisfaction levels (Maula et al., 2024).

Various studies show that employee performance is influenced by occupational health and safety factors, safety, work environment, and job satisfaction (Daramola & Daramola, 2019; Gebremichael, 2020; Mandago & Anusu, 2022; Kumarasinghe & Dilan, 2022), where effective implementation of Health, Safety, Security, and Environment (HSSE) can improve employee satisfaction and performance (Basri et al., 2021; Sarmuji & Aryani, 2019). Although Pelindo Regional 2 Teluk Bayur has shown commitment through various HSSE programs, national and internal work accident data of the company still shows a fairly high level of incidents, including work accidents, environmental incidents, security, and even fatalities (Indonesia, 2022; Kemanaker, 2023).

The Regional HSSE Business Performance Report for December 2, 2024 recorded 33 incidents with work accidents as the highest category, indicating the need for continuous evaluation of HSSE implementation. Low employee awareness of safety procedures, even though SOPs and Personal Protective Equipment have been provided, has the potential to reduce job satisfaction and have an impact on employee performance. Therefore, this study is important to analyze the influence of Health, Safety, Security, and Environment (HSSE) on the performance of employees of PT Pelabuhan Indonesia (Persero) Regional 2 Teluk Bayur with job satisfaction as an intervening variable, in order to obtain a comprehensive empirical picture in supporting the improvement of organizational performance and sustainability.

Based on the background of the research on the influence of Health, Safety, Security, and Environment (HSSE) on the performance of employees of PT Pelabuhan Indonesia (Persero) Regional 2 Teluk Bayur with job satisfaction as an intervening variable, the formulation of the problem in this study is focused on analyzing the influence of each aspect of HSSE on employee performance, either directly or indirectly through job satisfaction. In particular, this study examines the influence of health and safety aspects, security, and environment on employee performance, the effect of job satisfaction on employee performance, and the role of

job satisfaction as an intervening variable in the relationship between health and safety, security, and environment on employee performance of PT Pelabuhan Indonesia (Persero) Regional 2 Teluk Bayur.

The purpose of this study is to comprehensively analyze the influence of health and safety, security, and environment on the performance of employees of PT Pelabuhan Indonesia (Persero) Regional 2 Teluk Bayur, as well as to examine the influence of job satisfaction on employee performance. In addition, this study also aims to determine the role of job satisfaction as an intervening variable in the relationship between health and safety, security, and environment to employee performance, so that a deeper understanding can be obtained of the mechanism of improving employee performance through the implementation of HSSE and increasing job satisfaction.

This research is expected to provide benefits both theoretically and practically. Theoretically, this research is expected to contribute to the development of human resource management theory, especially related to the influence of Health, Safety, Security, and Environment (HSSE) on employee performance with job satisfaction as an intervening variable, as well as provide empirical evidence regarding the relationship between these variables that can be used as a reference for future research.

Practically, this research is expected to be an additional reference for educational institutions, especially for students in the field of human resource management, in understanding HSSE factors that affect employee performance through job satisfaction. In addition, the results of this research are expected to be used by PT Pelabuhan Indonesia (Persero) Regional 2 Teluk Bayur as a basis for evaluating and formulating strategic policies in improving employee performance and productivity, as well as a reference for future researchers in developing studies related to factors that affect employee performance in various organizational contexts.

METHOD

This study used a quantitative approach with a correlational study design, which aims to identify relationships between variables (Pasaribu et al., 2023). The variables analyzed included Health, Safety, Security, and Environment (HSSE) as exogenous variables, job performance as endogenous variables, and job satisfaction as intervening variables. Data collection was carried out using a structured questionnaire with a Likert scale which was compiled based on variable indicators and standard instruments, including HSSE questionnaires (Basri et al., 2021; Mandago & Anusu, 2022), job satisfaction (Judge et al., 2022), and the Individual Work Performance Questionnaire (IWPQ) which have been adapted to Indonesian and proven to be valid and reliable (Koopmans et al., 2011, 2014; Widyastuti & Hidayat, 2018; Widyastuti et al., 2023).

The research was carried out at PT Pelabuhan Indonesia (Persero) Regional 2 Teluk Bayur in the period from December 2024 to May 2025. The research population is 150 employees, and because the number is relatively small, a total sampling technique is used, so that the entire population is used as a sample (Ghozali, 2019; Pasaribu et al., 2023). The data source consists of primary data obtained directly from respondents through questionnaires and secondary data in the form of personnel data, performance reports, activity documentation, and relevant scientific references (Pasaribu et al., 2023).

Data analysis was carried out through descriptive analysis and inferential analysis. Descriptive analysis was used to describe the characteristics of respondents and perceptions of each variable by calculating frequency, percentage, mean value, and Interval Level Value (NJI) (Pasaribu et al., 2023). Meanwhile, the inferential analysis uses Structural Equation Modeling–Partial Least Square (SEM-PLS) because the research model is causal, involves latent variables, does not require a normal distribution, and can be used on a limited sample size (Sholihin & Ratmono, 2021).

In SEM-PLS, measurement model testing (outer model) was carried out through convergent validity, discriminant validity, and reliability tests (Cronbach's Alpha and Composite Reliability) with criteria referring to Hair et al. (2022), as well as structural models (inner model) to assess causal relationships between variables using path coefficients, R-square values, and significance tests based on T-statistic > 1.96 at a confidence level of 95% (Pasaribu et al., 2023). The control variables used in the model include age, gender, working age, and last education, to ensure that the results of the relationship between the main variables are more valid and unbiased (Basri et al., 2021).

RESULT AND DISCUSSION

1. Variant-Based Partial Least Square (PLS) SEM

The analysis in this study uses Structural Equation Modeling (SEM) based on Partial Least Square (PLS) which is variant-oriented, with the aim of testing the influence of Health, Safety, Security, and Environment (HSSE) on Employee Performance, as well as the role of Job Satisfaction as an intervening variable in PT Pelabuhan Indonesia (Persero) Regional 2 Teluk Bayur. This study involved as many as 150 respondents who were active employees within PT Pelindo Regional 2 Teluk Bayur. After going through the data screening process and the drop out procedure for invalid or outlier data, the final number of samples that were declared suitable for analysis was obtained. Validity and reliability tests are carried out through external model testing which includes Convergent Validity, Discriminant Validity, and Composite Reliability. The results showed that all indicators in the research model met the required criteria, with a loading factor value of > 0.7 , Average Variance Extracted (AVE) > 0.5 , and Composite Reliability > 0.7 , so that all constructs were declared valid and reliable to proceed to the inner model testing stage. Below is a schematic diagram of the PLS program model tested:

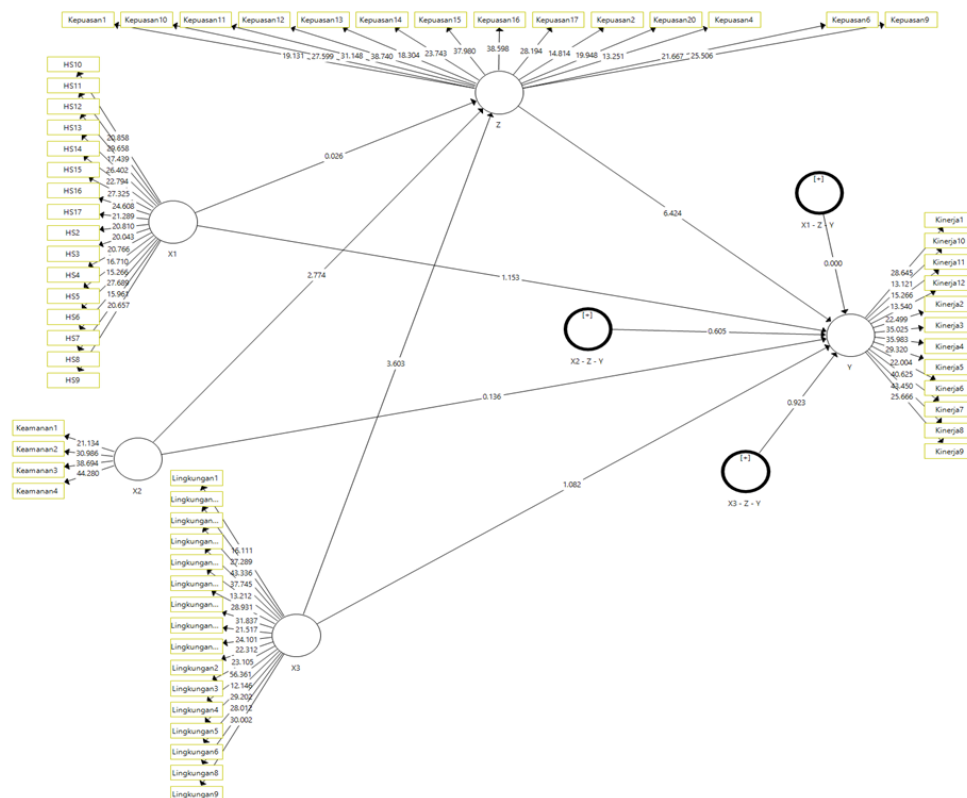


Figure 1. SEM Model PLS Outer Models After Drop Out

2. Outer Model

a. Convergen Validity

External load values or load factors are used to test the effectiveness of convergence. If the external load value > 0.7 , the dimension is declared to meet the convergence validity in a good category (Chin, 2010).

Based on the results of the outer loading test on the research model that has gone through a drop out process for indicators that do not meet the convergent validity criteria at the previous test stage, the factor loading value for all research variable indicators is obtained as shown. According to the criteria put forward by Chin (2010), an indicator is declared to have good convergent validity if the outer loading value is greater than 0.70. Based on the results of the analysis, all indicators in the Health and Safety (X1) variable showed a high loading value, ranging from 0.816 to 0.893, which indicates that all indicators are valid in measuring the construct.

The Security variable (X2) also showed excellent results, with loading values ranging from 0.879 to 0.919, illustrating the consistency and strength of the indicator in explaining the security dimension of employees. Furthermore, the Environment variable (X3) has a strong outer loading value, which is between 0.783 to 0.925, which means that all indicators are worth maintaining because they have a significant contribution to the formation of the work environment construct. The Employee Performance variable (Y) shows a loading value range between 0.742 to 0.906, which indicates that most indicators have good convergent validity even though there are some values at the lower limit but are still acceptable.

Meanwhile, the Job Satisfaction (Z) variable also showed good results with an outer loading value between 0.736 to 0.888, so that all indicators can be declared valid in measuring the level of employee job satisfaction. Thus, the entire construct in the model has met the criteria of convergent validity, indicating that the indicators remaining after the drop-out process have been tested and are able to represent their respective latent variables consistently and significantly.

b. *Validity Discriminant*

Cross-loading values are used to test the validity of the assessment. A dimension is declared to meet the validity of discrimination if the cross-loading value for the dimension variable is the largest compared to the other variable. It is known that each dimension of the study variable has the highest cross-loading value of the variable it forms compared to the cross-loading value of the other variable.

Based on the results obtained, the dimensions used in this study can be said to have good discriminative validity in arranging each variable. In addition to observing cross-loading values, discriminant validity can be found in other ways. That is, by examining the mean value of variance extraction (AVE) for each dimension, the value should be > 0.5 for the corresponding model (Chin, 2010).

Tabel 1. Average Variant Extracted (AVE)

Variable	Average Variance Extracted (AVE)
Health & Safety	0,755
Health & Safety - Job Satisfaction - Employee Performance	1,000
Security	0,824
Security - Job Satisfaction - Employee Performance	1,000
Environment	0,747
Environment - Job Satisfaction - Employee Performance	1,000
Employee Performance	0,720
Job Satisfaction	0,684

c. *Reliability*

Composite reliability is the part used to test the reliability value of a variable's dimensions. Variables with a combined confidence value greater than 0.6 can be declared to meet the combined confidence level (Chin, 2010). Below are the combined confidence values for each variable used in this study:

Table 2. Composite Reliability

Variable	Composite Reliability
Health & Safety	0,980
Health & Safety - Job Satisfaction - Employee Performance	1,000
Security	0,949
Security - Job Satisfaction - Employee Performance	1,000
Environment	0,979
Environment - Job Satisfaction - Employee Performance	1,000
Employee Performance	0,968
Job Satisfaction	0,968

Source : Primary Data Processed (2025)

Reliability tests using the above composite reliability can be improved using Cronbach Alpha values. If the Cronbach Alpha value of a variable exceeds 0.7, the variable can be declared reliable or meet the Cronbach Alpha (Chin, 2010). Below are the values Cronbach Alpha For each variable:

Table 3. Cronbach Alpha	
Variable	Cronbach's Alpha
Health & Safety	0,978
Health & Safety - Job Satisfaction - Employee Performance	1,000
Security	0,929
Security - Job Satisfaction - Employee Performance	1,000
Environment	0,977
Environment - Job Satisfaction - Employee Performance	1,000
Employee Performance	0,964
Job Satisfaction	0,964

Source : Primary Data Processed (2025)

3. Inner Model Evaluation

In this study, the results of the path coefficient test, goodness of fit test and hypothesis test will be explained, for more detail described in Figure 2.

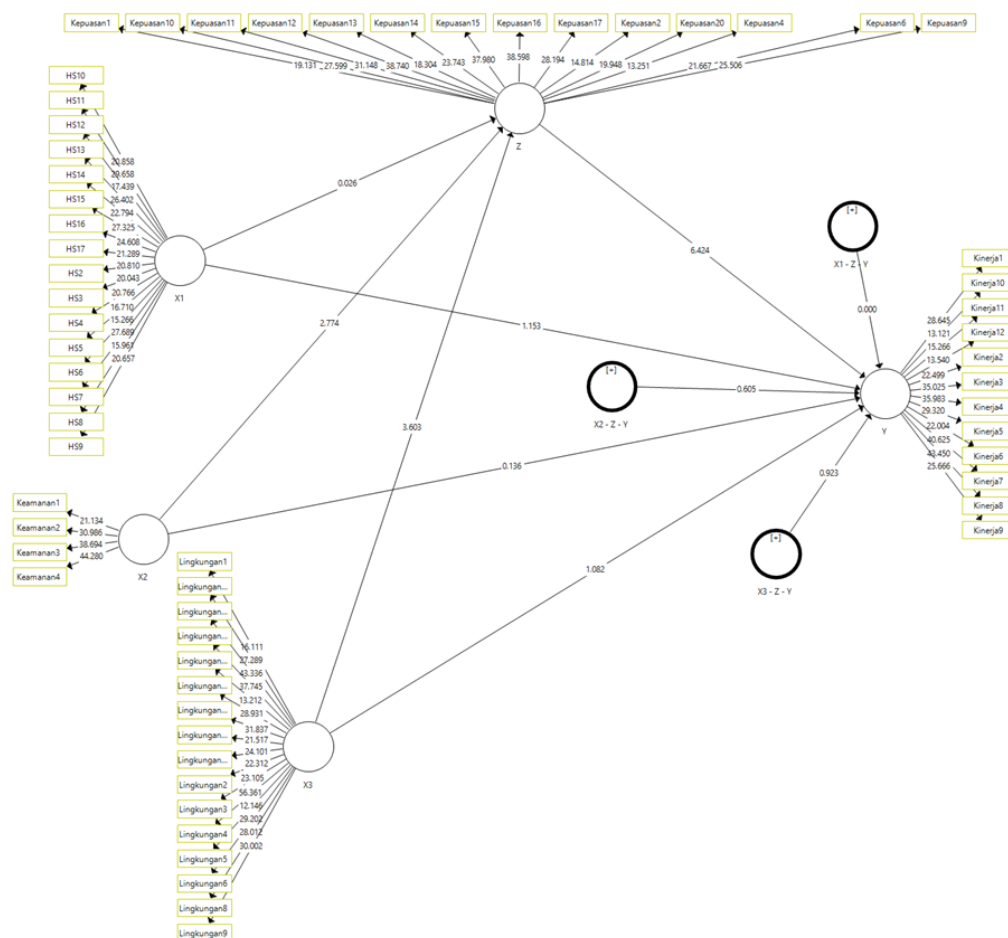


Figure 2. Model SEM PLS Inner Models Setelah Drop Out

a. Path Coefficient

Path factor assessment is used to show the effect or intensity of the effects of independent variables on dependent variables. On the other hand, the determinant (R-square) is used to measure how endogenous variables are affected by other variables.

The results of the analysis showed that Health and Safety had a positive influence on Employee Performance with an estimated value of 0.243. This means that the better the implementation of occupational health and safety, the more employee performance will increase, even though the effect is in the medium category.

In addition, Health and Safety has also been proven to have a positive effect on Job Satisfaction with a value of 0.345, which indicates that a safe and healthy work environment is able to increase employee comfort and satisfaction at work. When Job Satisfaction was included as a mediating variable, the indirect effect of Health and Safety on Employee Performance increased to 0.448. This shows that job satisfaction strengthens the relationship between occupational health safety and employee performance, thus playing an important role as a mediator.

Meanwhile, the security variable has a strong direct influence on Employee Performance, shown by an estimated value of 0.474. This means that the higher the sense of security and protection at work, the higher the performance of employees. Security also contributes positively to Job Satisfaction with a value of 0.382, so that the security aspect is proven to increase employee psychological comfort. However, when Job Satisfaction acts as a mediator, the indirect effect of Security on Employee Performance is only 0.067, indicating that job satisfaction does not make a significant additional contribution in strengthening the relationship between job security and employee performance.

In the Environment variable, the work environment has a positive effect on Employee Performance of 0.317, which indicates that the work atmosphere, facilities, and physical conditions of the environment support the improvement of employee performance. The influence of the Environment on Job Satisfaction is even higher, which is 0.467, which shows that a comfortable and conducive work environment is an important factor in shaping employee job satisfaction. However, the indirect influence of the Environment on Employee Performance through Job Satisfaction is actually worth -0.071. This negative value indicates that job satisfaction does not mediate the relationship between the work environment and employee performance, possibly because the direct influence of the environment is strong enough that it does not require intermediaries.

Job Satisfaction itself has the greatest influence on Employee Performance, which is 0.677. This finding confirms that employees who feel satisfied with their work in terms of workload, employment relations, awards, and environmental conditions will show higher motivation and commitment to work. Thus, job satisfaction becomes a key variable that significantly determines the quality of employee performance in the organization.

b. Good of Fitness

Based on the results of the R-Square analysis presented in Table 4.24, it can be seen that the R-Square value for the Employee Performance variable (Y) is 0.781 with the R-Square Adjusted is 0.771. This means that 78.1% of the variation that occurs in Employee Performance can be explained by the variables Health (X1), Safety (X2), Security (X3), and Job Satisfaction

(Z) as intervening variables, while the remaining 21.9% is explained by other factors outside this research model. This value is relatively strong, which shows that the model has a high ability to explain employee performance at PT Pelabuhan Indonesia (Persero) Regional 2 Teluk Bayur.

Meanwhile, the R-Square for the Job Satisfaction (Z) variable is 0.652 with the Adjusted R-Square is 0.644, which indicates that 65.2% of the variation in Job Satisfaction can be explained by the Health, Safety, Security, and Environment variables, while the remaining 34.8% is influenced by other factors not included in the model. This value is in the strong to medium category, which means that HSSE variables have a significant contribution in shaping employee job satisfaction levels. Thus, the results of R-Square strengthen the finding that HSSE plays an important role in improving both employee satisfaction and performance, so the implementation of HSSE-based policies and work culture needs to continue to be strengthened within PT Pelindo Regional 2 Teluk Bayur.

The f Square (f^2) test is the effect size. In this study, the value of f square shows the magnitude of the influence of exogenous variables on endogenous variables (Musyaffi et al., 2022). The exogenous variables in this study are *Health and Safety, Security, and Environment*. The F-square value consists of 3 categories, namely the small category of 0.02, the medium category of 0.15 and the large category of 0.35 (Musyaffi et al., 2022).

The results of the analysis of the F-Square value showed that all variables in the model had an influence in the medium to large category, without any small effect. The Health and Safety variables had a moderate effect on employee performance ($f^2 = 0.337$) and job satisfaction ($f^2 = 0.315$), and showed a large effect when affecting performance through the mediation of job satisfaction ($f^2 = 0.352$). The Security variable also had a significant impact, with a moderate influence on employee performance ($f^2 = 0.302$), a large influence on job satisfaction ($f^2 = 0.359$), and a moderate influence close to a large through the work satisfaction mediation pathway ($f^2 = 0.348$).

Meanwhile, the Environment showed a large influence on employee performance ($f^2 = 0.356$) and a moderate effect on job satisfaction ($f^2 = 0.196$), as well as a near-large moderate effect on performance through job satisfaction ($f^2 = 0.344$). Among all variables, Job Satisfaction had the most dominant influence on employee performance with an f^2 value of 0.721, which was included in the category of very large effects. These findings show that improving the quality of the work environment, safety, and occupational health and safety aspects contribute significantly to employee satisfaction and performance, while job satisfaction is the most powerful key factor in driving performance improvement

c. Hypothesis and Significance Test

Based on the data processing that has been carried out, the results can be used to answer the hypothesis in this study. The hypothesis test in this study was carried out by looking at the T-Statistics value and the P-Values value. The research hypothesis can be stated to be tested if the T-Statistics value > 1.96 and the P-Values < 0.05 . The following are the results of the hypothesis test obtained in this study through the inner model:

Table 4. T-Statistics dan P-Values

	T Statistics	P Values	Verdict
X1 -> Y	2,153	0,008	Accepted

X1 -> Z	2,926	0,005	Accepted
X1 - Z - Y -> Y	2,484	0,010	Accepted
X2 -> Y	3,136	0,000	Accepted
X2 -> Z	2,774	0,006	Accepted
X2 - Z - Y -> Y	0,605	0,545	Rejected
X3 -> Y	2,082	0,003	Accepted
X3 -> Z	3,603	0,000	Accepted
X3 - Z - Y -> Y	0,923	0,356	Rejected
Z -> Y	6,424	0,000	Accepted

Source : Primary Data Processed (2025)

1. The Influence of Health and Safety on Employee Performance

The test results showed a T-Statistics value of $2.153 > 1.96$ and a P-Value of $0.008 < 0.05$. This means that the first hypothesis is accepted. This means that Health and Safety (X1) has a significant effect on Employee Performance (Y)

2. The Influence of Security on Employee Performance

Based on the test results with a T-Statistics value of $3.136 > 1.96$ with a P-Values of $0.000 < 0.05$. This means that Security (X2) has a significant effect on Employee Performance (Y).

3. The Influence of Environment on Employee Performance

Based on the test results with a T-Statistics score of $2.082 > 1.96$ and P-Values by $0.003 < 0.05$. This means that there is an environment affecting employee performance.

4. The Effect of Job Satisfaction on Employee Performance

Based on the test results with T-Statistics of $6.424 > 1.96$ and P-Values by $0.000 < 0.05$. This means that there is an influence of job satisfaction affecting employee performance

5. The Effect of Health and Safety on Employee Performance through Job Satisfaction as an Intervening Variable

Based on the results of the T-Statistics test of $2.484 > 1.96$ and P-Values of $0.010 < 0.05$, it means that health and safety affect employee performance through job satisfaction as an intervening variable.

6. The Effect of Security on Employee Performance through Job Satisfaction as an Intervening Variable

Based on the results of the T-Statistics test of $0.605 < 1.96$ with P-Values of $0.545 > 0.05$, it means that security affects employee performance through job satisfaction as an intervening variable.

7. The Influence of Environment on Employee Performance through Job Satisfaction as an Intervening Variable

Based on the results of the test T-Statistics value of $0.923 < 1.96$ and P-Values of $0.356 > 0.05$, it means that environment affects employee performance through job satisfaction as an intervening variable.

The Effect of Health and Safety on the Performance of Employees of PT Pelabuhan Indonesia (Persero) Regional 2 Teluk Bayur

The results of the study show that Health and Safety has a significant effect on employee performance with a T-statistic value of 2.153 and a P-value of 0.008, which means that the

better the implementation of occupational health and safety (K3), the higher the performance produced by employees. These findings indicate that a safe work environment, free from the risk of accidents, and supported by adequate health facilities can increase employee focus, comfort, and motivation in carrying out their duties.

This condition occurs because when employees feel physically and psychologically protected, they can work without anxiety, reduce absenteeism due to injury, and improve performance consistency. Theoretically, these results are in line with Maslow's theory, which states that basic needs and a sense of security are important prerequisites before an individual is able to achieve optimal performance. When safety needs are met, employees can move towards higher needs so that productivity increases.

In addition, these findings are also consistent with Agency Theory, which emphasizes that companies need to control work risks so that employees as "agents" can effectively meet organizational expectations. In this context, the implementation of K3 serves as a risk reduction mechanism that increases employee trust and compliance, so that performance can achieve better results. Thus, the implementation of Health and Safety has been proven to play a strategic role in encouraging employee performance improvement both practically and theoretically.

The results of the study show that Health and Safety has a significant effect on employee performance are very relevant to the operational conditions of PT Pelabuhan Indonesia (Pelindo) Regional 2 Teluk Bayur. As a company engaged in port activities with a high level of occupational risk—such as heavy equipment operation, loading and unloading, activities in the dock area, and interaction with the marine environment—the implementation of occupational health and safety (K3) is an important foundation in maintaining employee performance.

When Pelindo Teluk Bayur provides strict safety procedures, complete PPE, regular equipment checks, and a well-functioning emergency response system, employees can work with a sense of security so that focus and productivity increase. This finding is in line with Maslow's theory which emphasizes that security is a fundamental need that must be met in order for individuals to be able to perform optimally. In the context of Agency Theory, the implementation of K3 at Pelindo Teluk Bayur also functions as a control mechanism to reduce work risks and ensure that employees as "agents" can carry out their responsibilities effectively according to the organization's expectations. Thus, the stronger the implementation of Health and Safety at Pelindo Teluk Bayur, the greater its contribution to improving employee performance and the smooth operation of the company.

The Effect of Security on the Performance of Employees of PT Pelabuhan Indonesia (Persero) Regional 2 Teluk Bayur

The results of the study showed that the Security variable had a significant influence on employee performance with a T-statistic value of 3.136 and a P-value of 0.000. This means that the higher the level of job security that employees feel, the better the performance they produce. Strong job security provides a sense of comfort, protection, and certainty for employees to carry out their duties without worrying about potential threats both from inside and outside the work environment.

When employees feel physically and psychologically safe, they can work more focused, have stable concentration, and be able to achieve optimal productivity because they are not

distracted by anxiety related to personal safety or company assets. These findings are in line with Maslow's theory which places the need for security as a basic need that must be met before a person can achieve peak performance. In the perspective of Agency Theory, security also functions as a control mechanism that ensures that employees as "agents" can work according to organizational goals without being disturbed by work environment risks.

At PT Pelabuhan Indonesia (Pelindo) Regional 2 Teluk Bayur, this result is very relevant considering that port operational activities have a high level of vulnerability, both related to the physical security of the dock area, the movement of heavy equipment, and potential external threats such as illegal access or the risk of sabotage. With the availability of structured security systems such as CCTV surveillance, limited area access control, adequate security officer presence, and clear operational security procedures, employees can work more calmly and efficiently.

Therefore, the job security maintained at Pelindo Teluk Bayur not only protects the company's assets, but also directly improves employee performance and supports the smooth running of the company's overall operational activities.

The Influence of Environment on the Performance of Employees of PT Pelabuhan Indonesia (Persero) Regional 2 Teluk Bayur

The results showed that Environment had a significant influence on employee performance, with a T-statistical value of 2.082 and a P-value of 0.003. This means that the better the condition of the work environment, both in terms of cleanliness, comfort, spatial layout, and the quality of facilities, the higher the performance that employees can achieve. A neatly organized work environment, has good air circulation, adequate lighting, and minimal physical and psychological disturbances, is able to increase work morale, focus, and comfort of employees in carrying out their duties.

Employees who work in a healthy and supportive environment will find it easier to maintain motivation, reduce stress, and improve the quality of work output. Theoretically, these results are consistent with Maslow's view that the need for physical comfort and a sense of security are essential foundations before individuals can achieve higher levels of performance. From the perspective of Agency Theory, a good work environment is a form of organizational support for employees as "agents," so that they have optimal conditions to effectively meet the company's expectations and goals.

The work environment has a significant influence on employee performance. Research shows that a good work environment can improve employee performance, while a poor work environment can decrease performance. A conducive work environment, both physically and non-physically, as well as good work discipline, can improve employee performance. Therefore, companies need to pay attention and continue to improve the conditions of the work environment to achieve optimal performance from their employees (Affini, 2020).

PT Pelabuhan Indonesia (Pelindo) Regional 2 Teluk Bayur carries out port activities demanding orderly, safe, and controlled environmental conditions so that operations can run smoothly. The arrangement of ergonomic work areas, the provision of adequate rest facilities, good waste management, and the cleanliness of the port environment not only have an impact on employee comfort, but also on overall work effectiveness. A well-managed environment helps employees perform tasks without physical restraint, reduces the risk of fatigue, and

increases concentration in operational activities that often require high precision. Thus, improving the quality of the work environment at Pelindo Teluk Bayur has proven to make a significant contribution to improving employee performance and the company's operational success.

PT Pelindo Regional 2 Teluk Bayur has shown its commitment to creating a friendly and healthy work environment, both in the office area and operational fields. Efforts to maintain cleanliness, spatial arrangements, and control noise and air pollution are important parts in supporting employee comfort. These factors contribute to increased work concentration and reduced physical and mental fatigue.

The Effect of Job Satisfaction on the Performance of Employees of PT Pelabuhan Indonesia (Persero) Regional 2 Teluk Bayur

This study proves that job satisfaction has the strongest influence on employee performance, shown by the T-statistics value of 6.424 and P-values of 0.000. These findings confirm that employees who feel satisfied with their work both in terms of appreciation, work environment, relationships with superiors and colleagues, and task suitability with abilities have higher motivation to achieve the best work results. Job satisfaction creates a sense of belonging, increases organizational commitment, and encourages employees to work more productively and responsibly.

PT Pelabuhan Indonesia (Pelindo) Regional 2 Teluk Bayur, strives to provide a good work environment, pay attention to the welfare of employees, provide health insurance, and create conducive working relationships that really have an impact on improving performance. Employees who feel valued and supported by management become more focused, loyal, and committed to providing the best performance. Thus, increasing job satisfaction is a key strategy for Pelindo Regional 2 Teluk Bayur in strengthening employee performance and ensuring the success of the company's operations.

Job satisfaction has a very strong influence on employee performance. Many studies and theories show that when employees feel satisfied with their work, employees tend to be more productive, motivated, and loyal to the organization. Job satisfaction is an individual's positive attitude towards their work, which reflects their feelings towards various aspects of the job, such as the work environment, co-workers, superiors, and company policies (Lee, 2020). Satisfied employees tend to perform better because they feel valued and motivated. Job satisfaction is an important factor in improving employee performance. By creating a work environment that supports and pays attention to the needs and well-being of employees, companies can encourage productivity, loyalty, and better work quality (Park, 2019).

The Effect of Health and Safety on the Performance of Employees of PT Pelabuhan Indonesia (Persero) Regional 2 Teluk Bayur with Job Satisfaction as an Intervening Variable

The results showed that Health and Safety had a significant effect on performance through job satisfaction, with a T-statistical value of 2.484 and a P-value of 0.010. These findings show that job satisfaction plays a mediator that strengthens the relationship between the implementation of occupational health and safety (K3) and employee performance. This means that when the implementation of K3 in the work environment is getting better, including

work safety, personal protective equipment, safe work procedures, and management support for employee safety, they will feel safer, comfortable, and protected. This feeling of security increases job satisfaction, which ultimately encourages employees to work more optimally so that it has an impact on improving performance.

This result is in line with Maslow's Hierarchy of Needs, where safety needs are an important basis before employees can achieve higher work motivation. In addition, according to agency theory, a safe work environment reduces risks and increases employees' trust in the organization, making them more motivated to meet the company's goals. Thus, the quality of K3 implementation indirectly encourages performance improvement through increased employee job satisfaction.

The Effect of Security on the Performance of Employees of PT Pelabuhan Indonesia (Persero) Regional 2 Teluk Bayur with Job Satisfaction as an Intervening Variable

The results of the analysis showed that Security did not have a significant effect on employee performance through job satisfaction, with a T-statistical value of 0.605 and a P-value of 0.545. These findings confirm that job satisfaction does not play a mediator role in the relationship between job security and employee performance. This means that while security aspects such as access control systems, asset protection, security procedures, and mitigation of the risk of operational disruptions are important in the work environment, these security improvements do not directly increase employee job satisfaction. On the other hand, security tends to have a more direct effect on employee performance, because employees can work more focused, calm, and efficient when the risk of disruption or threats can be minimized.

The Influence of Environment on the Performance of Employees of PT Pelabuhan Indonesia (Persero) Regional 2 Teluk Bayur with Job Satisfaction as an Intervening Variable

Based on the test results, the Environment variable did not have a significant effect on performance through job satisfaction, as shown by the T-statistics value of 0.923 and the P-values of 0.356. These findings suggest that job satisfaction is not a mediator in the relationship between the work environment and employee performance. In other words, although the work environment such as cleanliness, comfort, lighting, air circulation, and spatial planning have an important role, the effect is more direct on employee performance, rather than through increased job satisfaction.

This indicates that employees respond directly to the quality of the work environment in the form of increased focus, work comfort, and efficiency, thus having an impact on improving performance without having to first increase their job satisfaction. In the perspective of Maslow's theory, the conditions of the work environment include the categories of basic physiological needs and safety; Fulfillment is important so that employees can work optimally, but it does not necessarily increase satisfaction significantly. In addition, from the perspective of agency theory, the quality of the work environment is related to organizational support so that employees can work effectively and minimize operational obstacles, so that the effect is more operational than psychological. Thus, the work environment remains an important factor, but its influence on performance is more dominant directly than through job satisfaction.

CONCLUSION

Based on the results of the study on the influence of Health, Safety, Security, and Environment (HSSE) on the performance of employees of PT Pelabuhan Indonesia (Persero) Regional 2 Teluk Bayur with job satisfaction as an intervening variable, it can be concluded that health and safety, security, and environment directly affect employee performance, as well as job satisfaction which is proven to have a significant influence on employee performance. However, job satisfaction has not been proven to mediate the relationship between health and safety, security, and environment on employee performance, so the influence of these three aspects of HSSE on employee performance takes place directly without going through the role of job satisfaction as an intervening variable. For future research, scholars could explore additional intervening variables, such as organizational commitment or leadership style, or extend the analysis longitudinally to assess the long-term sustainability of HSSE effects in dynamic port environments.

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