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THE EFFECT OF SMK3 IMPLEMENTATION AND ORGANIZATIONAL CULTURE ON PERFORMANCE WITH K3L CERTIFICATION AS AN INTERVENTIONAL VARIABLE INDISTRIBUTION EMPLOYEE AT PT PLN (PERSERO) UID NORTH SUMATERA

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ABSTRACT

This study aims to investigate how the implementation of the Occupational Safety and Health Management System (SMK3) and corporate culture affects employee performance, with K3L Certification as an intermediary factor in the Distribution Division of PT PLN (Persero) UID North Sumatra. A quantitative method was employed, using a questionnaire for data collection. The study sample consisted of 163 employees, selected through a saturated sampling method. Data analysis was conducted using Structural Equation Modeling–Partial Least Squares (SEM-PLS). The results indicate that the implementation of SMK3 and corporate culture has a positive and significant impact on employee performance. Furthermore, both factors were shown to have a positive and significant effect on K3L Certification. Furthermore, K3L Certification significantly influences employee performance and acts as a mediating factor in the relationship between SMK3 implementation, corporate culture, and employee performance. Therefore, improved employee performance can be achieved through the successful implementation of SMK3, strengthening corporate culture, and the ongoing promotion of K3L Certification.

Introduction

With the rapid development of modern industry, marked by increasing competition and changing work dynamics, occupational safety and health (OHS) has become crucial for increasing productivity and ensuring the sustainability of business operations. Every organization, especially those in the electricity sector such as PT PLN (Persero), faces significant occupational risks that can lead to workplace accidents and significant financial losses. Therefore, implementing an Occupational Safety and Health (OHS) Management System is a strategic step towards creating a safe and efficient workplace that complies with legal requirements. OHS is a crucial component of a company's management

framework designed to identify and manage risks, prevent workplace incidents, and protect employees and organizational assets. According to Government Regulation Number 50 of 2012, the implementation of OHS is mandatory for companies with more than 100 employees or companies with high hazard risks. In the case of PT PLN (Persero), the implementation of OHS is seen not only as compliance with legal mandates but also as evidence of the company's dedication to maintaining reliable and sustainable operations.
As a government-owned enterprise engaged in the electricity supply sector, PT PLN (Persero) Main Distribution Unit (UID) North Sumatra is crucial in supplying electricity to various sectors of society. The distribution sector is a unit with a relatively high level of risk because its operations are closely related to technical tasks in the field, such as maintaining the electricity network, handling disturbances, and installing new connections. These tasks require significant focus on occupational safety, given that even minor errors can result in serious consequences. Therefore, the establishment of an Occupational Safety and Health (OHS) Management System for distribution personnel is an urgent need. However, the effectiveness of OHS implementation is greatly influenced by the organizational culture prevailing in the workplace. Organizational culture encompasses collective values, norms, and behavioral patterns that guide employees in their actions and interactions. As noted by Robbins and Judge (2019), a strong organizational culture can foster a shared understanding to achieve organizational goals, including those related to occupational safety and health. Within PLN, a culture that emphasizes discipline, caring, teamwork, and accountability will enhance the success of OHS system implementation.

In reality, there is still a gap between established regulations and their implementation in the field. Many studies and internal documents reveal that workplace accidents still occur at PLN, usually due to negligence, a lack of understanding of safety protocols, and low employee awareness of the importance of K3 (Occupational Safety, Health, and Environment). This scenario shows that the implementation of a strong K3 Management System (K3) does not always improve employee performance if it is not supported by a supportive organizational culture and adequate employee skills. One method to improve the effectiveness of K3 implementation and organizational culture is through K3 (Occupational Safety, Health, and Environment) certification. This certification serves as formal recognition of an individual's ability to understand, implement, and monitor K3 standards in the workplace. By obtaining this certification, employees not only gain technical expertise but also increased awareness and accountability in consistently applying K3 principles. In this context, K3 certification serves as a mediating factor linking the impact of K3 implementation and organizational culture on employee performance.

Employee performance is the result of the interaction of various elements, including ability, motivation, work environment, and existing management systems. Mangkunegara (2021) describes performance as the results achieved by employees, assessed in terms of quality and quantity, in accordance with established responsibilities. At PT PLN (Persero), particularly in the distribution sector, employee performance can be evaluated based on the reliability of the electricity network, speed in handling disruptions, quality of customer service, and compliance with standard operating procedures. Therefore, improving employee performance is highly dependent on the company's capacity to integrate the implementation of the Occupational Safety and Health (OHS)

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Management System, foster a strong organizational culture, and ensure that employees have the appropriate OHS certification.

In practice, PT PLN (Persero) UID North Sumatra has implemented OHS through several initiatives, such as routine OHS training, internal assessments, and the provision of standardized personal protective equipment (PPE). However, the success of these initiatives still depends heavily on management involvement and employee compliance. Challenges also arise when trying to foster a consistent safety culture. This primarily relates to employee actions in the field, such as the use of PPE and reporting potential risks. Therefore, K3L certification is an important tool to ensure that employees not only understand occupational safety concepts theoretically but also possess professionally recognized practical skills. Employees with K3L certification are expected to demonstrate increased discipline, responsibility, and a focus on safety in their work, which can positively impact individual and organizational performance. Based on the description above, this study is very important to evaluate how the implementation of SMK3 and culture in the organization impact the performance of distribution staff at PT PLN (Persero) UID North Sumatra, using K3L certification as a mediating factor. The expected findings of this study are to provide empirical insights into how much the combination of the occupational safety management system, organizational culture, and K3L certification helps improve employee performance. Furthermore, the results of this study can serve as a guide for management in developing policies for human resource growth and strengthening the occupational safety culture in the future. Theoretically, this study aims to improve the field of human resource management and occupational safety by introducing K3L certification as a mediating variable, which is relatively underexplored in previous studies. Practically, the results of this study can provide information on approaches to improve the effectiveness of SMK3 implementation and promote safety-focused human resource development in the context of PLN.

Problem Formulation

1. Does the Implementation of SMK3 have a positive and significant effect on the Performance of Distribution Division employees at PT PLN (Persero) UID North Sumatra?
2. Does Organizational Culture have a positive and significant effect on the Performance of Distribution Division employees at PT PLN (Persero) UID North Sumatra?
3. Does the Implementation of SMK3 have a positive and significant effect on K3L Certification among Distribution Division employees at PT PLN (Persero) UID North Sumatra?
4. Does Organizational Culture have a positive and significant effect on K3L Certification among Distribution Division employees at PT PLN (Persero) UID North Sumatra?
5. Does K3L Certification have a positive and significant effect on the Performance of Distribution Division employees at PT PLN (Persero) UID North Sumatra?
6. Does the Implementation of SMK3 have a positive and significant effect on Employee Performance through K3L Certification in the Distribution Division at PT PLN (Persero) UID North Sumatra?
7. Does Organizational Culture have a positive and significant effect on Employee Performance through K3L Certification in the Distribution Division at PT PLN (Persero) UID North Sumatra?

Research objectives

The purpose of this research is to:

1. 1. To test and analyze the effect of SMK3 Implementation on the Performance of Distribution Division employees at PT PLN (Persero) UID North Sumatra.
2. To test and analyze the effect of Organizational Culture on the Performance of Distribution Division employees at PT PLN (Persero) UID North Sumatra.
3. To test and analyze the effect of SMK3 Implementation on K3L Certification among Distribution Division employees at PT PLN (Persero) UID North Sumatra.
4. To test and analyze the effect of Organizational Culture on K3L Certification among Distribution Division employees at PT PLN (Persero) UID North Sumatra.
5. To test and analyze the effect of K3L Certification on the Performance of Distribution Division employees at PT PLN (Persero) UID North Sumatra.
6. To test and analyze the effect of SMK3 Implementation on Employee Performance through K3L Certification in the Distribution Division at PT PLN (Persero) UID North Sumatra.
7. To test and analyze the effect of Organizational Culture on Employee Performance through K3L Certification in the Distribution Division at PT PLN (Persero) UID North Sumatra.

Benefit of Research

1. Theoretical Advantages

The expected outcome of this research is to provide insight into the progress of human resource management and occupational safety studies, particularly through the following components:

a. Provides empirical insight into the impact of the implementation of the Occupational Safety and Health Management System (SMK3) on worker performance.
b. Increase studies on the impact of organizational culture in improving employee performance.
c. Clarifying the function of K3L certification as an intermediary factor that can strengthen the influence of SMK3 implementation and organizational culture on employee performance. 2. Practical Benefits

In practice, it is hoped that the findings of this research will provide benefits to several stakeholders, such as:

a. For PT PLN (Persero) UID North Sumatra, the results of this study can be the basis for evaluation and guidance in forming policies related to the implementation of SMK3, improving organizational culture, and developing K3L certification to increase employee productivity.
b. For employees, this research can provide insight into the importance of having K3L certification and how organizational culture contributes to occupational safety and improved performance.
c. For future researchers, the findings of this study are expected to be a source and guide for additional research exploring the subjects of OHSMS, organizational culture, OHS certification, and employee performance, particularly in the energy sector and government companies.

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Literature Review

Employee Performance

According to Robbins & Judge (2019), employee performance is the work results obtained by individuals or groups within an organization, encompassing target achievement, effectiveness, efficiency, and work behavior that supports organizational goals. According to Mathis & Jackson (2016), employee performance is the work results of individuals measured based on the level of achievement of assigned tasks, both in terms of quality and quantity, in accordance with the given responsibilities.

Employee Performance Indicators

Indicators of Employee Performance according to Mathis & Jackson (2016):

1. Achievement of work targets - The level of employee success in completing tasks according to the quantity set by the organization.
2. Quality of work results - The level of perfection and accuracy of the work produced by employees.
3. Timeliness of task completion - The ability of employees to complete tasks according to schedule or predetermined deadlines.
4. Work initiative and creativity - The ability of employees to take initiative, innovate, and improve work effectiveness.
5. Cooperation and communication - The ability of employees to work together in teams and communicate effectively with coworkers or superiors.

Factors Influencing Employee Performance

Factors influencing employee performance according to Mathis & Jackson (2016) include several main aspects, namely:

1. Ability and Skills
2. Work Motivation
3. Leadership
4. Compensation and Rewards
5. Organizational Culture
6. Work Environment
7. Training and Development
8. Discipline and Work Ethic

Occupational Health and Safety Management System (SMK3)

According to Soekidjo (2018), the Occupational Health and Safety Management System (SMK3) is an organizational effort to create a safe, healthy, and productive work environment through the systematic management of occupational health and safety. According to Astari and Suidarma (2022), SMK3 is a risk control activity related to creating a safe, efficient, and productive work environment. The implementation of SMK3 in companies aims to create a safe and healthy workplace for workers and increase company productivity.

Indicators of the Occupational Health and Safety Management System (SMK3)

According to Soekidjo (2018), SMK3 is an organizational effort to create a safe and healthy work environment. Indicators:

1. Clear organizational structure and responsibilities for OHS.
2. Implementation of SOPs and operational controls.
3. Evaluation of OHS performance, including measurement of accident rates.
4. OHS competency training and development for workers.

Organizational Culture

According to Hatch (2016), organizational culture is defined as a system of meaning shared by organizational members that shapes the identity of the organization. This culture influences how members view work, interact, and make decisions. According to Lunenburg (2018), organizational culture is the values and norms accepted by organizational members that guide organizational behavior, decisions, and strategies in achieving goals.

Indicators of Organizational Culture

Indicators of Organizational Culture according to Hatch (2016) are as follows:

1. Alignment of employee behavior with organizational values -- The extent to which employees carry out tasks and interactions according to the values upheld by the organization.
2. Compliance with organizational norms and rules -- The level of employee adherence to applicable formal and informal rules.
3. Participation in organizational rituals and symbols -- Employee involvement in activities, symbols, or traditions that reflect organizational identity.
4. Commitment to the organization's vision and mission -- The level of understanding and application of the organization's vision and mission in daily work.
5. Cooperation and interaction among members -- The ability of employees to cooperate, communicate, and build harmonious relationships aligned with organizational culture.

K3L Certification (Occupational Health, Safety, and Environment)

According to Rahman (2020), K3L Certification is a formal recognition of employee competence in implementing OHS and work environment procedures, encompassing knowledge, skills, and attitudes towards safety, health, and environmental sustainability. According to Sari (2019), K3L Certification is the process of granting official recognition to employees who demonstrate ability and skills in correctly applying work safety procedures and environmental management according to organizational standards.

Indicators of K3L Certification

Indicators of K3L Certification according to Rahman (2020):

1. Possession of a K3L certificate
2. Knowledge of K3L
3. Practical skills in K3L
4. Proactive attitude towards OHS
5. Application of K3L procedures in daily work

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Conceptual Framework

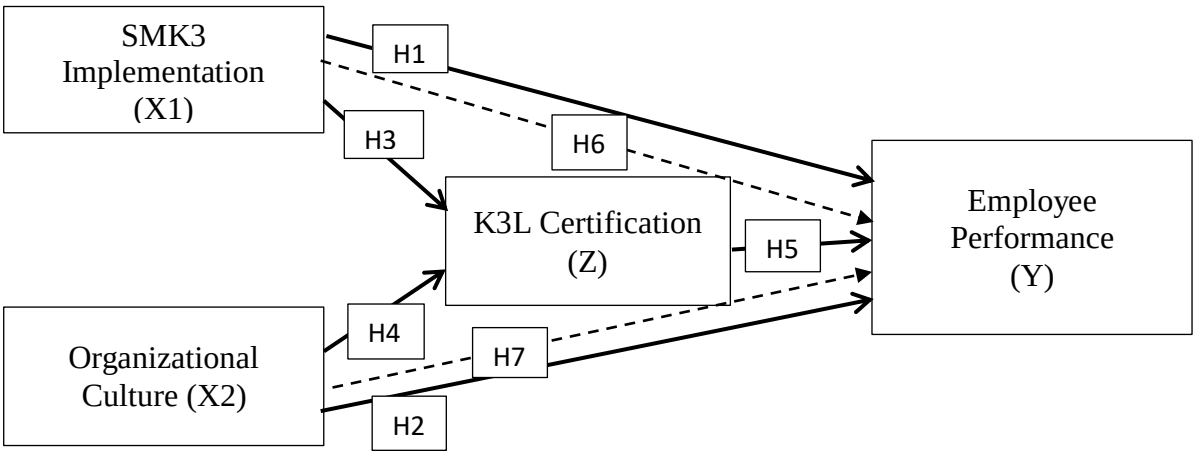

Figure I Conceptual Framework

Research Hypotheses

1. SMK3 Implementation has a positive and significant effect on the Performance of Distribution Division employees at PT PLN (Persero) UID North Sumatra.
2. Organizational Culture has a positive and significant effect on the Performance of Distribution Division employees at PT PLN (Persero) UID North Sumatra.
3. SMK3 Implementation has a positive and significant effect on K3L Certification of employees in the Distribution Division at PT PLN (Persero) UID North Sumatra.
4. Organizational Culture has a positive and significant effect on K3L Certification of employees in the Distribution Division at PT PLN (Persero) UID North Sumatra.
5. K3L Certification has a positive and significant effect on the Performance of Distribution Division employees at PT PLN (Persero) UID North Sumatra.
6. SMK3 Implementation has a positive and significant effect on Employee Performance through K3L Certification in the Distribution Division at PT PLN (Persero) UID North Sumatra.
7. Organizational Culture has a positive and significant effect on Employee Performance through K3L Certification in the Distribution Division at PT PLN (Persero) UID North Sumatra.

Method

Research Type

According to Rahman (2020), K3L Certification is a formal recognition of employee competency in implementing occupational health, safety, and environmental procedures, encompassing knowledge, skills, and attitudes toward safety, health, and environmental sustainability. According to Sugiyono (2019), quantitative research is a research method based on the philosophy of positivism, used to research specific populations or samples, with the aim of testing predetermined hypotheses.

Research Time and Location

According to Arikunto (2019), research time and location are important parts that explain the research implementation period and data collection location so that the research can be replicated by other researchers. This research was conducted from November to December 2025, located at Jl. KL. Yos Sudarso No. 284, Glugur Kota, Kecamatan Medan Barat, Kota Medan, Sumatera Utara.

Research Population and Sample

According to Arikunto (2018), a sample is a part or representation of the population to be studied. The population in this study is all respondents totaling 275 people. The Slovin formula is as follows:

$$n = \frac{N}{1 + N \cdot e^2}$$

$$n = \frac{275}{1+275\cdot(0.05)^2}$$

$$n = \frac{275}{1{,}6875}$$

$$n = 162{,}98 \approx 163$$

Based on this calculation, the minimum sample size required is 163 respondents.

Data Collection Technique

According to Riduwan (2016), a questionnaire is a data collection technique by providing a set of written questions or statements to respondents to answer. According to Sekaran and Bougie (2020), data collection techniques are an important step in research because they function to obtain information relevant to the research problem. The data collection technique in this study was carried out using a questionnaire.

Data source

Research data sources are categorized into two main types: primary data and secondary data (Kuncoro, 2018):

1. Primary data refers to information collected directly from participants using surveys or interviews (Sugiyono, 2019).
2. Secondary data includes information collected from indirect sources, such as reports, official records, books, journals, and other literature relevant to the research (Umar, 2020).

In this study, primary data was collected directly from sample participants, while secondary data was collected from company reports and academic references to strengthen the analysis.

Data Analysis Method Using Smart PLS 3

Data analysis for this study was conducted using Smart Partial Least Squares (Smart PLS 3) because this technique can examine complex relationships between latent variables

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and their indicators, making it ideal for studies with small sample sizes or non-normally distributed data (Ghozali & Latan, 2018). Partial Least Squares (PLS) is a variance-based methodology of Structural Equation Modeling (SEM) that emphasizes prediction over theory validation. This method is used to estimate relationships between latent constructs within a measurement and structural framework (Ghozali & Latan, 2018). Smart PLS aims to increase the explained variance in endogenous variables and has been shown to be effective for exploratory and predictive research, particularly in the early stages of theory building (Hair et al., 2021). PLS also accommodates research involving complex models, many latent variables, and data that violate the assumption of multivariate normality (Jogiyanto & Abdillah, 2020).

Analysis Model in Smart PLS

Data analysis using Smart PLS 3 consists of two main models: Measurement Model (Outer Model) and Structural Model (Inner Model) (Ghozali & Latan, 2018).

a. External Model (Measurement Model)

The external model evaluates how well an indicator represents the intended latent variable

(Ghozali & Latan, 2018). The assessment of the measurement model is carried out in several steps:

1. Convergent Validity Test: This is assessed by the loading factor and Average Variance
   Extracted (AVE); an indicator is valid if the loading factor exceeds 0.7 and the AVE exceeds 0.5 (Ghozali & Latan, 2018).
2. Discriminant Validity Test: This is checked using cross-loading and the Fornell-Larcker Criterion; it is considered valid when the correlation of the indicator with its construct exceeds the correlation with other constructs (Ghozali & Latan, 2018).
3. Construct Reliability Test: This is based on Composite Reliability (CR) and Cronbach's Alpha; values exceeding 0.7 indicate internal consistency between indicators (Ghozali & Latan, 2018).

b. Internal Model (Structural Model)

The internal model assesses the relationships between latent constructs based on research hypotheses (Hair et al., 2021). This evaluation includes the following stages:

1. R-Square (R^2) Test: This represents the percentage of endogenous variables explained by exogenous variables; $R^2 = 0.75$ is considered strong, 0.50 moderate, and 0.25 weak (Hair et al., 2021).
2. Predictive Relevance Test (Q^2): This tests the predictive power of the model; a Q^2 greater than 0 indicates that the model has good predictive ability (Hair et al., 2021).
3. Path Coefficient Examination: Using bootstrapping to evaluate how significant the relationship between variables is; A result is considered significant if the t-statistic value is greater than 1.96 and the p-value is less than 0.05 (Hair et al., 2021).

Explanation of Smart PLS Analysis Results

Findings from the Smart PLS 3 analysis are presented using factor loading values, path coefficients, t-statistics, and p-values. Indicators are considered valid if the factor loading is equal to or exceeds 0.7 and the p-value is below 0.05. The model has strong

predictive ability if the R^2 is sufficiently large and the Q^2 is greater than 0. The relationship between variables is significant if the t-statistic exceeds 1.96 (Hair et al., 2021; Ghozali & Latan, 2018). These findings are used to analyze the influence between variables and evaluate the research hypothesis (Hair et al., 2021).

Results and Discussion

Outer Model Analysis

Measurement Model Evaluation (Outer Model) An outer model evaluation is conducted to examine how the latent and observed variables relate to each other. This evaluation includes convergent validity, discriminant validity, and reliability.

Convergent Validity

Convergent validity is assessed by examining the loading factor, which must be at least 0.7, and the Average Variance Extracted (AVE) of at least 0.5. An indicator is considered valid if its loading factor exceeds 0.7 and its AVE exceeds 0.5, indicating that the indicator successfully reflects the latent variable. The structural model used in this study is illustrated below:

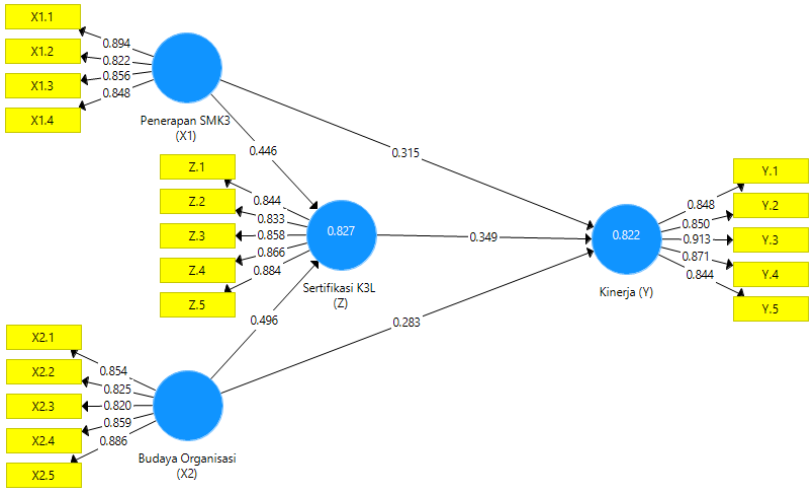

Figure 1. Outer Model

Source : Smart PLS 3.3.3

The Smart PLS output for the loading factors provides the results in the table below: External Loading In this study, there is a relationship consisting of two substructures.

For substructure 1

Z = b1X1 + b2X2 + e1

Z = 0.446 + 0.496 + e1

For substructure 2

Y = b3X 2 + b4X 1 + b5Z + e2

Y = 0.315 + 0.283 + 0.349 + e2

Table 1. Outer Loadings

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	Organizational Culture (X2)	Performance (Y)	Implementation of SMK3 _(X1)	K3L Certification _(Z)
X1.1			0.894	
X1.2			0.822	
X1.3			0.856	
X1.4			0.848	
X2.1	0.854			
X2.2	0.825			
X2.3	0.820			
X2.4	0.859			
X2.5	0.886			
Y.1		0.848		
Y.2		0.850		
Y.3		0.913		
Y.4		0.871		
Y.5		0.844		
Z.1				0.844
Z.2				0.833
Z.3				0.858
Z.4				0.866
Z.5				0.884

Source : Smart PLS 3.3.3

The external loading assessment shows that each indicator in the SMK3 Implementation (X1), Organizational Culture (X2), Performance (Y), and K3L Certification (Z) variables has a loading value exceeding 0.70. This indicates that each indicator effectively represents its construct and meets the requirements of convergent validity, making it suitable for further model evaluation.

Discriminant Validity

The next step involves evaluating the credibility of the data through Discriminant Validity, which aims to confirm that the cross-loading value of an indicator on its construct exceeds that of other constructs. This method allows for the identification of indicators that have a strong relationship with the concept. The table below illustrates the cross-loading results from this validity assessment.

Table 2. ***Discriminant Validity***

	Organizational Culture (X2)	Performance (Y)	Implementation of SMK3 _(X1)	K3L Certification _(Z)
X1.1	0.785	0.773	**0.894**	0.809
X1.2	0.697	0.787	**0.822**	0.753
X1.3	0.710	0.710	**0.856**	0.719
X1.4	0.762	0.681	**0.848**	0.702
X2.1	**0.854**	0.693	0.715	0.741

X2.2	**0.825**	0.751	0.712	0.729
X2.3	**0.820**	0.763	0.694	0.717
X2.4	**0.859**	0.733	0.782	0.801
X2.5	**0.886**	0.722	0.759	0.750
Y.1	0.781	**0.848**	0.773	0.810
Y.2	0.697	**0.850**	0.701	0.696
Y.3	0.763	**0.913**	0.748	0.752
Y.4	0.765	**0.871**	0.747	0.725
Y.5	0.722	**0.844**	0.767	0.790
Z.1	0.802	0.723	0.774	**0.844**
Z.2	0.790	0.718	0.690	**0.833**
Z.3	0.731	0.746	0.718	**0.858**
Z.4	0.711	0.779	0.772	**0.866**
Z.5	0.744	0.779	0.790	**0.884**

Source : Smart PLS 3.3.3

The cross-loading results show that each indicator has the highest loading value on the specific construct it represents when compared to other constructs. For example, the SMK3 Implementation indicator (X1) shows the most substantial loading on X1, the Organizational Culture indicator (X2) shows the highest loading on X2, the Performance indicator (Y) ranks highest on Y, and the K3L Certification indicator (Z) is strongest on Z. This implies that all constructs have met the criteria of discriminant validity, allowing each latent variable to be clearly identified in the research model.

Composite Reliability

This study used composite reliability to evaluate the reliability of each variable. A variable is considered reliable if its composite reliability score exceeds 0.60. Conversely, if the score is below 0.60–0.70, the variable is not considered reliable. Various indicators were used to determine the reliability and validity of the study, including Cronbach's Alpha, Composite Reliability (CR), and Average Variance Extracted (AVE), the results of which are shown in the following table.

Table 3. ***Construct Reliability and Validity***

	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Organizational Culture (X2)	**0.903**	**0.928**	**0.721**
Performance (Y)	**0.916**	**0.937**	**0.749**
Implementation of SMK3 _(X1)	**0.878**	**0.916**	**0.732**
K3L Certification _(Z)	**0.910**	**0.933**	**0.735**

Source : Smart PLS 3.3.3

The cross loading results show that each variable shows its strongest value on the specific construct related to it, when compared to other constructs. For example, the SMK3

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Implementation variable (X1) shows the peak loading on X1, the Organizational Culture variable (X2) is ranked highest on X2, the Performance variable (Y) dominates on Y, and the K3L Certification variable (Z) is ranked highest on Z. This indicates that all constructs have met the requirements of discriminant validity, allowing clear differentiation of each latent variable in the research framework.

Internal Model Analysis

The internal model is examined to check its robustness and accuracy. Various metrics are used to evaluate the model's effectiveness, one of which is the Coefficient of Determination (R^2).

From the data analysis carried out with SmartPLS 3.0, the R Square value was obtained as follows:

Table 4. R Square Results

	R Square	Adjusted R Square
Performance (Y)	0.822	0.819
K3L Certification _(Z)	0.827	0.825

Source : Smart PLS 3.3.3

The R Square value shows that the Performance variable (Y) can be explained by 82.2% through the independent variables in the model, while the K3L Certification variable (Z) is explained by 82.7%. The adjusted R Square values are 0.819 for Performance and 0.825 for K3L Certification, respectively, indicating that the model has strong explanatory power and is suitable for further research.

Hypothesis Testing

After the internal model is created, the next step is to assess the relationships between constructs based on the research hypotheses. Hypothesis evaluation is performed by examining the T-statistic and P-value. A hypothesis is considered significant if the T-statistic exceeds 1.96 and the P-value is lower than 0.05. The following are the results of the path coefficients for the direct effects between variables.

Table 5. *Path Coefficients* (Direct Effect)

	Original Sample (O)	T Statistics (| O/STDEV |)	P Values	Results
Organizational Culture (X2) -> Performance (Y)	0.283	3,756	0,000	Accepted
Organizational Culture (X2) -> K3L Certification _(Z)	0.496	7,121	0,000	Accepted
Implementation of SMK3 _(X1) -> Performance (Y)	0.315	3,421	0,000	Accepted
Implementation of SMK3 _(X1) -> K3L Certification _(Z)	0.446	6,438	0,000	Accepted
K3L Certification _(Z) -> Performance (Y)	0.349	3,896	0,000	Accepted

Source : Smart PLS 3.3.3

1. The Influence of Organizational Culture on Performance

The test results show that Organizational Culture has a positive and significant effect on Performance, with a coefficient of 0.283, a T statistic of 3.756, and a P value of 0.000. Therefore, the hypothesis that Organizational Culture influences Performance is confirmed.

2. The Influence of Organizational Culture on K3L Certification
   Evidence shows that Organizational Culture has a positive and significant impact on HSE Certification, as indicated by a coefficient of 0.496, a T statistic of 7.121, and a P value of 0.000. This indicates that an increase in Organizational Culture leads to a higher level of HSE Certification, confirming that the hypothesis is confirmed.

3. Impact of SMK3 Implementation on Performance
   The implementation of SMK3 has a positive and significant impact on Performance, with a coefficient of 0.315, a T statistic of 3.421, and a P value of 0.000. This indicates that effective SMK3 implementation can improve Performance; therefore, the hypothesis is validated.
4. Impact of SMK3 Implementation on K3L Certification
   The results of the analysis show that the implementation of SMK3 positively and significantly affects K3L Certification, indicated by a coefficient of 0.446, a T-statistic of 6.438, and a P-value of 0.000. Consequently, the proposed hypothesis is confirmed.
5. Impact of K3L Certification on Performance
   K3L Certification has been proven to positively and significantly affect Performance, with a coefficient of 0.349, a T-Statistic of 3.896, and a P-Value of 0.000. This supports the idea that successful K3L Certification helps improve Performance, so the hypothesis is accepted.

Table 6. *Path Coefficients* (Indirect Effect)

	Original Sample (O)	T Statistics (| O/STDEV |)	P Values	Results
Organizational Culture (X2) -> K3L Certification _(Z) -> Performance (Y)	0.173	3,431	**0,000**	**Accepted**
Implementation of SMK3 _(X1) -> K3L Certification _(Z) -> Performance (Y)	0.156	3,259	**0.001**	**Accepted**

Source : Smart PLS 3.3.3

6. The Influence of Organizational Culture on Performance through K3L Certification
   The findings show that Organizational Culture has a positive impact on Performance through K3L Certification, reflected by a coefficient of 0.173, a T-statistic of 3.431, and a P-value of 0.000. This implies that K3L Certification effectively mediates the relationship between Organizational Culture and Performance, so the hypothesis is accepted.
7. The Impact of SMK3 Implementation on Performance through K3L Certification
   The implementation of SMK3 has been proven to significantly improve Performance through K3L Certification, as evidenced by a coefficient of 0.156, a T-statistic of 3.259, and a P-value of 0.001. Therefore, K3L Certification functions as a mediating factor in the relationship between SMK3 Implementation and Performance, so the hypothesis is accepted.

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Conclusion

The findings of this study can be summarized as follows:

1. Organizational culture has been shown to significantly improve employee performance.
2. A strong organizational culture is very helpful in achieving K3L certification.
3. Effective implementation of SMK3 greatly contributes to improving employee performance.
4. The implementation of SMK3 significantly influences the success of achieving K3L Certification.
5. K3L certification positively influences employee performance improvement.
6. K3L Certification successfully mediates the impact of Organizational Culture, leading to improved Performance.
7. K3L certification functions as a mediator that strengthens the impact of SMK3 implementation on performance.

References

Arikunto, S. (2018). Prosedur Penelitian: Suatu Pendekatan Praktik (Edisi Revisi). Jakarta: Rineka Cipta.

Arikunto, S. (2019). Dasar-Dasar Evaluasi Pendidikan. Jakarta: Bumi Aksara.

Astari, N., & Suidarma, I. (2022). Sistem Manajemen Keselamatan dan Kesehatan Kerja (SMK3): Konsep dan Implementasi di Dunia Industri. Jakarta: Mitra Wacana Media.

Creswell, J. W. (2018). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (5th ed.). Thousand Oaks, CA: SAGE Publications.

Ghozali, I., & Latan, H. (2018). Partial Least Squares: Konsep, Teknik dan Aplikasi Menggunakan Program SmartPLS 3.0 untuk Penelitian Empiris (Edisi 3). Semarang: Badan Penerbit Universitas Diponegoro.

Hatch, M. J. (2016). Organization Theory: Modern, Symbolic, and Postmodern Perspectives (4th ed.). Oxford: Oxford University Press.

Jogiyanto, H. M., & Abdillah, W. (2020). Konsep dan Aplikasi Partial Least Square (PLS) untuk Penelitian Empiris. Yogyakarta: BPFE Yogyakarta.

KF Ferine, R Aditia, MF Rahmadana, An empirical study of leadership, organizational culture, conflict, and work ethic in determining work performance in Indonesia's education authority, Heliyon 7 (7)

Kuncoro, M. (2018). Metode Kuantitatif: Teori dan Aplikasi untuk Bisnis dan Ekonomi. Yogyakarta: UPP STIM YKPN.

M Isa Indrawan (2009), Pengaruh Kompetensi Komunikasi dan Gaya Kepemimpinan Source Daya Manusia Terhadap Employee Performance SDM, Jurnal Ilmiah Abdi Ilmu

Lunenburg, F. C. (2018). Organizational Culture: Performance Relationship. International Journal of Management, Business, and Administration, 21(1), 1–6.

Mathis, R. L., & Jackson, J. H. (2016). Human Resource Management (15th ed.). Boston: Cengage Learning.

Rahman, A. (2020). K3L Certification dan Kompetensi Pegawai dalam Keselamatan Kerja. Yogyakarta: Deepublish.

Riduwan. (2016). Metode dan Teknik Menyusun Tesis. Bandung: Alfabeta.

Robbins, S. P., & Judge, T. A. (2019). Organizational Behavior (18th ed.). New York: Pearson Education.

Sari, D. (2019). Implementasi K3L Certification dalam Meningkatkan Keselamatan dan Kesehatan Kerja. Bandung: Alfabeta.

Sekaran, U., & Bougie, R. (2020). Research Methods for Business: A Skill Building Approach (8th ed.). Hoboken, NJ: Wiley.

Soekidjo, N. (2018). Manajemen Keselamatan dan Kesehatan Kerja. Jakarta: Rineka Cipta.

Sugiyono. (2017). Metode Penelitian Kuantitatif, Kualitatif, dan R&D. Bandung: Alfabeta.

Sugiyono. (2019). Metode Penelitian Kuantitatif, Kualitatif, dan Kombinasi (Mixed Methods). Bandung: Alfabeta.

Umar, H. (2020). Metode Penelitian untuk Skripsi dan Tesis Bisnis (Edisi Kedua). Jakarta: RajaGrafindo Persada.

Y Anwar, KF Ferine, NS Sihombing, (2020) Competency of human resources and customer trust on customer satisfaction and its consequence on customer retention in the hospitality industry north sumatra, Journal of Environmental Management & Tourism