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## THE INFLUENCE OF ETHICS TRAINING AND HUMAN RESOURCE COMPETENCE ON ETHICAL CULTURE AND ITS IMPACT ON EMPLOYEE PERFORMANCE

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### ABSTRACT

Fluctuating employee performance and rising ethics violations have become critical challenges at PT Amman Mineral Nusa Tenggara, highlighting the need to strengthen ethical culture and human resource competence. Although ethics training programs have been implemented, participation remains below target, and performance inconsistencies persist. This study aims to examine the influence of ethics training and human resource competence on ethical culture and their combined effect on employee performance. A quantitative approach was employed, using data from 307 employees gathered via structured questionnaires. Data analysis was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings reveal that ethics training and human resource competence significantly and positively influence ethical culture. In turn, ethical culture has a substantial impact on employee performance. Additionally, ethics training and human resource competence also exert a direct effect on performance outcomes. These results confirm that building a strong ethical culture supported by effective training and competent human capital is essential for improving organizational productivity. The implications of this study suggest that companies, especially in high-risk industries like mining, must prioritize integrated ethics and competency development strategies to foster sustainable employee performance and ensure alignment with corporate values and compliance expectations.

**KEYWORDS** Ethics Training, Human Resource Competence, Ethics Culture, Employee Performance.



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### Article Info:

Submitted: 28-12-2024

Final Revised:  
24-04-2025

Accepted: 28-04-2025

Published: 30-04-2025

## INTRODUCTION

The success level of an organization is greatly influenced by the abilities and dedication of its employees in performing their duties. Each employee's performance contributes directly to the overall effectiveness of organizational functions. A phenomenon observed at PT Amman Mineral Nusa Tenggara (AMMAN) highlights fluctuations in the achievement of employees' Key

**How to cite:**

**E-ISSN:**

**Published by:**

Suhendrawan, S., & Indiyati, D. (2025). The Influence of Ethics Training and Human Resource Competence on Ethical Culture and its Impact on Employee Performance. *Journal Eduvest*. 5 (4): 4330-4347.

2775-3727

<https://greenpublisher.id/>

Performance Indicators (KPIs). Over the past three years, AMMAN employees' KPI achievements have varied and have not yet reached the maximum level. The KPIs of AMMAN employees are measured on a scale of one to three, where: 1) a score of one indicates a need for improvement due to subpar performance; 2) a score of two reflects solid performance that meets expectations; and 3) a score of three represents exceptional performance exceeding expectations. These KPIs are assessed using eight indicators: 1) safety, 2) initiative, 3) interpersonal skills, 4) communication, 5) ownership, code of conduct, and reputation, 6) analytical ability, 7) problem-solving, and 8) teamwork. In 2021, AMMAN employees recorded an average KPI score of 2,44, slightly increasing to 2,48 in 2022 but decreasing to 2,36 in 2023. Although the employees' performance generally meets expectations, the decline observed in 2023 indicates areas for improvement and opportunities to return to a positive trajectory (Sarstedt et al., 2021).

Improving employee productivity or performance remains a primary focus for business managers and academics (Putri & Wahyuningtyas, 2024). According to Hanaysha (2016), enhancing employee productivity or performance contributes to improving organizational performance and competitiveness (Abawa & Obse, 2024). Triansyah (2023) assert that employee productivity is a crucial factor in strengthening corporate competitiveness, maintaining performance standards, meeting set targets, and fulfilling stakeholders' expectations (Utama & SE, 2020). Employee performance is vital as it directly impacts organizational productivity and outcomes, ultimately determining the organization's success (Patel et al., 2022). Furthermore, according to Sari (2024), performance reflects the extent to which an employee performs tasks with quality and output aligned with the company's goals (Apsari et al., 2022).

Although AMMAN employees' performance is commendable, the fluctuations and deviation from maximum targets suggest certain aspects requiring improvement (Jelena & Nikola, 2022). One such aspect is the ethical culture, which plays a pivotal role in influencing organizational performance. Ethical culture shapes employees' actions and perspectives and contributes to creating a work environment that fosters productivity and efficiency. Hough (2020) found that a workplace emphasizing ethics and organizational trust increases employee optimism, which positively impacts individual performance. Similarly, Parboteeah (2024) emphasized that an ethical climate within an organization significantly enhances overall organizational performance (Agsah, 2024). In AMMAN's Sustainability Strategy Framework, a blueprint for embedding sustainability across its operations and business practices, the organization emphasizes: 1) Upholding Ethics, 2) Advancing Human Resources, 3) Preserving the Environment, and 4) Managing Resources. This framework is further reinforced by AMMAN's core values, one of which pertains to integrity. Everyone working at AMMAN is expected to act honestly, humbly, and reliably while treating all individuals with respect. These core values aim to establish and maintain a sustainable ethical culture (Waruwu et al., 2023).

At PT Amman Mineral Nusa Tenggara, ethical culture is integral to the company's operations. One of the organization's initiatives to uphold its code of ethics and employee business ethics is the establishment of a whistleblowing system called the Amman Ethics Line (AEL). This platform serves as a mechanism for reporting violations related to ethical codes, including conflicts of interest, inappropriate supplier/contractor activities, misconduct, misuse of company assets/services, and other ethical breaches. Based on data from ethics case reports,

a significant increase in cases reported via AEL occurred in 2023. In 2021, 26 cases were reported, rising to 24 cases in 2022, and then surging to 84 cases in 2023. This escalation in reported cases demonstrates increased employee awareness of the importance of ethics and their willingness to report violations. It also suggests that AMMAN's ethical culture is evolving, although opportunities for continuous improvement remain to strengthen consistency and resilience further. By continuously reinforcing ethical culture and implementing effective policies, the company can build a conducive work environment that enhances overall employee productivity.

Beyond ethical culture, human resource competence is another critical factor influencing superior performance. According to Dudiya et al. (2023), competence encompasses the technical knowledge, personal skills, and conceptual expertise required to perform tasks and achieve organizational objectives. Data from AMMAN's 2022 Sustainability Report indicates significant growth in employee numbers, from 1.230 in 2021 to 1.863 in 2023. This growth underscores the importance of ensuring employees possess adequate competencies to perform their roles effectively. With such a substantial increase in the workforce, the company must ensure that every employee is adequately equipped to make optimal contributions. Wiguna (2017) emphasizes that education level, experience, and relevant skills significantly influence human resource competence. Moreover, age plays a vital role, with the majority of employees aged between 31 and 50 years, typically at their peak productivity, yet requiring ongoing career development programs to sustain motivation and performance. Research by Larsson (2020) indicates that age affects competence and leadership behavior, with significant differences in leadership effectiveness and style across age groups. In theoretical terms, Indiyati (2021) argue that an employee's job performance heavily relies on a combination of their knowledge, skills, and work attitude. Their research reveals that employees with high competency levels are more adept at tackling work challenges, improving output quality, and contributing meaningfully to corporate success.

Enhancing employee competency is key to achieving optimal organizational performance. However, strong competencies must be supported by a robust ethical culture and effective policies. Ethics training is vital in instilling organizational values in employees, aligning their behavior and attitudes with the company's culture. Valentine (2014) ethics training enhances employees' ethical awareness and behavior, positively impacting organizational performance. PT Amman Mineral Nusa Tenggara has implemented ethics training programs to ensure that all employees understand and adhere to the company's code of ethics, while raising awareness of the importance of ethics in all aspects of their work.

Ethics can be learned through practice; regular training is required to reinforce this learning. Such training forms part of a broader development and training program. Ethics training has two primary objectives. First, it helps employees develop a code of ethics as a form of compliance. Second, it raises employee awareness and fosters an ethical culture within the company ((Kancharla & Dadhich, 2021). To achieve optimal performance, companies must ensure that employees possess the necessary technical skills and a deep understanding and adherence to high ethical standards. Therefore, ethics training becomes integral to employee development, helping create a work environment that supports fair and objective performance evaluations. Through effective ethics training, employees can operate with integrity and professionalism, leading to enhanced efficiency and

effectiveness in all corporate operations. PT Amman Mineral Nusa Tenggara's ethics training initiatives span from 2022 to the first quarter 2024. The ethics training target was 1.403 employees, but only 1.153 employees completed the program, achieving approximately 82,18% of the target. In 2023, the target increased to 1.863 employees, yet the actual number of participants was 1.272, accounting for about 68,28% of the target. For the first quarter of 2024, the target was 2.109 employees. Evaluation results indicate a gap between the performance targets established for Amman's ethics training program and the actual outcomes. This gap highlights the need for improvements in training strategies or resource management to achieve higher targets in the future.

The fluctuation of employee performance at PT Amman Mineral Nusa Tenggara in recent years, as reflected in the inconsistent achievement of Key Performance Indicators (KPIs), indicates unresolved organizational challenges. Despite efforts to maintain a high-performance standard, KPI scores dropped from 2.48 in 2022 to 2.36 in 2023, suggesting that external and internal factors may affect employee output. One underlying issue is the gap in the implementation and effectiveness of ethics training programs. Although these trainings are intended to build awareness and integrity, participation rates remain below targets, leading to concerns about their reach and influence on actual behavior and performance.

Another significant issue lies in the variation of human resource competence across the organization, especially following a rapid increase in workforce size. As the number of employees grew from 1,230 in 2021 to 1,863 in 2023, ensuring all personnel possess the necessary technical, conceptual, and ethical competencies has become more complex. This presents a risk to organizational consistency and ethical integrity. Combined with the rise in ethics violations reported through the Amman Ethics Line, it is evident that fostering an ethical culture remains a critical concern that directly affects performance outcomes.

This research is urgent due to the growing need for ethical accountability and high performance within large-scale organizations, particularly in high-risk industries like mining. As global business practices emphasize integrity, competence, and transparency, companies must continuously reinforce ethical standards to remain competitive and socially responsible. The fluctuating KPI performance and increased ethics violations at PT Amman Mineral Nusa Tenggara signal a pressing need to assess how ethics training and human resource competence shape organizational culture and performance. Timely research can provide actionable insights for strengthening internal governance and sustaining a productive, ethical work environment.

Research by Kancharla & Dadhich (2021) reveals that ethics training can foster an ethical culture that positively influences employee behavior in the workplace over the long term. This aligns with findings by Valentine (2014), who demonstrated that ethics training increases employees' understanding of organizational integrity and reduces incidents of unethical behavior. Additionally, Safitri & Rizky (2022) assert that employees' organizational performance is closely tied to their ability to comprehend and apply moral and ethical values. Therefore, ethics training that focuses on strengthening collective ethical values can cultivate a robust ethical culture within the company, ultimately contributing to improved employee performance in meeting corporate expectations.

Although existing literature has explored the individual effects of ethics training and human resource competence on organizational outcomes, there is a lack of integrated analysis that examines how these two variables interact to shape

ethical culture and, in turn, influence employee performance, particularly in the mining sector. Most prior research focuses on corporate or academic environments, with limited empirical data from industrial contexts like PT Amman Mineral Nusa Tenggara. Furthermore, studies often neglect quantitative modeling that directly links training effectiveness, competence levels, and culture to measurable performance indicators.

The novelty of this research lies in its comprehensive model that links ethics training and human resource competence to ethical culture and employee performance using PLS-SEM statistical analysis. This study quantifies these relationships and provides insight into how ethics training can be optimized to enhance performance. Unlike previous research, it focuses on the mining industry—a sector often excluded from organizational behavior and ethics studies, making the findings especially valuable for high-risk, high-regulation environments.

This study aims to examine the influence of ethics training and human resource competence on ethical culture and how these variables, both directly and indirectly, affect employee performance at PT Amman Mineral Nusa Tenggara. It also aims to evaluate the strength of these relationships using statistical modeling and provide actionable recommendations for improving training strategies, ethical engagement, and performance outcomes.

The findings of this research offer practical benefits for HR professionals, organizational leaders, and policy makers. By identifying the specific impacts of ethics training and HR competence on ethical culture and performance, the study provides a roadmap for designing more effective development programs. These insights can help organizations foster a high-integrity work environment, reduce ethical violations, and achieve more consistent performance across departments. Furthermore, the study contributes to the academic discourse by providing a model applicable to other industries seeking to align ethics with strategic business outcomes.

## RESEARCH METHOD

### Type of Research

The research employs a quantitative method with the research design characteristics outlined in the following table:

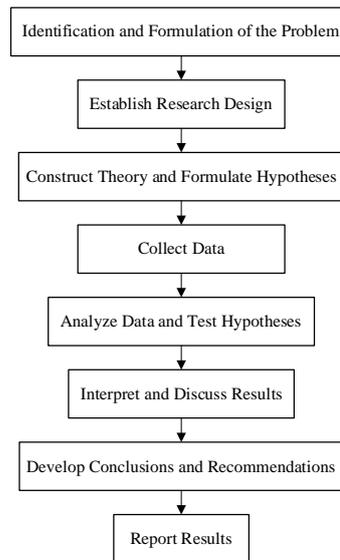
**Table 1. The Characteristics of Research**

Characteristics	Type
Based on Method	Quantitative
Based on Objective	Descriptive
Based on Investigation Type	Causal
Based on Researcher Involvement	Non-Intervention
Based on Unit of Analysis	Individual
Based on Time of Execution	Cross-Sectional

Source: Processed by Researchers (2024)

### Research Stages

The research process involved several stages to achieve optimal results and align with applicable procedures. These stages are described step-by-step, starting from problem identification to conclusion. The detailed steps are as follows:



**Figure 1. Research Stages**  
Source: Silalahi (2015)

**Population and Sample**

The study population includes all PT Amman Mineral Nusa Tenggara employees, totaling 1.403 individuals in 2022. However, the study uses a sample due to its cost and time efficiency. To obtain a representative sample, the Slovin formula was used to calculate the optimal sample size:

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

Where:

n = Sample size

N = Total population

e<sup>2</sup> = Error margin

The researchers set a 5% margin of error, considering no research produces perfect results. With a population of 1.403 employees, the sample calculation is as follows:

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

$$n = \frac{1.403}{1 + (1.403 \times 0,05^2)}$$

$$n = \frac{1.403}{1 + (1.403 \times 0,0025)}$$

$$n = \frac{1.403}{1 + (3,575)}$$

$$n = 306,67.$$

The sample size was rounded to 307 employees, representing 5% of the total population.

**Data Collection and Data Sources**

This study relies on primary data obtained directly from respondents through specifically designed questionnaires (MSDM, 2023).

## RESULTS AND DISCUSSION

### Data Analysis

The collected data were analyzed using the Partial Least Squares Structural Equation Modeling (PLS-SEM) technique to test the research hypotheses. This method facilitates the identification of complex relationships among latent variables. The evaluation process in SEM-PLS consists of two primary stages: the assessment of the measurement model and the structural model. Below is the structural model developed based on the conceptual framework using SmartPLS 4 v.4.1.0.3.

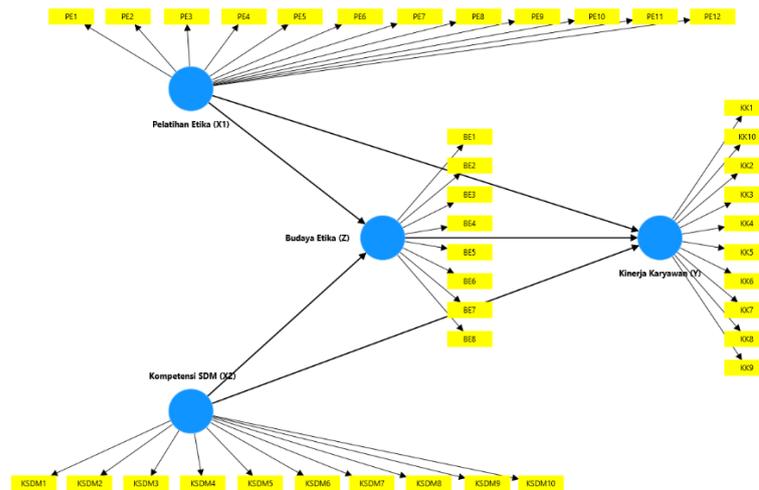


Figure 2. Structural Model

The structural model can observe the relationships among the hypothesized latent variables. The validity and reliability of the constructs in this model can be seen in the figure presented below:

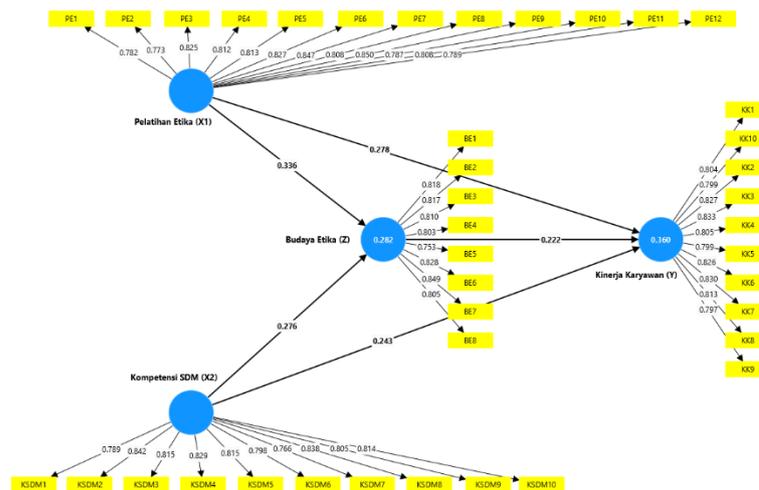


Figure 3. Outer Model Framework

### Evaluation of the Measurement Model (Outer Model)

According to Hair et al. (2022), the outer model analysis can be evaluated based on several aspects, such as convergent validity, discriminant validity,

composite reliability, and Cronbach's alpha, all of which are crucial for ensuring the quality of construct measurements in the PLS-SEM model.

### **Convergent Validity Indicators: Outer Loading and AVE**

Construct validity in SEM-PLS can be assessed using outer loading and Average Variance Extracted (AVE) values. Outer loading values greater than 0,70 indicate a strong relationship between indicators and their latent constructs. Meanwhile, AVE values exceeding 0,50 demonstrate that the latent construct's variance is more effectively explained by its indicators than other factors. Indicators with outer loading values between 0,40 and 0,70 may still be retained if the AVE criteria are met. However, indicators with outer loading values below 0,40 should be excluded as they do not significantly contribute to the latent construct variance (Hair et al., 2022).

**Table 2. Outer Loading Test Results**

Variables	Dimension	Indicators	Outer Loading				Remark
			X <sub>1</sub>	X <sub>2</sub>	Z	Y	
Ethics Training (X <sub>1</sub> )	Reaction	PE1	0,782				Valid
		PE2	0,773				
		PE3	0,825				
		PE4	0,812				
	Learning	PE5	0,813				
		PE6	0,827				
	Behavioral Changes	PE7	0,847				
		PE8	0,808				
	Outcomes	PE9	0,850				
		PE10	0,787				
		PE11	0,808				
		PE12	0,789				
Human Resource Competence (X <sub>2</sub> )	Self- Development	KSDM1		0,789			
		KSDM2		0,842			
	Professional	KSDM3		0,815			
		KSDM4		0,829			
	Technology Proficiency	KSDM5		0,815			
		KSDM6		0,798			
	Education Level	KSDM7		0,766			
		KSDM8		0,838			
	Expertise	KSDM9		0,805			
		KSDM10		0,814			
Ethical Culture (Z)	Impression Management	BE1			0,818		
		BE2			0,817		
	Ethical Environment	BE3			0,810		
		BE4			0,803		
	Code Implementation	BE5			0,753		
		BE6			0,828		
	Obedience to Authority	BE7			0,849		
		BE8			0,805		
Employee Performance (Y)	Work Quality	KK1			0,804		
		KK2			0,827		
	Productivity	KK3			0,833		
		KK4			0,805		
	Work Knowledge	KK5			0,799		
		KK6			0,826		
	Trust	KK7			0,830		
		KK8			0,813		
	Availibility	KK9			0,797		
		KK10			0,799		

Source: Data Processed Using SmartPLS (2024)

The analysis results indicate that all research indicators meet the convergent validity criteria, as evidenced by outer loading values exceeding 0,70. This means that each latent variable—ethics Training, Human Resource Competencies, Ethical Culture, and Employee Performance—is well-explained by its indicators.

**Table 3. AVE Test Results**

Variables	AVE	Criteria	Remark
Ethics Training (X <sub>1</sub> )	0,657	>0,5	Valid
Human Resource Competence (X <sub>2</sub> )	0,658	>0,5	Valid
Ethical Culture (Z)	0,657	>0,5	Valid
Employee Performance (Y)	0,662	>0,5	Valid

Source: Data Processed Using SmartPLS (2024)

From the AVE calculations, all research variables meet the minimum criteria of 0,50, indicating that the latent variables successfully capture most of the variance explained by their indicators. Therefore, they fulfill the convergent validity requirements.

### Discriminant Validity

Discriminant validity measures the extent to which a construct is empirically distinct from other constructs that are not conceptually related. The Fornell-Larcker criterion is used to test discriminant validity. If the square root of the AVE for a construct is greater than the correlation between that construct and other constructs, it can be concluded that the construct has good discriminant validity.

**Table 4. Discriminant Validity - Fornell-Larcker Criterion**

Latent Variables	Z	Y	X <sub>2</sub>	X <sub>1</sub>	Remark
Ethical Culture (Z)	0,811				Valid
Employee Performance (Y)	0,462	0,813			Valid
Human Resource Competence (X <sub>2</sub> )	0,445	0,481	0,811		Valid
Ethics Training (X <sub>1</sub> )	0,475	0,505	0,504	0,810	Valid

Source: Data Processed Using SmartPLS (2024)

The discriminant validity analysis using the Fornell-Larcker criterion in Table 4 demonstrates that all latent constructs in the model have square root AVE values higher than the correlations between constructs. This confirms that each construct represents a distinct concept and does not overlap with others, meeting the discriminant validity requirements.

Cross-loading can be used to test discriminant validity in addition to the Fornell-Larcker criterion. A construct is considered to have good discriminant validity if its indicators are more strongly associated with the construct itself than with other constructs.

**Table 5. Discriminant Validity – Cross-Loading**

Indicators	Ethical Culture (Z)	Employee Performance (Y)	Human Resource Competence (X <sub>2</sub> )	Ethics Training (X <sub>1</sub> )
BE1	0,818	0,355	0,329	0,326
BE2	0,817	0,381	0,407	0,424
BE3	0,810	0,316	0,361	0,341
⋮	⋮	⋮	⋮	⋮

KK1	0,384	0,804	0,412	0,394
KK2	0,401	0,827	0,420	0,411
KK3	0,360	0,833	0,427	0,466
⋮	⋮	⋮	⋮	⋮
KSDM1	0,322	0,392	0,789	0,402
KSDM2	0,328	0,419	0,842	0,393
KSDM3	0,366	0,347	0,815	0,355
⋮	⋮	⋮	⋮	⋮
PE1	0,374	0,401	0,379	0,782
PE2	0,341	0,367	0,390	0,773
PE 3	0,415	0,424	0,435	0,825
⋮	⋮	⋮	⋮	⋮

Source: Data Processed Using SmartPLS (2024)

The cross-loading analysis in Table 5 shows that each indicator has the strongest relationship with its corresponding latent variable. This indicates that all indicators possess good discriminant validity, ensuring accurate measurement of each construct in the model.

Discriminant validity can also be evaluated using the Heterotrait-Monotrait Ratio (HTMT). HTMT compares the average correlations between indicators measuring different constructs with those measuring the same construct. Lower HTMT values indicate better discriminant validity. Constructs are considered valid if their HTMT values are below 0,90 (Hair et al., 2022).

**Table 6. Discriminant Validity – HTMT**

Variables	Ethical Culture	Employee Performance	Human Resource Competence	Ethics Training
Ethical Culture (Z)				
Employee Performance (Y)	0,491			
Human Resource Competence (X <sub>2</sub> )	0,474	0,507		
Ethics Training (X <sub>1</sub> )	0,501	0,528	0,532	

Source: Data Processed Using SmartPLS (2024)

The HTMT results in Table 6 show that all variables have ratios below 0,90, indicating that each construct has a unique identity and does not overlap with other constructs. The HTMT results in Table 6 show that all variables have ratios below 0,90, indicating that each construct has a unique identity and does not overlap with other constructs.

**Composite Reliability**

In addition to validity testing, reliability testing was conducted to measure the internal consistency of each variable. Composite reliability and Cronbach's alpha values are used as indicators of reliability. A variable is considered reliable if both indices meet the established criteria, where composite reliability values must exceed 0,7, and Cronbach's alpha values must exceed 0,6 (Haryono, 2017). Composite reliability measures the internal consistency of items within a scale, reflecting how well the indicators correlate and represent the same construct

**Table 7. Composite Reliability**

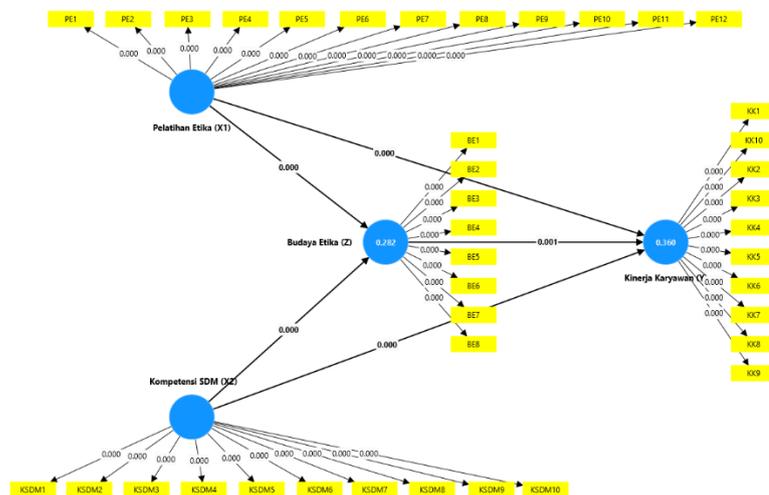
Variables	Composite Reliability (rho_a)	Composite Reliability (rho_c)	Cronbach's Alpha	Remark
Ethical Culture (Z)	0,927	0,939	0,925	Reliabel
Employee Performance (Y)	0,944	0,951	0,943	Reliabel
Human Resource Competence (X <sub>2</sub> )	0,943	0,951	0,942	Reliabel
Ethics Training (X <sub>1</sub> )	0,954	0,958	0,952	Reliabel

Source: Data Processed Using SmartPLS (2024)

Based on Table 7, all variables in this study exhibit composite reliability, and Cronbach's alpha values satisfy the reliability criteria, with composite reliability values exceeding 0,7 and Cronbach's alpha values above 0,6. These results indicate that each variable possesses high internal consistency, ensuring the reliability of the measurement instruments.

**Evaluation of the Structural Model (Inner Model)**

The structural model evaluation aims to assess the causal relationships among latent constructs in the research model and measure the strength and accuracy of the model in explaining variance in the data. This step evaluates the predictive power of exogenous latent variables on endogenous latent variables and tests the statistical significance of these relationships using R-squared values and t-statistics obtained from bootstrapping analysis. Below is the path diagram representing the inner model:



**Figure 4. Path Diagram Inner Model**

Figure 4 presents a path diagram illustrating the causal relationships between latent variables. Several aspects need to be evaluated to ensure that the structural model meets the necessary criteria, including VIF values, R-Square (R<sup>2</sup>), and F-Square (f<sup>2</sup>).

**Variance Inflation Factor (VIF) – Collinearity Assessment**

An important aspect of structural model evaluation is assessing the level of multicollinearity among predictor variables. The VIF value serves as an indicator

of multicollinearity. If the VIF values for all variables are less than 5,0, it can be concluded that no severe multicollinearity issues exist, and the model can proceed to further analysis (Hair et al., 2022).

**Table 8. VIF Values (Collinearity Assessment)**

Variables	Ethical Culture	Employee Performance
Ethical Culture		1,393
Human Resource Competence	1,340	1,446
Ethics Training	1,340	1,497

Source: Data Processed Using SmartPLS (2024)

Based on the analysis results in the table, all variable constructs exhibit VIF values below the threshold of 5,0, indicating no significant multicollinearity issues within the model.

**Coefficient of Determination (R-squared)**

The R-squared ( $R^2$ ) coefficient measures the proportion of variance in the endogenous latent variable that is explained by the exogenous latent variables in the structural model. High  $R^2$  values indicate that the model can explain a significant portion of the variation in the dependent variable, reflecting a high level of predictive accuracy.  $R^2$  values of 0,67, 0,33, and 0,19 generally indicate strong, moderate, and weak relationships, respectively (Haryono, 2016).

**Table 9. R-Squared**

Variables	R-Square	R-Square Adjusted
Ethical Culture (Z)	0,282	0,278
Employee Performance (Y)	0,360	0,353

Source: Data Processed Using SmartPLS (2024)

The R-squared value for Ethical Culture (Z) is 0,282, indicating that the regression model can explain 28.2% of the variance in Z. Similarly, the R-squared value for Employee Performance (Y) is 0,360, suggesting that the model explains 36% of the variance in Y. The slightly lower R-squared adjusted values (0,278 for Ethical Culture and 0,353 for Employee Performance) account for the number of predictors in the model. The model demonstrates moderate explanatory power for the two endogenous latent variables.

**Predictive Relevance (Q-Squared)**

As a complement to R-squared values, the Stone-Geisser Q-squared ( $Q^2$ ) statistic is used to evaluate the predictive relevance of the model for unseen data.  $Q^2$  values of 0,02, 0,15, and 0,35 represent low, medium, and high predictive relevance, respectively (Hair et al., 2022).

**Table 10. Q-Squared Predictive Relevance – PLSpredict LV Summary**

Variables	$Q^2$ predict	RMSE (Root Mean Square Error)	MAE (Mean Absolute Error)
Ethical Culture (Z)	0,268	0,864	0,593
Employee Performance (Y)	0,308	0,843	0,581

Source: Data Processed Using SmartPLS (2024)

Based on the analysis results using PLSpredict, the  $Q^2$  predict values for the latent variables Ethical Culture (Z) and Employee Performance (Y) are 0,268 and 0,308, respectively. These results indicate that Ethical Culture has moderate

predictive relevance, while Employee Performance approaches a high level of predictive relevance. The higher Q<sup>2</sup> predict value for the Employee Performance variable suggests that the predictive model is more accurate in predicting this variable than Ethical Culture.

Additionally, the PLSpredict MV Summary - Overview table shows that nearly all indicators associated with the Ethical Culture (Z) and Employee Performance (Y) variables show relatively low RMSE and MAE values. This indicates that the PLS-SEM model used has a small prediction error, which reinforces the reliability of the developed predictive model. For instance, the KK3 indicator in the Employee Performance variable has a Q<sup>2</sup> predict value of 0,255, which also demonstrates moderate predictive relevance and supports the model's consistency in predicting this variable.

**Table 11. Q<sup>2</sup> Values – PLSpredict MV Summary**

Indicators	Q2 predict	PLS-SEM RMSE	PLS-SEM MAE	LM RMSE	LM MAE
BE1	0,129	1,032	0,809	1,060	0,834
BE2	0,219	0,975	0,760	1,013	0,795
⋮	⋮	⋮	⋮	⋮	⋮
BE7	0,220	1,025	0,808	1,089	0,862
BE8	0,179	0,998	0,783	1,050	0,828
KK1	0,206	1,017	0,806	1,081	0,861
KK2	0,219	1,012	0,793	1,078	0,851
⋮	⋮	⋮	⋮	⋮	⋮
KK9	0,201	0,978	0,784	1,022	0,824
KK10	0,214	0,972	0,784	1,018	0,823

Source: Data Processed Using SmartPLS (2024)

Overall, the analysis indicates that the model used in this study can make predictions with satisfactory accuracy, with Employee Performance showing slightly stronger predictive relevance compared to Ethical Culture.

#### Effect Size (F-squared)

The F-squared (f<sup>2</sup>) statistic is a quantitative measure used to determine the extent of each exogenous latent variable's contribution to the increase or decrease in the endogenous latent variable within a model. An f<sup>2</sup> value of 0,35 indicates a significant effect, 0,15 indicates a medium effect, and 0,02 indicates a small effect (Haryono, 2016).

**Table 12. F-Square (f<sup>2</sup>) Values**

Variables	Ethical Culture	Employee Performance	Human Resource Competence	Ethics Training
Ethical Culture (Z)		0,055		
Employee Performance (Y)				
Human Resource Competence (X <sub>2</sub> )	0,079	0,064		
Ethics Training (X <sub>1</sub> )	0,117	0,081		

Source: Data Processed Using SmartPLS (2024)

Based on the table above, the F-Square (f<sup>2</sup>) values indicate the relative effect sizes of independent variables on dependent variables within the model. Ethics Training (X<sub>1</sub>) has the most significant influence on Ethical Culture (Z) with an F-

Square ( $f^2$ ) value of 0,117, which, although small, approaches the medium effect category. Competence ( $X_2$ ) also shows a small effect on both Ethical Culture ( $Z$ ) and Employee Performance ( $Y$ ), with F-Square ( $f^2$ ) values of 0,079 and 0,064, respectively. Additionally, Ethical Culture ( $Z$ ) has a very small effect on Employee Performance ( $Y$ ), with an F-Square ( $f^2$ ) value of 0,055. Ethics Training ( $X_1$ ) also has a small effect on Employee Performance ( $Y$ ), with an F-Square ( $f^2$ ) value of 0,081. Although the overall effects of these variables are categorized as small, they still contribute to explaining the variability in Ethical Culture and Employee Performance.

**Hypothesis Testing**

Hypothesis testing was conducted using Path Coefficients, which measure the direct influence of independent variables on dependent variables and confirm whether the direction of the influence aligns positively. The hypothesis results are determined based on the Original Sample (O) value as the primary indicator. An O value close to +1 indicates a positive relationship, while a value close to -1 indicates a negative relationship. Additionally, the hypothesis testing considers the T-statistic value, which must exceed 1,96, and the significance level (P-value), which must be less than 0,05. If both criteria are met, the hypothesis is accepted.

**Table 13. Hypothesis Testing Results**

Variable Relationship	Original Sample (O)	T Statistics ( O/STDEV )	P Value	Remark
Ethics Training → Ethical Culture ( $H_1$ )	0,336	5,195	0,000	Accepted
Competence → Ethical Culture ( $H_2$ )	0,276	4,105	0,000	Accepted
Ethical Culture → Employee Performance ( $H_3$ )	0,222	3,310	0,001	Accepted
Ethics Training → Employee Performance ( $H_4$ )	0,278	4,388	0,000	Accepted
Competence → Employee Performance ( $H_5$ )	0,243	3,767	0,000	Accepted

Source: Data Processed Using SmartPLS (2024)

Interpretation of Hypothesis Testing Results:

- a)  $H_1$ : Ethics Training Influences Ethical Culture  
The Original Sample (O) value for  $H_1$  is 0,336, with a T-Statistics value of 5,195 and a P-value of 0,000. Since the T-Statistics value is greater than 1,96 and the P-value is less than 0,05,  $H_1$  is accepted. This indicates that ethics training significantly and positively influences ethical culture.
- b)  $H_2$ : Human Resource Competence Influences Ethical Culture  
The Original Sample (O) value for  $H_2$  is 0,276, with a T-Statistics value of 4,105 and a P-value of 0,000. Since the T-Statistics value is greater than 1,96 and the P-value is less than 0,05,  $H_2$  is accepted. This demonstrates that human resource competence significantly and positively influences ethical culture.
- c)  $H_3$ : Ethical Culture Influences Employee Performance  
The Original Sample (O) value for  $H_3$  is 0,222, with a T-Statistics value of 3,310 and a P-value of 0,001. Since the T-statistic value is greater than 1,96 and the P-value is less than 0,05,  $H_3$  is accepted. This suggests that ethical culture significantly and positively impacts employee performance.
- d)  $H_4$ : Ethics Training Influences Employee Performance  
The Original Sample (O) value for  $H_4$  is 0,278, with a T-Statistics value of 4,388 and a P-value of 0,000. Since the T-statistic value is greater than 1,96 and

the P-value is less than 0,05, H4 is accepted. This implies that ethics training significantly and positively affects employee performance.

e) H4: Human Resource Competence Influences Employee Performance

The Original Sample (O) value for H5 is 0,243, with a T-Statistics value of 3,767 and a P-value of 0,000. Since the T-statistic value is greater than 1,96 and the P-value is less than 0,05, H5 is accepted. This indicates that human resource competence significantly and positively impacts employee performance.

## **DISCUSSION**

The main issue underlying this research is the fluctuation in employee performance observed over recent years. Achievements often fall short of optimal targets, indicating critical aspects that need improvement to enhance stability and overall effectiveness in performance. A primary challenge is ensuring that the existing ethics training programs significantly impact employee performance, particularly in fostering a workplace atmosphere that promotes integrity and professionalism.

The findings from the analysis demonstrate that ethics training plays a pivotal role in establishing a strong ethical culture, which subsequently affects employee behavior and performance. However, the achievement rates for ethics training over specific periods reveal discrepancies between the set targets and actual accomplishments. This indicates a need for improvements in the management of ethics training and highlights that without a solid ethical culture, the positive impacts of ethics training on performance may not be fully realized. Therefore, the sustainability and consistency of ethics training are essential for strengthening the company's ethical culture.

In addition to ethics training, human resource competence also emerges as a critical factor in improving performance. This competency encompasses technical skills and employees' abilities to make decisions aligned with the company's ethical values and norms. The research reveals that employees with higher competencies tend to exhibit more consistent work results, as they are better equipped to understand and adhere to work standards and adapt to the company's ethical culture. Hence, enhancing competency through continuous ethics training programs is vital for achieving consistent performance outcomes aligned with corporate expectations.

The research focuses on four key variables: ethics training, human resource competence, ethical culture, and employee performance. Each variable demonstrates a significant role in enhancing employee performance at PT Amman Mineral Nusa Tenggara. Hypothesis testing shows that ethics training significantly fosters ethical culture, with a T-statistic value of 5,195, indicating that high-quality training strengthens the company's ethical culture. Moreover, human resource competence significantly influences ethical culture, with a T-statistic value of 4,105, suggesting that competent employees can implement the company's ethical standards in their daily work. Furthermore, a strong ethical culture positively impacts employee performance, as indicated by a T-statistic of 310. Ethics training and human resource competence also directly and significantly affect employee performance, with T-statistic values of 4,388 and 3,767, respectively. These findings suggest that by reinforcing the ethical culture through effective ethics training and competency enhancement, the company can create a supportive and efficient work environment, thereby strengthening employee performance achievements within the organization.

The novelty of this research lies in its comprehensive approach, which examines not only the individual impacts of ethics training and human resource competence but also the interaction between these variables in shaping an ethical culture that directly influences employee performance. The findings indicate that effective ethics training and human resource competence significantly contribute to the formation of an ethical and productive workplace culture, particularly in the context of a mining company, a relatively under-researched sector.

The solutions proposed through this study's findings emphasize the importance of integrating ethics training and competency development as strategic steps to improve employee performance. Implementing effective ethics training and human resource competence development programs is expected to create a conducive work environment where ethical culture is a consistent behavioral guideline, helping the company achieve its performance targets.

The findings of this study reinforce previous research that revealed similar results, showing that ethics training and human resource competence significantly impact ethical culture and employee performance. For example, the study by Kancharla & Dadhich (2021) demonstrated that ethics training enhances employees' commitment to ethical values, positively affecting their work outcomes. Additionally, the study by Valentine (2014) This supports the finding that competence and ethics training create an ethical work environment, significantly influencing productivity.

## CONCLUSION

The main findings of this study indicate that ethics training plays a significant role in shaping a strong ethical culture within the company. At the same time, human resource competence positively impacts ethical culture and directly contributes to enhancing employee performance. This study contributes to the existing literature by emphasizing the importance of ethics training and human resource competence, particularly in the relatively underexplored mining industry context.

Despite its contributions, this research has several limitations, including its focus on a single company, which may limit the generalizability of the findings to other sectors. Additionally, the use of quantitative data obtained through questionnaires may restrict an in-depth understanding of employees' contextual perceptions. For future research, it is recommended to include companies from various industrial sectors to provide more comprehensive insights into the role of ethics training and human resource competence in building ethical culture. Qualitative research methods are also suggested to complement the analysis with a deeper understanding of employees' perceptions and experiences regarding ethical culture and performance. Expanding the scope and approach of research can provide broader and more in-depth insights into the determinants of ethical culture in improving employee performance. Additionally, future research should consider the influence of additional variables that may strengthen the relationship between ethics training, competence, and employee performance.

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