

The Effect of Competency and Training on Employee Performance at BRMP Mektan in Tangerang Regency

Yulianti¹, Endang Suprpti²

Program Studi Manajemen Fakultas Ekonomi Dan Bisnis Universitas Pamulang Tangerang Selatan

*Corresponding Author e-mail: callmeantiii.01@gmail.com, dosen00728@unpam.ac.id

Article History:

Received: 19-08-2026

Revised: 21-08-2026

Accepted: 28-09-2026

Keywords: *Employee
Performance, Competence,
Human Resource Management,
Training, Work Achievement*

Abstract:, *Background: Employee performance has an important role in supporting the achievement of organizational goals, while competence and training are factors related to employee performance at the Center for Agricultural Mechanization Assembly and Modernization (BRMP Mektan) in Tangerang Regency. Objective: This study aims to determine the effect of competence and training on employee performance partially and simultaneously. Method: This study uses a quantitative approach with a population of 108 employees and a sample of 85 respondents determined using non-probability sampling with the Slovin formula. Data were collected through questionnaires and analyzed using SPSS through validity tests, reliability, classical assumptions, simple and multiple linear regression, correlation, coefficient of determination, t test, and F test. Results: Competence has a positive and significant effect on employee performance with a t value of 8.492 and $p < 0.001$. Training also has a positive and significant effect with a t value of 6.125 and $p < 0.001$. Simultaneously, competence and training have a significant effect on employee performance with an F value of 97.998 and $p < 0.001$. The coefficient of determination was 69.8%. Conclusion: Competence and training are important factors related to employee performance at BRMP Mektan.*

How to Cite: Yulianti, & Suprpti, E. (2026). The effect of competency and training on employee performance at BRMP Mektan in Tangerang Regency. Escalate: Economics and Business Journal, volume(issue), 949–965 <https://doi.org/10.61536/escalate.v4i3.739>

 <https://doi.org/10.61536/escalate.v4i3.739>

This is an open-access article under the [CC-BY-SA License](https://creativecommons.org/licenses/by-sa/4.0/).



Introduction

In business competition, human resources play a crucial role in enhancing organizational competitiveness, as the knowledge, skills, and training of employees are key factors in ensuring competitiveness for world-class companies (Dessler, 2020:422). Therefore, optimal human resource management is essential to ensure employees are able to perform their work in accordance with their duties and responsibilities. Employee performance is a key focus in human resource management. According to Mangkunegara (2019:67), employee performance is the work results achieved by an individual, both in terms of quality and quantity, in accordance with their assigned responsibilities.

Employee performance is crucial for achieving organizational goals, as good performance can positively impact the company, including through increased employee fulfillment (Kasim, 2017:184). Conversely, poor performance can hinder the achievement of goals, reduce work productivity, and diminish the quality of services provided by the organization.

This condition has also become a concern for the Center for Agricultural Mechanization Assembly and Modernization (BRMP Mektan) in Tangerang Regency. BRMP Mektan is a Technical Implementation Unit (UPT) under the Agency for Agricultural Mechanization Assembly and Modernization, Ministry of Agriculture, which is tasked with carrying out the assembly and modernization of agricultural mechanization based on the Regulation of the Minister of Agriculture Number 10 of 2025 concerning the Organization and Work Procedures of UPT within the scope of BRMP. In carrying out its duties and functions, BRMP Mektan has a strategic role in supporting the development of the agricultural sector through the development of modernization of agricultural tools and machinery. As an agency oriented towards technological innovation and agricultural modernization, BRMP Mektan requires employees who have adequate knowledge and skills in the fields of agricultural mechanization, technology testing, and public services. Rapid technological changes and the need for innovation in the assembly and modernization of agricultural tools and machinery increasingly require organizations to pay attention to employee capabilities to support the achievement of organizational goals.

Employee performance issues at BRMP Mektan are evident from the results of a pre-survey of 40 employees. In terms of performance indicators, job knowledge showed the highest percentage of problems at 62.5%, followed by work quantity at 60%, work quality at 57.5%, job task execution at 52.5%, and job responsibility at 50%. These results indicate that there are still employees who feel their knowledge is inadequate to support optimal job performance. This condition indicates a gap between job demands and employee capabilities, especially in the aspect of mastery of job knowledge. These problems can be related to a lack of updated information, minimal mastery of work technology, and suboptimal competency development received by employees. If not immediately addressed, these conditions can lead to decreased work effectiveness, delays in task completion, and less than optimal employee work results, which can ultimately affect the achievement of organizational goals.

One factor related to this condition is employee competence. According to Arya et al. (2024), "competence is the ability to carry out or perform a job based on skills and knowledge and supported by the work attitude required by the job." Competence is necessary for human resources to be able to carry out work in accordance with organizational demands. Wibowo (2022:271) explains that managerial competence includes the ability to formulate an organizational vision and strategy as well as the ability to acquire and direct human resources to realize the vision and set strategic goals for the organization or company. In addition, competence can help human resources explore their potential so as to increase productivity and produce optimal performance (Masud et al., 2022). The results of a pre-competence survey of 40 BRMP Mektan employees showed that the skill indicator had the highest percentage of problems at 62.5%, followed by knowledge at 60%, attitude at 55%, self-image at 52.5%, and social role at 50%. These findings indicate that employee competence does not fully support optimal work implementation.

In addition to competence, training is a factor that needs to be considered in improving employee performance. Training is part of human resource management that is directed at improving employee knowledge, skills, attitudes, and work behavior. According to Cascio (2016), "employee training is planned programs designed to improve performance at the individual, group, and/or organizational level." Noe in Jehanzeb (2015:4) states that "training is an activity planned by an organization to transfer work knowledge and skills, and improve employee attitudes and behavior in accordance with organizational goals." In addition, Simamora (2016) states that "employee training is a learning process that involves the acquisition of skills, concepts, regulations, or work attitudes to improve workforce performance." However, the results of a pre-survey of 40 BRMP Mektan employees showed that training implementation still faces problems. The training type indicator had the highest percentage of problems at 65%, followed by training materials at 60%, training methods at 57.5%, training objectives at 55%, and participant qualifications at 52.5%. This condition shows that the implementation of training still needs to be evaluated to make it more appropriate to job needs and able to improve employee abilities and skills.

Based on these conditions, this study aims to determine the effect of competence on employee performance partially, determine the effect of training on employee performance partially, and determine the effect of competence and training simultaneously on employee performance at BRMP Mektan in Tangerang Regency. This research is important because there are still problems found in employee performance, competence, and training that can affect the effectiveness of task implementation and the achievement of organizational goals. Previous research shows that competence has a positive and significant effect on employee performance (Irmayanti et al., 2020), and there is a significant effect between competence and employee performance (Ratnaningsih & Rahman, 2021). Meanwhile, Fahrozi et al. (2022) showed that training has a positive and significant effect on employee performance, and Utami and Kharismasyah (2022) stated that job training has a positive and significant effect on employee performance. However, there are other studies that show that training does not always have a significant effect on employee performance, so further research is still needed on different research objects. Thus, the novelty of this research lies in testing the influence of competence and training on employee performance partially and simultaneously at BRMP Mektan in Tangerang Regency, so that it can provide an overview of the relationship between these two factors and the condition of employee performance in the research object being studied.

Research methods

This study uses a quantitative research type with the aim of testing the influence of competence and training on employee performance at the Center for Agricultural Mechanization Assembly and Modernization (BRMP Mektan) in Tangerang Regency. Kurniawan (2016:18) states that "quantitative research methods are structured research and quantify data to be generalized." The research approach is directed at testing the hypothesis regarding the influence of competence as the first independent variable (X1) and training as the second independent variable (X2) on employee performance as the dependent variable (Y). The study was conducted at BRMP Mektan Tangerang Regency because problems were found related to employee performance that were suspected to be related to competence and training.

The research instrument was a questionnaire used to obtain data on employee competency, training, and performance. Respondents' answers were measured using a Likert scale, which is used to reveal the attitudes, opinions, and perceptions of an individual or group of people regarding social phenomena (Sugiyono, 2016:93). The questionnaire was administered directly to 85 respondents who were ASN employees at the BRMP Mektan Tangerang Regency. The research instrument was first tested through validity and reliability tests. The validity test was carried out by comparing the calculated r value with the r table, while the instrument's reliability was tested using the Cronbach's Alpha value with a limit of 0.60 (Ghozali, 2017:238). The test results in the study showed that the employee competency, training, and performance instruments were declared reliable.

Data analysis was conducted using the SPSS program through associative hypothesis testing. The analysis stages include instrument testing, classical assumption testing, simple linear regression, multiple linear regression, correlation coefficient, coefficient of determination, and hypothesis testing using the t-test and F-test. Classical assumption testing includes normality, multicollinearity, heteroscedasticity, and autocorrelation tests. Simple linear regression analysis was used to determine the effect of each independent variable on employee performance, while multiple linear regression was used to determine the effect of competence and training simultaneously on employee performance. The t-test was used to determine the effect of each independent variable partially, while the F-test was used to determine the effect of competence and training variables simultaneously on employee performance with a significance level of 0.05.

The population in this study was all employees at the Center for Agricultural Mechanization Assembly and Modernization (BRMP Mektan) in Tangerang Regency, totaling 108 employees. Sugiyono (2016:80) defines a population as a generalization area consisting of objects or subjects that have certain qualities and characteristics that researchers determine to be studied and then conclusions drawn. Furthermore, Sugiyono (2019:127) explains that a sample is part of the number and characteristics of a population. Sampling in this study used a non-probability sampling technique with the Slovin formula. With an error rate of 5%, the calculation obtained, so the number of samples used

was rounded to 85 respondents.

The research procedure begins with the identification of employee performance issues at BRMP Mektan Tangerang Regency related to competency and training. Next, the research establishes competency (X1), training (X2), and employee performance (Y) as research variables. Primary data were collected through observation and distribution of questionnaires to 85 respondents, while secondary data were obtained through literature, books, and company documents. Sugiyono (2016:308) states that research techniques are "a scientific way to obtain valid data with the aim of discovering, proving, and developing certain knowledge so that in turn it can be used to understand, solve, and anticipate problems." The collected data were then processed using SPSS through validity and reliability tests, classical assumption tests, simple and multiple linear regression analysis, correlation coefficients, determination coefficients, as well as t-tests and F-tests to examine the effect of competency and training on employee performance.

Results and Discussion

Respondent Characteristics

1. Description of Respondent Category Data

A. Respondent Characteristics Based on Gender

Table 1. Respondent characteristics by gender

No	Gender	Amount	Percentage
1	Man	57	67.1
2	Woman	28	32.9
Total		85	100.0

Source: 2026 Research Questionnaire Data

Based on Table 1, it is known that of the total 85 respondents, the majority were male (57 people, or 67.1%), while 28 respondents (32.9%) were female. This indicates that the respondents in this study were predominantly male due to the large number of technical workers.

B. Characteristics based on age

Table 2. Respondent characteristics based on age

No	Age	Amount	Percentage
1	>35 Years	74	87.1
2	26-30 Years	5	5.9
3	31-35 Years	6	7.1
Total		85	100.0

Source: research respondents

Table 2 shows that 74 people (87.1%) were aged >35 years, 6 people (7.1%) were aged 31-35 years, and 5 people (5.9%) were aged 26-30 years. This indicates that the respondents in this study were predominantly aged over 35 years.

C. Characteristics based on education

Table 3. Characteristics based on education

No	Education	Amount	Percentage
1	High School/Vocational School	13	15.3
2	Diploma (D1)	7	8.2
3	Bachelor degree	40	47.1
4	Postgraduate (S2)	25	29.4
Total		85	100.0

Source: research respondents

Based on table 3, it shows that 13 people (15.3%) have graduated from high school/vocational school, and 7 people (8.2%) have graduated from diploma (D1). 25 people (29.4%) have graduated from postgraduate (S2). This shows that the majority of respondents in this study have a bachelor's degree (S1) with a total of 40 people (47.1%).

2. Descriptive Analysis of Respondents' Assessments

Table 4. Respondent Response Interval Table

Scale Range	Criteria Description
1.00 – 1.79	Very bad (STB)
1.80 – 2.59	Not good (TB)
2.60- 3.39	Not good (KB)
3.40 – 4.19	Good (B)
4.20 – 5.00	Very good (SB)

Source: Sugiyono (2017:92)

Table 5. Respondent Competency Values

NO	QUESTION	ANSWER CHOICES					Amount	Total score	Mean	Note
		SS	S	KS	TS	STS				
Skills										
1.	I have skills that match the job I do	21	39	24	1	0	85	335	3.9	B
2.	I often find innovative solutions to problems that arise in my work.	23	39	20	3	0	85	337	3.96	B
Knowledge										
3.	I understand the job duties and responsibilities well	21	34	26	4	0	85	327	3.85	B
4.	I am confident with the knowledge I have in this field. my job..	24	35	25	1	0	85	337	3.20	SB
Social Role										
5.	I feel like I'm making a positive contribution to my work team or community.	24	35	25	1	0	85	337	3.96	B
6.	I can communicate well in the work environment	28	36	19	2	0	85	345	4.22	SB
Self-Image										
7.	I am confident in completing the work assigned	24	41	18	1	1	85	341	4.31	SB
8.	I have confidence in my own abilities in working	20	36	24	4	1	85	325	3.82	B
Attitude										
9.	I demonstrate a disciplined attitude in carrying out work	24	35	23	3	0	85	335	3.94	B
10.	I am passionate and enthusiastic in carrying out my duties every day.	26	40	14	5	0	85	342	4.22	SB
Amount		235	370	218	25	2	850	3,361	Average	
Percentage %		27.6%	43.5%	25.6%	2.9%	0.2%	100%	100%	3.95	

Source: 2026 questionnaire results

Based on Table 5, the overall average score was 3.95, which is in the good category. The majority of respondents (27.6%) agreed, indicating that employee competency is at a good level.

The indicator with the highest average score was the statement "I am confident in completing the assigned work" at 4.31, categorized as very good. Meanwhile, the lowest average score was the statement "I have confidence in my own abilities at work" at 3.82, categorized as good. These results indicate that employees possess good skills, knowledge, social roles, self-image, and attitudes in carrying out their work.

Table 6. Respondents' Training Scores

NO	QUESTION	ANSWER CHOICES								
		SS	S	KR	TS	STS	Amount	Total score	Mean	Note
Types of Training										
1.	Training is held in accordance with work developments in the agency	16	48	18	2	1	85	331	3.9	B
2.	The type of training provided helped me in improving my professional skills.	14	50	18	2	1	85	329	3.9	B

Escalate: Economics and Business Journal

<https://doi.org/10.61536/escalate.vxxxx.xxx>

This open-access article is distributed under a Creative Commons Attribution (CC-BY-SA) 4.0 license



NO	QUESTION	ANSWER CHOICES								
		SS	S	KR	TS	STS	Amount	Total score	Mean	Note
Training Objectives										
3.	The training helped me improve the quality of work in the agency.	19	43	21	1	1	85	333	3.9	B
4.	The purpose of this training is in line with my development needs.	13	34	26	2	1	85	320	3.76	B
Training Materials										
5.	The training materials provided additional insights that were useful for my work.	16	44	22	2	1	85	327	3.85	B
6.	The training materials are presented in an easy-to-understand manner.	19	40	23	2	1	85	329	3.87	B
Training Methods										
7.	The training method used was very effective in helping me understand the material.	16	45	19	5	0	85	327	3.85	B
8.	The training methods applied make the training sessions interesting and interactive.	17	17	20	1	1	85	332	3.91	B
Participant Qualifications										
9.	Training participants have the appropriate qualifications to participate in this training.	15	15	17	3	2	85	326	3.84	B
10.	The established participant qualifications help in creating an effective learning environment.	19	19	20	3	1	85	330	3.88	B
Amount		164	449	204	23	10	850	32.84	Average	
Presentation		19.9%	528.2%	240%	27.1%	11.8%	100%	100%	3.9	B

Source: 2026 questionnaire results

Based on Table 6, the results of respondents' responses to the training variable show an overall average score of 3.90, which is considered good. Most respondents agreed, indicating that the training provided was effective and beneficial in supporting work performance.

The highest average score was found in “the applied training method made the training session interesting and interactive” at 3.91, while the lowest average score was found in the statement “the objectives of this training are in accordance with my development needs” at 3.76. These results indicate that the type of training, training objectives, training materials, training methods, and participant qualifications were assessed well by respondents and supported the improvement of employee competence and work quality.

Table 7. Respondents' Values of Employee Performance

NO	QUESTION	ANSWER CHOICES								
		SS	S	KS	TS	STS	Amount	Total score	Mean	Note
Quantity of Work										
1.	Able to do the job in accordance with the standards set by the company.	6	50	29	00	0	85	317	3.88	B
2.	I can complete a large amount of work during working hours.	18	64	3	0	0	85	335	4.08	B
Quality of work										
3.	I always try to produce neat and precise work.	6	65	13	1	0	85	331	4.21	SB
4.	The results of my work are in accordance with the quality standards set by the agency.	18	60	7	0	0	85	351	3.85	B
Working Knowledge										
5.	I understand the work that is my responsibility.	5	50	29	1	0	85	314	4.29	SB
6.	I am able to use work knowledge to solve work problems.	33	45	6	1	0	85	365	3.69	B

NO	QUESTION	ANSWER CHOICES								
		SS	S	KS	TS	STS	Amount	Total score	Mean	Note
Implementation of Tasks										
7.	I am able to carry out work duties in accordance with the applicable regulations in the agency.	3	66	16	0	0	85	327	4.13	SB
8.	I try to complete every job with full sincerity and responsibility.	28	48	8	1	0	85	358	3.89	B
Responsibility										
9.	Always take full responsibility for the work given to me.	13	13	6	0	0	85	347	4.18	SB
10.	I care about the results of the work that is my responsibility.	3	3	13	0	0	85	330	3.73	
Amount		133	583	130	4	0	850	33.95	Average	
Presentation		15.6%	68.6%	15.3%	0.00%	0.0%	100%	100%	3.99	B

Source: 2026 research questionnaire

Based on Table 7, the results of respondents' responses to the employee performance variable show an overall average score of 3.99, which is considered good. On average, respondents agreed (68.6%) and strongly agreed (15.6%), indicating that employee performance at the agency has been good.

The highest average value is found in the statement "I understand the work that is my responsibility" at 4.29 with the Very Good category, while the lowest average value is found in the statement "I am able to use work knowledge to solve work problems" at 3.69 with the Very Good category. **Good.** These results indicate that employees have good work quantity, work quality, work knowledge, work execution, and responsibility in carrying out their work.

Data Instrument Test

1. Validity Test

Table 8. Competency Validity Test

No	Statement	R count	R table	Information
1	I have skills that match the job I do	0.877	0.2133	Valid
2	I often find innovative solutions to problems that arise in my work.	0.799	0.2133	Valid
3	I understand the job duties and responsibilities well.	0.780	0.2133	Valid
4	I have sufficient knowledge.	0.826	0.2133	Valid
5	I am able to work well with my colleagues.	0.776	0.2133	Valid
6	I can communicate well in the work environment.	0.853	0.2133	Valid
7	I am confident in completing the work assigned.	0.836	0.2133	Valid
8	I have confidence in my own abilities to work.	0.774	0.2133	Valid
9	I demonstrate a disciplined attitude in carrying out work.	0.824	0.2133	Valid
10	I am passionate and enthusiastic in carrying out my duties.	0.816	0.2133	Valid

Based on the table data above, the competency variable (X1) obtained a value ($r_{\text{count}} > r_{\text{table}}$ 0.2133), thus all questionnaire items were declared valid. Therefore, the questionnaire used was suitable to be processed as research data.

Table 9. Validity test of Job Training

No	Statement	R count	R table	Information
1	Training is held in accordance with work developments in the agency.	0.813	0.2133	Valid
2	The type of training provided helped me in improving my professional skills.	0.837	0.2133	Valid
3	The training helped me improve the quality of work in the agency.	0.865	0.2133	Valid
4	The purpose of this training is in line with my development needs.	0.822	0.2133	Valid
5	The training materials provided additional insights that were useful for my work.	0.828	0.2133	Valid
6	The training materials are presented in an easy-to-understand manner.	0.851	0.2133	Valid

7	The training method used was very effective in helping me understand the material.	0.782	0.2133	Valid
8	The training methods applied make the training sessions interesting and interactive.	0.773	0.2133	Valid
9	Training participants have the appropriate qualifications to participate in this training.	0.806	0.2133	Valid
10	The established participant qualifications help in creating an effective learning environment.	0.795	0.2133	Valid

Source: processed data from SPSS 2.7

Based on the table data above, the Training Variable (X2) obtained a value ($r_{\text{count}} > r_{\text{table}}$ 0.2133), thus all questionnaire items were declared valid. Therefore, the questionnaire used was suitable to be processed as research data.

Table 10. Employee Performance Validity Test

No	Statement	R count	R table	Information
1	Able to do work according to the standards set by the company.	0.669	0.2133	Valid
2	I can complete a large amount of work during working hours.	0.787	0.2133	Valid
3	I always try to produce neat and precise work.	0.745	0.2133	Valid
4	The results of my work are in accordance with the quality standards set by the agency.	0.727	0.2133	Valid
5	I understand the work that is my responsibility.	0.749	0.2133	Valid
6	I am able to use work knowledge to solve work problems.	0.802	0.2133	Valid
7	SI am able to carry out work duties according to the rules in force in the agency.	0.707	0.2133	Valid
8	I try to complete every job with full sincerity and responsibility.	0.781	0.2133	Valid
9	Always take full responsibility for the work given to me.	0.745	0.2133	Valid
10	I care about the results of the work that is my responsibility.	0.709	0.2133	Valid

Source: processed data from SPSS 2.7

Based on the table data above, the employee performance variable (Y) obtained a value ($r_{\text{count}} > r_{\text{table}}$ 0.2133), thus all questionnaire items were declared valid. Therefore, the questionnaire used was suitable for processing as research data.

2. Reliability Test

Table 11. Results of the Reliability Test of Independent and Dependent Variables

Variables	Cronbach's Alpha	Cronbach's Alpha Standard	Decision
Competence (X1)	0.944	0.600	Reliable
Training (X2)	0.944	0.600	Reliable
Employee Performance (Y)	0.906	0.600	Reliable

Source: processed data from SPSS 2.7

Based on Table 11 above, it shows that employee competence, training, and performance are stated to be reliable, as evidenced by each cronbatch alpha variable being greater than the standard cronbatch alpha (0.600).

Classical Assumption Test

1. Normality Test

Table 12. Results of the One-sample Kolmogorov-Smirnov Normality Test

One-Sample Kolmogorov-Smirnov Test		Unstandardized Residual
N		85
Normal Parameters ^{a,b}	Mean	,0000000
	Standard Deviation	2,15841648
Most Extreme Differences	Absolute	,057
	Positive	,038
	Negative	-,057
Test Statistics		,057
Asymp. Sig. (2-tailed) ^c		,200

- Test distribution is Normal.
- Calculated from data.
- Lilliefors Significance Correction.

Source: SPSS 2 data processing.

Based on the test results in the table above, a significance value of $0.200 > 0.5$ was obtained, so the distribution assumption of the equation in this normality test is NORMAL.

The normality test is also carried out using a probability plot graph where the residual variables can be detected by looking at the distribution of residual points following the direction of the diagonal line, and this is in accordance with the results of the distribution diagram obtained with SPSS Version 2.7 as in the image below:

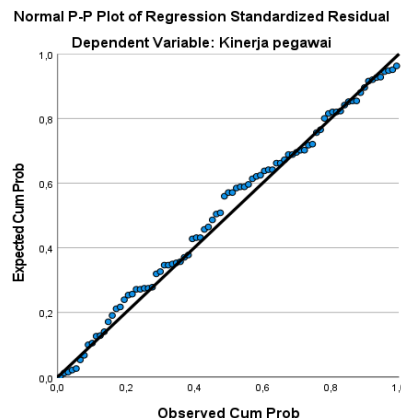


Figure 1. PP plot of Regression graph

The image above shows that the normal probability plot graph exhibits a normal pattern. This is evident from the points spread around the diagonal line and their distribution follows the diagonal line. Therefore, it can be concluded that the regression model meets the assumption of normality.

2. Multicollinearity Test

Table 13. Multicollinearity Test Results Colinertity Statistics

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta				Tolerance	VIF
1 (Constant)	13,469	1,918			7,024	,000		
Competence	,375	,036	,631		10,462	,000	,989	1,011
Training	,301	,037	,493		8,170	,000	,989	1,011

a. Dependent Variable: Employee performance

Source: SPSS 2.7 data processing

The following table presents the results of the multicollinearity test:

- The Competency Tolerance value (X1) is 0.989 and the VIF value is 1.011. This indicates that the X1 variable has met the applied requirements, namely meeting the tolerance value above 0.10 ($0.989 > 0.10$) and the VIF value below 10 ($1.011 < 10$). So it can be concluded that the X1 variable does not have a multicollinearity problem.
- The Training Tolerance Value (X2) is 0.989 and the VIF value is 1.011. This indicates that the X2 variable has met the applicable requirements, namely meeting a tolerance value above 0.10 ($0.989 > 0.10$) and a VIF value below 10 ($1.011 < 10$). Therefore, it can be concluded that the X2 variable does not have a multicollinearity problem.

3. Autocorrelation Test

Table 14. Durbin-Watson Test Interval Guidelines

Criteria	Information
$< 1,000$	There is autocorrelation interference
$1,100 - 1,550$	Without conclusion
$1,550 - 2,460$	There is no autocorrelation interference

2,460 – 2,9000	Without conclusion
>2,900	There is autocorrelation disorder

Source: Sugiyono (2017:184)

The results of the autocorrelation test are as follows:

Table 15. Results of the Autocorrelation Test with Durbin-Watson

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,840	,705	,698	2,18458	1,925

Source: SPSS 2.7 data processing

Based on the test results in table 15 above, it can be seen that the Durbin-Watson value is 1.925, so it can be concluded that the data is within the criteria of 1.550-2.460, which means there is no autocorrelation interference.

4. Heteroscedasticity Test Results

Table 16. Heteroscedasticity Test Results

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	3,154	1,140		2,767	,007
	Competence	-,013	,021	-,067	-,610	,543
	Training	-,024	,022	-,120	-1,092	,278

a. Dependent Variable: ABSRES

Source: SPSS 27 output

Based on the test results in the table above, using the Glejser heteroscedasticity test, the Competence variable has a significance value of 0.543 and the Training variable has a significance value of 0.278. Since both significance values are greater than 0.05, it can be concluded that the regression model does not exhibit heteroscedasticity. Therefore, the heteroscedasticity assumption has been met.

Testing can also be done by looking at the scatter plot graph between the predicted value of the dependent variable (ZPRED) and its residual value (SRESID) with the following conditions:

- If the points form a certain pattern, such as large waves widening and narrowing, then heteroscedasticity has occurred.
- If the points are spread above and below the number 0 on the Y axis without forming a particular pattern, then heteroscedasticity does not occur.

The results of the heteroscedasticity test are as follows:

Scatterplot Dependent Variable: Abs

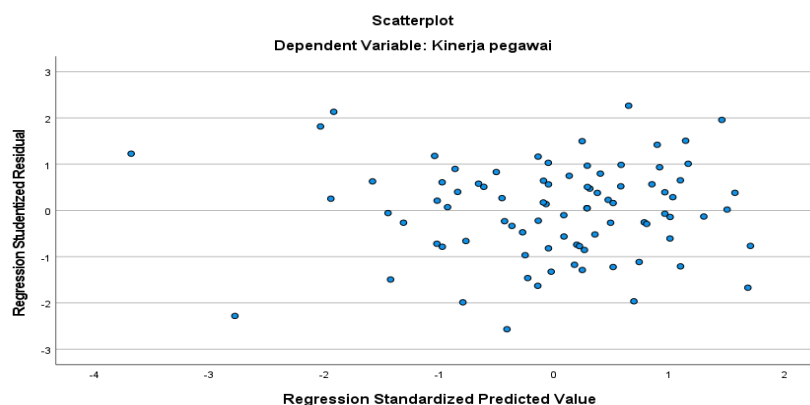


Figure 2. Scatter Plot Graph

Based on the results of the image above, the points on the scatterplot graph do not have a clear distribution pattern or do not form certain patterns, thus there is no heteroscedasticity interference in the regression model so that this regression model is suitable for use.

Linear Regression Analysis

1. Simple linear regression analysis

Table 17. Results of Simple Regression Test of Competency Variable (X1) on Employee Performance (Y)

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	23,903	1,915		,000
	Competence	,406	,048	,682	,000

a. Dependent Variable: Employee performance

Source: SPSS 27 output

The results of the regression calculations in table 17 above, then the regression equation $Y = 23.903 + 0.406X_1$ can be obtained, then the following conclusions can be drawn:

- The constant number of unstandardized coefficients, in this case the value is 23.903, this number is a constant number which means that if there is no competence (X_1) then the consistent value of employee performance (Y) is 23.903.
- The regression coefficient figure, its value is 0.406. This figure means that for every 1% increase in the competency level (X_1), employee performance (Y) will increase by 0.406.

Table 18. Results of Simple Regression Test of Training Variable (X2) on Employee Performance (Y)

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	26,766	2,181		,000
	Training	,341	,056	,558	,000

a. Dependent Variable: Employee performance

Source: Processed data, SPSS 27

Based on table 18 above, the regression value can be obtained simple, namely $Y = 26.766 + 0.341X_2$, then it can be concluded as follows:

- The constant number of unstandardized coefficients, in this case the value is 26.766. This figure is a constant figure which means that if there is no training (X_2) then the consistent value of employee performance (Y) is 26.766.
- The regression coefficient is 0.341. This figure means that for every 1% increase in the training level (X_2), employee performance (Y) will increase by 0.341.

2. Multiple Linear Regression Analysis

Table 19. Results of Multiple Linear Regression Test of Competency Variable (X1)

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	13,469	1,918		,000
	Competence	,375	,036	,631	,000
	Training	,301	,037	,493	,000

a. Dependent Variable: Employee performance

Source: data processed by SPSS 27

Based on the results of the regression calculation research in table 4.18 above, the regression equation $Y = 13.469 + 0.375X_1 + 0.301X_2$ can be obtained. From the equation above, the following conclusions can be drawn:

- c. The constant value of 13.469 means that if the competency variable (X_1), and training (X_2) does not exist or has a value equal to zero.
- d. The competency value (X_1) is (0.375) and training (X_2) is (0.301) on employee performance. Based on the regression coefficient value on each variable, it can be explained that the variable with a greater influence on employee performance is the competency variable (X_1) which has a larger regression coefficient value (0.375) compared to the training variable (X_2) (0.301).

Correlation Coefficient Test

1. Coefficient analysis

Table 20. Guidelines for Degree of Relationship

Scale	Information
0.00 – 0.199	Very Low
0.20 – 0.399	Low
0.40 – 0.599	Currently
0.60 – 0.799	Strong
0.80 – 1,000	Very strong

Source: Sugiyono (2017)

From the results of calculations carried out on SPSS Version 27 software, the complete results can be seen in the table below:

A. Correlation Coefficient Test of the Influence of Competence on Employee Performance

Table 21. Results of Partial Correlation Coefficient Test of Competency Variable (X_1) Against Employee Performance (Y)

Correlations		Competence	Employee performance
Competence	Pearson Correlation	1	,682**
	Sig. (2-tailed)		,000
	N	85	85
Employee performance	Pearson Correlation	,682**	1
	Sig. (2-tailed)	,000	
	N	85	85

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Data processed by SPSS 27

Based on the calculation results in table 21 above, the correlation coefficient value obtained is 0.682 where the value is at 0.60 - 0.799, meaning that the two variables have a strong level of relationship.

Table 22. Results of Partial Coefficient Test of Training Variable (X_2) on Employee Performance (Y)

Correlations		Training	Employee performance
Training	Pearson Correlation	1	,558**
	Sig. (2-tailed)		,000
	N	85	85
Employee performance	Pearson Correlation	,558**	1
	Sig. (2-tailed)	,000	
	N	85	85

** . Correlation is significant at the 0.01 level (2-tailed).

Based on the results in table 22 above, the coefficient value obtained is 0.558 where the value is at 0.40 - 0.599, meaning that the two variables have a moderate level of relationship.

Table 23. Results of the Simultaneous Correlation Coefficient Test of Competency (X_1) and Training (X_2) Variables on Employee Performance

Model Summary

Escalate: Economics and Business Journal

<https://doi.org/10.61536/escalate.v4i3.739>

This open-access article is distributed under a Creative Commons Attribution (CC-BY-SA) 4.0 license



Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	.840a	.705	.698	2,18458

a. Predictors: (Constant), Training, Competence

b. Dependent Variable: Employee performance

Based on the research results in Table 23, it can be concluded that the correlation coefficient (R) value is 0.840, which means that the coefficient between the Competence and Training variables on Employee Performance is very strong. Based on the correlation coefficient table above, the range of 0.80–1.000 indicates a very strong level of relationship.

Coefficient of Determination (KD)

1. Competency Determination Coefficient (X1) on Employee Performance (Y)

Table 24. Determination of Competence on Employee Performance

Model Summary				
Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	.682a	.465	.458	2.92451

a. Predictors: (Constant), Competence

Source: SPSS 2 output.7

From the calculation results in Table 24, the coefficient of determination (KD) value can be determined. $= (R^2) \times 100\%$ is obtained from R, namely $KD = 0.465 \times 100\% = 46.5\%$, in the R Square column of 46.5% while the remaining 53.5% ($100\% - 0.465$) is the influence of other factors that were not examined in the study by the author.

2. Training Determination Coefficient (X2) on Employee Performance (Y)

Table 25. Determination of Training on Employee Performance

Model Summary				
Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	.558a	.311	.303	3.31786

a. Predictors: (Constant), Training

Source: SPSS 27 Output

From the calculation results in table 25, it can be seen that the coefficient of determination (KD) $= (R^2) \times 100\%$ is obtained from R, namely $KD = 0.311 \times 100\% = 31.1\%$, in the R square column of 31.1%, while the remaining 68.9% ($100\% - 31.1\%$) is the influence of other factors studied in this study by the author.

3. Coefficient of Determination of Competence and Training on Employee Performance

Table 26. Simultaneous Determination KD

Model Summary					
Model	R	R Square	Adjusted R Square	Standard Error of the Estimate	Durbin-Watson
1	.840a	.705	.698	2,18458	1,925

a. Predictors: (Constant), Competence, Training

b. Dependent Variable: Employee performance

The coefficient of determination calculation yielded an R^2 (R square) value of 0.698, meaning that 69.8% of employee performance variables can be explained by competency and training. The remaining 30.2% ($100\% - 69.8\%$) is explained by variables other than those used.

Hypothesis Testing

1. t-test (Partial test)

Table 27. Results of Hypothesis Test (t-Test) of Competency Variable (X1) on Employee Performance (Y)

Model	Unstandardized Coefficients		Coefficients ^a Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	23,903	1,915		12,481	,000		
Competence	,406	,048	,682	8,492	,000	1,000	1,000

a. Dependent Variable: Employee performance

Based on the test results in table 4.26, the calculated t value is obtained $> t$ table or $(8.492 > 1.989)$ and this is also strengthened by the P Value $< sig$ (0.05) or (0.000) thus H_0 is rejected H_a is accepted, this shows that there is a significant influence between Competence (X1) on Employee Performance (Y).

Table 28. Hypothesis Test Results (t-Test) of Training Variable (X2) on Employee Performance (Y)

Model	Unstandardized Coefficients		Coefficients ^a Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	26,766	2,181		12,273	,000		
Training	,341	,056	,558	6,125	,000	1,000	1,000

a. Dependent Variable: Employee performance

Based on the test results in table 28, the calculated t value is obtained $> t$ table or $(6.125 > 1.989)$ and this is also strengthened by the p value $< sig$. (0.05) or $(0.000 < 0.05)$. Thus, H_0 is rejected and H_a is accepted, this shows that there is a significant influence between Training (X2) on employee performance (Y).

2. F Test (Simultaneous Test)

Table 29. Hypothesis Test Results (f-Test) of Competency Variables (X1) Training (X2) on Employee Performance (Y)

		ANOVA				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	935,370	2	467,685	97,998	,000b
	Residual	391,336	82	4,772		
	Total	1326,706	84			

a. Dependent Variable: Employee performance

b. Predictors: (Constant), Competence, Training

Based on the test results in table 29, the calculated F value is obtained $> F$ table or $(97.998 > 3.11)$ and this is also strengthened by the P value $< sig$. 0.05 or $(0.000 < 0.05)$. Thus, H_0 is rejected and H_a is accepted, this shows that there is a significant simultaneous influence between Competence (X1) Training and (X2) on employee performance (Y) at the Center for Agricultural Mechanization Assembly and Modernization in Tangerang Regency.

Discussion Results

1. The Influence of Competence (X1) on Employee Performance (Y)

H_{a1} : There is a positive and significant influence between employee competence and performance at the Center for Agricultural Mechanization Assembly and Modernization. Competence (X1) produces a calculated t of 8,492. Based on the analysis results, the regression equation value is $Y = 23.903 + 0.406X_1$.

From these results it can be seen that t count $> t$ table $(8.492 > 1.989)$. then it can be concluded that H_{01} is rejected and H_{a1} is accepted, which means that competence (X1) has a positive and significant effect on employee performance. This means that low employee competence can be caused because

employees do not have the skills to do work according to company standards, therefore the company should make an affirmation so that each employee works with applicable work standards by paying attention to each employee's work results in order to improve employee performance. If employee competence is good then employee performance will increase.

This is also supported by previous research conducted by Irmayanti et al (2020) entitled "the influence of competence and work culture on employee performance" the results of the study show that competence has a positive and significant influence on employee performance with $t \text{ count} > t \text{ table}$ ($10.842 > 2.012$).

2. The Effect of Training (X2) on Employee Performance (Y)

Ha2: There is a positive and significant influence between training and employee performance at the Center for Agricultural Mechanization Assembly and Modernization. Training (X2) produces a calculated t of 6.125. Based on the analysis results, the regression equation value obtained is $Y = 26.766 + 0.341X_2$.

From these results it can be seen that $t \text{ count} > t \text{ table}$ ($6.125 > 1.989$), it can be concluded that H_0 is rejected and Ha2 is accepted, which means that training (X2) has a positive and significant effect on employee performance. This indicates that low employee performance can be caused by a lack of training provided. Therefore, companies need to increase effective training, employees will be better able to carry out work according to standards so that employee performance will increase.

This is also supported by previous research conducted by Ahmad Syarifudin (2025) entitled "the influence of recruitment and training on employee performance" research results that training has a positive and significant effect on employee performance by obtaining a $t \text{ table value} > (8.177 > 1.980)$ and a significance value < 0.05 .

3. The Influence of Competence (X1) and Training (X2) on Employee Performance (Y)

Ha3: There is a positive and significant influence between competence and training on employee performance at the Center for Agricultural Mechanization Assembly and Modernization in Tangerang Regency. Based on the analysis results, the regression equation value is $Y = 13.469 + 0.375X_1 + 0.301X_2$.

From the results obtained, the calculated F value is 97.998 and $F \text{ table } 3.11$ means $F \text{ count} > F \text{ table}$, then Ha3 is accepted thus that the variables of competence and training together have a positive and significant effect on employee performance. From the results of the calculation of the coefficient of determination above, the R^2 (R square) value of 0.698 is obtained, meaning that 69.8% of employee performance variables can be explained by competence and training. The remaining 30.2% is explained by other variables outside the variables used. This means that the competencies possessed by employees such as knowledge, skills and work abilities, play an important role in improving employee performance. In addition, training is also an important factor in improving employee performance because through training, employees can improve the technical and non-technical abilities needed, especially performance at the Center for assembly and modernization of agricultural mechanization in Tangerang district.

This is also supported by previous research conducted by Noor et al (2024) entitled "the influence of competence and training on the performance of civil servants in the trade and industry service of Kotawaringin Regency" the results of this study showed that This is proven by the value ($f \text{ count } 21,746 > (f \text{ table } 3.22)$ with a significant level ($0.000 < 0.05$) there is an influence of competence and training on the performance of civil servants in the trade and industry service of East Kotawaringin Regency.

Conclusion

This study shows that competence and training have a positive and significant influence on employee performance at the Center for Agricultural Mechanization Assembly and Modernization (BRMP Mektan) in Tangerang Regency. Partially, competence has a significant influence on employee performance with a calculated t value of $8.492 > t \text{ table } 1.989$ and a significance of $0.000 < 0.05$. Training also has a positive and significant influence on employee performance with a calculated t value of $6.125 > t \text{ table } 1.989$ and a significance of $0.000 < 0.05$. Simultaneously, competence and training

have a positive and significant influence on employee performance with a calculated F value of 97.998 > F table 3.11 and a significance of 0.000 < 0.05. The coefficient of determination value of 69.8% indicates that employee performance can be explained by competence and training, while 30.2% is explained by other factors outside the research variables. The limitations of this research lie in the use of competency and training as the variables studied, so it does not cover other factors that have the potential to influence employee performance.

Practically, the research results indicate that BRMP Mektan needs to maintain and improve employee competency, particularly through strengthening skills, knowledge, teamwork, communication, discipline, and self-confidence. Training implementation also needs to be tailored to employee development needs, particularly in terms of objectives, types, materials, methods, and participant qualifications, in order to support optimal performance improvement. For further research, it is recommended to develop the research model by incorporating other variables that have not been studied so as to provide a broader understanding of the factors that influence employee performance in government organizations.

Bibliography

- Arya, D., Husriah, H., & Riadi, A. (2024). Pengaruh kompetensi pegawai dan motivasi kerja terhadap kinerja pegawai pada Kantor Bappeda Kabupaten Sidrap. *Jurnal Ilmiah Metansi (Manajemen dan Akuntansi)*, 7(2), 404–415. <https://doi.org/10.57093/metansi.v7i2.323>
- Ariyanto, T. E., Kristanto, Y., & Rustomo. (2025). Pengaruh penilaian kerja terhadap kinerja pegawai PT. Heri Daya Integra. *Jurnal Minfo Polgan*, 14(2), 2345–2352. <https://doi.org/10.33395/jmp.v14i2.15310>
- Dessler, G. (2017). *Human resource management* (15th ed.). Pearson.
- Dessler, G. (2020). *Human resource management* (16th ed.). Pearson.
- Gustiana, R., Hidayat, T., & Fauzi, A. (2022). Pelatihan dan pengembangan sumber daya manusia: Suatu kajian literatur review ilmu manajemen sumber daya manusia. *Jurnal Ekonomi Manajemen Sistem Informasi*, 3(6), 657–666. <https://doi.org/10.31933/jemsi.v3i6>
- Irmayanti, P. A., Widiastini, M. A., & Suarmanayasa, I. N. (2020). Pengaruh kompetensi dan budaya kerja terhadap kinerja karyawan. *Prospek: Jurnal Manajemen dan Bisnis*, 2(1), 111. <https://doi.org/10.23887/pjmb.v2i1.26274>
- Kumaeli, J. (2025). Analisis manajemen sumberdaya manusia aparatur pemerintah Desa Gunung Batu Kecamatan Ciligrang Kabupaten Lebak dalam penyelenggaraan pemerintahan desa. *Prosiding Seminar Nasional Administrasi Banten*, 2(1), 138–143. <https://jurnal.iknus.ac.id/index.php/pena/article/view/262>
- Mangkunegara, A. P. (2016). *Manajemen sumber daya manusia perusahaan*. PT Remaja Rosdakarya.
- Mangkunegara, A. P. (2017). *Manajemen sumber daya manusia perusahaan*. PT Remaja Rosdakarya.
- Mangkunegara, A. P. (2018). *Manajemen sumber daya manusia perusahaan*. Remaja Rosda Karya.
- Mangkunegara, A. P. (2019). *Manajemen sumber daya manusia perusahaan* (Edisi revisi). PT Remaja Rosdakarya.
- Mangkunegara, A. P. (2020). *Manajemen sumber daya manusia perusahaan*. Remaja Rosda Karya.
- Masud, A. A., Tenriyola, A. P., & Asike, A. (2022). Peranan kompetensi SDM terhadap peningkatan kinerja karyawan. *Amsir Management Journal*, 3(1), 42–48. <http://www.journal.stieamsir.ac.id/index.php/amj/article/view/115>
- Napitupulu, F., Lie, D., Butarbutar, M., & Wijaya, A. (2017). Pengaruh pelatihan dan komitmen terhadap kinerja pegawai pada BPJS Ketenagakerjaan Cabang Pematangsiantar. *Maker: Jurnal Manajemen*, 3(2), 27–37. <http://repository.stiesultanagung.ac.id/id/eprint/461/>
- Noor, M. T., Susanto, H., Prasetya, D., Rudini, A., & Irhamni. (2024). Pengaruh kompetensi dan pelatihan terhadap kinerja pegawai Aparatur Sipil Negara pada Dinas Perdagangan dan Perindustrian Kabupaten Kotawaringin Timur. *Jurnal Ilmiah Hospitality*, 12(2), 2685–5534. <https://doi.org/10.47492/jih.v12i2.3006>
- Novarini, N. N. A., Andriani, N. L. P., Sujana, I. W., & Prastyadewi, M. I. (2022). Pengaruh kompetensi dan stres kerja terhadap turnover intention pada karyawan Furamaxclusive Ocean Beach Seminyak Hotel. *Jurnal Ilmu Manajemen*, 12(1), 75–85.
- Novitasari, E. (2020). *Dasar-dasar ilmu manajemen: Pengantar menguasai ilmu manajemen*. Anak

- Hebat Indonesia.
- Putri, E. Y., Putri, A., Rahma, A. R., & Maolani, F. M. (2022). Penerapan praktek manajemen sumber daya manusia dan hubungannya dengan kinerja karyawan. *Jurnal Ekobis: Ekonomi Bisnis & Manajemen*, 12(2), 343–356. <https://ejournal.utmj.ac.id/ekobis/article/view/618>
- Rahman, A., & Nitra, A. E. V. (2025). Pengaruh pelatihan kerja terhadap kinerja pegawai. *Jurnal Riset Ilmu Ekonomi dan Bisnis*, 5(1), 73–80. <https://doi.org/10.29313/jrieb.v5i1.7125>
- Ratnaningsih, T., & Rahman, A. S. (2021). Pengaruh kompetensi terhadap kinerja pegawai pada Biro Pembinaan Operasi Mabes Polri Jakarta. *Jurnal Arastirma*, 1(1), 151–164. <https://doi.org/10.32493/arastirma.v1i1.10071>
- Sarwono, J. (2012). *Metode riset skripsi: Pendekatan kuantitatif menggunakan prosedur SPSS*. Elex Media Komputindo.
- Sarumaha, W. (2022). Pengaruh budaya organisasi dan kompetensi terhadap kinerja pegawai. *Jurnal Akuntansi, Manajemen dan Ekonomi*, 1(1), 28–36. <https://jamane.marospub.com/index.php/journal/article/view/10>
- Sugiyono. (2016). *Metode penelitian kuantitatif, kualitatif dan R&D*. Alfabeta.
- Sugiyono. (2017). *Metode penelitian kuantitatif, kualitatif, dan R&D*. Alfabeta.
- Sugiyono. (2019). *Metode penelitian kualitatif, kuantitatif dan R&D*. Alfabeta.
- Sugiyono. (2020). *Metodologi penelitian kuantitatif, kualitatif dan R&D*. Alfabeta.
- Sukasih, A. S. (2025). Pengaruh rekrutmen dan pelatihan terhadap kinerja pegawai. *Journal of Artificial Intelligence and Digital Business*, 4(2), 799–809. <https://journal.ilmudata.co.id/index.php/RIGGS/article/view/566>
- Sutanjar, T., & Saryono, O. (2019). Pengaruh motivasi, kepemimpinan dan disiplin pegawai terhadap kinerja pegawai. *Journal of Management Review*, 3(2), 321–325. <https://jurnal.unigal.ac.id/managementreview/article/view/2514>
- Wibowo. (2022). *Manajemen kinerja*. PT RajaGrafindo Persada.