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The Influence of Competence and Training on Employee Performance through Motivation at the Environmental Service Office of Jambi Province

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Abstract: This study aims to analyze the influence of competence and training on employee performance through motivation as an intervening variable at the Environmental Service Office of Jambi Province. The research population consists of all 101 Civil Servants (PNS) at the Environmental Service Office of Jambi Province. The sampling technique used the census method, in which the entire population was included as respondents. Data were collected through questionnaires using a Likert scale and analyzed using the Partial Least Square (PLS) method with SmartPLS 3.0 software. The results show that competence has a positive and significant effect on motivation and employee performance. Training also has a positive and significant effect on motivation and employee performance. Furthermore, motivation is proven to act as an intervening variable that strengthens the influence of competence and training on performance. Thus, the higher the competence and the better the training provided, the greater the employee motivation, which ultimately leads to improved employee performance.

Keyword: Competence, Training, Motivation, Employee Performance.

INTRODUCTION

Human resources (HR) are the most important asset of an organization, as the success of an institution is largely determined by the quality and performance of its employees. In the era of globalization and increasingly competitive competition, effective HR management has become a key factor in achieving a competitive advantage (Becker & Huselid, 2006). Organizations are required to adapt to environmental changes, particularly the rapid development of technology, making it necessary to improve employee competence and provide training.

Employee performance plays a crucial role in achieving organizational goals. Strong competence enables employees to carry out their tasks effectively, while training enhances the skills and knowledge relevant to their jobs (Gultom et al., 2019). However, competence and training alone are not sufficient without motivation, which drives employees to deliver their

best contributions. Motivation serves as both an internal and external driver that can influence employee productivity and loyalty to the organization (Pratama & Riana, 2022).

In the context of government institutions, the Environmental Agency of Jambi Province holds significant responsibility in environmental management. Based on available data, the number of employees increased from 135 in 2020 to 162 in 2024; however, performance achievements have not fully met the established targets. For example, in the 2023 waste management program, only 68.67% of the 99% target was achieved (Environmental Agency of Jambi Province, 2025). This indicates a gap between the growing number of employees and the expected performance outcomes.

Previous studies also emphasize the importance of competence, training, and motivation in enhancing employee performance. Masud et al. (2021) found that these three factors simultaneously have a positive and significant effect on employee performance. Similarly, Ataunur & Ariyanto (2015) highlighted that well-structured training programs can improve employee performance quality. Therefore, developing employees through competence enhancement and training, supported by work motivation, is an effective strategy to improve the performance of employees at the Environmental Agency of Jambi Province.

Based on this background, this study aims to analyze the influence of competence and training on employee performance, considering motivation as an intervening variable. The results of the study are expected to contribute to human resource development in government institutions and provide recommendations for the Environmental Agency of Jambi Province in formulating strategies to improve employee performance in the future

METHOD

This study uses a quantitative approach with a survey research design. The quantitative approach was chosen because the study focuses on measuring the relationships between variables through statistical analysis. According to Sugiyono (2016), the quantitative method is suitable for testing pre-formulated hypotheses, allowing the results to be generalized to the research population. The research objects in this study are employee competence, training, motivation, and performance, while the research subjects are the employees of the Environmental Agency of Jambi Province.

The population in this study consists of 101 civil servants (PNS). Since the population is relatively small, a saturated sample or census technique was used, meaning the entire population was included as the research sample (Sugiyono, 2016). Therefore, the respondents in this study total 101 employees. Before the research instruments were used, a data quality test was conducted, which included validity and reliability tests. The validity test was performed using the product-moment correlation, while the reliability test employed Cronbach's Alpha, with a criterion of $\alpha > 0.70$ indicating that the instrument is reliable (Duryadi, 2021).

Subsequently, the collected data were analyzed using Partial Least Squares (PLS) with the assistance of SmartPLS 3.0 software. The PLS method was chosen because it can test structural models with a relatively small sample size and does not require normally distributed data (Abdillah & Jogiyanto, 2009). Data analysis was conducted in two stages: descriptive analysis and verificative analysis. Descriptive analysis was used to depict the condition of the research variables based on respondents' responses. Meanwhile, verificative analysis was employed to test the hypotheses, both direct and indirect effects among variables, by examining the path coefficients, R-square, t-statistics, and P-values (Ghozali & Latan, 2015).

RESULTS AND DISCUSSION

Respondent Characteristics

Respondent characteristics are the attributes or traits of individuals involved in the study that are relevant for data analysis and interpretation. Understanding respondent characteristics helps researchers assess the accuracy of the data, comprehend the context of the findings, and

ensure that the study sample aligns with the target population. The respondent characteristics in this study are presented in Table 1 as follows:

Table 1. Characteristics of Respondents of Jambi Province Environmental Service Employees

No	Profil Responden	Amount	Percentage (%)
1	Gender		
	Man	42	42
	Woman	58	58
2	Age Group (Years)		
	20 – 30	0	10
	31 – 40	12	12
	41 - 50	57	57
	51 – 60	31	31
3	Education		
	High School or Equivalent	4	4
	Diploma	11	11
	Bachelor	57	57
	Masters	26	26
	Doctoral	2	2

Source: processed data (2025).

Descriptive of Research Variables

Descriptive statistics of the research variables are used to determine the extent to which the indicators, which serve as questionnaire items for each variable, are represented in this study. Based on the survey conducted, the descriptive data of the research variables are summarized in the following table.

Table 2. Descriptive Research Variables

No	Variable	Average Score	Total Score	Information
1	Competence	388,3	2.330	Tall
2	Training	388,4	1.942	Good
3	Motivation	386,9	2.708	Tall
4	Performance (Z)	388	1.940	Tall

Source: processed data (2025)

Verificative/Quantitative Analysis

Partial Least Squares (PLS) is a statistical analysis method used to identify relationships between variables within a complex structural model. PLS is frequently applied in social science, marketing, management, and behavioral studies to test theoretical models and evaluate the relationships between latent variables (abstract concepts) and measured variables (indicators). The results of this study can be seen as follows:

Convergent Validity Testing

Convergent validity testing is a type of validity used to evaluate the extent to which an instrument or measurement tool effectively measures the same construct. In the context of statistics and data analysis, especially in models based on latent variables such as Partial Least Squares (PLS), convergent validity is crucial to ensure that the indicators or items used in the model truly reflect the same construct.

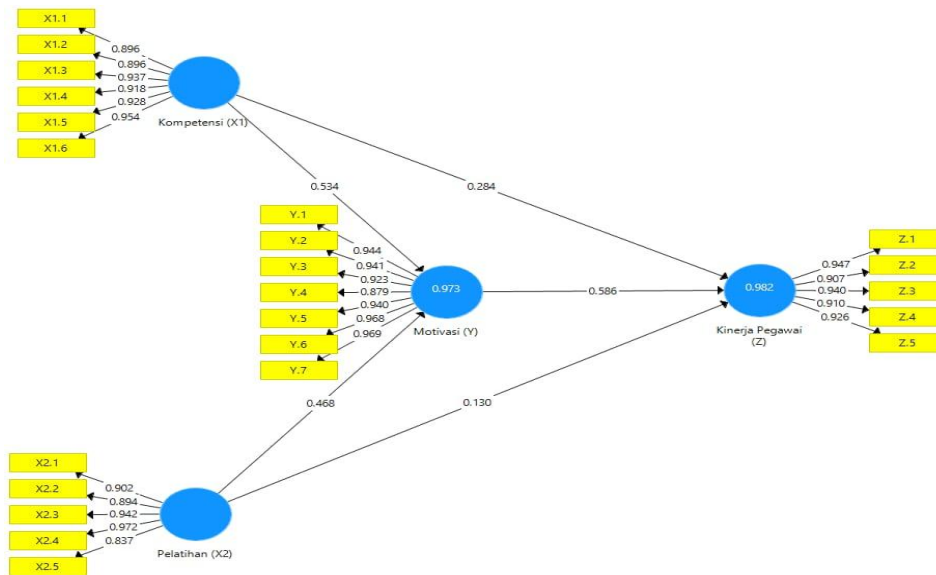


Figure 1. Outer Model of Research in SmartPLS 3

The figure above shows that all indicators of the observed variables (competence, training, motivation, and employee performance) have loadings above 0.7, indicating they are very strong in measuring their respective constructs. Outer loading serves as an indicator of convergent validity, with an ideal value above 0.70. Therefore, all indicators in this study are considered valid and statistically significant in representing the latent variables examined.

Furthermore, the reliability test results, conducted using Composite Reliability and Cronbach’s Alpha for the four observed variables, also exceeded the recommended minimum threshold of 0.70, indicating that the indicators within each construct are highly consistent in measuring their variables. The highest value was observed for the Motivation variable, with a Composite Reliability of 0.981, followed by Competence (0.971), Employee Performance (0.968), and Training (0.960). This demonstrates that each indicator within these constructs has an excellent internal correlation.

Evaluation of the Inner Model

The structural model in SEM-PLS analysis was tested using SmartPLS 3, specifically by examining the coefficient of determination (R^2) to measure how well the model explains the variance of the dependent variables. Hair et al. (2017) stated that the coefficient of determination indicates the combined ability of exogenous latent variables to predict endogenous constructs. In other words, the coefficient represents the proportion of variance in the endogenous construct explained by all related exogenous constructs. The R^2 value ranges from 0 to 1, with higher values indicating greater predictive accuracy. Similar to multiple regression, the adjusted R^2 is used as a criterion to avoid bias in complex models.

R Square

In assessing a model using PLS, the evaluation begins by examining the R-Square for each dependent latent variable (Hair et al., 2017). Table 3 presents the R-Square estimation results obtained using SmartPLS 3:

Table 3. R Square Value

Variabel	R Square
Motivation (Y)	0.973
Employee Performance (Z)	0.982

Source: SmartPLS 3.0 output (2025).

Table 3 shows R-square values of 97.3% for Motivation and 98.2% for Employee Performance. This indicates that the influence of Competency and Training on Motivation falls into the strong category. Likewise, the influence of Competency and Training on Employee Performance is also categorized as strong.

Q Square

Wiyono (2011) states that a model is considered to have relevant predictive value if the Q-square value is greater than 0 ($Q^2 > 0$). Q^2 (or Q-squared) is a measure used in Partial Least Squares (PLS) analysis to evaluate how well a model explains the endogenous variables. The Q^2 value indicates how accurately the model can predict endogenous variables based on the independent variables. The Predictive Relevance value is calculated using the following formula:

$$Q^2 = 1 - (1 - R1) (1 - R2)$$

$$Q^2 = 1 - (1 - 0,973) (1 - 0,982)$$

$$Q^2 = 1 - (1 - 0,027) (1 - 0,018)$$

$$Q^2 = 1 - (0,000486)$$

$$Q^2 = 0,9995$$

The Q-square calculation result in this study is 0.9995, meaning $Q^2 > 0$. This very high Q^2 value indicates that the model is excellent in explaining the endogenous variables. A Q^2 value close to 1 demonstrates that the model has very strong predictive power.

Structural Model Testing

In SEM-PLS analysis, the structural model in this study can be assessed through the Direct Effects, also referred to as Path Coefficients. Subsequently, the Path Coefficients between constructs are measured to determine the significance and strength of the relationships, as well as to test the hypotheses.

To examine the structural model in this study, refer to the following table:

Table 4. Path Coefficient

	Path Coefficient
Competency (X1) -> Motivation (Y)	0,465
Pelatihan (X2) -> Motivation (Y)	0,530
Competency (X1) -> Performance (Z)	0,344
Training (X2) -> Performance (Z)	0,204
Motivation (Y) -> Performance (Z)	0,451
Competency (X1) -> Motivation (Y) -> Performance (Z)	0,210
Pelatihan (X2) -> Motivation (Y) -> Performance (Z)	0,239

Source: SmartPLS 3.0 output (2025).

Based on the path coefficient analysis in Table 4 above, the following conclusions can be drawn:

1. The direct effect of Competency on Motivation is 0.465, meaning that if Competency increases by 1 unit, Motivation can increase by 0.465. This effect is positive.
2. The direct effect of Training on Motivation is 0.530, meaning that if Training increases by 1 unit, Motivation can increase by 0.530. This effect is positive.
3. The direct effect of Competency on Performance is 0.344, meaning that if Competency increases by 1 unit, Performance can increase by 0.344. This effect is positive.
4. The direct effect of Training on Performance is 0.204, meaning that if Training increases by 1 unit, Performance can increase by 0.204. This effect is positive.

5. The direct effect of Motivation on Performance is 0.451, meaning that if Motivation increases by 1 unit, Performance can increase by 0.451. This effect is positive.
6. The indirect effect of Competency on Performance through Motivation is 0.210, meaning that if Competency increases by 1 unit, Performance can increase indirectly through Motivation by 0.210. This effect is positive.
7. The indirect effect of Training on Performance through Motivation is 0.239, meaning that if Training increases by 1 unit, Performance can increase indirectly through Motivation by 0.239. This effect is positive.

Hypothesis Testing

Hypothesis testing was conducted by examining the T-Statistic and P-Value. A test is considered highly significant if the P-Value is less than or equal to 0.05 ($P\text{-Value} \leq 0.05$) or by using the t-table value of 1.96. The criteria for accepting or rejecting the hypothesis are as follows: if the T-Statistic > t-table, the hypothesis is rejected; if the T-Statistic < t-table, the hypothesis is accepted. Through the Bootstrapping process, the T-Statistic and P-Value can be seen in the following table and figure.

Table 5. Hypothesis Testing Results

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Competence (X1) -> Motivation (Y)	0,465	0,439	0,111	4,201	0,000
Training (X2) -> Motivation (Y)	0,530	0,556	0,110	4,832	0,000
Competence (X1) -> Employee Performance (Z)	0,344	0,329	0,085	4,059	0,000
Training (X2) Employee Performance (Z)	0,204	0,228	0,114	1,790	0,074
Motivation (Y) -> Employee Performance (Z)	0,530	0,556	0,110	4,832	0,000
Competence (X1) -> Motivation (Y) -> Employee Performance (Z)	0,210	0,196	0,066	3,175	0,002
Training (X2) -> Motivation (Y) -> Employee Performance (Z)	0,239	0,244	0,058	4,153	0,000

Source: SmartPLS 3.0 output (2025).

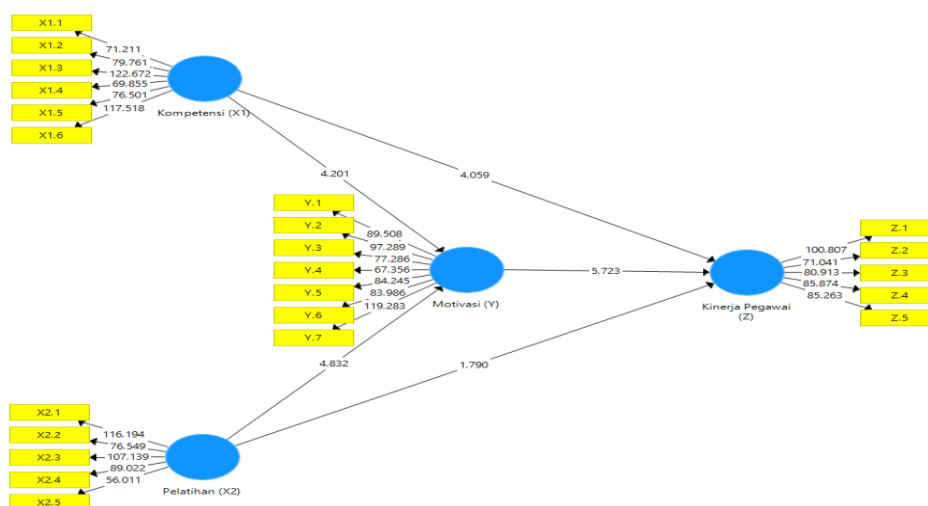


Figure 2. Bootstrapping

The results of the hypothesis testing, both direct and indirect, as shown in Table 5 and Figure 2 above, indicate that one hypothesis has a T-Statistic value below the rule of thumb

($1.790 < 1.96$) and a P-Value greater than 0.05 ($0.074 > 5\%$), namely the hypothesis of training on employee performance. Based on these results, this hypothesis is rejected, meaning that training does not have a significant effect on employee performance. The remaining six hypotheses have T-Statistic values greater than the rule of thumb (1.96) and P-Values less than 0.05 (5%). Therefore, it can be concluded that these six hypotheses are accepted, indicating a significant effect.

The Influence of Competence on Motivation

The results of the study indicate that competence has a positive and significant effect on motivation. This finding aligns with Pariesti et al. (2022), who also stated that competence positively and significantly influences motivation. The impact of competence on motivation arises because employees demonstrate honesty in their work, exhibit courteous behavior toward colleagues, possess the ability to identify tasks, can find solutions to problems encountered, have knowledge relevant to their job field, and show a willingness to enhance their knowledge, resulting in opportunities for promotion due to their excellent performance.

Then, employees receive promotions for performing exceptionally well, successfully completing assigned tasks, working according to their areas of expertise, being motivated to achieve targets to earn bonuses, taking responsibility for completing their work properly, seeking placement in units aligned with their skills, and successfully accomplishing their job duties.

Effect of Training on Motivation

The results of the study indicate that training has a positive and significant effect on motivation. This finding aligns with the research conducted by Anton (2024) and Purwanti & Rushadiyati (2022), which also found that training positively and significantly impacts motivation. The effect of training on motivation is due to instructors possessing adequate knowledge in their fields, participants meeting the required qualifications, the material being relevant to job needs, and the methods being appropriate, easy to understand, and helpful in achieving work objectives. As a result, employees receive promotions for performing exceptionally well, successfully completing assigned tasks, working according to their areas of expertise, being motivated to achieve targets to earn bonuses, taking responsibility for completing their work properly, seeking placement in units aligned with their skills, and successfully accomplishing their job duties.

Effect of Competence on Employee Performance

The results of the study indicate that competence has a positive and significant effect on employee performance. This finding aligns with the research conducted by Mardiana et al. (2021) and Lianasari & Ahmadi (2022), which also reported that competence positively and significantly influences employee performance. The effect of competence on employee performance is attributed to employees demonstrating honesty in their work, showing politeness toward colleagues, possessing the ability to identify tasks, having problem-solving skills, having knowledge relevant to their field, and being willing to enhance their expertise. As a result, employees consistently achieve organizational targets, complete tasks on time, contribute ideas and suggestions within the organization, fully utilize their abilities in performing tasks, and maintain effective communication within the organization.

Effect of Training on Employee Performance

The results of the study indicate that training has a positive but not significant effect on employee performance. This finding aligns with the research conducted by Purwanti & Rushadiyati (2022), which reported that training positively but not significantly affects employee performance. The positive but insignificant effect of training on performance is due

to factors such as instructors lacking adequate knowledge in their respective fields, participants not meeting the required qualifications, training materials not aligning with job needs, and methods that are inappropriate or difficult to understand, thus failing to effectively help participants achieve work objectives. Additionally, employees may be unwilling to take responsibility for their work results. Employees who do not take responsibility for their work often show little initiative or concern for the quality of their output. This lack of responsibility can be related to low motivation; if employees do not feel motivated to perform well or perceive no significant consequences for their work results, training will have little impact on performance.

Effect of Motivation on Employee Performance

The results of the study indicate that motivation has a positive and significant effect on employee performance. This finding aligns with the research conducted by Anton (2024) and Purwanti & Rushadiyati (2022), which also showed that motivation positively and significantly influences employee performance. The impact of motivation on performance is due to employees being promoted for working exceptionally well, successfully completing assigned tasks, performing according to their expertise, being motivated to achieve targets for bonuses, taking responsibility for their work, wanting to be placed in units matching their skills, and effectively completing their duties. As a result, employees achieve organizational targets, consistently complete tasks on time, contribute ideas within the organization, fully utilize their abilities at work, and maintain good communication within the organization.

Effect of Competence on Employee Performance Through Motivation

The results of the study indicate that competence has a positive and significant effect on employee performance through motivation. This finding aligns with the research conducted by Lianasari & Ahmadi (2022), which stated that competence positively and significantly influences employee performance through motivation. The impact of competence on performance through motivation is due to employees demonstrating honesty in their work, showing politeness to colleagues, having the ability to identify tasks, possessing problem-solving skills, having knowledge relevant to their job, and being willing to improve their knowledge. Consequently, employees receive promotions for performing exceptionally well, successfully completing assigned tasks, working according to their expertise, being motivated to achieve targets for bonuses, taking responsibility for their work, seeking placement in units matching their skills, and effectively completing their duties.

Effect of Training on Employee Performance Through Motivation

The results of the study indicate that training has a positive and significant effect on employee performance through motivation. This finding aligns with the research conducted by Anton (2024), which stated that training positively and significantly influences employee performance through motivation. The impact of training on employee performance through motivation is due to instructors possessing adequate knowledge in their field, training participants meeting the required qualifications, training materials being relevant to job needs, and training methods being appropriate, easy to understand, and helpful in achieving work objectives. Consequently, employees receive promotions for performing exceptionally well, successfully completing assigned tasks, working according to their expertise, being motivated to achieve targets for bonuses, taking responsibility for their work, seeking placement in units matching their skills, and effectively completing their duties.

CONCLUSION

Based on the analysis and discussion presented in the previous chapter, the following conclusions can be drawn: 1) The questionnaire results on competence show a total competence

score of 2,330, which falls into the high category. For the training variable, the results indicate that training at the Environmental Agency of Jambi Province is good, with a score of 1,942. The motivation variable shows a score of 2,708, which is also categorized as high. Meanwhile, the employee performance variable shows a score of 1,940, classified as high.

2) Competence has a positive and significant effect on motivation at the Environmental Agency of Jambi Province, with a path coefficient of 0.465. 3) Training has a positive and significant effect on motivation at the Environmental Agency of Jambi Province, with a path coefficient of 0.530. 4) Competence has a positive and significant effect on employee performance at the Environmental Agency of Jambi Province, with a path coefficient of 0.344. 5) Training has a positive but not significant effect on employee performance at the Environmental Agency of Jambi Province, with a path coefficient of 0.204.

6) Motivation has a positive and significant effect on employee performance at the Environmental Agency of Jambi Province, with a path coefficient of 0.451. 7) Competence has a positive and significant effect on employee performance through motivation at the Environmental Agency of Jambi Province, with a path coefficient of 0.210. 8) Training has a positive and significant effect on employee performance through motivation at the Environmental Agency of Jambi Province, with a path coefficient of 0.239

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